Schumaker & Company

Jersey Central Power and Light

Introduction

June 2011

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I. Introduction

This chapter represents a summary introduction and results of the audit of the affiliated transactions between Jersey Central Power and Light Company (JCP&L) and its affiliates, and a comprehensive management audit of Jersey Central Power and Light Company completed by Schumaker & Company in 2011 on behalf of the New Jersey Board of Public Utilities (NJBPU). It includes a summary of recommendations and their respective priorities, JCP&L and FirstEnergy Corporation (FE) background information, and 2005 to 2009 annual statistics for JCP&L. The remaining report chapters contain a discussion of our findings, conclusions, and recommendations for each discrete area of review within the scope of the audit. They include:

- Phase I
  - Chapter II – Energy Procurement and Purchasing
  - Chapter III – Affiliated Relationships and Affiliate Allocation Methodologies
  - Chapter IV – Market Conditions
  - Chapter V – Review of Prior Audit Recommendations
  - Chapter VI – Remediation Costs
- Phase II
  - Chapter VII – Executive Management and Corporate Governance
  - Chapter VIII – Finance and Accounting
  - Chapter IX – Electric Operations
  - Chapter X – Customer Service
  - Chapter XI – Clean Energy
  - Chapter XII – Support Services

These chapters provide the detailed facts and analyses that support, and provide context for, the recommendations we have made. The findings and recommendations contained in this audit report are the findings and recommendations of the consultant only and are not necessarily agreed to by JCP&L or NJBPU.

A. Summary of Recommendations

To assist JCP&L management in developing implementation plans, each recommendation has been assigned a priority of "high," "medium," or "low" according to the following criteria:

- *High* – Designated recommendations are high priority because of their importance and urgency. These represent significant benefit potential, major improvements to service, or substantial improvements to methods or procedures.
- *Medium* – Designated recommendations are of medium priority. In some instances, the implementation of these recommendations is expected to provide moderate improvements in profitability of operations, or management methods and performance. In other instances, implementation may provide significant longer-term benefits which are less predictable.
- *Low* – Designated recommendations reflect a lower priority. In many instances, they should be studied further or implemented sometime during the next few years. Potential benefits are perceived to be either modest or difficult to measure.

Exhibit I-1 summarizes the priority totals for each audit phase.

Exhibit I-1
Summary of Priority Totals

	High	Medium	Low
Phase I	7	6	4
Phase II	15	39	14
Total	**22**	**45**	**18**

In many recommendations, it is not possible or practical at this time to measure "quantitative" benefits. The benefits associated with these recommendations fall primarily into four categories:

- Reduction in actual costs of operations within a JCP&L area
- Increase in a revenue source within a JCP&L area
- Change in work flow processes used in the provision of services to JCP&L customers on a more effective or efficient basis
- Change in other processes resulting in good business practices being implemented

Particularly in instances where a new management practice or procedure is recommended (where one either did not exist or was not fully implemented), it may be difficult to estimate the actual benefit to be derived. It is believed, however, that the overall benefit will be improved effectiveness and efficiency of the specified JCP&L area. Additionally, qualitative benefits may occur that cannot be easily quantified.

They could include improved effectiveness and efficiency in operations, increased customer satisfaction, additional cost savings, increased revenues, etc. It should also be noted that, because it is not possible in all instances to estimate expected benefits prior to implementation, any implementation plan should include a reliable measurement tool to track benefits after implementation.

Quantifiable benefits (increased revenues or additional cost savings) have been provided in our report chapters where they could be estimated. This quantification is subject to some judgment and would require additional effort beyond the scope of this review to refine the estimates. The actual benefits from these recommendations are, therefore, subject to a degree of uncertainty. For other recommendations the benefits to be derived are of a more qualitative nature or, simply stated, the expectations of prudent management. Those areas where major quantifiable benefits have been identified in the report are described on the following pages.

As JCP&L will have varying ways to implement recommendations, Schumaker & Company did not estimate the impact of implementing audit recommendations on JCP&L's expense. However, the short-term impact could be considerable. Additionally, implementation of recommendations often requires a phase-in period before benefits can be achieved.

The actual recommendation statements contained in the audit report are shown by phase and work plan area on the following pages. We have also indicated the recommendation number, page number in the report, priority, estimated time-frame to initiate implementation efforts, and estimated benefits following implementation. The details of each recommendation can be found in the individual chapters where the subject matter is evaluated.

Phase I – Review of Affiliate Transactions, Planning, Operations, & Maintenance Practices

	Description	Page	Priority	Initiation Timeframe
II. Review of Procurement Activities (ENPRO)		21		
III. Affiliated Relationships and Affiliate Allocation Methodologies		41		
III-1	Establish affiliate agreements for all missing affiliate relationships, as appropriate, and provide them, as necessary, to the applicable state regulatory commissions for review and approval. (Refer to Finding III-2)	58	Medium	0-6 Months
III-2	Perform periodic studies to determine the cost-competitiveness of centralized functions, consistent with regulatory requirements, and develop plans to address the results of these studies. (Refer to Finding III-3)	58	High	6-12 Months
III-3	Develop documentation regarding SERVECO's allocation factor review process. (Refer to Finding III-4)	58	High	6-12 Months
III-4	Evaluate and implement formal accounting and human resources policies and procedures to address situations in which an employee might leave JCP&L to go to affiliates. (Refer to Finding III-5)	59	Low	12+ Months
III-5	Establish a formal written JCP&L dividend policy. (Refer to Finding III-7)	59	Medium	0-6 Months
III-6	Continually review and update, as appropriate, the number of allocation factors available to SERVECO for affiliate charges, which could reduce the reliance on general allocators. (Refer to Finding III-9 and Finding III-10)	74	Low	6-12 Months
III-7	Routinely perform internal audits of affiliate relationships and associated transactions. (Refer to Finding III-12)	74	High	0-6 Months
III-8	Update the SERVECO CAM documentation. (Refer to Finding III-13)	75	High	6-12 Months
III-9	Avoid charging JCP&L ratepayers for merger team costs. (Refer to Finding III-14)	75	High	0-6 Months
III-10	Study the size of the aircraft fleet to increase overall utilization on the aircraft. (Refer to Finding III-17)	80	High	0-6 Months
III-11	Analyze and modify, as appropriate, aircraft charging mechanisms so that entities such as JCP&L do not excessively pay for services not rendered. (Refer to Finding III-18)	81	High	0-6 Months
III-12	Modify policies and procedures regarding the use of corporate aircraft to provide economic guidelines on appropriate use. (Refer to Finding III-19)	81	Low	6-12 Months
III-13	Perform a lease versus own analysis and submit it to the BPU Audit Division to justify the benefits and costs of maintaining an in-house FE flight operation showing various lease/own options. (Refer to Finding III-17, Finding III-18, and Finding III-19)	81	Medium	6-12 Months
IV. Market Conditions		83		
V. Review of Prior Audit Recommendations		91		
V-1	Provide a report on the number of circuits that have implemented tie and recloser schemes during the past year as a part of the Annual System Performance Report. (Refer to Finding V-3)	109	Medium	12+ Months

Description		Page	Priority	Initiation Timeframe
VI. Remediation Costs		113		
VI-1	Institute a formal process to review the existing project management methodology for the remediation program to determine if there are ways to strengthen and improve it.. (Refer to Finding VI-3)	120	Medium	6-12 Months
VI-2	Investigate the provisions of the RAC minimum filing requirements via an electronic repository that is accessible by the BPU via the Internet. (Refer to Finding VI-3)	121	Low	0-6 Months
VI-3	Perform periodic internal audits of external remediation contractors' invoicing. (Refer to Finding VI-5)	121	Medium	12+ Months

Phase II - Comprehensive Management Audit

Description		Page	Priority	Initiation Timeframe
VII. Executive Management & Corporate Governance		123		
VII-1	Develop a periodic organizational review process. (Refer to Finding VII-1)	129	Medium	6-12 Months
VII-2	Regularly review and update corporate goverance policies. (Refer to Finding VII-4)	142	Medium	6-12 Months
VII-3	Periodically send out letters to all vendors and contractors informing them of FE's Code of Conduct. (Refer to Finding VII-4)	142	Medium	0-6 Months
VII-4	More routinly rotate directors through committees (Refer to Finding VII-5)	142	Medium	12+ Months
VII-5	Review and update the Audit Committee charter to specify that the Audit Committee is responsible for oversight of all risk management. (Refer to Finding VII-6)	142	Low	0-6 Months
VII-6	Update the Audit Committee charter to state that the Director of Internal Auditing functionally reports to the Audit Committee and uses FE for logistical support. (Refer to Finding VII-8)	143	Low	0-6 Months
VII-7	Periodically rebid external audit services. (Refer to Finding VII-8)	143	Medium	12+ Months
VII-8	Require all outside counsel to report wrongdoing up through the Board, as is now required from outside counsel practicing before the SEC. (Refer to Finding 0-7)	143	Low	0-6 Months
VII-9	Continue to strengthen employee safety programs. (Refer to Finding VII-15 and Finding VII-16)	180	High	12+ Months
VII-10	Develop a strategic workforce plan. (Refer to Finding VII-11 and Finding VII-12)	181	Medium	12+ Months
VII-11	Strengthen efforts to attract women to managerial and technical jobs. (Refer to Finding VII-17, Finding VII-18, and Finding VII-19)	181	High	12+ Months
VII-12	Strengthen the narrative in the affirmative action plan describing JCP&L's actions and plans for hiring and promoting women and minorities. (Refer to Finding VII-20)	181	High	6-12 Months
VII-13	Develop a comprehensive and integrated external relations/communications strategy. (Refer to Finding VII-24, Finding VII-25, and Finding VII-26)	190	Medium	6-12 Months

Description		Page	Priority	Initiation Timeframe
VIII. Finance and Accounting		193		
VIII-1	Explore the advisability of ring-fencing JCP&L's operations from FE. (Refer to Finding VIII-2)	209	Medium	0-6 Months
VIII-2	Seek an extension of approval to participate in the Utility Money Pool. (Refer to Finding VIII-7)	224	Medium	0-6 Months
VIII-3	Study and evaluate combining FirstEnergy's capital budget systems and databases. (Refer to Finding VIII-16)	257	Low	6-12 Months
VIII-4	Provide the resources or effort to reduce the backlog of assets in Account 106. (Refer to Finding VIII-18)	257	Medium	6-12 Months
VIII-5	In conjunction with the FE/Allegheny Energy merger integration process, identify and implement the most efficient organizational design to effectively and independently perform the Internal Audit function.. (Refer to Finding VIII-19)	257	Medium	6-12 Months
VIII-6	Provide the fraud training program to JCP&L employees. (Refer to Finding VIII-22)	258	Medium	6-12 Months
IX. Electric Operations		259		
IX-1	Monitor recent capital and/or O&M expenditure reductions to ensure that customer service and reliability levels do not significantly deteriorate and maintain established statewide standards. (Refer to Finding IX-2, Finding IX-4, Finding IX-11, Finding IX-12, Finding IX-14, Finding IX-15, and Finding IX-16)	338	High	0 – 6 Months
IX-2	Complete deferred trimming of the distribution corridors in 2011 consistent with the four-year vegetation management cycle. (Refer to Finding IX-6 and Finding IX-7)	339	High	0 – 12 Months
IX-3	In conjunction with the FE/AYE merger integration process, identify and implement the most efficient organizational design to effectively perform distribution vegetation managemen including considering reorganize distribution vegetation management under the JCP&L Engineering Services group. (Refer to Finding IX-30)	339	Medium	0 – 12 Months
IX-4	Upon completionof the first full program cycle, evaluate the experimental corridor widening program (which has resulted in an increased portion of the expenditures for distribution tree trimming being allocated to capital) and adjust as appropriate. (Refer to Finding IX-8)	339	Medium	12 – 24 Months
IX-5	Award transmission vegetation management contracts to the lowest qualified bidder, and adequately document cases where exceptions are made. (Refer to Finding IX-21)	340	Low	0 – 12 Months
IX-6	Revise capital program and project management to include a focus on managing individual projects according to their schedules and budgets. (Refer to Finding IX-17, Finding IX-18, and Finding IX-19)	340	Medium	0 – 12 Months
IX-7	Begin tracking and reporting the aggregate volume and value of change orders by project and by time period. (Refer to Finding IX-20)	340	Low	6 – 12 Months
IX-8	Begin tracking and reporting actual versus estimated hours by work order and by time period. (Refer to Finding IX-25)	340	Medium	0 – 12 Months
IX-9	Improve the delay reporting to reduce crew downtime and improve schedule adherence. (Refer to Finding IX-26)	341	Medium	0 – 12 Months

Description		Page	Priority	Initiation Timeframe
IX-10	Modify the high-priority circuit program to include a focus on the number of repeat high-priority circuits. (Refer to Finding IX-29)	341	Medium	6-12 Months
IX-11	Re-evaluate the T&D employee and contractor labor allocation. (Refer to Finding IX-34)	341	Medium	0 – 12 Months
IX-12	Include as a component of the analysis of the highest priority circuits the age, size, and type of overhead conductor to determine if these factors are the key contributors to the unreliability of a particular circuit and if conductor replacement would be cost-effective to address customer hours of outages on such circuits. (Refer to Finding IX-9)	341	Medium	6 - 12 Months
IX-13	In conjunction with the high priority circuit program, consider adding CEMI measurements and targets to the internal reliability performance measures to enhance customer satisfaction and further improve reliability. (Refer to Finding IX-3)	342	Medium	12+ Months
IX-14	JCP&L should provide documentation that its distribution planning criteria includes requirements consistent with the PJ Downes' reports for tie and recloser schemes for new and substantially reconfigured circuits, which, over time, will allow for increasing levels of automation with respect to the Company's response to outages. (Refer to Finding IX-37)	342	Medium	0 - 12 Months
IX-15	Determine the root cause(s) of the claims against JCP&L's underground locates contractor and develop a plan to minimize the causes. (Refer to Finding IX-54)	377	Medium	6 - 12 Months
IX-16	Perform periodic audits of the contractor(s) that are providing JCP&L with underground locates services. (Refer to Finding IX-55)	377	Medium	6-12 Months
X. Customer Service		387		
X-1	Maintain or achieve customer service performance levels that result in overall customer satisfaction, making improvements where cost-effective. (Refer to Finding X-3, Finding X-5, Finding X-6, Finding X-7, and Finding X-10)	430	High	0 – 12 Months
X-2	In conjunction with the FE/Allegheny Energy merger integration process, identify and implement the most efficient organizational design to effectively perform customer complaint management processes. (Refer to Finding X-4)	431	Medium	0 – 12 Months
X-3	In conjunction with the FE/Allegheny Energy merger integration process and then periodically thereafter, review and evaluate the use of call center resources, both internal and through contractors, in which these periodic reviews consider cost-effectiveness, as well as other relevant factors, including quality, experience, labor pool diversification, and disaster recovery. (Refer to Finding X-8)	431	High	0 – 12+ Months
X-4	Re-evaluate AMR, AMI, and communication devices for inside meters to reduce estimated meter reads and to lower meter-reading costs. (Refer to Finding 12 and Finding X-13)	431	Low	0 – 12 Months
X-5	Complete the JCP&L meter reading rerouting process within six months. (Refer to Finding X-15)	432	Medium	0 – 6 Months
X-6	In conjuction with the FE/Allegheny Energy reorganization merger integration process, identify and implement the most efficient organizational design to effectively perform the economic development function, including New Jersey. (Refer to Finding X-23)	432	Low	0 – 12 Months
XI. Clean Energy		433		

Description		Page	Priority	Initiation Timeframe
XII. Support Services		441		
XII-1	Conduct periodic, formal risk management studies. (Refer to Finding XII-1)	449	Low	0-6 Months
XII-2	Conduct periodic, formal insurance studies. (Refer to Finding XII-3)	449	Low	0-6 Months
XII-3	Strengthen Legal Department objectives and associated KPIs, including responding to survey results. (Refer to Finding XII-4)	467	Medium	6-12 Months
XII-4	Perform a cost/benefit analysis to determine whether state regulatory work should be performed primarily internally or externally in the future, and incorporate the development of RFPs into this decision-making process. (Refer to Finding XII-5)	467	High	0-6 Months
XII-5	Establish formal written Claims function documentation for all FE groups managing claims. (Refer to Finding XII-6)	468	Medium	6-12 Months
XII-6	Perform an investigation and resulting cost/benefit analysis to see if FE's claims system should be replaced. (Refer to Finding XII-7)	468	Medium	12+ Months
XII-7	Begin providing formal reports to JCP&L senior management regarding claims and legal cases activities. (Refer to Finding XII-8)	468	High	6-12 Months
XII-8	Develop a Facilities Master Plan. (Refer to Finding XII-10)	475	Medium	6-12 Months
XII-9	Improve JCP&L turnover rate to 2.1, the level already achieved in 2005. (Refer to Finding XII-15)	484	Medium	0 – 12 Months
XII-10	Improve the JCP&L central storeroom fill rate to 94%, the level already achieved by FEU/Ohio Edison. (Refer to Finding XII-15)	484	Medium	0 – 12 Months
XII-11	Measure the amount and cost of field crew lost time due to material availability (stock out) problems. (Refer to Finding XII-16)	484	Medium	0 – 12 Months
XII-12	Monitor the effect of FE Supply Chain staffing reductions on JCP&L and address adverse impacts as appropriate. (Refer to Finding XII-17)	485	Low	0 – 12 Months
XII-13	Resume Supply Chain participation in benchmarking programs by 2012. (Refer to Finding XII-18)	485	Low	0 – 24 Months
XII-14	Consider adding Supply Chain staff to standards committees. (Refer to Finding XII-19)	485	Low	0 – 12 Months
XII-15	Accelerate the consideration of consolidating the two JCP&L regional storerooms. (Refer to Finding XII-20)	485	Medium	0 – 12 Months
XII-16	Investigate the possibility of vendor resupply of JCP&L central and work center storerooms and/or additional outsourcing of logistics and warehousing functions. (Refer to Finding XII-21)	486	Medium	0 – 12 Months
XII-17	Reinstate JCP&L fleet replacements and catch up to both the FEU fleet replacement guidelines and the fleet replacement strategy within five years, if practicable and cost beneficial. (Refer to Finding XII-25)	501	Medium	0 – 12 Months
XII-18	Accelerate the implementation of scheduling preventive maintenance through a combination of mileage or engine hours of use and elapsed calendar time, if feasible and cost beneficial. (Refer to Finding XII-26)	502	Medium	0 – 12 Months
XII-19	Implement the tracking of fuel usage by vehicle and add fuel use efficiency to the evaluations of individual vehicle and class-of-equipment performance and cost, if feasible and cost beneficial. (Refer to Finding XII-27)	502	Low	0 – 12 Months
XII-20	Conduct a thorough lease-versus-buy analysis before resuming the acquisition of vehicles and equipment for JCP&L. (Refer to Finding XII-28)	502	High	0 – 6 Months

Description		Page	Priority	Initiation Timeframe
XII-21	In conjunction with the FE/Allegheny Energy merger integration process, and regularly thereafter, identify and implement the most efficient organizational design to effectively perform the IT function across FE. (Refer to Finding XII-29)	529	High	12+ Months
XII-22	Incorporate technology direction into IT's strategic planning process. (Refer to Finding XII-30)	529	High	6-12 Months
XII-23	Expand the PMO to take on additional responsibilities. (Refer to Finding XII-32)	529	Medium	12+ Months
XII-24	Expand FirstEnergy's commitment to project management by incorporating all IT employees who are responsible for project delivery into a PMP certification program and closely monitor implementation of this program, whereby all appropriate staff achieve PMP certification to ensure timely progress is made. (Refer to Finding XII-33)	530	Medium	12+ Months
XII-25	Implement a relevant IT dashboard. (Refer to Finding XII-34)	530	High	6-12 Months
XII-26	Expedite completion of SLAs with all major client groups. (Refer to Finding XII-36)	531	High	12+ Months
XII-27	Transition to the use of the remote management software's wake-up capability. (Refer to Finding XII-39)	531	Medium	12+ Months
XII-28	Take and enforce a more aggressive posture with regard to having departments follow FE's records management program. (Refer to Finding XII-40)	539	High	12+ Months

B. Company Background

JCP&L History and Background

JCP&L was organized under the laws of the state of New Jersey in 1925. It owns property and does business as an electric public utility in that state. JCP&L provides transmission and distribution services across 3,200 square miles of northern, western, and east central New Jersey. The area it serves has a population of approximately 2.6 million. JCP&L complies with the regulations, orders, policies, and practices prescribed by the U.S. Securities and Exchange Commission (SEC), (FERC), and the New Jersey Board of Public Utilities (NJBPU).

JCP&L is a FirstEnergy subsidiary that transmits/distributes electricity to about 2.6 million homes and businesses in 13 counties throughout central and northern New Jersey. JCP&L operates more than 19,770 miles of distribution lines. Its 2,160-mile transmission system is overseen by the regional transmission organization (RTO) PJM Interconnection. The utility also has power plant interests. Key 2009 financials for JCP&L are shown in *Exhibit I-2*.

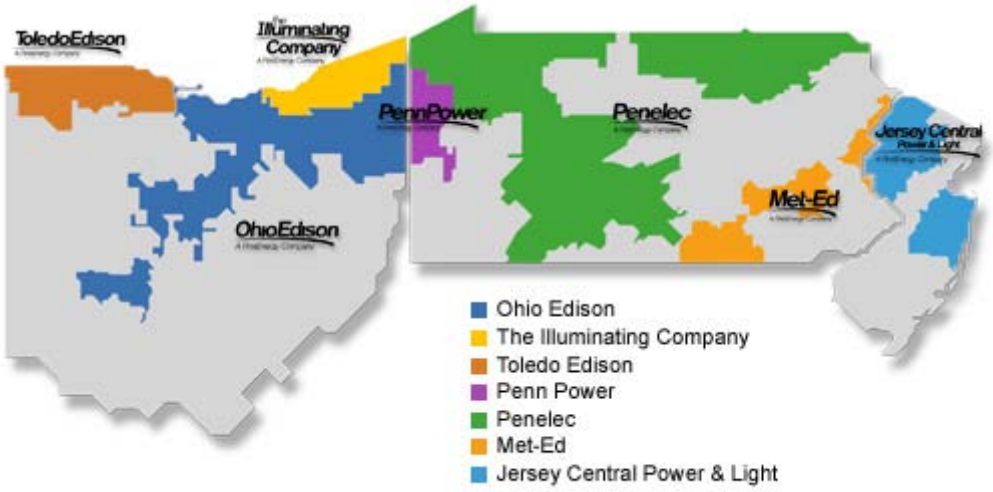
Exhibit I-2
JCP&L Key 2009 Financials
as of December 31, 2009

Category	Description
Company Type	Electric Operating Subsidiary of FirstEnergy
Fiscal Year End	December
2009 Electric Operating Revenue	$2.9 Billion
1-Year Sales Revenue Growth	(–8.24%)
2009 Net Income	$170,498,826
2009 Employees	1,432
2009 Bargaining Unit Employees	1,092
1-Year Employee Growth	(–2.6%)

Source: JCP&L FERC Form 1

FirstEnergy Corporation Background

FirstEnergy Corporation was organized under the laws of the state of Ohio in 1996. It is a diversified energy company headquartered in Akron, Ohio. FirstEnergy's principal business is the holding, directly or indirectly, of all of the outstanding common stock of its eight principal electric utility operating subsidiaries (i.e., Ohio Edison Company (OE), Cleveland Electric Illuminating Company (CEI), Toledo Edison Company (TE), Pennsylvania Power Company (Penn Power), American Transmission Systems, Inc. (ATSI), Jersey Central Power & Light Company (JCP&L), Metropolitan Edison Company (Met-Ed), and Pennsylvania Electric Company (Penelec)) and of its generating and marketing subsidiary, FirstEnergy Solutions (FES). Its subsidiaries and affiliates are involved in the generation, transmission, and distribution of electricity as well as energy management and other energy-related services.



FirstEnergy's consolidated revenues are primarily derived from electric service provided by its utility operating subsidiaries and the revenues of its other principal subsidiary: FirstEnergy Solutions (FES). In addition, FirstEnergy holds all of the outstanding common stock of other direct subsidiaries, including FirstEnergy Properties, Inc.; FirstEnergy Ventures (FEV); FirstEnergy Nuclear Operating Company (FENOC); FELHC, Inc.; FirstEnergy Facilities Services Group, LLC; FirstEnergy Fiber Holdings Corp.; GPU Power, Inc.; GPU Nuclear, Inc.; MARBEL Energy Corporation; and FirstEnergy Service Company (FESC).

FirstEnergy's combined service areas encompass approximately 36,100 square miles in Ohio, New Jersey, and Pennsylvania. The areas it serves have a combined population of approximately 11.3 million. Its seven electric utility operating companies comprise the nation's fifth largest investor-owned electric system based on serving 4.5 million customers in Ohio, Pennsylvania, and New Jersey. Moreover, its generation subsidiaries own or operate nearly 14,000 megawatts of capacity.

As of December 31, 2009, FirstEnergy's subsidiaries had a total of 13,379 employees located in the United States. Some key financials for FirstEnergy are shown in *Exhibit I-3*.

Exhibit I-3
FirstEnergy Key 2009 Financials
as of December 31, 2009

Category	Description
Fiscal Year End	December
2009 Basic Earnings	$3.31 per share of common stock ($3.29 diluted) on net income of $990 million and revenue of $12.97 billion
2008 Basic Earnings	$4.41 per share of common stock ($4.38 diluted) on net income of $1.34 billion and revenue of $13.63 billion.
2009 Consolidated Electric Sales	(–9%) compared with 2008, related to economic and weather conditions and changes in generation supply and pricing for the Ohio load
2009 Retail Market Sales	(–8%) compared with the fourth quarter of 2008
2009 Wholesale Market Sales	(–14%) compared with the fourth quarter of 2008
2009 Consolidated Generation Sales	(–12%) compared with the fourth quarter of 2008
2009 Total Distribution Deliveries	(–7%) compared to 2008 and (–3%) in the 4th quarter

Source: FE FERC Form 1

In addition to lower distribution and wholesale generation revenues, adjusted results for the full year and fourth quarter 2009 were impacted by higher purchased power costs, a reduction in transition cost recovery in Ohio, and higher pension costs. These factors were partially offset by lower operation and maintenance expenses, higher investment income, the impact of delivery service improvement riders in Ohio, and a lower effective income tax rate.

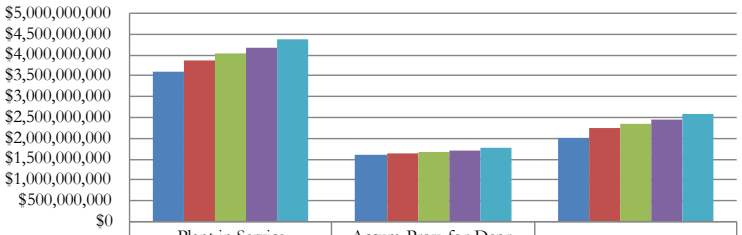
C. JCP&L 2005 to 2009 Annual Statistics

During the management audit, Schumaker & Company consultants developed a brief historical perspective on JCP&L by compiling a five-year history of some of the key financial and other statistics. This background and perspective was reviewed by all the consultants on the project at the beginning of the project to provide further understanding the current situation at JCP&L. This information is provided here to assist the reader in understanding some of the items discussed in the report. In developing this section, Schumaker & Company reviewed the *Federal Energy Regulatory Commission (FERC) Form No. 1: Annual Report of Major Electric Utilities, Licensees, and Others* for the years 2005 through 2009, along with other documents furnished by JCP&L. FERC publishes relevant information on financial and physical operations. Collected data include all line items from balance sheet, income statement, cash flows, plant in service, depreciation, depletion and amortization, taxes, salaries, operating revenue, sales, number of customers, operation and maintenance expenses, environmental facilities and expenses, and much more. The following annual statistics of JCP&L for the years 2005 through 2009 use *FERC Form 1* as their major source of data.

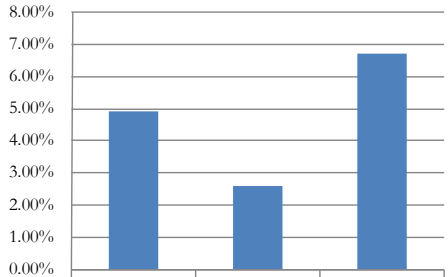
Total Plant in Service

Total plant in service and growth by years are shown in *Exhibit I-4*. Total plant in service has increased by 6.7% over the last five years, as shown in *Exhibit I-4*. However, the rate of increase has been reduced from the 2005 to 2006 timeframe due to a decrease in capital spending.

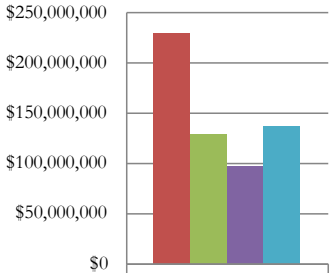
Exhibit I-4
Total Plant in Service & Growth by Year
2005 to 2009



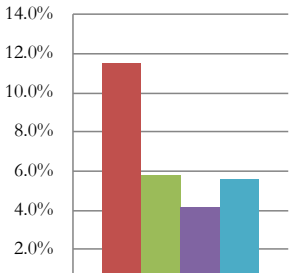
	Plant in Service (classified)	Accum Prov for Depr, Amort, & Depl	Total Plant in Service
2005	$3,601,463,980	$1,595,909,319	$2,005,554,661
2006	$3,858,490,768	$1,623,350,351	$2,235,140,417
2007	$4,031,577,591	$1,667,187,807	$2,364,389,784
2008	$4,163,616,651	$1,701,480,718	$2,462,135,933
2009	$4,367,670,955	$1,767,818,841	$2,599,852,114



	Plant in Service (classified)	Accum Prov for Depr, Amort, & Depl	Total Plant in Service
Compound Growth/Loss 2005-2009	4.94%	2.59%	6.70%



	Dollar Growth by Year
2005 to 2006	$229,585,756
2006 to 2007	$129,249,367
2007 to 2008	$97,746,149
2008 to 2009	$137,716,181



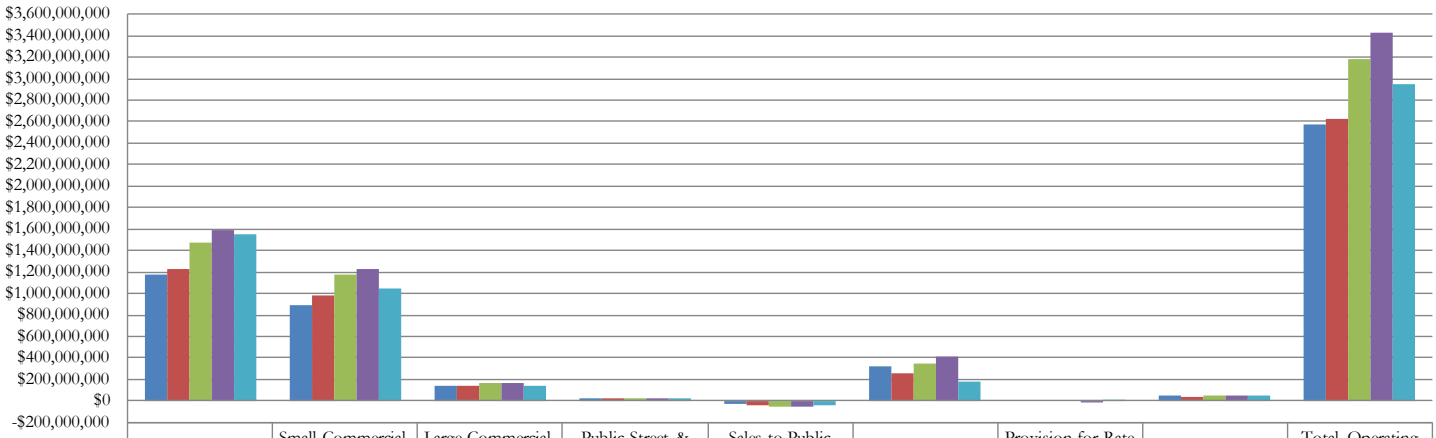
	Percentage Growth by Year
2005 to 2006	11.4%
2006 to 2007	5.8%
2007 to 2008	4.1%
2008 to 2009	5.6%

Source: *FERC Form 1, p. 200*

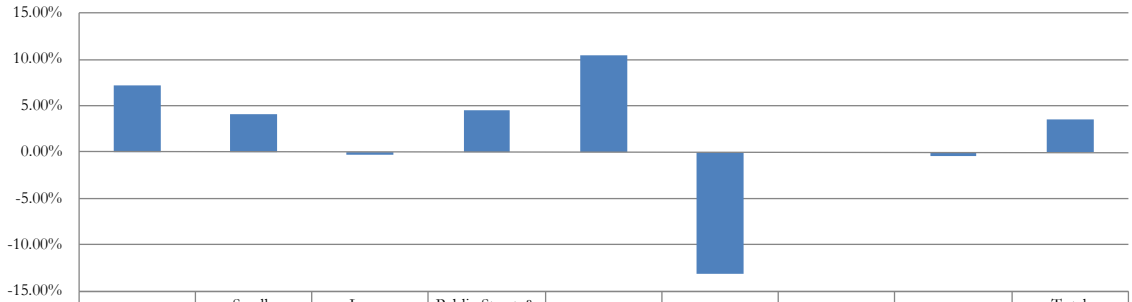
Operating Revenue

Operating revenues trends are shown in *Exhibit I-5*.

Exhibit I-5
Total Operating Revenue
2005 to 2009



	Residential	Small Commercial and Industrial	Large Commercial and Industrial	Public Street & Highway Lighting	Sales to Public Authorities	Sales for Resale	Provision for Rate Refunds	Other Revenues	Total Operating Revenue
2005	$1,177,914,907	$888,037,168	$147,207,097	$20,509,615	-$30,411,611	$320,522,350	$0	$48,150,637	$2,571,930,163
2006	$1,224,803,312	$979,221,075	$144,640,389	$21,484,479	-$41,109,408	$254,323,755	$0	$43,278,947	$2,626,642,549
2007	$1,473,856,460	$1,181,665,888	$165,161,286	$23,703,738	-$58,447,443	$352,608,063	$0	$46,959,711	$3,185,507,703
2008	$1,592,893,975	$1,225,595,852	$168,709,818	$24,863,878	-$50,467,165	$414,652,691	-$347,227	$45,990,911	$3,421,892,733
2009	$1,551,717,994	$1,041,002,587	$145,591,172	$24,434,370	-$45,234,139	$182,328,210	$347,227	$47,372,368	$2,947,559,789



	Residential	Small Commercial and Industrial	Large Commercial and Industrial	Public Street & Highway Lighting	Sales to Public Authorities	Sales for Resale	Provision for Rate Refunds	Other Revenues	Total Operating Revenue
Compound Growth/Loss 2005-2009	7.13%	4.05%	-0.28%	4.47%	10.43%	-13.15%	0.00%	-0.41%	3.47%

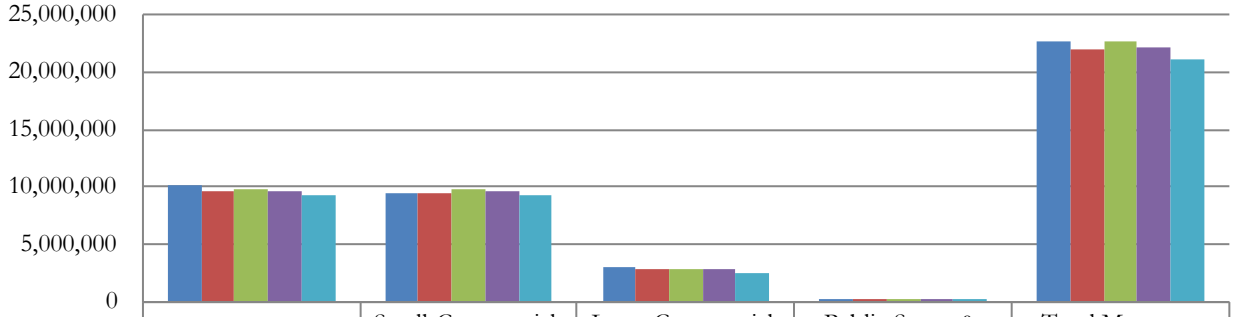
Source: *FERC Form 1 page 300*

Operating revenues experienced a decrease in 2009 after having increased in each of the previous four years, as shown in *Exhibit I-5*. The sales for resale category are primarily associated with certain legacy costs involving non-utility generators.

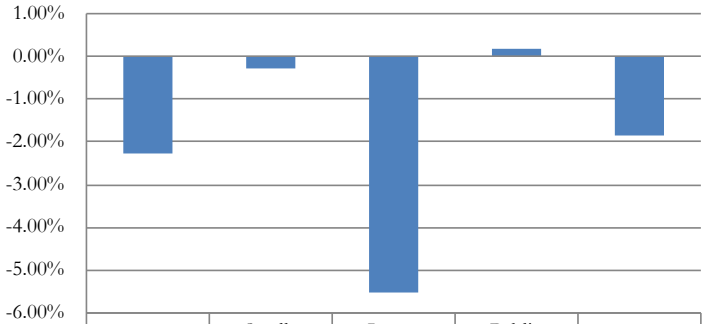
Sales by Volume (Megawatt Hours (MWh))

Sales by volumes are shown in *Exhibit I-6*.

Exhibit I-6
Sales by Volume (MWh)
2005 to 2009



	Residential	Small Commercial and Industrial	Large Commercial and Industrial	Public Street & Highway Lighting	Total Megawatt Hours Sold
2005	10,106,918	9,431,766	3,073,951	86,779	22,699,414
2006	9,547,790	9,450,490	2,831,040	86,180	21,915,500
2007	9,838,800	9,867,446	2,884,540	88,265	22,679,051
2008	9,667,364	9,706,944	2,773,128	88,385	22,235,821
2009	9,213,827	9,323,204	2,447,113	87,453	21,071,597

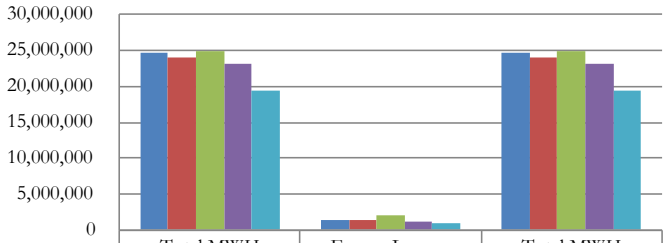


	Residential	Small Commercial and Industrial	Large Commercial and Industrial	Public Street & Highway Lighting	Total Megawatt Hours Sold
Compound Growth/Loss 2005-2009	-2.29%	-0.29%	-5.54%	0.19%	-1.84%

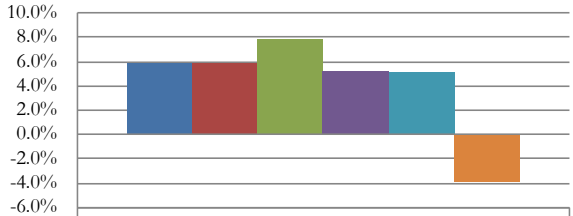
Source: *FERC Form 1 page 304*

Overall sales have been decreasing in the last five years, with the large commercial and industrial customers showing the biggest decrease (–5.54%), as shown in *Exhibit I-6*. In that JCP&L is only a delivery company, these numbers do not reflect its energy sales. MWh as Reported is shown in *Exhibit I-7*.

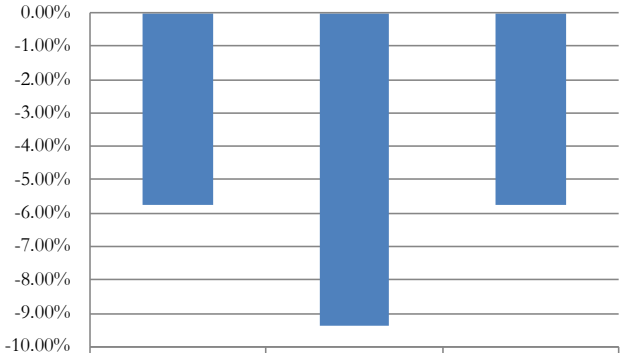
Exhibit I-7
MWh as Reported
2005 to 2009



	Total MWH Received	Energy Losses Unaccounted For	Total MWH Delivered
2005	24,669,380	1,465,445	24,669,380
2006	24,012,793	1,411,897	24,012,793
2007	24,907,868	1,959,196	24,907,868
2008	23,182,626	1,210,456	23,182,626
2009	19,470,669	987,993	19,470,669



	Unaccounted For as Percent of Total Delivered
2005	5.9%
2006	5.9%
2007	7.9%
2008	5.2%
2009	5.1%
Compound Growth/Loss 2005-2009	-3.86%



	Total MWH Received	Energy Losses Unaccounted For	Total MWH Delivered
Compound Growth/Loss 2005-2009	-5.74%	-9.39%	-5.74%

Source: *FERC Form 1, p. 401a*

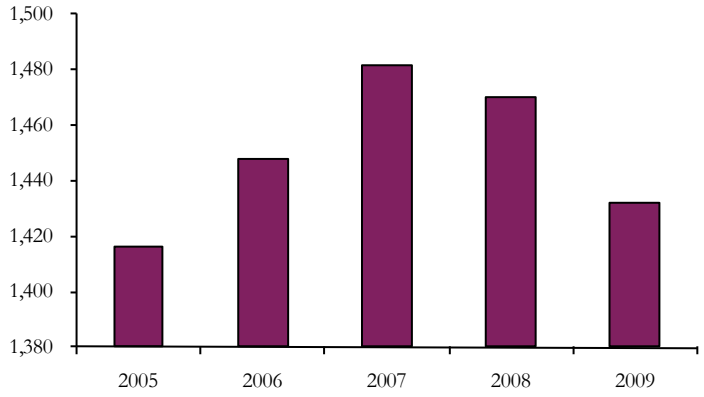
Total MWh received and delivered have decreased in a similar manner, as shown in *Exhibit I-7*.

JCP&L Total Employees (End of Year)

JCP&L's employee counts for 2005 through 2009 have been obtained from FirstEnergy *SEC 10-K annual reports*. JCP&L had a one-year employee loss from 2008 to 2009 of 2.59%. This information is shown in *Exhibit I-8*.

Exhibit I-8
JCP&L Employees (End of Year)
2005 to 2009

	2005	2006	2007	2008	2009	Compound Growth/Loss 2005-2009
Total Employees at Year End	1,416	1,448	1,482	1,470	1,432	0.28%



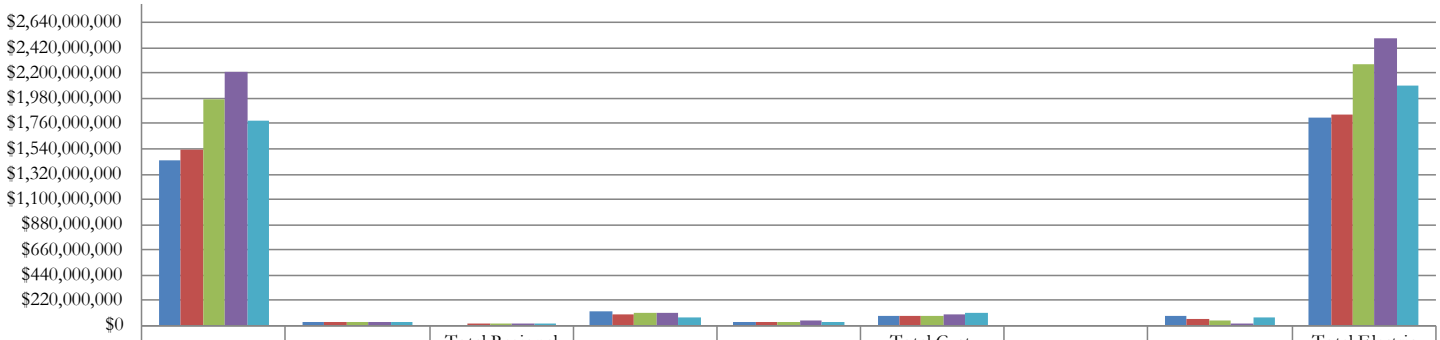
Source: *SEC.gov Archives/edgar/data 10-K Annual Reports*

The total number of employees has remained flat over the last five years after peaking in 2007, as shown in *Exhibit I-8*.

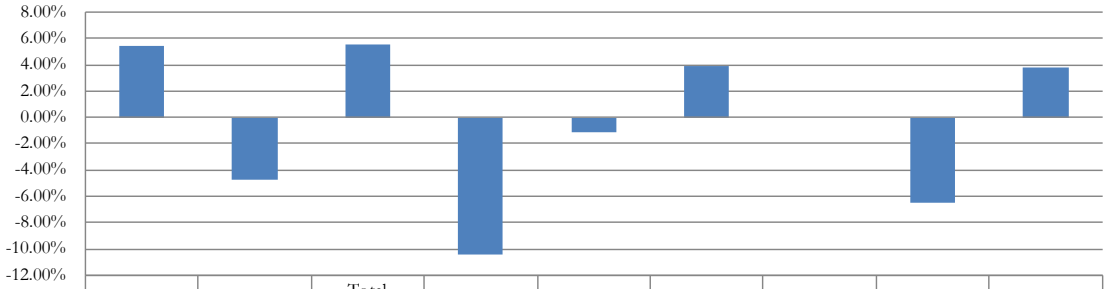
Operating and Maintenance Expenses

Trends in operating and maintenance expenses are shown in *Exhibit I-9*.

Exhibit I-9
Operating & Maintenance Expenses
2005 to 2009



	Total Power Production Expenses	Total Transmission Expenses	Total Regional Transmission & Market Op Expns*	Total Distribution Expenses	Total Customer Accounts Expenses	Total Cust. Service & Information Expenses	Total Sales Expenses	Total Admin & General Expenses	Total Electric Operating & Maintenance Expenses
2005	$1,444,834,133	$30,594,886	$0	$118,096,604	$34,479,059	$89,771,676	$5	$87,650,224	$1,805,426,587
2006	$1,530,536,017	$28,359,940	$72,721	$102,821,227	$35,665,278	$86,181,162	$0	$58,499,280	$1,842,135,625
2007	$1,966,426,375	$28,723,653	$69,683	$115,500,526	$37,309,332	$85,130,769	$0	$50,319,434	$2,283,479,772
2008	$2,210,998,842	$25,750,991	$39,684	$113,114,858	$38,592,092	$98,281,349	$0	$21,796,436	$2,508,574,252
2009	$1,785,790,990	$25,249,534	$85,704	$75,945,317	$32,957,459	$104,874,573	$0	$67,070,622	$2,091,974,199



* Compound Growth/Loss is 2006-2009	Total Power Production Expenses	Total Transmission Expenses	Total Regional Transmission & Market Op Expns*	Total Distribution Expenses	Total Customer Accounts Expenses	Total Cust. Service & Information Expenses	Total Sales Expenses	Total Admin & General Expenses	Total Electric Operating & Maintenance Expenses
Compound Growth/Loss 2005-2009	5.44%	-4.69%	5.57%	-10.45%	-1.12%	3.96%	0.00%	-6.47%	3.75%

Source: *FERC Form 1, pp. 320-323*

JCP&L has made some significant reductions in operations and maintenance expenses, specifically in 2009, as shown in *Exhibit I-9*. Total distribution expenses have been reduced the most at 10.45%.

Performance Ratios

For the time period spanning 2005–2009, the JCP&L compound growth rate in electric operating revenues was 3.47% and the average number of customers per month was 0.62%, whereas the compound growth rate in volume was –1.84%.

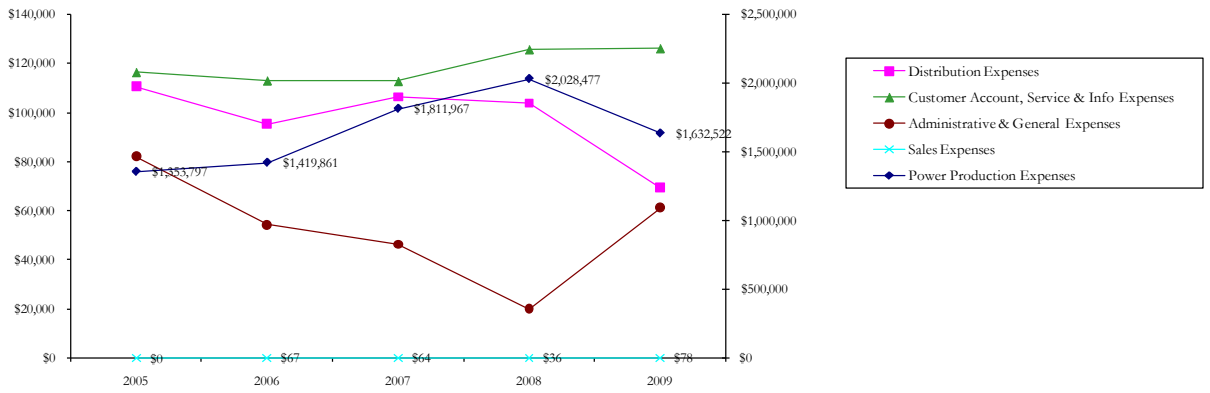
Exhibit I-10
Performance Ratios
2005 to 2009

	2005	2006	2007	2008	2009	Compound Growth/Loss 2005-2009
Total Power Production Expenses	$1,444,834,133	$1,530,536,017	$1,966,426,375	$2,210,998,842	$1,785,790,990	5.44%
Total Distribution Expenses	$118,096,604	$102,821,227	$115,500,526	$113,114,858	$75,945,317	-10.45%
Total Customer Service and Information Expenses	$89,771,676	$86,181,162	$85,130,769	$98,281,349	$104,874,573	3.96%
Total Customer Account Expenses	$34,479,059	$35,665,278	$37,309,332	$38,592,092	$32,957,459	-1.12%
Total Administrative & General Expenses	$87,650,224	$58,499,280	$50,319,434	$21,796,436	$67,070,622	-6.47%
Total Regional Transmission & Market Op Expns*	$0	$72,721	$69,683	$39,684	$85,704	5.57%
Average Number of Customers per Month	1,067,246	1,077,948	1,085,244	1,089,980	1,093,885	0.62%
Power Production Expenses per Thousand Customers	**$1,353,797**	**$1,419,861**	**$1,811,967**	**$2,028,477**	**$1,632,522**	**4.79%**
Distribution Expenses per Thousand Customers	**$110,655**	**$95,386**	**$106,428**	**$103,777**	**$69,427**	**-11.00%**
Customer Account, Services & Information Expenses per Thousand Customers	**$116,422**	**$113,036**	**$112,823**	**$125,574**	**$126,002**	**2.00%**
Administrative & General Expenses per Thousand Customers	**$82,127**	**$54,269**	**$46,367**	**$19,997**	**$61,314**	**-7.05%**
Regional Transmission & Mrk Op Expns Expenses per Thousand Customers*	**$0**	**$67**	**$64**	**$36**	**$78**	**5.06%**
Total Operating Revenue	$2,571,930,163	$2,626,642,549	$3,185,507,703	$3,421,892,733	$2,947,559,789	3.47%
Operating Revenues (Residential, Commercial, & Industrial)	$2,213,159,172	$2,348,664,776	$2,820,683,634	$2,987,199,645	$2,738,311,753	5.47%
Power Production Expenses as Percent of Total Operating Revenue	**56.18%**	**58.27%**	**61.73%**	**64.61%**	**60.59%**	**1.91%**
Distribution Expenses as Percent of Total Operating Revenue	**4.59%**	**3.91%**	**3.63%**	**3.31%**	**2.58%**	**-13.45%**
Customer Account, Services & Info Expenses as Percent of Total Operating Revenue	**4.83%**	**4.64%**	**3.84%**	**4.00%**	**4.68%**	**-0.81%**
Administrative & General Expenses as Percent of Total Operating Revenue	**3.41%**	**2.23%**	**1.58%**	**0.64%**	**2.28%**	**-9.61%**
Regional Transmission & Mrk Op Expns Expenses as Percent of Total Operating Revenue	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**N/A**
Megawatt Hours Sold	22,699,414	21,915,500	22,679,051	22,235,821	21,071,597	-1.84%
Power Production Expenses per MWH	**$63.65**	**$69.84**	**$86.71**	**$99.43**	**$84.75**	**7.42%**
Distribution Expenses per MWH	**$5.20**	**$4.69**	**$5.09**	**$5.09**	**$3.60**	**-8.77%**
Customer Account, Services & Information Expenses per MWH	**$5.47**	**$5.56**	**$5.40**	**$6.16**	**$6.54**	**4.55%**
Administrative & General Expenses per MWH	**$3.86**	**$2.67**	**$2.22**	**$0.98**	**$3.18**	**-4.72%**
Regional Transmission & Mrk Op Expns Expenses per MWH	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**N/A**

* Compound Growth/Loss calculated for 2006-2009 only

Source: *FERC Form 1*

Performance Ratios per Thousand Customers



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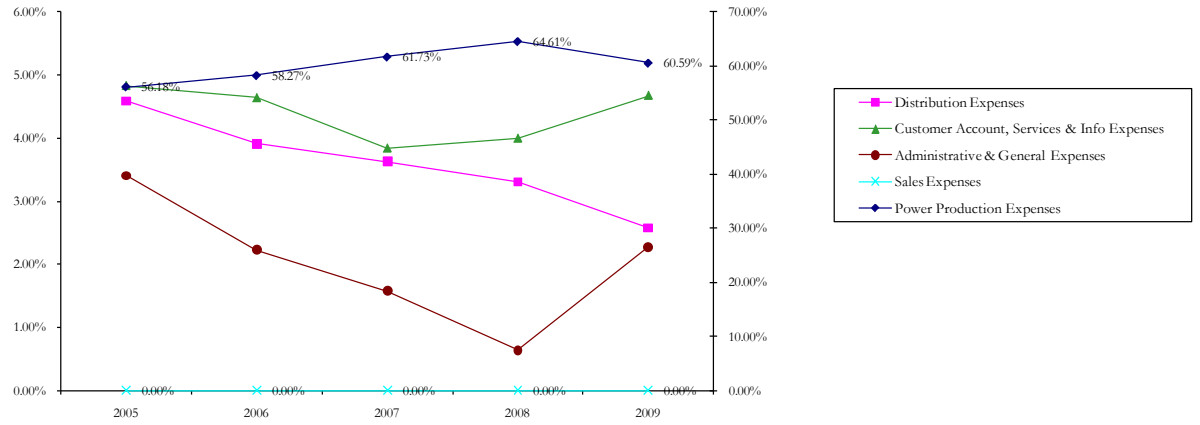
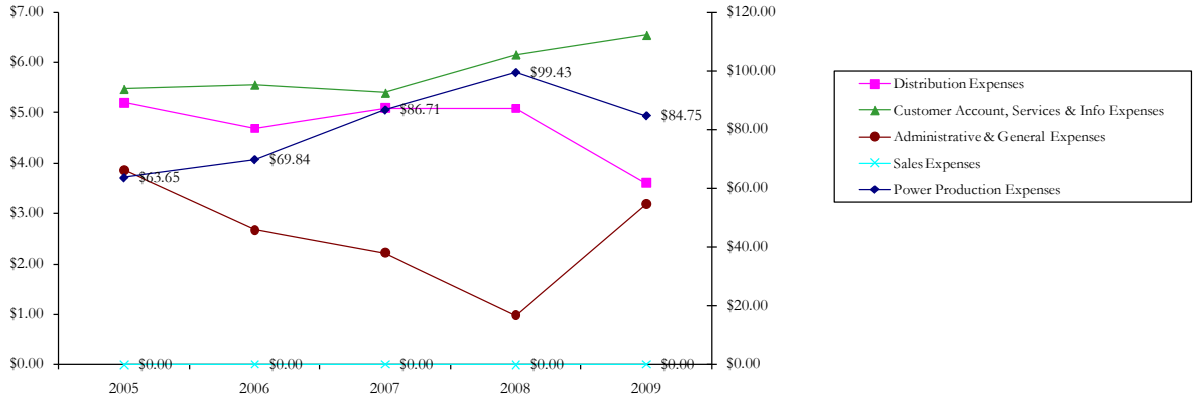
Performance Ratios as Percent of Customer Class Revenue



Performance Ratios per MWH



Schumaker & Company

Jersey Central Power and Light

Phase I Review of Affiliates Transactions, Planning, Operations, and Maintenance Practices

June 2011

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Recommendation III-2 — Perform periodic studies to determine the cost-competitiveness of centralized functions, consistent with regulatory requirements, and develop plans to address the results of these studies. (Refer to Finding III-3) 58

Recommendation III-3 — Develop documentation regarding SERVECO's allocation factor review process. (Refer to Finding III-4) 58

Recommendation III-4 — Evaluate and implement formal accounting and human resources policies and procedures to address situations in which an employee might leave JCP&L to go to affiliates. (Refer to Finding III-5) 59

Recommendation III-5 — Establish a formal written JCP&L dividend policy. (Refer to Finding III-7) 59

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Recommendation VI-3 Perform periodic internal audits of external remediation contractors' invoicing. (Refer to Finding VI-5) 121

II. Review of Procurement Activities (ENPRO)

This chapter addresses the Jersey Central Power & Light (JCP&L) procurement and disposition of electric energy outside the New Jersey basic generation service (BGS) process. Electric commodity supply has been restructured in New Jersey and JCP&L no longer provides vertically integrated electric commodity supply services directly to customers. Electric commodity supply is provided to shopping customers[1] by the third-party supplier (TPS) each of those customers selects. Non-shopping customers receive the default BGS electric commodity supply. Basic generation service is a New Jersey–wide structure and process that includes all four electric-distribution, investor-owned companies. It provides default electric commodity supply to non-shopping customers. There are only a few remaining legacy situations in which JCP&L directly owns or procures electric commodity supply.

Schumaker & Company consultants reviewed and determined if the pricing of JCP&L's goods and services to and from FirstEnergy (FE) and its affiliates is non-discriminatory and does not exceed market rates. Schumaker & Company identified and evaluated JCP&L's performance with regard to the designated matters and:

1. Defined, documented, and supported JCP&L's electric procurement activities outside the BGS auction process to the extent such activities exist.
2. Determined if JCP&L's purchases are and have been allocated across customer classes according to industry practices.

A. Background & Perspective

JCP&L Capacity and Energy Sources

JCP&L's demand and energy requirements within its service territory provided through the BGS process over the last five years is shown in *Exhibit II-1*.

[1] In New Jersey, customers may elect to "shop" and purchase their electric commodity supply from a TPS or not "shop" and receive the default BGS service.

Exhibit II-1
JCP&L BGS Demand and Energy Requirements
2005 to 2009

Year	Demand (kW)	Total Energy (kWh)
2005	6,278,534	25,095,491,692
2006	6,701,668	24,245,739,550
2007	6,151,683	25,341,527,654
2008	6,298,638	24,502,811,437
2009	5,738,385	23,189,745,314

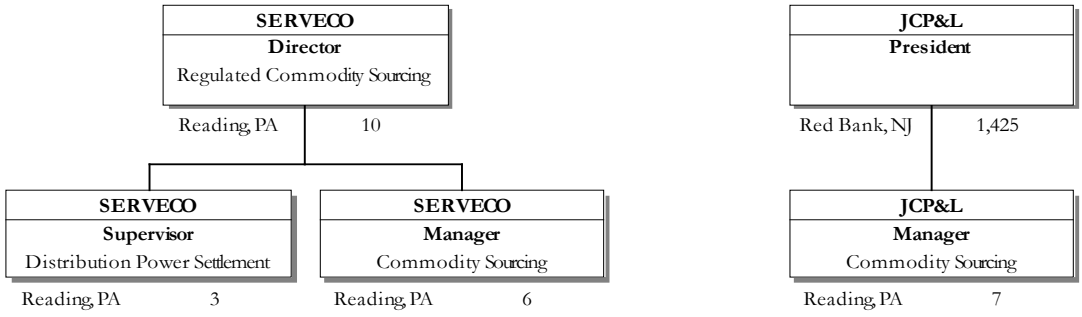
Source: Information Response 740

As can be seen from *Exhibit II-1*, overall demand in 2009 has dropped by approximately 14% from a high of 6,701,668 in 2006 while overall energy has decreased by approximately 8.5% in 2009 from a high of 25.3 billion kilowatt hours (kWhs) in 2007.

Regulated Commodity Sourcing (RCS) Organization

The Regulated Commodity Sourcing (RCS) organization provides procurement decision-making for all remaining (outside the BGS) commodity-related activities of the FirstEnergy Pennsylvania-, Ohio-, and New Jersey–regulated operating companies. This organization is located in Reading, Pennsylvania and is organized as shown in *Exhibit II-2*.

Exhibit II-2
Regulated Commodity Sourcing Organization
as of June 30, 2010



Source: Information Response 54

The RCS organization is staffed by both FirstEnergy Service Company (SERVECO) and JCP&L employees. FirstEnergy SERVECO employee costs are borne by the Pennsylvania and Ohio companies and JCP&L employee costs are borne by JCP&L.

Front-desk 24/7-operations staff members are responsible for both Pennsylvania and New Jersey generation assets. Their primary responsibilities include the real-time dispatch of the Pennsylvania- and New Jersey–regulated generation assets, encompassing both corporate-owned (Yards Creek) and NUG facilities. These individuals also interface with the PJM return to operations dispatchers on operation-related matters. Organizationally, there are three FirstEnergy Service Company regulated energy resource operators and three JCP&L regulated energy resource operators.

With respect to mid- and back-office activities, the RCS organization includes analysts who are FirstEnergy Service Company employees as well as those who are JCP&L employees. Staff-level analysts perform more of the complex analysis related to budgeting, RTO requirements, regulatory compliance, contract interpretation, and demand response programs. The senior analysts complete daily forecasting and load bidding responsibilities in addition to supporting the front desk operators with natural gas purchases. To the extent that an analyst supports efforts in the other group, labor hours are charged to the appropriate cost collector for the state being supported.

Basic Generation Service (BGS) Process

Beginning in July 2002, JCP&L has participated in a statewide auction process that was established by the Board of Public Utilities (BPU) to serve its basic generation service customers. The statewide auction occurs in February of each year and encompasses a fixed-price (FP) auction and an hourly-priced commercial industrial energy pricing (CIEP) auction. The BGS-FP auction is intended to serve residential and smaller commercial customers while the BGS-CIEP auction serves the needs of larger commercial and industrial customers (1,000 kW) who are required to be on hourly service. JCP&L is obligated to file a company-specific addendum regarding this process annually to the BPU for its approval. This addendum addresses elements specific to JCP&L and any proposed changes to those elements from the previous year.

In July of each succeeding year, JCP&L and the other New Jersey Electric Distribution Companies jointly file a proposal with the BPU to procure supply to meet their BGS load requirements. Since 2002, all four of the state's electric utilities have proposed a statewide auction and the BPU has accepted the proposals. After a comment period, the BPU approves the individual utility's plans. The next step in the process involves bidder qualification and registration that begins in mid-December and ends in mid-January. Qualifying bidders can then participate in the auction, which is held during the first week of February. After the auction concludes, the BPU has two business days to approve the results. Because the supply year is synchronized with the PJM planning year, supply flows from June 1 through May 31 of the following year.

A simultaneous multiple-round, descending-clock auction format is used. One tranche represents a given fixed percentage of JCP&L load. A tranche in the BGS-FP auction is approximately 100 megawatts (MWs) of peak demand while a tranche in the BGS-CIEP is approximately 75 MWs of peak load. The auction proceeds in rounds and is called a descending-clock auction because prices "tick" down until the supply bid is sufficient to meet the amount of required load.

For the BGS-FP load, New Jersey uses a rolling procurement structure whereby each year one-third of the load is procured for a three-year period as summarized in *Exhibit II-3*. The BGS process does procure two products, a fixed price service (BGS-FP), and a commercial and industrial energy pricing service (BGS-CIEP). The BGS-FP is a fixed-price service that serves the residential and smaller commercial customers of JCP&L. The BGS-CIEP service is an hourly product that serves the larger customers of JCP&L.

Exhibit II-3
BGS Auction Process

BGS-FP – Annual Fixed-Price Auction	1/3 of expected load every February
BGS-CIEP – Annual Commercial & Industrial Energy Pricing Auction	Expected load auction every February

Source: Information Response 1 – Commodity Portfolio Risk Management Policy

Winners of the BGS-FP auction become BGS-FP suppliers and are responsible for fulfilling all the requirements of a PJM load-serving entity, including capacity, energy, ancillary services, transmission, and any other services required by PJM. Accordingly, suppliers assume migration risks and must also satisfy the state's renewable portfolio standards. BGS-FP suppliers receive an all-in payment from JCP&L based on the auction price for JCP&L.

All of JCP&L's energy transactions are executed in accordance with the FE Utilities' Commodity Risk Management Policy. FE Utilities, including JCP&L, has a default service obligation (DSO)[2] to provide the required power supply to non-shopping customers who have elected to receive service under retail tariffs. Power supply consists of energy (adjusted for distribution losses), capacity / aggregate planning resource credit (APRC), transmission, financial transmission rights (FTRs), auction revenue rights (ARRs), contracts for differences (CFDs), ancillaries, and renewable energy requirements. The procurement of power supply necessary to fulfill this obligation is, to the extent possible, achieved using competitive power procurement plans.

FE Utilities maintains a separate portfolio or book of business for the Ohio Utilities, Pennsylvania Utilities, and JCP&L. DSO load is procured through an open, fair, non-discriminatory, and transparent

[2] / DSO is meant to encompass any of the following regulatory requirements: default service obligation, standard service obligation, provider of last resort, and/or basic generation service.

competitive procurement process that is designed to objectively provide no advantage to any potential supplier and to result in minimal, if any, reliance on spot market purchases. With the exception of the Yards Creek facility, JCP&L no longer owns any generation facilities. All electric energy that is provided to JCP&L non-shopping customers is procured through the BGS process, which has been approved by the New Jersey Board of Public Utilities. Bidding processes for energy supply are currently in the process of being established in both Pennsylvania and Ohio as longer-term fixed contracts expire.

Exhibit II-4 provides the last five years of successful supplier history in the BGS auction process for serving JCP&L loads.

Exhibit II-4
JCP&L BGS Results
2008 to 2010

Winning Bidder	2006	2007	2008	2009	2010
BGS-FP Auction Results					
Consolidated Edison Energy, Inc.	4		2		
Constellation Energy Commodities Group, Inc.			2		2
DTE Energy Trading, Inc.					1
Energy America	1	2			
Exelon Generation Company, LLC		2		3	
FirstEnergy Solutions Corp.*					2
J. Aron & Company			1		
J.P. Morgan Ventures Energy Corp.	5				2
Morgan Stanley Capital Group, Inc.				4	
NextEra Energy Power Marketing, LLC					3
NRG Power Marketing, LLC		1			1
PPL EnergyPlus, LLC**	3	3	4	3	
PSEG Energy Resources & Trade, LLC	4	6	3	7	5
Sempra Energy Trading, LLC					1
TransCanada Power Marketing Ltd					1
WPS Energy Services		1			
Total Tranches	**17**	**15**	**12**	**17**	**18**
BGS-CIEP Auction Results					
Consolidated Edison Energy, Inc.		22			
Constellation Energy Commodities Group, Inc.	9		1		
Dominion Retail, Inc.				4	4
DTE Energy Trading, Inc.			1		
FPL Energy Power Marketing	11	2	8	5	
Hess Corporation					1
Morgan Stanley Capital Group, Inc				2	4
NextEra Energy Power Marketing, LLC					2
PSEG Energy Resources & Trade, LLC		5			
Total Tranches	**20**	**29**	**10**	**11**	**11**

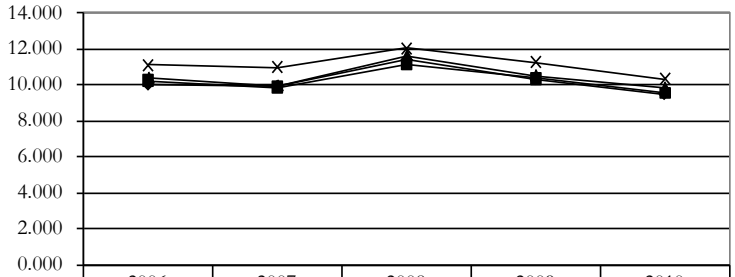
* FirstEnergy Solutions Corp. FP tranches from the 2010 auction were assigned by FirstEnergy Solutions Corp. to NextEra Power Marketing, LLC on April 22, 2010

** PPL Energy Plus FP tranches from the 2008 auction were assigned by PPL Energy Plus to Constellation Energy Commodities Group, Inc. on July 13, 2010

Source: Information Response 440 and 738

The pricing history regarding the BGS-FP process, including other New Jersey utilities, is shown in *Exhibit II-5*.

Exhibit II-5
BGS Pricing Results–FP
2006 to 2010

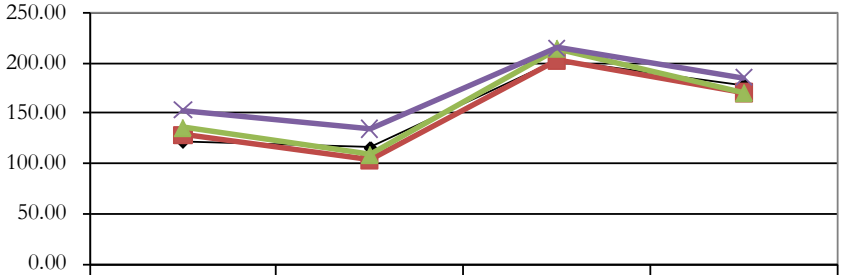


	2006 (cents/kWh)	2007 (cents/kWh)	2008 (cents/kWh)	2009 (cents/kWh)	2010 (cents/kWh)
JCP&L	10.044	9.964	11.409	10.351	9.517
PSEG	10.251	9.888	11.150	10.372	9.577
ACE	10.399	9.959	11.650	10.536	9.856
RECO	11.114	10.999	12.049	11.270	10.332

Source: Information Response 739

The pricing results trend of the BGS-CIEP is shown in *Exhibit II-6*.

Exhibit II-6
BGS Pricing Results–CIEP
2007 to 2010

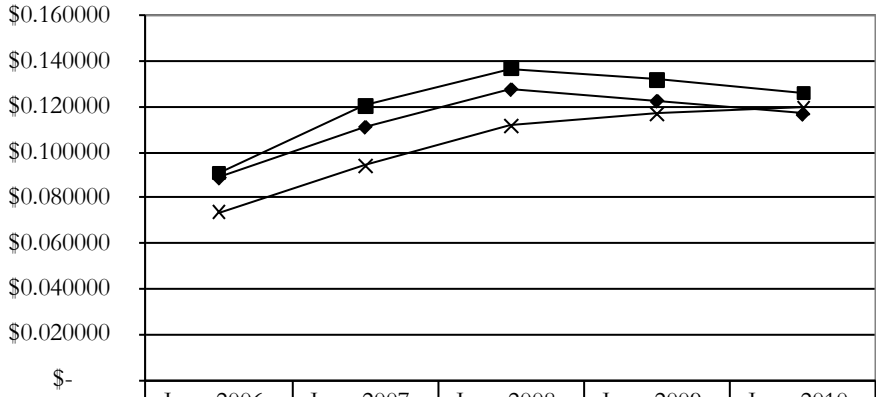


	2007 ($/MW/day)	2008 ($/MW/day)	2009 ($/MW/day)	2010 ($/MW/day)
JCP&L	121.56	115.76	203.92	177.99
PSEG	128.77	103.28	203.25	170.79
ACE	135.61	108.65	215.00	170.54
RECO	153.31	134.38	215.25	185.82

Source: Information Response 739

Exhibit II-7 provides an indication of how the actual prices paid by JCP&L's non-shopping residential customers have changed over the last five years using the residential service (RS) rate as a proxy.

Exhibit II-7
RS Rates Changes
2006 to 2010



	June 2006-May 2007	June 2007-May 2008	June 2008-May 2009	June 2009-May 2010	June 2010-May 2011
For First 600 KWH	$0.089030	$0.111331	$0.127835	$0.122779	$0.116982
For All Over 600 KWH	$0.090820	$0.120589	$0.137093	$0.132037	$0.126240
October Through May for All KWH	$0.073812	$0.094266	$0.111903	$0.117143	$0.119698

Source: Information Response 739

Yards Creek Pumping Station

The Yards Creek Pumping Station is a pumped storage facility located on the Delaware River. A pumped storage facility both uses and generates electricity. It is a facility that stores energy in a reservoir (a small lake at a higher elevation) by pumping water up into the lake such that at a later time that water can be returned to the river generating electricity through a hydroelectric generator for use at that time. The operational goal of such a facility is to pump water up into the reservoir when electricity costs are lowest and then to generate energy when electric costs are highest. The facility essentially time shifts the actual generation and usage of the electricity to achieve an economic benefit.

This resource is co-owned equally by JCP&L and Public Service Electric & Gas (PSE&G)(400 MW total nominal capacity – 200 MW to JCP&L). It is operated by Jersey Central Power & Light using contracted FirstEnergy Generation personnel. JCP&L's communication with PSE&G consists of providing a daily pumping and generation schedule. JCP&L has been self-scheduling Yards Creek for several years. This alternative approach is seen to be more beneficial than ceding control scheduling to PJM. Yards Creek operation is conducted in accordance with NOP-01 Yards Creek Operating Instructions and NOP-06 Yards Creek Unit Generation Bid.

Yards Creek is a taker of PJM day-ahead spot energy price, with the overall focus on maximizing the off-peak (pumping) to on-peak (generating) price differential opportunities. "Price taking" is used during the hours of desired operation to ensure this facility will be scheduled "on" by PJM during those hours to execute the price-differential strategy within the constraints of available water storage. Setting a PJM day-ahead non-zero offer price would incur the risk of not having the facility selected by PJM and therefore not running as desired.

The regulation ancillary service from Yards Creek is approximately 20 to 92 MW, based on the number of units in operation and the water level of the reservoir, and remains in the JCP&L portfolio. The regulation is offered into the PJM regulation market, with all revenues received by JCP&L applied to the non-utility generation charge (NGC) deferral. Any profits or losses from the management of JCP&L's Yards Creek Pumped Storage Station are applied to the JCP&L NGC deferral account.

Within the JCP&L system, the Yards Creek facility generates approximately 273,000 to 404,000 MWh of energy. This results in approximately $10 million to $23 million in net benefits being applied to the NGC rider.

St. Lawrence/FDR Project

JCP&L administers the allocation of electric power received by the state of New Jersey via the New York Power Authority (NYPA) from the St. Lawrence/FDR project (essentially Niagara Falls, etc.). A 10 MW tranche is carved out of the BGS Fixed Price auction which JCP&L then serves using the St. Lawrence generation as part of the source. Since the St. Lawrence generation is not always 10 MW around the clock, the difference (over or under) is made up by buying and selling capacity and energy in the PJM market to realize an economic benefit that is computed on a monthly basis. It is then passed through to residential customers through the NGC rider – the St. Lawrence/FDR benefit essentially serving as a credit in the NGC rider. The St. Lawrence/FDR project provides approximately a $1 million to $2 million net benefit to residential customers each year.

JCP&L serves as the scheduling and transmission agent for the St. Lawrence/FDR project's NYPA capacity and associated energy. JCP&L schedules the St. Lawrence/FDR project allocations to the municipal and cooperative utilities in New Jersey. JCP&L arranges the transmission of the St. Lawrence allocation on behalf of the investor-owned electric utilities but is not responsible for the municipal and cooperative systems allocations from the St. Lawrence/FDR project. JCP&L delivers and distributes the St. Lawrence/FDR capacity and energy as basic generation service to residential customers under the authority of the New Jersey Board of Public Utilities.

A 10 MW tranche is created to account for the St. Lawrence/FDR capacity and energy. Although the price for the St. Lawrence/FDR capacity and energy is very attractive, it amounts to less than 0.2% (10 MW tranche/5,525 MW total tranches) of the total BGS capacity and energy requirements, as shown in *Exhibit II-8*.

Exhibit II-8
Capacity and Energy Perspective
as of June 30, 2010

Tranches	Approximate Number of Tranches	Nominal MW per Tranche	Nominal Total MW
BGS-FP	47	100	4,700
BGS-CIEP	11	75	825
St. Lawrence/FDR	1	10	10

Source: Schumaker & Company Analysis

Non-Utility Generators (NUGs)

JCP&L also has an additional obligation of managing non-utility generator (NUG) activities. The JCP&L Restructuring Settlement dated May 24, 1999 approved unbundled retail electric rates for JCP&L customers with a rate structure that included components for BGS and market transition charge (MTC). On September 1, 2004, the MTC was renamed the non-utility generation charge (NGC) by order of the BPU for customer billing purposes. The NGC provides recovery of BPU-approved costs that are associated with committed supply energy, capacity, and ancillary services, net of all revenues from the sale of committed supply in the PJM market.

The rules set by the New Jersey Board of Public Utilities (NJBPU), as part of the BGS auction, allow JCP&L to retain ownership of all energy-, capacity-, and generator-related ancillary services from what the BPU refers to as JCP&L's "committed resources." Committed resources are owned generating units, contracted (NUG) generating capacity, or other power/energy products secured through contracts where some prior arrangement or entitlement is in place. Because of the BGS auction process, these resources do not serve load. Essentially, these rules place JCP&L in a "long" supply position, with no particular regulatory mandate for that supply's disposition other than that which is deemed prudent by the BPU. The measure of prudency assumed by JCP&L is the minimization of the excess-cost deferral account's size through a prudent disposition strategy that manages market risks. However, in the final Company Specific Addendum, which was approved by the BPU, it states that "JCP&L will continue to sell all of the energy, capacity and ancillary services associated with its Committed Supply into the PJM Spot Market unless and until the Board determines that a different sales protocol is appropriate."

JCP&L has a responsibility to manage and minimize its NGC deferral accounts. JCP&L has worked to renegotiate some of its NUG contracts, many of which have been allowed to expire, as shown in *Exhibit II-9*. These legacy NUGs can be divided into three groups as follows:

- *"Must Run" NUGs* (*originally 771 MW*) – These generators are either fixed-energy delivery power purchase agreements (PPAs) or bilateral purchases arising from renegotiated former PPAs, with predefined pricing schedules over relatively long (i.e., 20-year) periods. All NUG electricity and ancillary service output is technically part of the JCP&L supply portfolio, but because of the

BPU-allowed recovery mechanism, through the deferral account, JCP&L can expect to be "made whole" for any portion of contract cost that exceeds the PJM spot market payments at the applicable generator bus. These units are offered at zero in the PJM day-ahead market and are then paid the Locational Marginal Price (LMP) market charge price at the applicable generator bus.

- *Lakewood Dispatchable NUG* (*nominal 222 MW*) – JCP&L dispatches this facility according to PJM market opportunities. Natural gas fuel is provided by JCP&L, so the marginal cost of operation is managed through the acquisition of natural gas. Oil alternative fuel, which is supplied by Lakewood cogeneration, will be substituted when it becomes more economical than gas. Therefore, these units are offered into the PJM market at pricing that is largely based on the daily cost of natural gas versus being offered at zero, as discussed above.
- *Green Power Sources* – There is a requirement in New Jersey for "green power," referred to alternatively as "renewables," to support a BPU-established specific portion of JCP&L zonal load. This obligation is, in turn, passed onto load-serving entities serving JCP&L load. For JCP&L BGS suppliers, JCP&L allocates, without charge on a pro rata basis, its committed resources' renewable attributes after first allocating resources to fulfill its own obligations based on load served. JCP&L retains the actual electrical products delivered from these same committed resources.

By May 5, 2011, there will be only seven remaining NUG contracts, specifically Lakewood, Warren, Gloucester, Manchester, South River, Newark BoxBoard, and Parlin as shown in *Exhibit II-9* with two of those contracts expiring before the end of that year. Thus, as of the end of 2011, JCP&L will have only 316.5 MW of NUG capacity out of an original 960 MW.

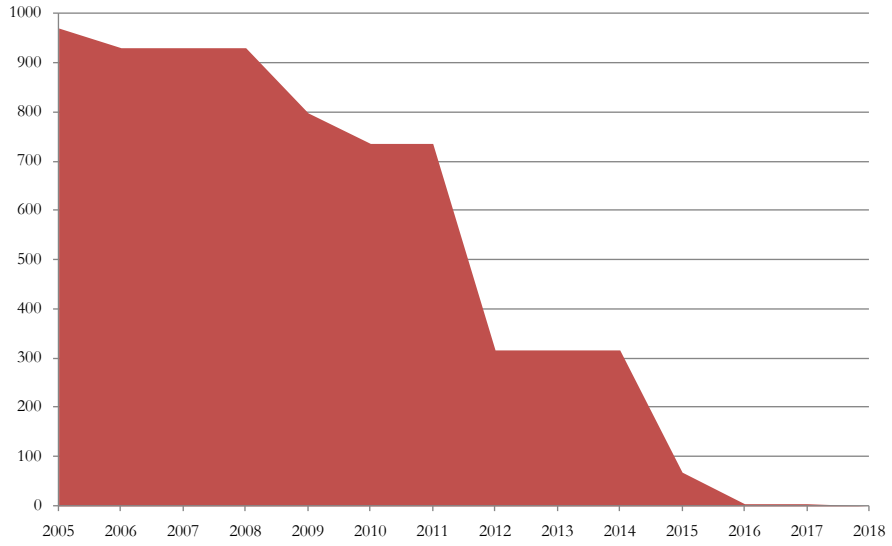
Exhibit II-9
JCP&L NUG Resources
as of June 30, 2010

NUG Contract	Commercial Operation Date	PPA Termination Date	Nameplate Rating (MW)	Negotiation Status
Bayonne	11/1/1988	11/1/2008	125.0	Terminated
Kenilworth	6/1/1989	6/1/2009	15.0	Terminated
Marcal	7/1/1989	7/1/2009	47.0	Terminated
Monmouth (MCRC)	1/1/1998	12/31/2008	7.2	Terminated
Roche Vitamins	4/1/1998	9/30/2005	40.0	Terminated
		Terminated	**234.2**	
South River	8/14/1991	8/13/2011	282.0	1st Restructuring Completed. Continuing
Newark Boxboard	11/1/1990	11/30/2015	52.0	Completed
Parlin	6/18/1991	6/17/2011	114.0	Completed
		Completed	**166.0**	
Camden	5/6/1991	5/5/2011	23.0	Continuing
Lakewood	11/1/1994	11/1/2014	238.0	Continuing
Warren	4/17/1989	4/30/2014	10.0	Continuing
		Continuing	**271.0**	
Gloucester	2/2/1990	2/1/2015	12.0	No Progress
Manchester (MRPC)	2/8/1997	2/8/2017	4.5	No Progress
		No Progress	**16.5**	
Original Total			**960.7**	

Source: Information Response 26

This remaining capacity is set to expire as shown in *Exhibit II-10*.

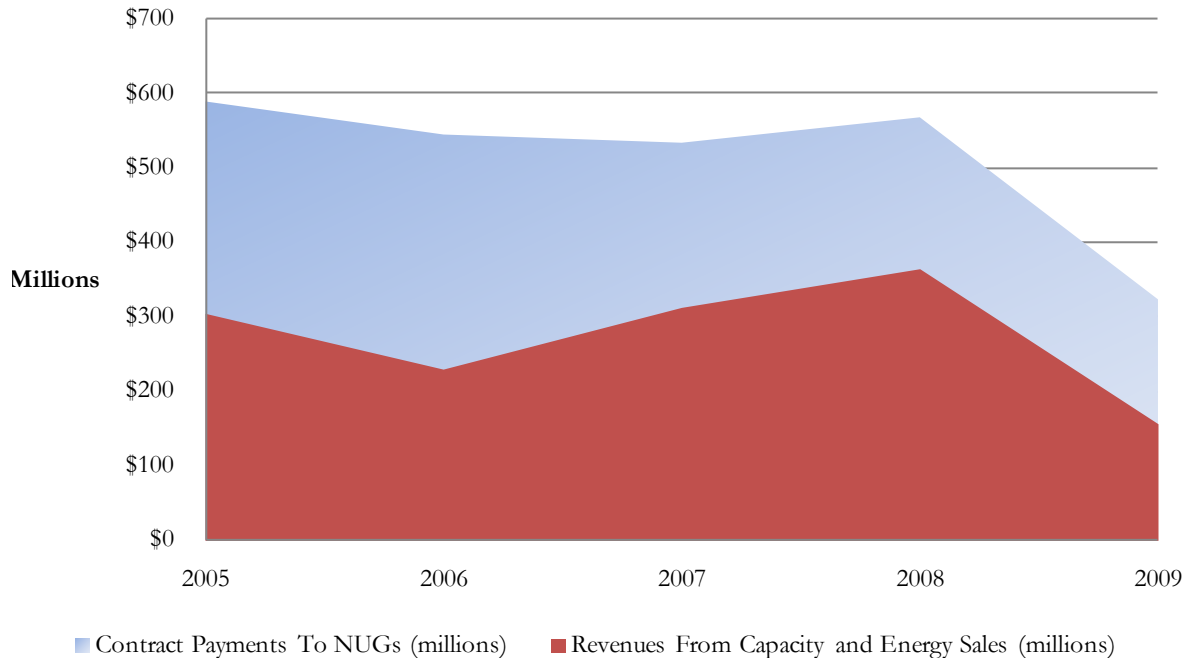
Exhibit II-10
NUG MW Commitment
as of June 30, 2010



Source: Information Response 26

The approximate costs associated with the NUGs over the last five years are shown in *Exhibit II-11*.

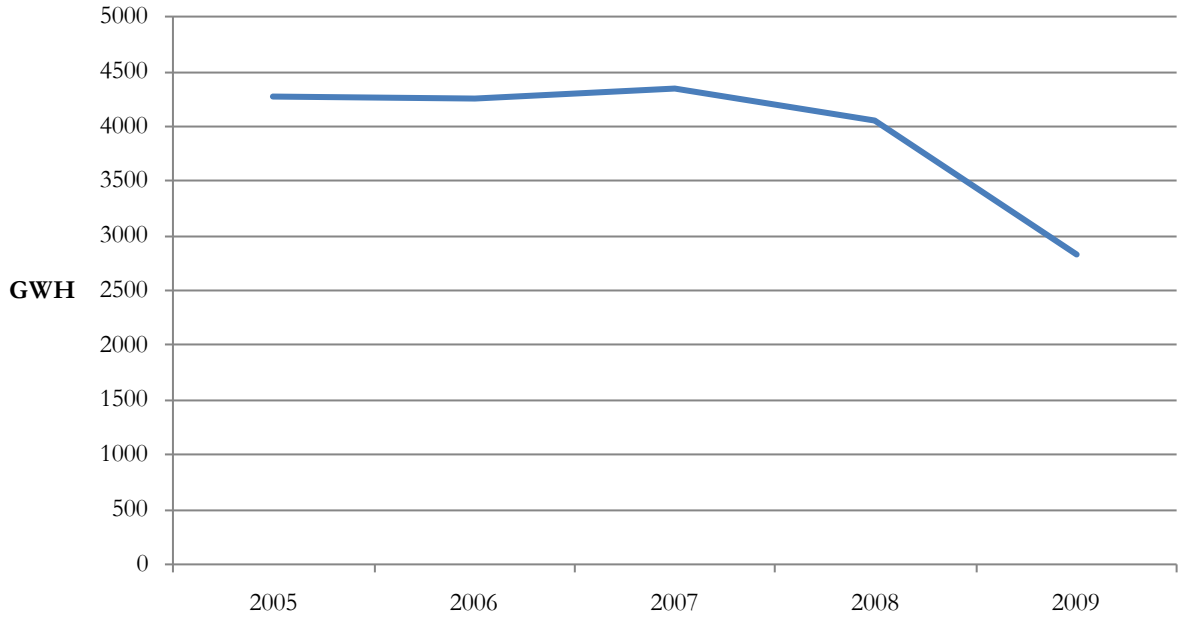
Exhibit II-11
NUG Costs
2006 to 2009



Source: Information Response 767

NUG energy is shown in *Exhibit II-12*.

Exhibit II-12
NUG Energy
2006 to 2009



Note: GWH - Gigawatt Hours
Source: Information Response 767

B. Findings & Conclusions

Finding II-1 **The only energy procured outside the BGS process is associated with the St. Lawrence/FDR project, non-utility generators (NUGs), and JCP&L's portion of the Yards Creek Pumped Storage Station.**

The only energy JCP&L procures outside the basic generation service is related to commitments that existed prior to the creation of the BGS process. With respect to the St. Lawrence/FDR project and NUGs, JCP&L takes the price offered in the PJM markets for this capacity and energy. For Yards Creek, JCP&L is a taker of PJM day-ahead spot-energy price, with the overall focus on maximizing the off-peak (pumping) to on-peak (generating) price differential opportunities.

Finding II-2 FirstEnergy (JCP&L) has developed a clear Commodity Risk Management Policy that guides energy procurement within all of FirstEnergy.

The FE Commodity Risk Management Policy defines the various roles and responsibilities for managing the risks associated with energy procurement as follows:

- Risk Policy Committee – The FirstEnergy Risk Policy Committee (RPC) was established by the Audit Committee of the FirstEnergy Board of Directors. The roles and responsibilities of the RPC are defined in the FirstEnergy Corporate Risk Management Policy.
- FE Utilities – Senior Management – The Senior Vice President – Energy Delivery & Customer Services, the Vice President – Customer Service & Energy Efficiency, and the various state and regional presidents are responsible for understanding the risks being undertaken by the RCS group and shall monitor and review periodic activity and risk reports.
- The Director, Regulated Commodity Sourcing is responsible for the effective implementation and administration of this policy.
  - The Director, RCS has primary responsibility for managing FE Utilities' total commodity risk exposures that are created through transactions in energy, capacity/APRCs, transmission, FTRs, ARRs, CFDs, ancillaries, and renewable energy requirements as related to the supply of power.
  - In the event of a supplier default or insufficient bids, the Director, RCS is responsible for the implementation of state regulatory commission– or Risk Policy Committee–approved contingency plans.
  - The Director, RCS develops commodity portfolio risk management strategies and enables the organization to execute these strategies. The Director, RCS will monitor the results of the commodity portfolio risk management strategies and the organization's effectiveness in achieving the objectives of these strategies. FE Service Company personnel will assist the RCS group in the performance of its duties.
  - The Director, RCS has responsibility for managing Metropolitan Edison Company, Pennsylvania Electric Company, and JCP&L NUG activities.
- Enterprise-wide risk management (EWRM) provides technical support to enable proper monitoring of performance and risk objectives. EWRM provides the independent risk management function for FE Utilities' commodity portfolio risk management.
  - EWRM is responsible for preparing and obtaining approval of this policy.
  - EWRM's credit risk management (CRM) and risk control provides daily monitoring of DSO master supplier agreements. It also works with RCS personnel to mitigate price risk associated with mark-to-market exposure through the contract's margining provisions.

- CRM provides independent auction managers with support by processing supplier credit requirements as stated by the applicable bidding rules and/or in the master supply agreement.

The policies are documented and well-written.

Finding II-3 The Regulated Commodity Sourcing unit is responsible for managing the risks associated with the Yards Creek Pumped Storage Station and the NUGs.

JCP&L's Regulated Commodity Sourcing unit develops the risk management programs associated with its generation and NUG responsibilities.

- RCS procures the appropriate natural gas supply and associated hedges required to meet the needs of the Lakewood NUG commitments.
- RCS bids and schedules the pumping and generation for the Yards Creek Pumped Storage Station.

Finding II-4 Two internal audits of various aspects of JCP&L's energy procurement activities have been conducted by FE's Internal Audit organization.

JCP&L has conducted two internal audits of Regulated Commodity Sourcing. The first internal audit resulted in the identification of a need to perform a mock drill that would simulate a BGS supplier default. JCP&L has procured several billion dollars of electric supply to serve its basic generation service customers through a statewide auction process, which is conducted by an independent auction manager. In the event of a BGS supplier default prior to or during the tenure of the agreement, JCP&L must ultimately ensure supply is available for those customers who are not shopping. Therefore, JCP&L has conducted a mock drill to ensure appropriate readiness. The other internal audit recommended various procedural and document improvements, which were subsequently implemented.

Finding II-5 A significant number of dollars are associated with the remaining NUG contracts, although these will be expiring over the next five years.

Although many of the NUG contracts have expired, JCP&L still has approximately 255 MW of NUG capacity to handle. The remaining contracts after May 5, 2011 will be Lakewood, Warren, Gloucester, Manchester, South River, Newark BoxBoard, and Parlin. The financial impact of these remaining contracts is shown in *Exhibit II-13*. *Exhibit II-13* shows the total contract payments by NUG and the revenue earned by sales within the PJM market. The difference between those amounts is the revenue deficiency that flows through the NGC rider. With the expiration of the South River contract (which accounted for $73 million of the $168 million deficiency) in 2011, the Lakewood NUG will account for the largest portion of the remaining deficiency. More specifically, in 2009 it accounted for approximately $31 million, as shown in *Exhibit II-13*. The remaining facilities, Warren, Gloucester, and

Manchester, are trash-to-energy facilities accounting for approximately $4.2 million. These facilities are offered into the PJM market to take the available price.

Exhibit II-13
NUG Payments and Revenue
as of December 31, 2009

NUG	Total KWH Generation	Contract Payments to NUG	Revenue Earned on Sales in PJM	Revenue Deficiency	Percent of Deficiency	Deficiency Mills/KWH
Camden	153,982,307	$13,774,849.63	$7,544,218.46	$6,230,631.17	3.71%	40.5
Composite NUG	21,714,718	$1,038,398.97	$1,112,925.06	-$74,526.09	-0.04%	(3.4)
Gloucester	91,753,328	$7,179,840.82	$4,490,043.07	$2,689,797.75	1.60%	29.3
Kenilworth	33,118	$2,233.94	$15,208.89	-$12,974.95	-0.01%	(391.8)
Lakewood	72,890,000	$48,896,123.23	$17,980,240.06	$30,915,883.17	18.39%	424.1
Manchester	35,768,990	$2,007,582.45	$1,770,746.80	$236,835.65	0.14%	6.6
Monmouth	32,535,706	$1,521,963.36	$1,650,616.27	-$128,652.91	-0.08%	(4.0)
Warren	84,697,980	$5,365,707.65	$3,922,460.24	$1,443,247.41	0.86%	17.0
	493,376,147	$79,786,700.05	$38,486,458.85	$41,300,241.20	24.57%	83.7
CES (Newark/Parlin)	0	$39,298,384.90	$0.00	$39,298,384.90	23.38%	
NJEA(South River)	2,043,550,000	$176,032,117.35	$103,102,092.39	$72,930,024.96	43.39%	35.7
Prime(Marcal)	287,940,000	$29,009,922.99	$14,468,889.60	$14,541,033.39	8.65%	50.5
	2,331,490,000	$244,340,425.24	$117,570,981.99	$126,769,443.25	75.43%	54.4
GRAND TOTAL	2,824,866,147	$324,127,125.29	$156,057,440.84	$168,069,684.45	100.00%	59.5

Source: Information Response 767

The Lakewood facility burns natural gas and/or fuel oil. JCP&L exercises its rights under the PPA to purchase natural gas for use at the facility. Natural gas price estimates are received from New Jersey Natural Gas (NJNG) for Lakewood on a pre-scheduled and intra-day basis. Intra-day natural gas has the most flexibility in scheduling so it is generally priced higher than pre-scheduled natural gas. Regulated Commodity Sourcing uses market pricing to develop all PJM day-ahead market offers for the Lakewood facility. The use of intra-day natural gas pricing for PJM offers ties the natural gas price to the timing of the "gas day" relative to the timing of the "PJM market day." This procedure attempts to mitigate the financial impact to JCP&L from offering on a pre-scheduled (cheaper natural gas) basis, having PJM take more or less hours than pre-scheduled, and then having to make up the difference at intra-day prices (more expensive).

Finding II-6 JCP&L has been reasonable in its management of the NUGs.

Although it would be ideal to have the ability to renegotiate some of the contracts such that ratepayers would not have to incur the remaining cost, it is unlikely that much renegotiation could be done given that these contracts will be expiring shortly. Furthermore, several of the contracts are tied to trash-to-energy facilities, which would further complicate these renegotiations.

The Lakewood NUG contract requires JCP&L to make a monthly payment of slightly over $3.5 million to the owner of the facility. Therefore, there is a fixed cost of approximately $42 million that would need to be overcome via the margin on the PJM market sales. With energy sales and prices decreasing in the last several years (even with natural gas prices declining), there is probably little incentive on the part of the project owner to renegotiate this contract versus allowing it to expire in 2014.

Finding II-7 The Yards Creek Pumping Station is appropriately managed by the JCP&L Commodity Resourcing organization.

Schumaker & Company consultants requested the pumping and generating schedules for the Yards Creek facility and compared those schedules to the hourly prices in the PJM market. Generally, the Yards Creek facility is pumping between 12:00 midnight and 6:00 am when energy prices are from approximately $25 to $45 per mWh and generating during the afternoon when energy prices are from $45 to $280 per mWh. JCP&L had developed a reasonable estimate for taking power during the lowest time period and for generating during periods of peak energy costs.

Finding II-8 JCP&L energy purchases have been appropriately allocated to customer classes.

The costs and sales associated with Yards Creek, St. Lawrence/FDR and the NUGS are accumulated in various general ledger accounts. On either a monthly or annual basis, balances within these accounts are reconciled to a deferral account which forms the basis for adjusting the NGC rider, if necessary, to account for major changes in economics such as the expiration of NUG contracts or other changes. Schumaker & Company consultants reviewed the work papers that are developed in making these calculations for a sample month (December 2010) and verified the reasonableness of the calculations.

Schumaker & Company reviewed the allocations of the cost and benefits associated with the Yards Creek, St. Lawrence/FDR, and NUG contract purchases. All of these costs and benefits flow through the NGC rider as follows:

- The NUG costs in excess of the sales realized into the PJM market are contained in the NGC rider. This rider is charged to all customer classes on a kWh basis.
- The Yards Creek benefits (the excess of sales into PJM over the costs of the generation) are assigned to the NGC rider. This assignment essentially lowers the overall NGC costs.
- The St. Lawrence/FDR benefits are also assigned to the NGC rider, although the rider is applicable to only the residential rate classes.

C. Recommendations

None

III. Affiliated Relationships and Affiliate Allocation Methodogies

This chapter addresses the affiliate relationships of Jersey Central Power & Light Company (JCP&L) within the FirstEnergy (FE) organization. It also focuses on the direct charging/cost allocation methodologies used for affiliate transactions between FE entities.

A. Affiliate Relationships

Background & Perspective

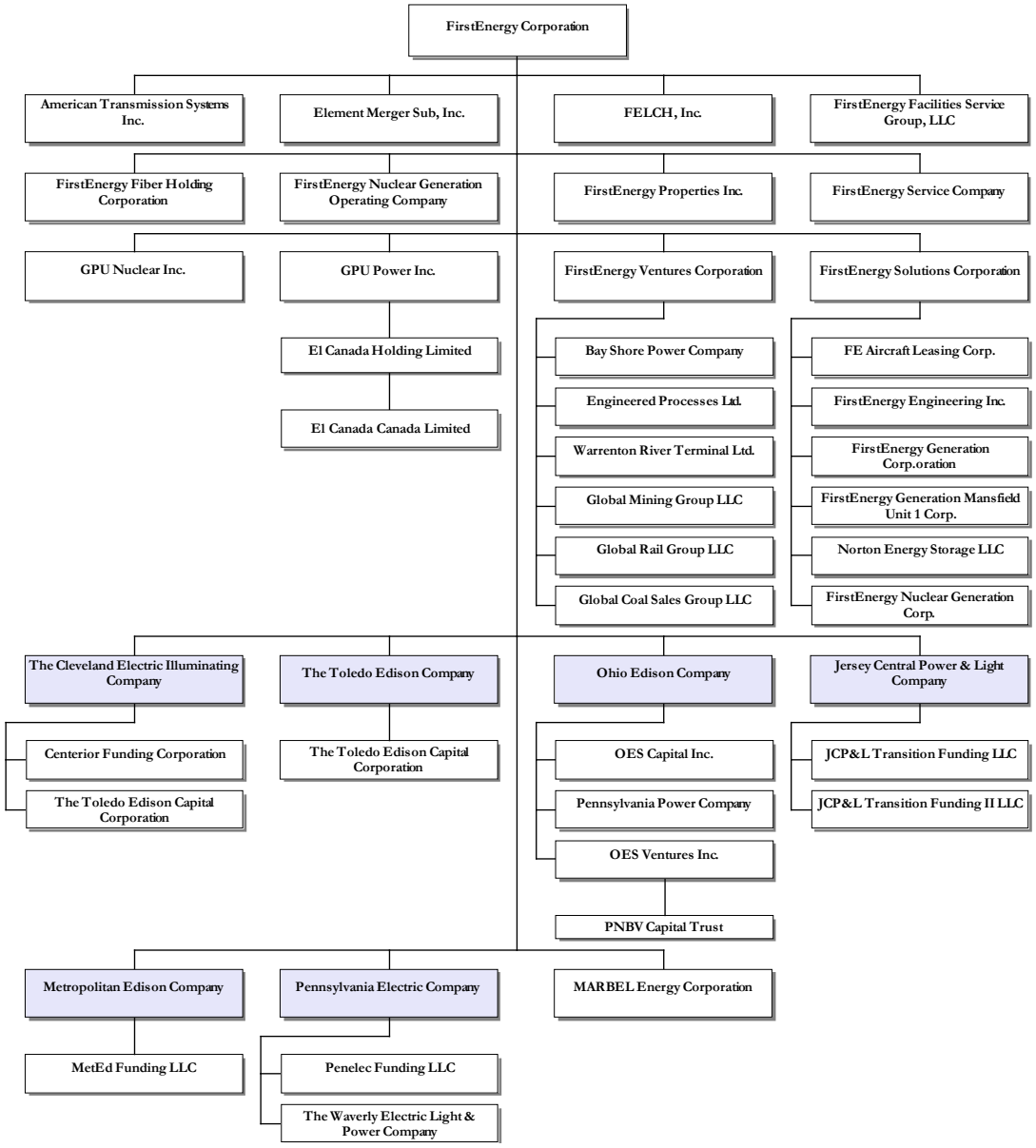
Organizational Structure

Exhibit III-1 (on the following page) displays the FE organization in which the JCP&L entity and other regulated entities are highlighted in gray. Additionally, JCP&L has two special-purpose financing entities that are wholly owned by JCP&L (i.e., JCP&L Transition Funding, LLC and JCP&L Transition Funding II, LLC) as follows:

- JCP&L Transition Funding, a Delaware limited liability company, was formed on February 24, 2000 and is a wholly-owned subsidiary of JCP&L. On February 6, 2002 in Docket No.EF99080615, JCP&L received a bondable stranded-costs rate order (financing order) from the New Jersey Board of Public Utilities (NJBPU). This order authorized the issuance of $320 million of transition bonds to securitize the recovery of bondable stranded costs associated with the previously divested Oyster Creek Nuclear Generating Station, plus upfront transaction costs. The financing order was issued in accordance with the Electric Discount and Energy Competition Act, which was enacted by the state of New Jersey in February 1999. JCP&L Transition Funding sold $320 million of transition bonds in June 2002.
- JCP&L Transition Funding II, a Delaware limited liability company, was formed on March 29, 2004 and is a wholly-owned subsidiary of JCP&L. On June 8, 2006 in Docket No.ER03020133, JCP&L received a bondable stranded-costs rate order from the NJBPU. This order authorized the issuance of transition bonds to securitize the recovery of bondable stranded costs associated with JCP&L's deferred basic generation service (BGS) net of tax account balance at July 31, 2003 plus upfront transaction costs. In August 2006, JCP&L Transition Funding II sold $182 million of transition bonds to securitize the recovery of deferred costs associated with JCP&L's supply of BGS.

JCP&L did not purchase and does not own any of the transition bonds, which are included as long-term debt on FirstEnergy's and JCP&L's consolidated balance sheets. The transition bonds are the sole obligations of JCP&L Transition Funding and JCP&L Transition Funding II and are collateralized by each company's assets, which consist primarily of bondable transition property.

Exhibit III-1
FirstEnergy Organization
as of June 30, 2010



Source: Information Response 8

JCP&L sold its bondable transition property to JCP&L Transition Funding and JCP&L Transition Funding II. As servicer, JCP&L manages and administers the bondable transition property, including the billing, collection, and remittance of the transition bond charge (TBC), pursuant to separate servicing agreements with JCP&L Transition Funding and JCP&L Transition Funding II. For the two

series of transition bonds, JCP&L is entitled to aggregate annual servicing fees of up to $628,000 that are payable from TBC collections.

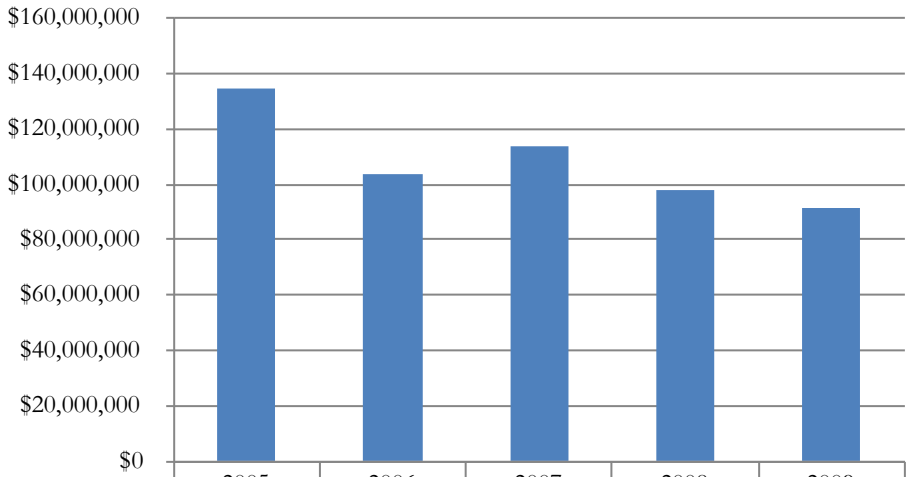
Both JCP&L Transition Funding and JCP&L Transition Funding II were established as Delaware limited liability companies and are subject to annual report filing fees of $250 each. They are single-member limited liability companies, which are treated as "disregarded entities" (JCP&L divisions) for federal and state income tax purposes. Accordingly they are therefore not subject to federal, New Jersey or Delaware income or franchise taxes.

Affiliate Transactions from/to JCP&L

Service Transactions

Exhibit III-2 illustrates yearly service charges from FE affiliates to JCP&L.

Exhibit III-2
Service Transactions from Affiliates to JCP&L
2005 to 2009



	2005	2006	2007	2008	2009
From Affiliates to JCP&L	$134,657,749	$103,477,613	$113,445,684	$97,855,121	$91,316,856

Source: Information Response 10

Exhibit III-3 illustrates the type of affiliate billings to JCP&L by billing company for the period spanning 2005 through 2009.

Exhibit III-3
Service Transactions from Affiliates to JCP&L
by Company and by Billing Type
2005 to 2009

Billing (Home) Company	What Was Billed	2005	2006	2007	2008	2009
Cleveland Electric	Mutual Assistance	$3,588,790	$89,135	$151,857	$2,093	$113
Cleveland Electric	Planning for ED A&G	$0	$0	$170,473	$11,402	$0
FE Generation	Environmental Support	$340,836	$0	$0	$0	$0
FE Generation	Forked River	$3,496,646	$1,417,199	$973,544	$350,592	$227,127
FE Generation	Forked River Fuel	$5,705,347	$3,060,670	$2,324,334	$808,870	$0
FE Generation	Merrill Creek Suport	$0	$3,609	$0	$0	$0
FE Generation	Yards Creek	$6,057,021	$3,025,886	$6,353,254	$4,320,868	$3,644,283
FE Nuclear Co.	Activity Allocations	$46	$42	$0	$61	$184,040
FE Nuclear Co.	Assessments	$230,639	$147,728	$145,106	$158,740	$0
FE Properties	Ghent Road Bldg. & West Akron Bldg	$0	$0	$4,972	$81,267	$100,711
FE Service Co.	Activity Allocations	$8,002,132	$4,795,691	$4,925,711	$4,286,194	$3,219,220
FE Service Co.	Assessments	$79,683,569	$84,256,291	$92,806,378	$81,166,066	$76,893,498
FE Service Co.	Misc	$1,005,818	($406,242)	$283,432	$187,340	$339,264
FE Service Co.	Settlement Activity Allocations	$4,113,057	$4,310,383	$2,527,922	$3,625,399	$4,703,160
FE Service Co.	Year End PUHCA Adjustment	$9,474,167	$0	$0	$0	$0
FE Solutions	Commodity Risk Management	$46,562	$9,680	$0	$0	$0
GPU Nuclear	Assessments	$2,114,147	$247,938	$402,546	$677,045	$686,708
Met-Ed	Airport Building	$93,485	$210	$0	$0	$0
Met-Ed	GPU Nuclear Building	$0	($57,293)	$47,523	($27,327)	$0
Met-Ed	Mutual Assistance	$1,166,736	$67,405	$246,830	$202,066	$21,599
Ohio Edison	Meter Testing	$1,377	$342	$124	$289	$44
Ohio Edison	Mutual Assistance	$4,321,202	$162,907	$64,558	$249,581	$0
Penelec	Broad Street Building	$208,913	$304,583	$285,415	$222,997	$0
Penelec	Mutual Assistance	$1,181,653	$177,244	$199,250	$115,598	$368
Penn Power	Mutual Assistance	$475,285	$117,385	$66,646	$0	$0
Toledo Edison	Mutual Assistance	$1,654,951	$88,946	$0	$11,190	$0
FE Service Co.	Activity Allocations	$0	$8,871	$16,836	$16,061	$11,902
		$132,962,377	$101,828,610	$111,996,712	$96,466,392	$90,032,038

Source: Information Response 10
*Transactions to JCP&L Transition Funding
ED=Energy Delivery
A&G=Administrative & General
PUHCA=Public Utility Holding Company Act

The affiliate providing the majority of services and, thus, the largest costs to JCP&L is FirstEnergy Service Company (SERVECO), which provides corporate/governance and transactional services to FirstEnergy Corporation subsidiaries. The costs charged by affiliates other than SERVECO to JCP&L include the following:

- Ghent Road/Summit Park facilities benefiting JCP&L that are billed by FE Properties
- The Broad Street building in Johnstown benefiting JCP&L that is billed by Penelec
- Beta Lab benefiting JCP&L that is billed by FirstEnergy Nuclear Operating Company (FENOC)

- Forked River operations and maintenance (O&M) expenses billed by FirstEnergy Generation Corporation (Forked River generating station was sold to an unrelated third party in April 2008)
- Yards Creek O&M expenses billed by FirstEnergy Generation Corporation (Yards Creek pump storage station is jointly-owned by JCP&L and PSE&G, although JCP&L operates through the plant through FirstEnergy Generation Corporation)
- Mutual assistance work by utility affiliates on various NJ storms

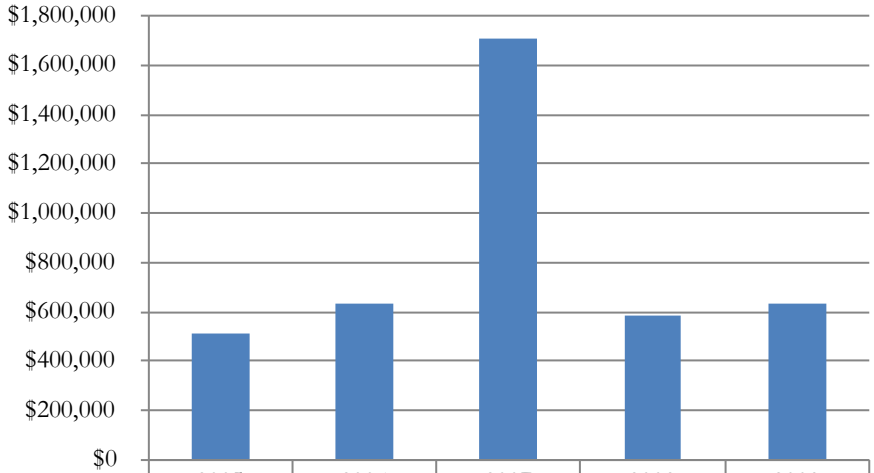
Excluded from *Exhibit III-2* and *Exhibit III-3* is interest expense on intercompany debt (money pool) from FirstEnergy Corporation, as this interest expense is an item covered by a separate NJBPU order and reflected directly on JCP&L's income statement. Although Schumaker & Company still characterizes this expense as an affiliate cost, our discussion of this item can be found in *Chapter VIII – Finance & Accounting* of Schumaker & Company's audit report.

Some "affiliate charges" that were paid to First Communications, which is 15% owned by FirstEnergy, were also excluded from *Exhibit III-2* and *Exhibit III-3*, because they are services provided on an aggregate basis, with the costs similarly paid on an aggregate basis by SERVECO and allocated to the associated companies. As part of the infrastructure used for the FE Information Technology (IT) function, First Communications, Inc. (an affiliate entity by virtue of FE's approximately 15% interest in First Communications) procures some special circuits (voice, data, and SCADA circuits) that are provided by AT&T and Qwest as well as other carriers (e.g., Verizon, AT&T, and MCI). These circuits provide IT/data processing within the FE system. In addition, FirstEnergy uses First Communications to provide long-distance services, limited local services, limited cellular services, and some special circuits in its three-state (OH, PA, and NJ) service area. The long-distance services provided by First Communications include outgoing intrastate and interstate long-distance services and incoming toll-free service. For some long-distance services, First Communications is the actual provider/carrier provider. For others, First Communications resells the services of AT&T and Qwest. In the Akron, OH area, First Communications provides limited local telephone service to some Akron locations (such as the West Akron Campus and the Fairlawn Service Center). Also, Verizon and Nextel cellular services are provided through First Communications, which also administers these cellular accounts for FirstEnergy. As part of the infrastructure used for the FE IT function, First Telecom Services, LLC (FTS), a subsidiary of First Communications, Inc., is used for the construction of external and affiliated fiber projects, the administration of "dark fiber" leases and agreements with other external carriers, and the coordination of external and affiliated fiber construction and repairs projects across FirstEnergy's three-state area.

Also excluded from *Exhibit III-2* and *Exhibit III-3* are charges associated with the FERC-filed Restated Composite Power Pooling Agreement among Met-Ed, Penelec, and JCP&L pertaining to Met-Ed's ownership interest in certain transmission lines (including the Susquehanna East line) built to transmit power from Three Mile Island (TMI), the costs for which are shared by the former GPU operating companies in accordance with the FERC-filed Restated Composite Power Pooling Agreement reflecting their respective former and current former joint ownership interests in the TMI facilities (i.e., Met-Ed-50%, JCP&L-25%, Penelec-25%).

Exhibit III-4 illustrates yearly service charges from JCP&L to FE affiliates.

Exhibit III-4
Service Transactions from JCP&L to Affiliates
2005 to 2009



	2005	2006	2007	2008	2009
From JCP&L to Affiliates	$515,850	$632,429	$1,706,185	$583,663	$635,515

Source: Information Response 10

Exhibit III-5 illustrates the type of billings by company for the period spanning 2005 through 2009.

Exhibit III-5
Service Transactions from JCP&L to Affiliates
by Company and by Billing Type
2005 to 2009

Billed (Receiving) Company	What Was Billed	2005	2006	2007	2008	2009
American Transmission Systems, Inc.	Lease/Rental Building - MGO	$16,392	$14,894	$14,528	$13,631	$14,572
American Transmission Systems, Inc.	Work Trucks	$0	$1,877	$356	$315	$42
Cleveland Electric	Lease/Rental Building - MGO	$51,135	$46,112	$43,072	$34,820	$35,488
Cleveland Electric	Mutual Assistance	$26,296	$42,403	$52,259	$170,417	$35,565
FE Corporation	Lease/Rental Building - MGO	$31,000	$24,253	$15,148	$15,179	$15,179
FE Corporation	Public Affairs Lobbyist Office	$63,685	$67,704	$67,162	$69,485	$69,212
FE Facilities	Lease/Rental Building - MGO	$415	$104	$0	$0	$0
FE Fiber Holdings	Lease/Rental Building - MGO	$145	$199	$156	$46	$0
FE Fiber Holdings	Mutual Assistance	$0	$177	$2,961	$0	$0
FE Generation Corporation	Forked River/Yards Creek Support	$31,415	$3,040	$0	$0	$57,265
FE Generation Corporation	Lease/Rental Building - MGO	$20,039	$17,790	$13,876	$28,265	$29,819
FE Nuclear	Lease/Rental Building - MGO	$98	$118	$161	$455	$425
FE Nuclear Generation Corporation	Lease/Rental Building - MGO	$0	$16,891	$17,374	$34,380	$31,200
FE Properties	Lease/Rental Building - MGO	$38	$63	$54	$105	$174
FE Solutions	Commodity Operations	$0	$0	$1,219	$0	$0
FE Solutions	Lease/Rental Building - MGO	$1,485	$2,769	$5,660	$2,735	$1,093
FE Ventures	Lease/Rental Building - MGO	$867	$1,287	$337	$1,117	$820
GPU Diversified Holdings	Lease/Rental Building - MGO	$25	$36	$19	$17	$17
Marbel	Lease/Rental Building - MGO	$112	$121	$66	$121	$74
Met-Ed	Lease/Rental Building - MGO	$27,754	$26,063	$28,020	$30,479	$31,359
Met-Ed	Mutual Assistance	$3,443	$140,476	$1,213,457	$41,142	$0
Ohio Edison	Lease/Rental Building - MGO	$63,853	$56,415	$52,206	$43,199	$44,413
Ohio Edison	Mutual Assistance	$20,501	$35,899	$37,634	$47,878	$24,846
Penelec	Lease/Rental Building - MGO	$28,826	$27,055	$27,679	$25,773	$25,956
Penelec	Mutual Assistance	$87,852	$55,015	$80,489	$0	$195,318
Penn Power	Lease/Rental Building - MGO	$10,870	$10,014	$7,734	$4,887	$4,432
Penn Power	Mutual Assistance	$0	$4,658	$1,489	$0	$0
Toledo Edison	Lease/Rental Building - MGO	$29,154	$25,904	$23,068	$19,216	$18,245
Toledo Edison	Mutual Assistance	$449	$11,091	$0	$0	$0
		$515,850	**$632,429**	**$1,706,185**	**$583,663**	**$635,515**

Source: Information Response 10
MGO = Morristown General Office

Costs charged by JCP&L to affiliates other than SERVECO, but which are allocated directly to such affiliates through SERVECO, include the following:

- Forked River fuel cost that is billed to FirstEnergy Generation Corporation
- Morristown building space benefiting the affiliates that is charged directly to affiliates
- Public affairs lobbyist office in Trenton that is billed to FirstEnergy Corporation

Employee Transfers

Exhibit III-6 illustrates the number of employees transferring in and out of JCP&L and its affiliates. The net change since 2005 has been three employees from JCP&L to its affiliates. In only one year (2008) has there been a large net decrease from JCP&L to its affiliates. One of the drivers of such shifts between JCP&L and affiliates is movement of engineers between JCP&L and SERVECO, which may depend on the construction projects being undertaken at a given time. Another contributing cause may of employee shifts is JCP&L employees going out on long-term disability (LTD), as employees on LTD are moved to a SERVECO cost center and stay there unless or until they return to their position.

Exhibit III-6
Employee Transfers between JCP&L and Affiliates by Year
2005 to 2010 (Through August 31, 2010)

Transferring from	Transferring to	2005	2006	2007	2008	2009	2010	Grand Total
JCP&L	ATSI	1						1
JCP&L	Cleveland Electric	1			1			2
JCP&L	FE GENCO	1	2					3
JCP&L	Met-Ed	1		7	3	1	1	13
JCP&L	Ohio Edison	1						1
JCP&L	Pennelec	2			1			3
JCP&L	SERVECO	8	9	11	15	9	5	57
	From JCP&L	**15**	**11**	**18**	**20**	**10**	**6**	**80**
ATSI	JCP&L		1					1
Cleveland Electric	JCP&L		1					1
FE GENCO	JCP&L						2	2
Met-Ed	JCP&L	1		3	1		1	6
Ohio Edison	JCP&L						1	1
SERVECO	JCP&L	11	12	18	6	8	10	65
Toledo Edison	JCP&L		1					1
	To JCP&L	**12**	**15**	**21**	**7**	**8**	**14**	**77**
	Net	**(3)**	**4**	**3**	**(13)**	**(2)**	**8**	**(3)**
	Grand Total	**27**	**26**	**39**	**27**	**18**	**20**	**157**

Source: Information Response 677

Charges related to personnel transfers (such as moving expenses) between companies (for example, an employee transferring from JCP&L to Metropolitan Edison (Met-Ed)) are not billed from one company to another. Rather, such expenses are charged directly to the company to which the employee is transferred. In this example, the moving expenses would be charged directly to Met-Ed, thereby precluding the need for an affiliated transaction regarding moving expenses. Then, on the effective date of the employee transfer, the salary and benefits of the employee transferring from JCP&L to Met-Ed

are charged to the cost center of his or her new Met-Ed organization/department, not to his or her former JCP&L organization/department.

Asset Transfers

No assets transferred between JCP&L and its FE affiliates during 2005 and 2006; however, there were assets transferred from JCP&L to its affiliates between 2007 and 2010. The majority of these asset transfers were associated with corrections of previously transferred assets from SERVECO to FE operating companies that resulted in a transfer of assets with a net book value of $820,177.66 from JCP&L to SERVECO, Cleveland Electric Illuminating (CEI), and Ohio Edison Company (OE). Additionally, there were substation assets (transformers and circuit breakers) with a net book value of $119,706.04 that were transferred from JCP&L to Met-Ed. According to FE management, the majority of these transactions that occurred in 2007 to 2009 were uncommon and driven by issues resulting from SERVECO's ownership of assets used by the operating companies, as mentioned above. As a 2007 example of a correction of previously transferred assets from SERVECO, SERVECO transferred to the operating companies, including JCP&L, assets associated with certain buildings in Ohio that were used to support energy delivery activities throughout the FE territories. The asset values of these buildings, which included the Main Avenue customer center, the employee training center, and the FE call center, were allocated to all the operating companies. It was later determined that the asset values of the buildings that are located in Ohio should remain with companies in Ohio and not be allocated to other companies outside Ohio. This decision also included equipment housed in these buildings, such as office furniture and computer equipment. Consequently, these assets were transferred to either the Ohio operating company in whose territory the building resided or back to SERVECO in early 2008.

Additionally, during this same period, SERVECO transferred assets to JCP&L with a total value of $11,877,779.71, which consisted primarily of general plant items, such as office furniture, data processing equipment, and software. Among the assets transferred from SERVECO to JCP&L were buildings (training sites) that were constructed for Energy Delivery (ED) using SERVECO project designations. The department, which had the responsibility to create these sites (lineman training facilities), was a SERVECO department working for ED. The asset values of these projects were transferred to the appropriate operating company during their closeout analysis. For example, the Phillipsburg training site was constructed using a SERVECO project designation. When the project was placed in service, a SERVECO asset was created. This asset was then transferred to JCP&L because this facility is used to train JCP&L employees and the building is located in New Jersey.

Findings & Conclusions

Finding III-1 **FirstEnergy and JCP&L generally met compliance with competitive service statutes and sections of the New Jersey Administrative Code, with the exception of any Phase I findings identified in this report.**

Specifically with regard to affiliate relationships, we examined and determined whether the holding company structure, affiliates, and their diversified activities have had or may have any detrimental effects on JCP&L. We reviewed and evaluated JCP&L's interactions with its affiliates, including but not limited to:

- A review of JCP&L's contracts and transactions with FE and with JCP&L's other affiliates
- An evaluation of the independence of purchasing on behalf of JCP&L on all staff levels and an assessment of such purchasing's performance in acting in the best interest of JCP&L and its ratepayers
- An evaluation of JCP&L's relationship with FE and its affiliates and the ability of JCP&L's internal controls and structure to allow them to make purchases on behalf of JCP&L that are in the best interest of JCP&L and its ratepayers
- An examination and determination of whether JCP&L has an internal system to provide assurance that its goals and objectives are accomplished at the lowest possible cost and the maximum benefit to its ratepayers – This should give a true and accurate account of the transactions of JCP&L and its affiliates and show that they have been carried out with integrity and according to standards consistent with regulatory and legal requirements.
- An examination and determination of whether JCP&L has internal controls that protect against irregular, illegal, and/or improper transactions, including accounting and financial activities that could result in trading irregularities, market price manipulation, false price information, or unfair cost allocations from FE or any of its affiliates to JCP&L
- A review of the following communication areas, including:
  - Evaluation of the internal controls and flow of information among JCP&L, FE, and JCP&L's other affiliates
  - Evaluation of the correspondence between directors and officers to determine if discussions were conducted at arms' length, in a way that ensured compliance with affiliate relationships and fair competition standards and in the best interest of JCP&L's ratepayers.

With regard to cost allocation methodologies, we reviewed the following:

- Identification of the accounting and allocation procedures for separating the costs of JCP&L intercompany transactions from affiliates

- Evaluation of the accuracy of allocations when allocating joint/common costs between JCP&L and FE/its affiliates by providing direct cost allocations when possible and explanations where the costs cannot be directly allocated
- Review of the timesheet reporting practices of employees with shared JCP&L and FE responsibilities to determine allocations and whether the duties of employees who bill time for JCP&L and FE and/or its affiliates create the potential for cross-subsidy
- Review and assessment of the pricing policies between affiliate interests (e.g., the market price of electricity compared to the cost of electricity purchased by JCP&L)
- Evaluation of competitive and noncompetitive bidding procedures
- Identification of all of JCP&L's lease arrangements with FE and its affiliates to determine if: 1) their terms are consistent with lease arrangements in competing local markets; 2) they have recommended cost allocations; and 3) they are set at arms' length
- Review of affiliate charges and cost allocation methodologies among JCP&L, FE, and its affiliates for adherence to applicable legal, regulatory, and contractual requirements

See *Phase I* findings where Schumaker & Company has identified areas in need of improvement.

Finding III-2 All affiliate arrangements involving JCP&L do not have agreements currently in place.

A *service agreement*, which includes a detailed description of services and allocation methodologies, was dated June 1, 2003 and was executed effective June 30, 2003 between FirstEnergy Service Company (SERVECO) and its client companies (Ohio Edison Company, Cleveland Electric Illuminating Company, Toledo Edison Company (TE), Pennsylvania Power Company (Penn Power), American Transmission Systems, Inc. (ATSI), Pennsylvania Electric Company (Penelec), Metropolitan Edison Company, JCP&L, Waverly Electric Power & Light Company, and York Haven Power Company). According to FE management, this agreement, which prescribes how transactions between SERVECO and affiliates are to be handled and includes a listing of allocation factors, has been approved by the Federal Energy Regulatory Commission (FERC) and state regulatory commissions, including the NJBPU. Any new allocation factors, as well as any major changes in the application of these allocation factors, require FERC and NJBPU approval; however, no changes have occurred since the agreement was initially approved in 2003. FirstEnergy's cost allocation manual (CAM) is not required to be submitted to the FERC or the NJBPU for approval.

In Section 5 of the SERVECO/JCP&L agreement, it states that JCP&L and SERVECO are to prepare a service request on or before September 30th of each year that lists the services to be provided to JCP&L by SERVECO and any special arrangements related to the provision of such services for the coming year. Such specifics are based on services provided during the preceding year. The section also indicates that JCP&L and SERVECO may supplement the service request during the year to reflect any additional or special services JCP&L wishes to obtain from SERVECO and the arrangements relating thereto. Rather than preparing formal service requests each year, centralized services provided by

SERVECO to affiliate companies are reviewed in connection with the annual review of cost allocation methods used and affiliate companies billed. FirstEnergy management then, as needed, modifies the existing centralized services. The services provided are also reviewed in connection with the annual budgeting process, which is based on the continuation of existing centralized services as well as additional centralized services required to meet the needs of affiliate companies.

Other affiliate agreements involving JCP&L include:

- A *mutual assistance agreement* was executed on October 28, 1993 among JCP&L, Met-Ed, Penelec, GPU Service Corporation (GPUSC), and GPU Nuclear (GPUN) Corporation, when JCP&L was part of the General Public Utilities (GPU) organization. It does not include FE's OH-based regulated utilities (i.e., OE, CEI, and TE). This agreement is a legacy agreement and there is no updated agreement that includes all of FE's operating companies. However, a proposed amended and restated mutual assistance agreement (ARMAA), which would include these FE Ohio-based utility companies, has been submitted to the Pennsylvania Public Utilities Commission (PaPUC). This agreement was pending review and approval by the PaPUC at the time of Schumaker & Company's fieldwork, but has since been approved by the PaPUC. No up-to-date ARMAA has been filed with the NJBPU or the Public Utilities Commission of Ohio (PUCO), although JCP&L had indicated that (a) it has executed the ARMAA that was recently approved in PA, and (b) Section 9 of the ARMAA reflects the need for JCP&L to obtain NJBPU approval with respect to transactions involving management, advisory, construction, or engineering services under the ARMAA in accordance with statutory requirements but not for all transactions. JCP&L has also indicated that it is not aware of any regulatory requirements relative to the filing of the ARMAA in Ohio.
- A *BGS master supply agreement* dated February 27, 2010 between JCP&L and FirstEnergy Solutions (FES) was executed. (Dollar figures are not included in either *Exhibit III-3* or *Exhibit III-5* because this contract reflects FES as a BGS supplier to JCP&L, not service transactions as generally included in these exhibits.)
- A *communications protocol document*, dated February 1, 2008, between the FE Regulated Commodity Sourcing Group (part of the JCP&L organization) and FE Generation Company (GENCO), for the Yards Creek station (a pumped storage facility) and the Forked River generating station was executed. This document delineates the relative responsibilities between Regulated Commodity Sourcing, which dispatches the plant and owns 50% of the output, and FirstEnergy Generation Corporation, whose employees physically operate the plant. It is not really an affiliate agreement.
- A *capacity use and service agreement*, a *facilities lease and indefeasible right-of-use agreement*, and an *agency agreement*, respectively, were entered into in 1998 pursuant to the NJBPU Order in Docket No.EE97050350 between JCP&L (and certain other FirstEnergy utilities) and a counterparty then known as GPU Telcom Services, Inc. (GPU Telecom). Since 1998, there have been several transactions that have impacted the identity of the counterparty to those agreements, including internal re-organizations following the 2001 merger of GPU and FirstEnergy and the

subsequent sale of portions of the business previously carried on by GPU Telcom. Transactions performed include the following:

- Subsequent to the GPU/FirstEnergy merger in late 2001, GPU Telcom Services, Inc. was merged into FirstEnergy Telecom Services, Inc. By virtue of that merger, FirstEnergy Telecom Services, Inc. succeeded GPU Telcom Services, Inc. as the counterparty to the 1998 agreements.
- Effective March 8, 2008, substantially all of the assets of FirstEnergy Telecom Services, Inc. were sold to First Telecom Services, LLC, a subsidiary of First Communications, Inc. (FirstEnergy Corporation currently owns an approximately 15% interest in First Communications), and the 1998 agreements were assigned to FTS. (As part of this transaction, FirstEnergy Telecom Services, Inc. changed its name to FirstEnergy Fiber Holdings Corporation.)
- On August 20, 2009, FTS transferred and assigned the wireless portion of its interests in the 1998 agreements to Diamond, a subsidiary of Diamond Communications, LLC. This transfer and assignment divided the lines of business covered by the agreements into two separate businesses: (i) the land-based fiber optic business, which remains with FTS; and (ii) the wireless business, which operates, leases, and develops structures for wireless equipment and facilities, both of which have been transferred to Diamond. According to JCP&L management, there were no changes in the financial implications for JCP&L and its customers under the 1998 agreements as a result of this transaction.

The annual revenue received by JCP&L under the three agreements for the years 2005 through 2009 and year-to-date through November 2010 from (i) FirstEnergy Telecom Services, Inc. (now FirstEnergy Fiber Holdings Corp.) for 2005 through March 8, 2008, (ii) FTS from March 8, 2008 through August 20, 2009, and (iii) FTS and Diamond from August 20, 2009 through December 31, 2010 is summarized in *Exhibit III-7*.

Exhibit III-7
FTS/Diamond Revenues Paid to JCP&L
2005 to 2009

REVENUES PAID TO JCP&L	2005	2006	2007	2008	2009
5% Gross Revenue	$ 385,003.65	$ 369,096.55	$ 369,480.03	$ 436,221.56	$ 465,540.69
Wireless Fees	773,476.45	943,745.64	893,445.44	972,114.79	981,297.72
Right of Way (ROW) Fees	816,235.36	799,247.38	776,645.55	776,649.61	776,709.55
Building Rental/Lease/Other	145.20	199.26	156.43	45.54	454.93
TOTAL	$ 1,974,860.66	$ 2,112,288.83	$ 2,039,727.45	$ 2,185,031.50	$ 2,224,002.89

Source: Information Response 877

Some of the affiliate relationships involving JCP&L do not currently have up-to-date agreements in place, with identified issues including:

- The mutual assistance agreement with FE's OH-based utilities (OH, CEI, and TE) is in effect for PA, but not NJ or OH; an ARMAA has been approved by the PaPUC, but has not been filed in NJ where JCP&L has indicated (as discussed above) that a filing is not necessary except for designated transactions and OH.
- FE Properties charges JCP&L for space provided to SERVECO technology employees at the Ghent Road Building and the West Akron Building. JCP&L indicates that these arrangements are put in place by SERVECO under the JCP&L/SERVECO service agreement, but as a matter of convenience and efficiency are directly charged in the SAP system to JCP&L.
- FE Nuclear services associated with use of the Beta Lab to JCP&L; however, mutual assistance agreement filed in NJ refers to GPUSC and GPUN, not FENOC. JCP&L also indicates that arrangements are put in place SERVECO under the JCP&L/SERVECO service agreement, but as a matter of convenience and efficiency are directly charged in the SAP system from FENOC to JCP&L.
- JCP&L services involving lease/rental building and work trucks for SERVECO employees located at the Morristown General Office (MGO) to ATSI. JCP&L indicates that these arrangements are put in place by SERVECO under the JCP&L/SERVECO service agreement, but as a matter of convenience and efficiency are directly charged in the SAP system from JCP&L, not SERVECO.
- JCP&L lease/rental building services for SERVECO employees located at the Morristown General Office (MGO) to FE Corporation, FE Facilities, FE Generation Corporation, FE Nuclear, FE Nuclear Generation Corporation, FE Solutions, and GPU Diversified Holdings. JCP&L indicates that these arrangements are put in place by SERVECO under the JCP&L/SERVECO service agreement, but as a matter of convenience and efficiency are directly charged in the SAP system from JCP&L, not SERVECO.

However, these multiple-tiered transactions through SERVECO to affiliates, included in the last four bulleted items above, are not appropriately discussed within the JCP&L/SERVECO agreement.

Although signed by the various parties, the JCP&L/FE Generation Corporation communications protocol for Yards Creek and Forked River is merely a communications protocol; it is not an affiliate agreement.

Finding III-3 FirstEnergy does not routinely perform studies to determine the cost-competitiveness of corporate functions as compared to outsourcing these functions.

No studies have been performed by or for JCP&L regarding the effectiveness and efficiency of the centralized functions performed by SERVECO. (JCP&L's parent (FirstEnergy Corporation) does not

have any employees; therefore it does not provide any services.) Moreover, it has not been assessed whether the SERVECO functions are provided most effectively and efficiently on a centralized rather than decentralized basis or whether the function could be provided at a lower cost by an outside party. Furthermore, JCP&L is not currently using any benchmarking reports involving cost and service competitiveness in either corporate/governance or transactional areas. This oversight ignores a 2005 internal audit report that recommended such activities be formally controlled and coordinated by the Strategic Planning and Operations Finance group (SP&O Finance) to ensure that periodic benchmarking activities are performed. It was also agreed to formalize service-level standards by July 31, 2005 to describe the scope of services to be performed by SERVECO employees, for whom they would be performed, and the cost allocation methodologies to be employed. These standards were to identify a few key performance measures to manage the effectiveness and efficiency of the services rendered. They were also to detail the benchmarking activities the shared services organizations planned to perform. While cost allocation methodologies have been defined, no benchmarking is centrally controlled and routinely performed, nor are service-level agreements generally used.

Finding III-4 **Although the management of affiliate costs is appropriately located within various groups of the SERVECO financial management function, Sarbanes-Oxley tests in 2008 and 2009 indicated that no formal written process or procedures documentation exists regarding the allocation factor review process.**

The SERVECO Assistant Controller conducts an annual review of the cost allocation factors used for all of the service company's cost centers. This review consists of a communications package to those who are responsible for each of the cost centers to determine if the default cost allocation factor used (one allocation factor for each cost center) and companies listed as benefiting from the services provided are appropriate. Through this communications package, the Assistant Controller is able to assess the need for any changes. The General Accounting group in Reading (PA) then makes any identified changes to the allocation factors or companies charged based on these reviews. These changes are generally made in October and November of each year so that the budget for the following year will reflect the desired allocation methodologies.

The allocation factor review process is considered a Sarbanes-Oxley (SOX) Section 404 control and the performance of this control is tested each year after the review has been performed. Interviews with FE representatives, as well as SOX 2008 and 2009 test results, indicated that there is no written process or procedure explaining the allocation factor review process. Affiliate training, however, is conducted when a SERVECO employee first joins the company and every two years thereafter.

On an ongoing basis, cost allocations are managed by the same General Accounting group in Reading (PA). FE's policy is to direct charge as much as possible from SERVECO with everything else being allocated. Charges between other affiliates are to be directly charged. (An example involving JCP&L is Yard's Creek, which is managed by FE Generation.) Affiliate charges are brought about by the coding of transactions in SAP. Whatever is left over every month, after direct charges, is allocated using

allocation factors (discussed later in *Finding III-9* and *Finding III-10*). The SERVECO costs are cleared out each month to either an affiliate or the parent company.

Finding III-5 Employee transfers among JCP&L and its affiliates have generally netted to roughly zero in the last six years.

As shown previously in *Exhibit III-6*, transfers of employees among JCP&L and its affiliates have in some years been net positive and others net negative. Overall in the last six years, however, the transfers of employees have been a negative three (3) employees.

Finding III-6 Asset transfers in 2007 to 2010 were generally made to correct asset balances and reserves that had been incorrectly recorded on JCP&L's books.

In late 2007, an analysis of assets assigned to SERVECO was completed by FE in connection with then-pending Ohio rate cases. This analysis identified assets sitting on SERVECO's books that were in-service and supporting only the energy delivery companies (EDCs), although FirstEnergy's practice is to assign to the SERVECO only those assets that are shared by all of the FE affiliate companies in the energy delivery, generation, and shared services areas. Because the identified assets were specifically supporting only the EDCs, they were reallocated from SERVECO to all EDCs, including JCP&L. In early 2008, the Tax Department recognized that this reallocation had inadvertently resulted in certain assets located in Ohio—primarily buildings and the equipment in those buildings—sitting on JCP&L's books. Because no Ohio assets should have been assigned to JCP&L, these assets were subsequently moved back (i.e., reassigned) to SERVECO or to an Ohio operating company, as appropriate, based on the use and/or location of the building or other assets.

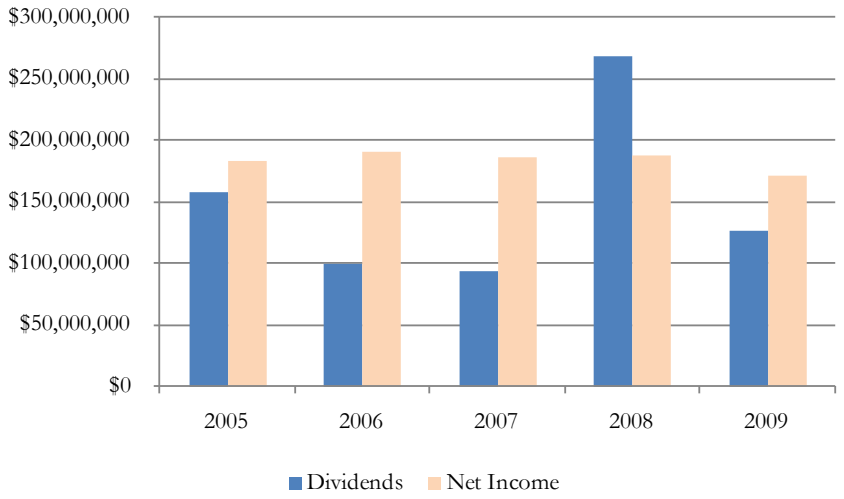
The assets that were incorrectly assigned to JCP&L, and subsequently reassigned back from JCP&L to a more appropriate FE entity, were transferred along with the accumulated reserve balances. The depreciation expense, however, was not transferred because the associated impact was not considered significant based on PricewaterhouseCoopers' materiality thresholds established for profit and loss (P&L) accounts. As an example, the third quarter 2010 pre-tax-income monthly threshold was $2.4 million.

Finding III-7 The JCP&L organization does not maintain a formal written dividend policy.

There is no formal written documentation related to dividend policies for JCP&L and its parent, FirstEnergy, or for any of FE's other subsidiaries. The payment of dividends by FE's subsidiaries, including JCP&L, to FE is reviewed on an ongoing basis by management and is in compliance with the applicable articles of incorporation, indentures, and various other agreements relating to the long-term debt of the subsidiaries. Net income, cash generation, capital structure, and regulatory restrictions on borrowings for each corporate entity are reviewed prior to a dividend recommendation.

Yearly dividend payments (2005 to 2009) by JCP&L to FE are illustrated in *Exhibit III-8*.

Exhibit III-8
Yearly JCP&L Dividend Payments to FE
2005 to 2009



Source: Information Responses 16, 83, and 511

Many regulated utilities have set a maximum of dividends to net income in the range of 75% to 85%. The percentage of dividends to net income at JCP&L for the five years spanning 2005 through 2009 was 86%, 52%, 51%, 143%, and 74% respectively. (Other FE operating companies also experienced significant variability over this same five-year period.) Regarding 2008's dividend being approximately 143% of net income (($268 million in dividends versus $187 million of net income), corporate management indicates that annual net income is only one of the items considered in the analysis of the dividend recommendation as JCP&L's capital structure is another factor in the determination of dividend payments. FE/JCP&L management also indicates that to better align JCP&L's capital structure with its approved regulatory capital structure, equity as a percent of its capital has been adjusted through the use of certain proceeds of recent new debt issuances, the payment of dividends, and the repurchase of equity. Other considerations in the determination of dividend payments include cash, retained earnings, covenants, etc. All of these factors were reviewed while determining the 2008 dividend payment.

Recommendations

Recommendation III-1 **Establish affiliate agreements for all missing affiliate relationships, as appropriate, and provide them, as necessary, to the applicable state regulatory commissions for review and approval. (Refer to Finding III-2)**

JCP&L should establish affiliate agreements, as appropriate, so that all existing relationships are covered. (Once the FE/Allegheny Power merger has been completed, the Allegheny Power entities should also be included.) Subject to, and to the extent consistent with NJAC 14:4-3 et al., for those situations (a) where JCP&L is providing services to non-regulated affiliates, transactions should be priced at no less than fair market value, and (b) when the reverse happens (i.e. non-regulated affiliates are providing services to JCP&L), transactions should be priced at no more than fair market value.

If and when developed, these affiliate agreements should be provided to all appropriate state regulatory commissions, including the NJBPU, as necessary, for review and approval.

Recommendation III-2 **Perform periodic studies to determine the cost-competitiveness of centralized functions, consistent with regulatory requirements, and develop plans to address the results of these studies. (Refer to Finding III-3)**

The FE organization should establish processes and procedures for periodically evaluating the cost of services provided to JCP&L (and other regulated operating companies) by its affiliates (or vice versa) so as to ensure that JCP&L is provided high-quality, cost-competitive services. New Jersey Administrative Code (NJAC) Section §14:4A.5 (Service Agreements) requires that JCP&L review such services (except for corporate governance or other activities, such as senior management services, treasury/finance functions, legal, system security, shareholder, and external relations services) every three years after April 6, 2009. As a means to incorporate better business practices, Schumaker & Company believes that FE should develop a formal program for implementing such reviews, which would every three years routinely compare the cost of shared services against not only peer groups but also other outsourcing options.

Recommendation III-3 **Develop documentation regarding SERVECO's allocation factor review process. (Refer to Finding III-4)**

Although the allocation factor review process has been included in SOX tests in prior years, SERVECO should still have formal written documentation describing how its allocation factor review process is performed.

Recommendation III-4 Evaluate and implement formal accounting and human resources policies and procedures to address situations in which an employee might leave JCP&L to go to affiliates. (Refer to Finding III-5)

Schumaker & Company understands that talent moves both ways among JCP&L and its affiliates; however, in such cases where a regulated utility is regularly losing employees to its affiliates, that entity may be financially impacted by having to train new employees to maintain its operations. Such a brain drain can occur when substantial staff is leaving JCP&L to go to other companies within the FE organization, especially in situations that are not attributable to changes in organizational structure and/or the consolidation of functions. While not a large issue for JCP&L at this time, it could potentially become significant in future years. Therefore, it might be worthwhile to adopt formal policies and procedures to prevent any excessive loss of employees to other affiliate organizations or to compensate the utility for the loss of its employees. This is particularly true in those situations where such losses are not attributable to changes in organizational structure and/or the consolidation of functions.

Recommendation III-5 Establish a formal written JCP&L dividend policy. (Refer to Finding III-7)

Not having a formal written JCP&L dividend policy, especially given the variability shown in *Exhibit III-8*, means that no expressed representation exists as to what to expect with regard to use of funds for dividend payments in the future. A formal written dividend policy providing the framework for determination of dividends, which is consistent with good regulatory practices, should be established and formally documented. JCP&L's policy should include policy and procedural guidelines for determining dividend amounts as well as a target range. It should also incorporate any steps required to deviate from this range.

B. Cost Allocation Methodologies

Background & Perspective

SERVECO and its affiliate companies, including JCP&L, use the SAP financial system, an integrated accounting system in which costs are accumulated using a work order management process. FE management indicates that the SAP system is set up to ensure that:

- Separation of costs between regulated and non-regulated affiliates is maintained
- Intercompany transactions and related billings are structured so that non-regulated activities are not subsidized by regulated affiliates
- Adequate audit trails exist on the books and records

SAP is set up such that each company's general ledger is separate and distinct. All of the companies use common general ledger (G/L) accounts (also referred to as cost elements) to record transactions. Affiliate separation and distinction, however, is accomplished with unique company codes (CC) and company-specific cost centers in combination with these G/L accounts. Intercompany cost flows within the SAP system are summarized as follows:

- *Direct Charges (or Activity Allocations Using FE Terminology)* – FE's SAP system used fully-loaded costing (called activity allocation) to charge labor costs from an employee's home cost center to capital work, billable work, orders, specific O&M projects, or another cost center. Included in the calculation of the fully-loaded labor rate are the employee's base salary, unproductive time (vacation, holidays, sick time, etc.), benefits, short-term incentive compensation, and payroll taxes. SERVECO charges represent labor charged to orders at SERVECO and billed to affiliates, such as JCP&L. Intercompany activity allocations between JCP&L and other affiliates represent labor for services (e.g., mutual assistance) between FE utilities.
- *Allocations (or Assessments Using FE Terminology)* – Intercompany assessments from SERVECO represent the allocation to JCP&L of its allocable share of SERVECO costs that cannot be directly charged. SERVECO allocates such costs among the affiliates through a cost allocation factor that distributes the product or service costs. Services are provided at fully allocated cost under the provisions of Public Utility Holding Company Act (PUHCA) 2005 and are consistent with the service agreements between SERVECO and affiliates. Examples of support services provided by SERVECO to JCP&L are customer service, utility operations, information technologies, rates and regulatory affairs, and financial, human resources, and legal-related services. Intercompany assessments between JCP&L and affiliates other than SERVECO are for services such as mutual assistance.
- *Overheads* – These charges represent stores and construction overheads related to the orders discussed above.

- *Settlements* – These transactions represent the settlement of utility orders to the appropriate affiliates by SERVECO based on the settlement rule assigned to the order. The associated costs include activity allocations from JCP&L timesheets, activity allocation of transportation, construction overheads, and stores handling overheads (described above under intercompany allocations and intercompany overheads). There are also settlements of projects (e.g., IT and Energy Delivery projects) established on SERVECO that benefit one or more of the affiliates and that settle to the projects set up on those affiliates' books. Technically, because they are utility orders, these are not affiliate charges with SERVECO. Rather, they are posted on SAP as SERVECO charges and must be backed out when summarizing SERVECO charges.

Any costs associated with capital expenditures and O&M expenses are settled to balance sheet and income statement accounts based on the settlement of cost collectors. The cost center cost collector uses assessments to clear costs from the cost centers to capital and expense accounts on a monthly basis. The percentage split to capital and expense accounts from cost centers is determined by assessment rules that are updated annually (summer to summer) based on the direct charge history of the cost center's labor, the service provided by the cost center, and input from cost center management.

A summary of the approximately 180 steps in the FE monthly financial close process is as follows:

- Accruals are booked.
- Settling orders are performed.
- Application of overheads is done.
- SERVECO assessments are performed to take SERVECO expenses to zero (first workday).
- FENOC/GENCO assessments are performed (second workday).
- Pretax income is determine (third workday).
- Close is performed (fourth workday).

Part of the controls to ensure SERVECO expenses are zero (after running six jobs; first one to apply engineering overheads and the other five to run as small jobs with various cost centers in the monthly assessment process) includes verifying SAP reports to see that no expenses are left, which includes running the trial balance. There are over 900 cost centers that must be assessed each month. Through trial and error, FE employees have determined that running assessments in one large batch might take several hours, while dividing the assessment process into smaller batches (run simultaneously) might take only ten minutes. Running four jobs simultaneously is the optimum process. Reasons why expenses might NOT be zero include late entries or a cost center not being set up in the assessment job. In such circumstances, these controls are used to detect and correct the situation.

When a true-up is required, the following steps need to be taken:

- A cost center's use of an allocation factor is updated in SAP.
  - An end date for the current allocation factor is entered so that factor will not be used on this cost center during any future processing.

- A start date for when the current month's closing will be processed using the cost center's new allocation factor is also entered into SAP.

- A journal entry is made to correct all prior months' assessments of this cost center. A report is run to determine where costs have been allocated in the prior months. This report is also used as backup support for the journal entry. The journal entry reverses the original allocation and posts the prior month's allocated costs, in accordance with the revised allocation factor, to the proper cost centers.

The SERVECO allocation factors contain the cost elements (with associated rates) that the service company uses to bill out its costs on a monthly basis through the assessment process during the monthly closing process. Informal desktop procedural documentation exists for updating allocation factors each year. The allocation factors are based on the 12 months ending June 20XX or the balances as of June 20XX. For example, July 1, 2008 to June 30, 2009 data would be used for 2010 allocation factors. As long as the methods do not change, the cost elements do not have to be presented to the Federal Energy Regulatory Commission (FERC) for approval. If a new method, including a new allocation factor, is developed, however, it needs to be approved by the FERC and should be presented to the state for approval. These allocation factor changes are generally started mid-July and completed by early August.

To develop the allocation factors, the General Accounting group sends out for raw data from various financial, rates, and payroll groups, including (but not necessarily limited to):

- Assets
- Revenues
- Customers
- Headcount
- Equity investments
- O&M expenses

FirstEnergy is using SAP version R3 and is expected to upgrade its G/L in 2012. The biggest change is that one of the steps in the monthly financial close will no longer be required because it will automatically be performed (keeping modules in balance).

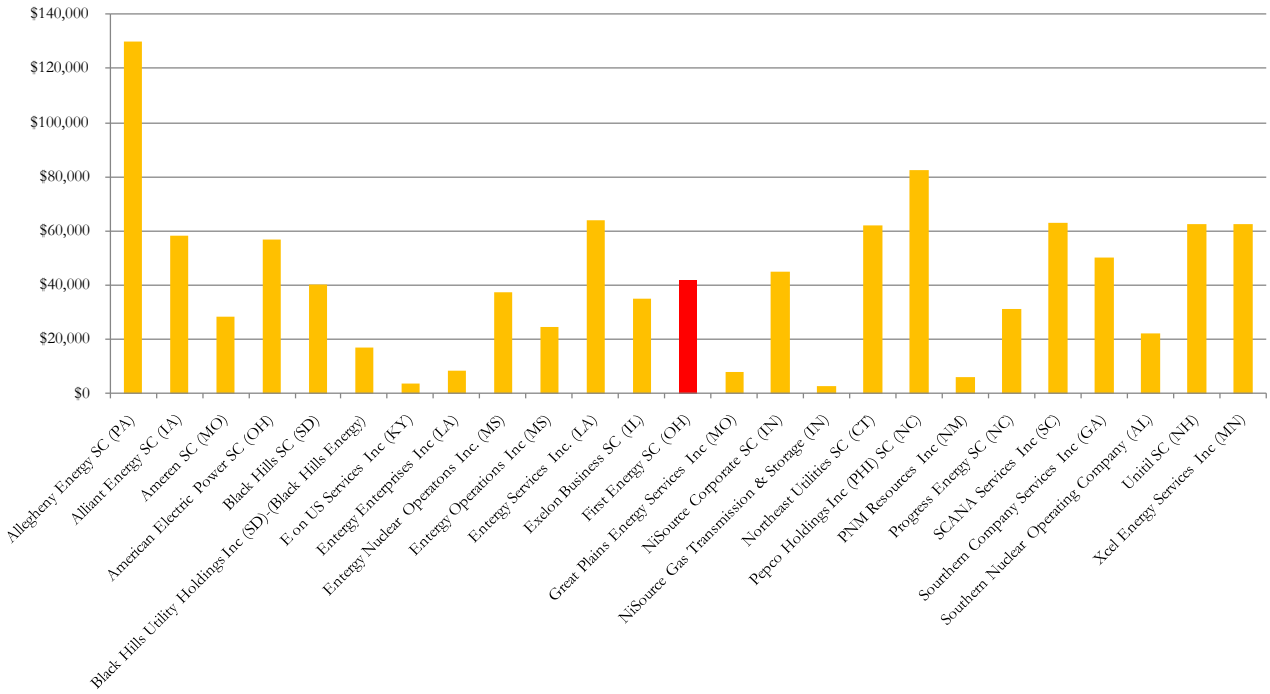
Findings & Conclusions

Finding III-8 **Recent comparisons of FERC Form 60 data indicate that SERVECO's costs are in the middle of the pack with regard to companies submitting such data.**

Schumaker & Company reviewed certain service company operating expense performance measures of SERVECO against other electric and gas service company organizations using FERC Form 60 data, as this was the most recent publicly-available data.

Exhibit III-9 illustrates FE's service company's operating expenses per employee (based on total number of corporate employees). The SERVECO organization's expenses are roughly $41,800 per employee, which is below many of the other service company organizations shown.

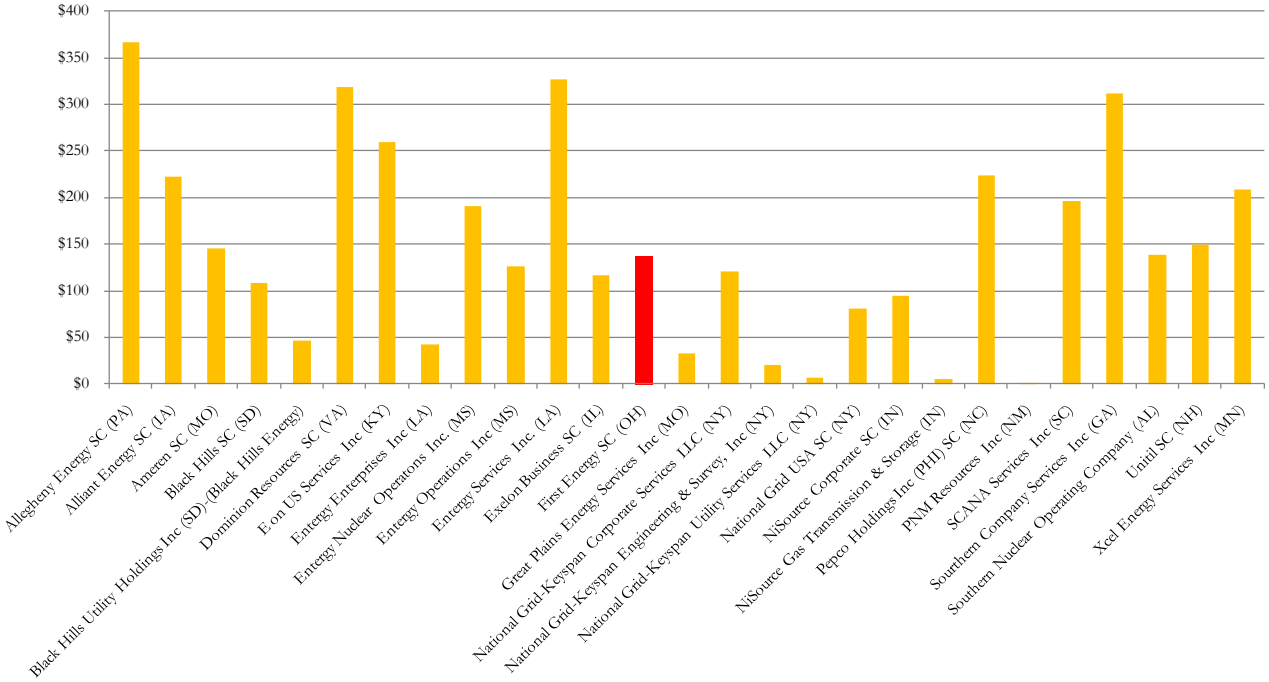
Exhibit III-9
Service Company Operating Expenses per Employee
FE Compared to Other Utility Service Company Organizations
2008



Source: Schumaker & Company Analysis of FERC Form 60 Data

Exhibit III-10 illustrates FE's service company's operating expenses per customer (based on total number of corporate customers). The SERVECO organization's expenses are roughly $136.60 per customer, which is below many of the other service company organizations shown.

Exhibit III-10
Service Company Operating Expenses per Customer
FE Compared to Other Utility Service Company Organizations
2008



Source: Schumaker & Company Analysis of FERC Form 60 Data

Finding III-9 A limited set of allocation factors has been established and is available for use by the SERVECO organization.

SERVECO cost allocation factors currently in use include the following:

1.	**Multiple Factor – All**

A. FirstEnergy will bear 5% of these indirect allocations.

B. A subsequent allocation step will then occur. Among the utility subsidiaries, allocations will be based upon the "Multiple Factor – Utility" method. Among the non-utility subsidiaries, allocations will be based upon the "Multiple Factor – Non-Utility" method.

2.	**Multiple Factor – Utility**

Based on the sum of the weighted averages of the following factors:

A. Gross transmission and/or distribution plant

B. Operations and maintenance expense excluding, purchase power and fuel costs

C. Transmission and/or distribution revenues, excluding transactions with affiliates

Each of the above factors will be weighted equally so that no one facet of the utility operations inordinately influences the distribution.

3.	**Multiple Factor – Non-Utility**

Based upon the total assets of each non-utility subsidiary, including the generating assets under operating leases from the utility subsidiaries

4.	**Multiple Factor – Utility and Non-Utility**

A. First, assign a distribution ratio that is in proportion to the indirect costs based on FirstEnergy's equity investment in the respective groups.

B. Among the utility subsidiaries, allocations will be based upon the "Multiple Factor – Utility" method. Among the non-utility subsidiaries, allocations will be based upon the "Multiple Factor – Non-Utility" method.

5	**Direct Charge Ratio**

The ratio of direct charges for a particular product or service to an individual subsidiary as a percentage of the total direct charges for a particular product or service to all subsidiaries benefiting from such services; indirect costs are then allocated to each subsidiary based on the calculated ratios.

6.	**Total Customer Ratio**

Based on the number of utility customers for the respective utility subsidiary that is receiving the product or service divided by the total number of utility customers

7.	**Number of Shopping Customers Ratio**

Based on the number of shopping customers for the respective utility subsidiary that is receiving the product or service divided by the total number of shopping customers

8.	**Number of Participating Employees – General**

Based on the number of participating employees for the respective subsidiary that is receiving the product or service divided by the total number of participating employees

9.	**Number of Participating Employees – Utility and Non-Utility**

A. First, assign a distribution ratio that is in proportion to the indirect costs based on FirstEnergy's equity investment in the respective groups.

B. Costs are further allocated by using the number of participating employees for the respective subsidiary divided by the total number of participating FirstEnergy employees.

10.	**Gigabytes Used Ratio**

Based on the number of gigabytes used by a subsidiary that is receiving the product or services divided by the total number of gigabytes used by the FirstEnergy system companies that are applicable to that respective product or services

11.	**Number of Computer Workstations Ratio**

Based on the number of computer workstations used by a subsidiary that is receiving the product or services divided by the total number of computer workstations in use by the FirstEnergy system companies that are applicable to that respective product or service

12.	**Number of Billing Inserts Ratio**

Based on the number of billing inserts performed for a subsidiary that is receiving the product or service divided by the total number of billing inserts performed for the FirstEnergy system companies that are applicable to that respective product or service

13.	**Number of Invoices Ratio**

Based on the number of invoices processed for a subsidiary that is receiving the product or service divided by the total number of invoices processed for the FirstEnergy system companies that are applicable to that respective product or service

14.	**Number of Payments Ratio**

Based on the number of monthly payments processed for a subsidiary divided by the total monthly number of payments processed for the FirstEnergy system companies that are applicable to that respective product or service

15.	**Daily Print Volume**

Based on the average daily print volume performed for a subsidiary that is receiving the service divided by the total average daily print volume performed for the entire FirstEnergy system

16.	**Number of Intel Servers**

Based on the number of Intel servers used by a subsidiary that is receiving the product or service divided by the total number of Intel servers used by the FirstEnergy system

17.	**Application Development Ratio**

Based on the number of application development hours budgeted for a subsidiary that is receiving the service divided by the total number of budgeted application development hours for the year

18.	**Server Support Composite**

Based on the average ratio of Unix gigabytes, SAP gigabytes, and Intel number of servers for a subsidiary that is receiving the service

Although sub-factors exist, they simply reflect different combinations of entities to which the primary factor is allocated. Of these 18 primary factors, however, four are non-cost-causative general allocation factors (1, 2, 3, and 4) and seven (10, 11, 12, 15, 16, 17, and 18) are associated primarily with IT functions. Therefore, only seven other primary factors are currently used, a number that is smaller than that often found in other utility organizations.

Additionally, of SERVECO's allocations, many cost centers (approximately 666 of 1,791 cost centers, or 37.2%) use one of the general allocation factors. Their use can produce results that do not reflect the

underlying causes for allocating costs. A good example is the Flight Operations cost centers, which use the multiple-all factor for charging costs that are not directly charged. (See *Finding III-18*)

Finding III-10 SERVECO relies upon a reasonable combination of direct charges and allocations for charging affiliates.

The costs of services provided by SERVECO are directly charged or allocated by activity, project, program, work order, or other basis. According to FE management, wherever practical, direct charges are made whereby costs can be identified and related to a particular transaction so long as excessive effort or expense is not required. The costs of products and services provided by SERVECO that cannot be specifically assigned to an FE subsidiary receiving the product or service are allocated among the associated companies through a cost allocation factor (varying by cost center) that FE management believes most accurately distributes the costs.

SERVECO uses fully allocated costs (an accounting method to distribute all of its costs through affiliate charges), which include, as applicable, wages and salaries of employees and related fringe benefit expenses (such as health care, life insurance, payroll taxes, pensions, and other employee welfare expenses), equipment, materials, subcontractor costs, overheads, cost of capital, and taxes. Other elements of cost include taxes, interest, other overhead, and compensation for the use of capital.

Exhibit III-11 displays the relative mix of direct charges versus allocations (other than direct charges) from SERVECO to JCP&L by year for 2005 to 2009. The allocations that are assessed 100% to JCP&L have been shown separately, as they are much like direct charges in effect.

Exhibit III-11
SERVECO to JCP&L Charges
Direct Charges versus Allocations
2005 to 2009

	2005	2006	2007	2008	2009
From SERVECO to JCP&L	$103,974,114	$94,605,127	$101,992,415	$90,653,728	$86,439,961
Direct Charge $	$8,002,132	$4,795,691	$4,925,711	$4,286,194	$3,219,220
Allocations 100% to JCP&L	$25,164,868	$21,159,781	$22,104,138	$18,322,822	$14,755,739
Other Allocation $	$70,807,114	$68,649,654	$74,962,566	$68,044,712	$68,465,002
% of Direct Charge + Allocations 100% to JCP&L	32%	27%	27%	25%	21%
% Other Allocations	68%	73%	73%	75%	79%

Source: Information Response 10

As shown, the percentage of direct charges plus allocations 100% to JCP&L relative to total SERVECO costs charged to JCP&L has decreased slightly from 32% to 21% over the past five years. Over this period, while the percentages of direct charges are relatively low, its usage of allocations 100% to JCP&L makes the total percentage of both a reasonable figure.

Finding III-11 Some of SERVECO's charges are not charged to FE subsidiaries but remain at the parent company.

The costs charged exclusively to the FE parent company include those from the following cost centers illustrated in *Exhibit III-12*:

Exhibit III-12
Costs Charged Exclusively to FE Parent Company
as of December 31, 2010

Cost Center	Cost Center Description	Types of Transactions
504402	Annual Meeting – FE Holding Co.	Payroll and outside contractor professional legal expenses
502029	Auditing Work – FE Holding Co.	Payroll
504400	Board of Directors – FE Holding Co.	Payroll and outside director costs
506101	Business Development – OH	Labor, payroll allocations, miscellaneous expenses
501005	Chairman of the Board	Labor and expenses
502902	Controller's – FE Holding Co.	Payroll and PricewaterhouseCoopers' (PwC) audit fees
502836	Corporate Affairs – FE Holding Co.	Outside professional legal expenses
502922	Executive Services – FE Holding Co.	Payroll and outside contractor professional legal expenses
506006	Federal Government Affairs – DC	Labor, miscellaneous expenses
506003	Federal Government Affairs – OH	Labor, miscellaneous expenses, outside contractor professional non-legal costs, lease rentals
502641	Federal Government Affairs – Fixed Assets	Depreciation expense
506005	Governmental Affairs – NJ	Labor, miscellaneous expenses
506020	Governmental Affairs – NJBPU	Labor, miscellaneous expenses
506002	Governmental Affairs – OH	Labor, miscellaneous expenses and outside contractor professional non-legal costs
506004	Governmental Affairs – PA	Labor, miscellaneous expenses
502770	HR Billing – FE Holding Co.	Payroll
505004	Investor Relations – OH	Labor, miscellaneous expenses and outside contractor costs
502197	IT Work – FE Holding Co.	IT payroll
502871	Legal and Claims – FE Holding Co.	Payroll and outside professional legal and non-legal expenses
502674	SERVECO Assets Carrying Charge	Carrying charges
502634	Special Items Treasury – SC00	Bank fees, service company investment interest
504401	Stock Administration – FE Holding Co.	Payroll, miscellaneous expenses, and outside contractor professional non-legal expenses
502840	Supply Chain – FE Holding Co.	Outside professional legal expenses

Source: Information Response 393

In other situations, especially those using the multiple factor-all methodology, 5% of charges go to the parent company.

Finding III-12 The Internal Audit organization does not routinely perform cost allocation audits.

In response to one of Schumaker & Company's information requests, the Internal Audit organization indicated that it has completed 31 audits related to affiliated relationships or transactions; however, Schumaker & Company's review indicated that only a few of those audits dealt with similar topics, including:

- *Audit of FirstEnergy's compliance with the Public Utility Holding Company Act – Phase III as of March 25, 2005 (Audit #24516)* – The Phase III review focused on the service company's budgeting process and management's use of budgets and other cost controls to monitor and control expenditures. It also included a review of intercompany tax allocation practices and the policies and practices associated with intercompany receivables and payables.
- *Audit of FirstEnergy's compliance with PUHCA – Phase IV as of March 28, 2005 (Audit #25518)* – The purpose of the Phase IV review was to (1) develop a risk control matrix to identify key control objectives, risks, and activities related to PUHCA; (2) determine if the SERVECO shared services organizations have undertaken benchmarking activities to ensure their cost-competitiveness and quality of services; and (3) determine whether benchmarking costs were fairly allocated to the affiliate companies, including FE Corporation.
- *Audit of the Federal Energy Regulatory Commission Order 2004 Standards of Conduct as of May 4, 2006 (Audit #25300)* – The purpose of this audit was to review FE's compliance with standards of conduct regulations adopted under Order 2004 and, where necessary, to identify additional measures FirstEnergy can take to proactively facilitate employee awareness, enforcement, monitoring, and/or reporting related to the standards of conduct. The audit also helped identify cornerstones for building a comprehensive infrastructure to ensure ongoing compliance with the standards of conduct and other applicable FERC regulatory obligations.

These three audits are fairly old and none of those audits completed by the Internal Audit organization since 2005 have focused on SERVECO affiliate charges to FE or its subsidiaries. (Only a July 2010 cost separation audit regarding FE's Ohio companies has been performed over that period of time, none impacting JCP&L.) Additionally, no external audits of affiliated relationships or transactions have been performed in the last five years.

Finding III-13 A recent review by SERVECO of its cost allocation manual found that several improvements were necessary, but most have not yet been completed.

In June 2010, the SERVECO Business Analytics group provided its preliminary project findings involving a review of SERVECO's cost allocation manual (CAM), which was effective June 1, 2003. In

particular, the following sections pertaining to services provided and allocation methods used were addressed:

- The description of services and transactions with affiliates (Sections III and V)
- Cost allocation methodologies (Section VI)
- Appendix A (service agreement)

In performing its gap analysis, the group:

- Located the service provided from the service agreement that most closely represented the cost center description
- Identified the allocation method stated in the service agreement and compared it to what was being used in SAP for 2010

Of the 867 SERVECO cost centers, the Business Analytics group found that 102 (or 11.8%) did not match. The group also found that of the 18 allocation factors, 108 different sets of sub-factors existed. That is because there are multiple sets of sub-factors within each methodology based on the set of legal entities involved.

As part of this project, the Business Analytics group performed a comparison to two other utilities to gain better understanding and insight into the cost allocation manuals of peer utilities and to determine areas for potential improvement. As part of this review, several recommendations were made, including:

- Keep the CAM introduction concise by focusing on purpose and scope.
- Clearly distinguish utilities from non-utilities on the organizational chart.
- Eliminate redundancy by describing services once in an easy-to-read format; generalize where possible; tie services to allocation methods in CAM instead of in the service agreement.
- Elaborate on FE's affiliate transaction policies in a prominent manner.
- Emphasize the preference for direct charging and explain how indirect costs are handled.

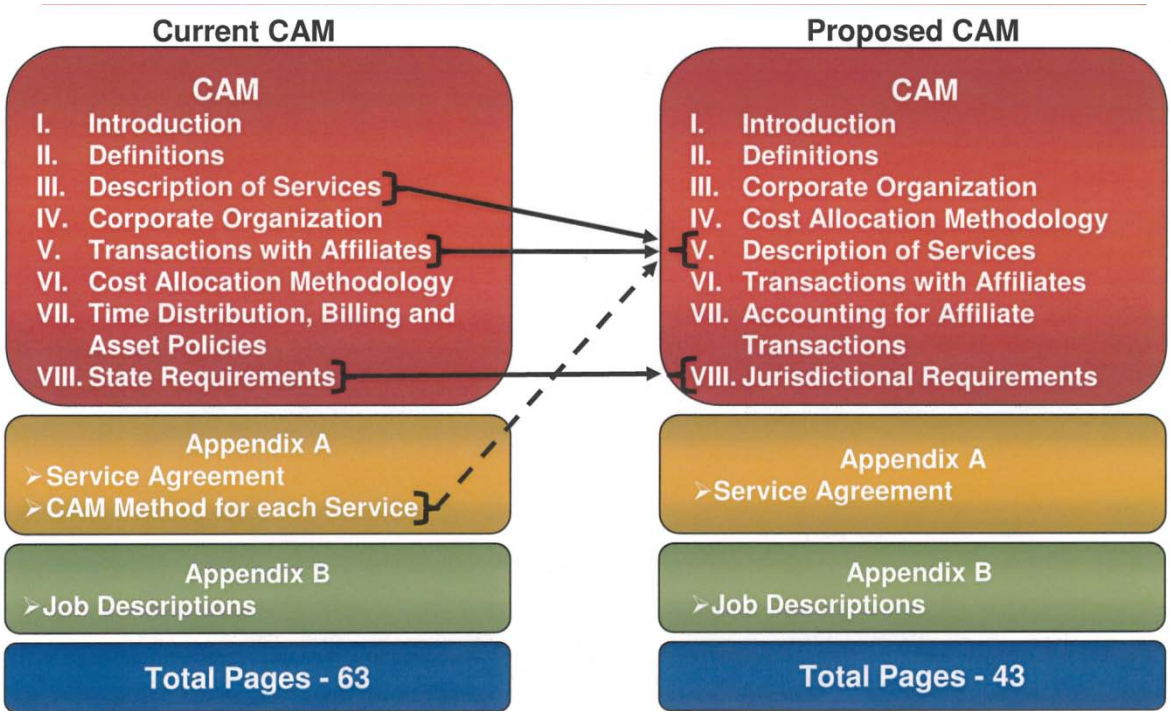
Also found was that FirstEnergy had the fewest number of allocation factors.

The next steps identified included considering peer review observations to:

- Create and review a redline version of the FE 2009 CAM documentation.
- Create a process for updating CAM documentation.
- Write a policy for the CAM update process.

Subsequently, the resulting CAM rearrangement recommendations identified by the Business Analytics group are illustrated in *Exhibit III-13*.

Exhibit III-13
CAM Rearrangement Recommendations Made by Business Analytics Group
as of September 2010



Source: Information Response 703, Attachments 3 and 4

A summary of the recommendations include:

- Implement a CAM update policy and procedure.
- Implement an IT solution vision for a Lotus Notes cost center (CCTr) repository by the first quarter of 2011. The purpose of this repository is to automate a cumbersome manual update and verification process. It would include validation checks to ensure that cost center methods align with the service agreement. It would also contain all cost center information, the service agreement information, and allocation factors for every year. The repository would send out e-mail messages to responsible parties and require a response. The cost centers would be connected to the service agreement so that validation of the responses could be conducted and warnings could appear if information disagreed. Finally, a text file could be created that would contain cost center and allocation factor information, which could be uploaded into SAP. In addition, reports would be created that would include validation with the service agreement as well as year-to-year comparisons of changes.
- Execute a new service agreement post-merger to replace the schedule of services with a reference to the CAM and streamline associated service descriptions.

Based on the gap analysis performed by the Business Analytics group, JCP&L would have received approximately $900,000 in additional allocation costs for the first half of 2010. Among the proposed modifications to allocation methodologies and associated factors were:

- The number of payments ratio was not being used by remittance processing.
- The number of participating employees (utility and non-utility) ratio must first be split by equity ratio and was not being used by investment management.
- The number of participating employees (general) ratio had one new set of factors added based on all utility entities except ATSI.
- The multiple factor-all ratio was modified to include three new sets of factors based on entities chosen.
- The multiple factor-utility (transmission) ratio should be identified separately.
- Review the use of transmission and distribution (T&D) versus transmission OR distribution in multiple-factor calculations, specifically the multiple factory-utility one.

The Business Analytics project was not completed until September 30, 2010; therefore, although the CAM documentation that Schumaker & Company reviewed as part of this audit project was updated as of October 1, 2010, it did not include many of the recommendations identified through the Business Analytics project.

Finding III-14 Merger team activities are being charged to JCP&L.

A merger integration team was established in 2010 regarding the upcoming merger of Allegheny Energy (operations in Pennsylvania, West Virginia, and Maryland) into the FE organization. This team is subdivided into nine teams and a project management office (PMO) of 11 FE employees. The nine teams and the number of FE employees in each team are as follows:

- Corporate (6)
- Utility Operations (7)
- Transmission (3)
- Finance (8)
- Fossil Generation/Environmental (6)
- Fuels (3)
- Human Resources (5)
- Information Technology (4)
- Supply Chain (3)

These teams are composed of team leads and core members from both the FE and Allegheny Energy organizations (with the number of FE employees listed above). In addition, on occasion, the teams have enlisted additional corporate personnel to provide support on project-specific items. Each of the nine teams has been charged with focusing on its jurisdictional area, ultimately providing preliminary

recommendations on organization, best practices, and value creation opportunities. Other than this objective, there is no overarching merger integration team charter.

FirstEnergy has established a cost center and statistical order (stat order) in SAP to track merger-related costs.

- Employees assign time and expenses associated with merger-related activities to their home cost center using the stat order. Costs for these merger team time and expenses are charged to FE organizations based on the default allocation factor for the assigned employees.
- Other incremental expenses, such as employee expenses, outside contractors, public relations, financing fees, and audit fees, are charged to the established merger team cost center (502680) using the same stat order. Costs charged to this merger team cost center are allocated among FE organizations using an allocation factor in which FirstEnergy Corporation bears 5% of the costs and the remaining costs are allocated between the utility and non-utility subsidiaries. Such allocation is based on FirstEnergy's equity investment in the respective groups and is then proportionately divided among the subsidiaries in the utility and non-utility groups using the respective factor for that group. This cost center is allocated to FE affiliates based on the multiple-factor-all factor.

The time and expenses charged to the merger statistical order (January to July 2010) totaled approximately $32.74 million, of which approximately $6.61 million was employee time (charged to each of the employee's default cost centers) and the remaining $26.13 million was incremental expenses charged to the merger team cost center. Of this $32.74-million figure, approximately $4.85 million was charged to JCP&L, or roughly 14.8%.

In other Schumaker & Company audits where a merger team has been formed, we typically find that the parent company, not the regulated entity, is charged the entire cost of the merger team activities. The FE/Allegheny merger costs should not be charged to JCP&L or other affiliates. They should be absorbed primarily by the FE Corporation entity itself, with charges borne by FE's shareholders, not ratepayers. Nevertheless Schumaker & Company understands that JCP&L has entered into a NJBPU-approved stipulation of settlement with respect to the merger and that such stipulation addressed the treatment of merger-related costs.

Finding III-15 The FE tax-sharing agreement is appropriate.

JCP&L, along with FirstEnergy Solutions and the other FE utility companies, is party to an Intercompany Income Tax Allocation Agreement. This agreement is effective for taxable years ending on or after January 1, 2002, with FE and its subsidiaries providing for the allocation of consolidated tax liabilities. In accordance with Code Section 1552(b) and Section 1.1552-1(c)(2) of the Internal Revenue Code of 1986, the consolidated tax liability (other than alternative minimum tax (AMT) and its related credits) is allocated among all the participants of this agreement in the same percentage of the total consolidated tax as if computed for each participant on a separate return basis. Any tax benefits are allocated to participants who had items of deduction, loss, or credit for which the tax benefit amount is

attributable. JCP&L's federal income tax rate has been 35%, the same as for the other FE utilities, FES, and FE, for the past three years. According to the FirstEnergy Tax Department, JCP&L's rate would be no different if it were a standalone utility. JCP&L's taxes are calculated based only on JCP&L's book income.

Recommendations

Recommendation III-6 **Continually review and update, as appropriate, the number of allocation factors available to SERVECO for affiliate charges, which could reduce the reliance on general allocators. (Refer to Finding III-9 and Finding III-10)**

Cost-causative factors are seldom used; instead, the general allocation factors for costs not directly charged are frequently relied upon. Extensive use of a general allocation factor does not appropriately link charges with underlying factors. The FE allocation methodology seems built for expediency as opposed to reflecting underlying factors and associated charges. Another reason for this oversight may be that SERVECO has a limited number of allocation factors available for its use.

Schumaker & Company understands that the 18 primary factors (with sub-factors) currently in use are the only allocation factors approved by the SEC for use at FE under the Public Utility Holding Company Act of 1935 (PUHCA) when the service agreement was initially approved. As FERC now oversees allocation factors (following the repeal of PUHCA), FERC approval is needed for any changes to these factors. Any changes to the allocation factors, if approved by FERC, would subsequently have to be reviewed by all state regulatory commissions. Nevertheless, the SERVECO organization should evaluate the need for an increase in the number of cost-causative allocation factors in use and increase the number of cost centers that rely on cost-causative factors rather than one of the general allocators.

Recommendation III-7 **Routinely perform internal audits of affiliate relationships and associated transactions. (Refer to Finding III-12)**

Given the complexity of FE's affiliate charging mechanisms, the lack of appropriate written documentation, the difficulty in obtaining affiliate data while conducting this audit, and the difficulty in reconciling affiliate data, Schumaker & Company strongly believes an audit of affiliate charges on a regular basis is necessary. FE's Internal Audit function should incorporate periodic audits of affiliate transactions and the associated direct billing/cost allocations in its audit plan/schedule based on its risk-assessment activities. The frequency for this type of audit must be factored into this analysis, although given that JCP&L is in the regulated utility industry, Schumaker & Company would expect that such audits should be performed no less than every two years, or sooner if significant changes occur.

Recommendation III-8 Update the SERVECO CAM documentation. (Refer to Finding III-13)

The SERVECO CAM documentation should be updated not only to reflect many of the findings associated with the Business Analytics group study but also to include modifications that incorporate suggestions made in *Recommendation III-6* of this audit report. That so many of the specific allocation factors changed as a result of FE's gap analysis further exacerbates the extensive usage of general allocators. This issue should not be allowed to continue but should be corrected when addressing *Recommendation III-6*.

Recommendation III-9 Avoid charging JCP&L ratepayers for merger team costs. (Refer to Finding III-14)

The FE/Allegheny merger costs should not be charged to JCP&L or other affiliates. They should be absorbed primarily by the FE Corporation entity itself, with charges borne by FE's shareholders, not ratepayers.

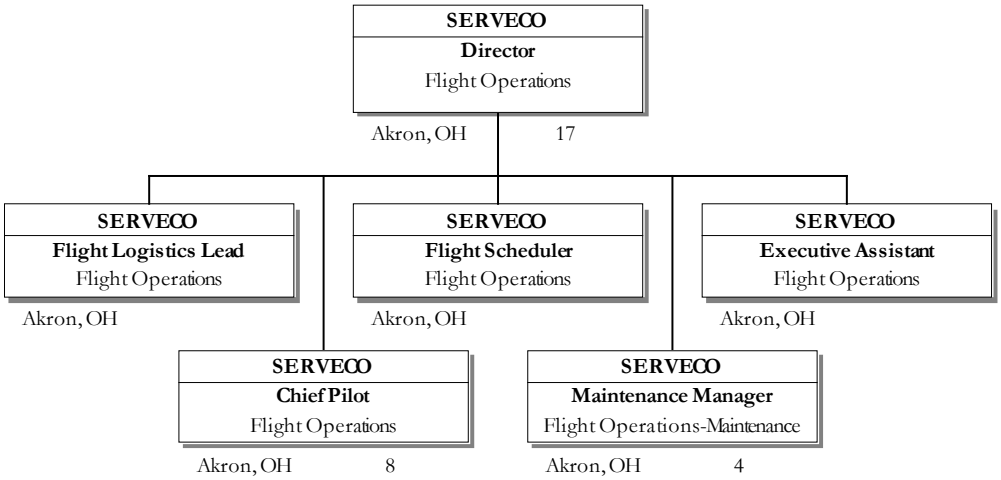
C. Flight Operations

The costs of the Flight Operations Department are primarily the result of cost allocations to JCP&L. Therefore, this organization is covered as a part of the *Affiliated Relationship and Cost Allocation Methodologies* chapter.

Background & Perspective

FirstEnergy created its own internal Flight Operations Department in April 2007, in which the Director of Flight Operations was hired at the end of March 2007 and the full complement of staff on board in July 2007. Prior to the formation of this department, FirstEnergy had contracted with an outside flight support group to operate and maintain its aircraft. Before 2007, FE had managed several aircraft.2 The Flight Operations Department is composed of 18 employees, which are organized as shown in *Exhibit III-14*.

Exhibit III-14
FirstEnergy Flight Operations Department
as of December 31, 2010



Source: Information Response 54

As shown in *Exhibit III-14*, there are eight full-time pilots reporting to the Chief Pilot. In addition, the Chief Pilot and the Director of Flight Operations are also pilots, so a total of ten pilots are available for the four aircraft. All aircraft require two pilots, a captain and a first officer. Pilots are generally qualified in no more than two aircraft. In addition, there are five personnel in the maintenance area, with one of those individuals being a line service technician. These personnel are responsible for the day-to-day maintenance of the aircraft, whereas major items are taken to a particular aircraft's maintenance service facilities, which are operated by the aircraft manufacturer or a facility licensed by the aircraft manufacturer. There are also flight logistics and scheduling personnel in this department that support flight operations.

FirstEnergy operates four jet aircraft as shown in *Exhibit III-15*.

Exhibit III-15
FirstEnergy Aircraft
as of December 31, 2010

Aircraft	Range	Seating Capacity
Citation XL	1,600 nautical miles	8 passengers
Citation XL	1,600 nautical miles	8 passengers
Embraer Legacy 600	3,100 nautical miles	12 passengers
Falcon 2000	3,700 nautical miles	10 passengers

Source: Interview 189

On-demand flights require the approval of the Chief Executive Officer (CEO), either on a trip-by-trip basis or through a blanket approval for a period of time. These flights are charged to users at $2,000/flight hour (split by users as they determine), plus fuel costs and any other associated expenses. Most flights operate in this manner; however, Flight Operations does operate a scheduled shuttle service on the second and last Wednesday of the month. On those dates, the Citation XL is operated between Akron, OH and Reading, PA for two round trips—out to Reading and back to Akron in the morning and out to Reading and back to Akron in the evening—providing the capability of moving eight people each way. The scheduled routes do not actually fly into Morristown, NJ but only Reading, PA. There is a Lotus Notes application for scheduling the shuttle. Individuals using the shuttle are charged a set amount (currently $220 per leg) to their cost center for each segment of the flight.

Findings & Conclusions

Finding III-16 FirstEnergy has a well-organized Flight Operations Department.

As discussed above, the Flight Operations Department has 18 employees and operates four different aircraft. It is located in the Akron Canton Airport at a facility FirstEnergy acquired from a previous fixed base operator (FBO) that was located on the field. The facility is well maintained and operations appear to be well run.

In July 2008, the Internal Audit (IA) organization issued a report, the purpose of which was to document the business processes and associated controls implemented by FE Flight Operations into one process manual to be followed by the department. As part of this project, IA developed an FE Flight Operation Process Manual to document processes and controls used within the department and to aid in the training of future employees. Sections documented as part of this project and included in the manual were:

- Aircraft Maintenance
- Aircraft Operation and Utilization Reporting
- BART Recordkeeping (scheduling system used by the department)
- Budgeting and Forecasting
- Charter Operator Selection
- Dress Code Requirements
- Employee Expense Reporting
- Insurance and Loss Prevention Programs
- Inventory Control
- Invoice Verification and Payment
- Key Performance Indicator (KPI) Development and Reporting
- Monthly Accrual
- Monthly Reporting
- Ordering Supplies/Services
- Personal Use Reporting for Securities Exchange Commission (SEC) and Internal Revenue

Service (IRS)
- Scheduling and Tracking Training
- Shuttle Scheduling and Operation
- Time Reporting

Previously developed in 2006 was a two-page policies and procedures document for use of dedicated/ charted (non-shuttle) aircraft.

Finding III-17 The utilization of corporate aircraft has dropped significantly over the last three years.

Aircraft utilization for the past four years has declined from its peak in 2008, as displayed in *Exhibit III-16*.

Exhibit III-16
FirstEnergy Aircraft Utilization
(Flight Hours)
as of December 31, 2010

	2007 4/1/07-12/31/07	2008 1/1/08-12/31/08	2009 1/1/09-12/31/09	2010 1/1/10-12/31/10
Citation XL	244.0	611.1	115.7	176.1
Citation XL	0.0	278.9	184.2	212.2
Embraer Legacy 600	0.0	112.7	143.7	226.5
Falcon 2000	107.4	203.1	161.5	276.9
Falcon 50	163.0	21.7	0.0	0.0
Total	**514.4**	**1,227.5**	**605.1**	**891.7**

Source: Information Response 868

In 2008, the shuttle schedule included trips to Reading (four days per week) and trips to Morristown (three days per week). In February 2009, shuttle flights to Morristown were removed from the schedule and trips between Akron and Reading were reduced from four to two days per week. In July 2009, the shuttle schedule was cut back further to include only two trips between Akron and Reading each month.

Finding III-18 JCP&L has incurred significant charges for flight operations, although JCP&L's usage has decreased significantly.

Charges to JCP&L for aircraft use since 2007, relative to FE's total costs, are shown in *Exhibit III-17*. The largest portion of aircraft costs are allocated as opposed to being directly charged. As shown in *Exhibit III-17*, the direct charges for use of the corporate aircraft by JCP&L have fallen to $400 in 2010, whereas JCP&L has been assessed approximately $1.2 million in indirect charges.

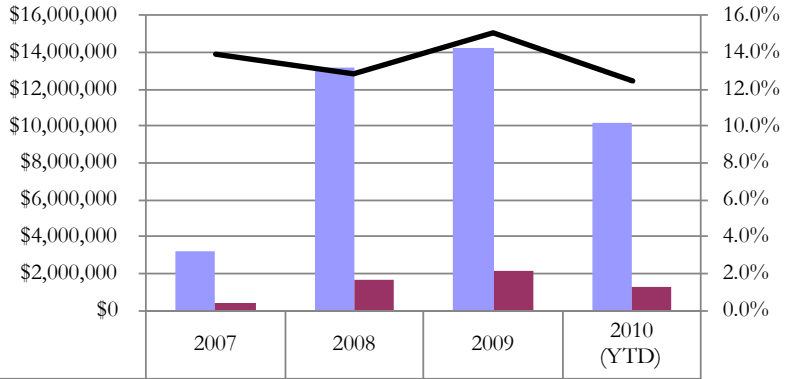
Exhibit III-17
Aircraft Costs
2007 to 2010 (September YTD)

Year	Total Costs	Use Billed Out (Direct)	Net to Assess (Indirect)	Use Billed Out to JCP&L (Direct)	Assessed to JCP&L (Indirect)	Total Costs Charged to JCP&L
2007	$3,193,326	$764,992	$2,428,334	$10,242	$434,186	$444,428
2008	$13,199,914	$3,240,431	$9,959,483	$74,725	$1,612,440	$1,687,165
2009	$14,272,540	$1,646,767	$12,625,773	$1,600	$2,148,907	$2,150,507
YTD Sept 2010	$10,198,112	$2,120,458	$8,077,654	$400	$1,264,153	$1,264,553

Source: Information Response 784
Direct=on demand and shuttle service charges
Indirect=allocated based on multiple factor-all methodology

Despite using the corporate aircraft very little during this timeframe, JCP&L has been charged approximately 13.6% of total FE corporate flight operations costs from 2007 through September 2010. JCP&L's portion of costs relative to FE total flight operations costs are displayed graphically in *Exhibit III-18*.

Exhibit III-18
JCP&L Flight Operations Costs
2007 to 2010 (September YTD)



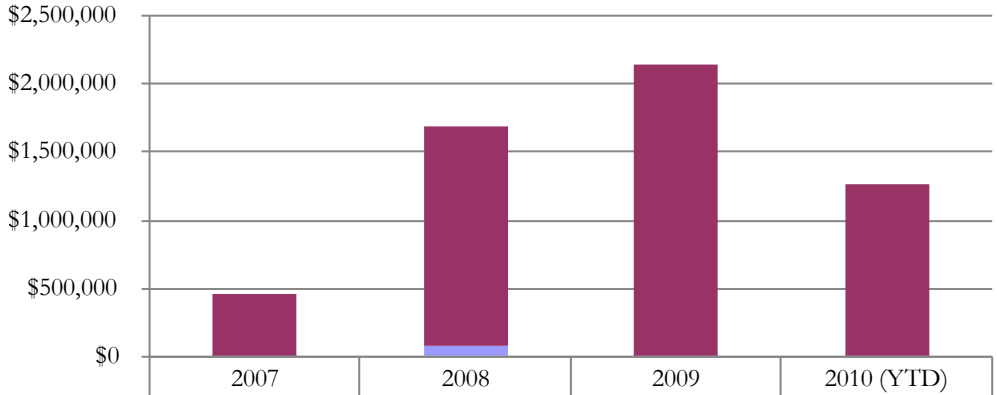
	2007	2008	2009	2010 (YTD)
Total Flight Operations Costs	$3,193,326	$13,199,914	$14,272,540	$10,198,112
Total Costs Charged to JCP&L	$444,428	$1,687,165	$2,150,507	$1,264,553
JCP&L % to Total	13.9%	12.8%	15.1%	12.4%

Source: Information Response 784

Exhibit III-19 displays the amount of these JCP&L costs segmented by direct charges and allocated charges. On-demand and shuttle charges to fly on FE's corporate aircraft result in the direct charges

shown in *Exhibit III-19*. A considerably larger amount of allocated charges have also been made to JCP&L, using the multiple-all cost allocation factor, also shown in *Exhibit III-19*.

Exhibit III-19
JCP&L Flight Operations Costs
Direct Versus Allocated Charges
2007 to 2010



	2007	2008	2009	2010 (YTD)
Allocated Charges to JCP&L $	$444,428	$1,612,440	$2,148,907	$1,264,153
Direct Charges to JCP&L $	$10,242	$74,725	$1,600	$400

Direct Charges to JCP&L $ Allocated Charges to JCP&L $

Source: Information Response 784

Finding III-19 **Policies and procedures governing the use of corporate aircraft do not specifically address the economic use of corporate aircraft.**

In 2006, FirstEnergy developed a policy governing the use of corporate aircraft. This policy is an extension of the FirstEnergy travel policy, which addresses all other types of travel (commercial airfare, ground transportation, hotels, meals, etc.). There is little mention in the dedicated/chartered aircraft policy that provides any guidelines on the appropriate use of the corporate aircraft other than "All use of dedicated or chartered aircraft shall be approved by the CEO or COO, as specified by the CEO."

Recommendations

Recommendation III-10 **Study the size of the aircraft fleet to increase overall utilization on the aircraft. (Refer to Finding III-17)**

The FE organization should investigate whether the current mix of aircraft is appropriate given the decreasing flight hours since 2008. Nearly 50% of usage has been with the two Citation XL airplanes, which are primarily used for shuttle services, except for 2008 when it was approximately 72%. The remaining flight hours are spread between the Embraer Legacy 600 and the Falcon 2000, both of which

have over 3,000 miles of range, a distance which is far more than FE's service territory in size or FE's need to interact with other groups, such as the investment and financial or federal regulatory agencies.

Recommendation III-11 **Analyze and modify, as appropriate, aircraft charging mechanisms so that entities such as JCP&L do not excessively pay for services not rendered. (Refer to Finding III-18)**

The charging mechanisms currently in use should be investigated for necessary modifications to more accurately reflect payment for services rendered by the Flight Operations organization. Modified areas should include the following:

- The direct charge amounts should be modified to accurately reflect actual costs of usage.
- The cost allocation factor used for charging indirect costs should be based on actual usage, not the multiple-all factor, so entities not significantly using FE aircraft are not inappropriately charged.

Recommendation III-12 **Modify policies and procedures regarding the use of corporate aircraft to provide economic guidelines on appropriate use. (Refer to Finding III-19)**

FirstEnergy should develop written guidelines regarding the appropriate and economic use for corporate aircraft. These guidelines might include such things as:

- Passenger loading (number of passengers) to a given location for use of corporate aircraft.
- Passenger loading requirements for using one aircraft versus another.
- Days of week aircraft available for on-demand versus scheduled routes, etc.
- Authorization levels for aircraft use below CEO (i.e., if budgeted for in cost center further approval is required).

Recommendation III-13 **Perform a lease versus own analysis and submit it to the BPU Audit Division to justify the benefits and costs of maintaining an in-house FE flight operation showing various lease/own options. (Refer to Finding III-17, Finding III-18, and Finding III-19)**

Given each of the findings on which this recommendation is based, FE should perform and submit a lease versus own analysis to the BPU Audit Division, which details both the benefits and costs of maintaining an in-house FE flight operation, showing various lease/own options. Included among the details should also be included JCP&L's portion of such benefits and costs.

IV. Market Conditions

This chapter addresses the level of customer activity in choosing electric commodity supply from third-party suppliers (TPSs). It addresses JCP&L's administration of the relationships with TPSs and the TPSs' success in penetrating the competitive market in the JCP&L territory. Customers who choose electric commodity supply from TPSs are called "shopping" customers. Customers who receive the default basic generation service (BGS) are called "non-shopping" customers.

A. Background & Perspective

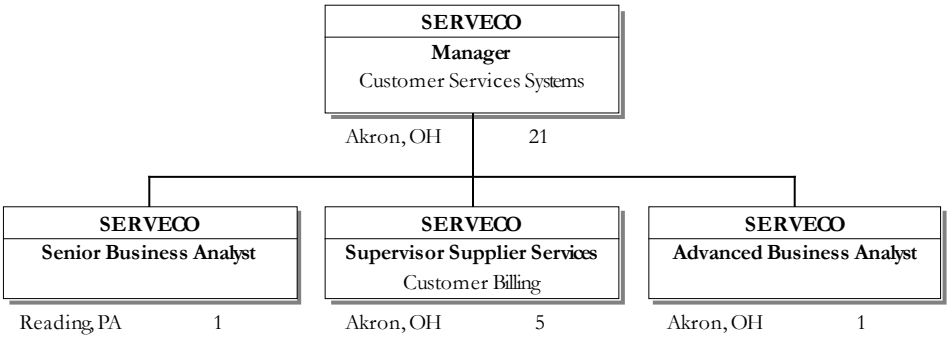
The provisioning of electricity supply to end-use customers has been restructured in New Jersey. JCP&L no longer supplies JCP&L-owned or -procured electric generation commodity service directly to end-use customers as it did in the former vertically integrated model. In New Jersey, customers can now choose electric commodity supply from any licensed and registered TPS, or they can simply accept the default BGS standard offer. There are two types of BGS: hourly and fixed. In general, large customers pay real-time hourly prices as determined in the PJM market. Small customers pay a fixed rate as determined in the BGS auctions. One-third of the fixed-price load is auctioned each year, so the fixed BGS price is a blend of three yearly auctions.

Non-shopping customers in the rate classes labeled residential and street lighting receive Basic Generation Service – Fixed Pricing (BGS-FP). Non-shopping customers in the commercial and industrial rate classes who take service at primary and transmission voltages receive hourly Basic Generation Service – Commercial Industrial Energy Pricing (BGS-CIEP). Non-shopping commercial and industrial customers taking service at secondary voltages receive BGS-FP, unless their peak load share is currently 1,000 kilowatt (kW) and above, or they voluntarily opt in to BGS-CIEP.

JCP&L's roles in electric commodity supply to end-use customers are, in addition to the physical delivery of electricity, to meter use, send bills, and collect payments on behalf of the BGS suppliers and TPSs and to administer the relationships with BGS suppliers and TPSs. JCP&L does not have programs to encourage or discourage customer choice between BGS- and TPS-provided commodity supply. That decision is each customer's choice as influenced by TPS offers and marketing.

The administration of JCP&L's involvement with TPSs is provided as a FirstEnergy (FE) Service Company (SERVECO) affiliate service by the Supplier Services section of the Customer Services Systems unit. This unit is part of the FirstEnergy Utilities (FEU) Customer Services organization. Two of the business analysts from the Customer Services Systems unit are also assigned to work with the Supplier Services section. The organizational structure for the Supplier Services section is shown in *Exhibit IV-1*.

Exhibit IV-1
FEU Supplier Services Organizational Structure
as of July 8, 2010



Source: Information Response 54

The five Supplier Services unit employees and the two assigned analysts are the contact and interface point for TPSs in all three FEU states (New Jersey, Ohio, and Pennsylvania).

Third-party suppliers wishing to do business in the JCP&L territory must first be licensed by the New Jersey Board of Public Utilities (NJBPU). Then they must register with JCP&L through the FEU Supplier Services group to do business. The process for supplier registration includes:

- Credit Risk management updates their credit reviews for suppliers on an annual basis and monitors on a daily basis industry news for events that would have a negative impact on suppliers' credit ratings.
- Posting a bond or cash for possible TPS defaults – JCP&L is the designated provider of last resort (POLR) in its service territories. If JCP&L has to provide power, as determined by the FE SERVECO return to operations (RTO) Settlement Services Department, the bond or cash deposit is used to cover the cost.
- Signing the NJBPU-approved standard master service agreement
- Delivering officer-signed letterhead banking information
- Submitting a W9 vendor form and a supplier communication contacts and billing information form.

Once licensed and registered, electronic data interchange (EDI) is set up and tested with the newly registered TPS. EDI enables electronic communication of usage and billing information with each TPS.

When the registration and EDI setup is complete, the third-party supplier may sign up customers. Each TPS can offer whatever terms and prices it chooses. The TPS offerings are not regulated. The third-party suppliers must notify Supplier Services/JCP&L at least 20 days before the read date for each

customer to make the switch that month, as required in New Jersey. The TPSs typically communicate with Supplier Services by phone and e-mail.

Each third-party supplier may elect to bill its customers directly based on consumption data provided by FEU/JCP&L (including detailed MV90 data), or it can have FEU/JCP&L do the billing on either a "bill ready" or "rate ready" basis. The consumption (and demand, if applicable) data is provided to the TPS. The third-party supplier can calculate the bill for each customer and provide it to FEU as "bill ready." Alternatively, the TPS can provide its contract rate structure for each customer to FEU and FEU will calculate the bill as "rate ready."

FEU Customer Services bills BGS and most TPSs' customers and collects their payments. The costs JCP&L incurs that are associated with the BGS process are recovered through Rider BGS-FP and Rider BGS-CIEP. The pricing is updated on an annual basis to reflect the results of the most recent basic generation service auction. A monthly accounting of BGS revenue billed vs. BGS incurred cost is performed, resulting in the recording of deferred under or over cost recoveries. Carrying cost, calculated on the basis of short-term debt rates, is assessed monthly on under/over-recovered deferred balances. The riders also include a reconciliation component, which is updated quarterly to ensure that JCP&L remains revenue neutral. External administrative costs, including the BGS auction consultant fees and Board of Public Utilities (BPU) staff consultants, are reimbursed through the annual BGS tranche fees, which are paid by the BGS winning bidders.

JCP&L assumes the receivables and pays the TPSs whether or not it receives payment from the customer. All third-party supplier customers are included. After 60 days, if the customer is in arrears, JCP&L switches the customer to dual billing and is no longer responsible for assuming receivables. The customer then has to be current for 12 months before he or she can go back on consolidated billing with JCP&L. JCP&L purchases the TPSs' receivables at 100% and the supplier is paid five days after the invoice's due date.

Costs associated with administering the TPS contracts, billing, and collections and other miscellaneous internal administrative costs (e.g., payroll related to accounting, regulatory filings, and tariff administration) are recovered through JCP&L's base rates. All uncollectible (bad debt) expense is recovered through Rider Uncollectible Costs (UNC), which is a component of Rider SBC.

Exhibit IV-2 shows that there were 19 active (having at least one customer) TPSs in New Jersey with a total of 29,261 shopping customers as of September 28, 2010.

Exhibit IV-2
Active JCP&L Territory Third-Party Suppliers
as of September 28, 2010

	Suppliers	TPS Customers
Commercial	17	16,744
Industrial	17	636
Residential	12	11,685
Street Lights	8	196
Totals (Unique Suppliers)	19	29,261

Source: Information Response 735

JCP&L's affiliate, FirstEnergy Solutions (FES), had 323 commercial and 30 industrial customers in the JCP&L territory as of September 28, 2010.

B. Findings & Conclusions

Finding IV-1 **JCP&L has more active third-party suppliers in its New Jersey territory than it does in its FEU Ohio and Pennsylvania operating company territories and that number has been increasing.**

Exhibit IV-3 shows that the number of active TPSs in JCP&L's territory increased from 12 in 2005 to 19 at the end of August 2010.

Exhibit IV-3
Active Third-Party Suppliers in the FEU Territories in Ohio, Pennsylvania, and New Jersey as of August 31, 2010

2005	Ohio	11
	Pennsylvania	5
	New Jersey	12
2006	Ohio	5
	Pennsylvania	2
	New Jersey	14
2007	Ohio	3
	Pennsylvania	7
	New Jersey	15
2008	Ohio	2
	Pennsylvania	8
	New Jersey	18
2009	Ohio	9
	Pennsylvania	9
	New Jersey	17
2010 (as of August 31)	Ohio	12
	Pennsylvania	12
	New Jersey	19

* Except for 2010, numbers represent totals as of December 31 of that year.

Source: Information Response 734

Furthermore, the number of active third-party suppliers in the JCP&L territory is greater than the number of active TPSs in the Ohio and Pennsylvania FEU territories.

Finding IV-2 **The number of JCP&L shopping customers has increased dramatically in recent years; however, the amount of shopping kilowatt hours has not increased as much.**

Exhibit IV-4 shows that the number of JCP&L shopping customers has increased from 699 to 9,436, or 1,250%, from 2005 to 2009. Almost all of the increase in shopping customers came in the general service (GS) secondary rate class, which increased from 65 shopping customers to 8,666 customers, or a total increase of 8,601. The GS increase in shopping customers is over 98% of the total increase in shopping customers. This pattern continued into 2010 as well.

Exhibit IV-4
FirstEnergy Shopping Statistics by State
2005 to 2010

Year	State	Shopping			Non-Shopping			TOTAL			Shopping Customers as a Percent of Total	Shopping kWh as a Percent of Total
		Customers [1]	kWh [2]	Revenue [3]	Customers [1]	kWh [2]	Revenue [4]	Customers [1]	kWh [2]	Revenue [3]		
2005	OH	446,627	19,961,150,092		1,667,389	36,364,279,040	$1,028,160,754	2,114,016	56,325,429,132		21.1%	35.4%
	PA	1,717	1,465,219,533		1,279,048	31,285,253,864	$1,372,600,136	1,280,765	32,750,473,397		0.1%	4.5%
	NJ	699	4,301,207,866		1,071,529	18,228,073,754	$1,167,630,724	1,072,228	22,529,281,620		0.1%	19.1%
		449,043	25,727,577,491	N/A	4,017,966	85,877,606,658	$3,568,391,614	4,467,009	111,605,184,149	N/A	10.1%	23.1%
2006	OH	298,313	9,112,972,933		1,819,468	46,149,880,869	$1,318,838,367	2,117,781	55,262,853,802		14.1%	16.5%
	PA	224	507,107,587		1,289,393	31,911,231,901	$1,478,686,562	1,289,617	32,418,339,488		0.0%	1.6%
	NJ	417	4,035,428,546		1,081,486	17,809,816,473	$1,329,917,576	1,081,903	21,845,245,019		0.0%	18.5%
		298,954	13,655,509,066	N/A	4,190,347	95,870,929,243	$4,127,442,505	4,489,301	109,526,438,309	N/A	6.7%	12.5%
2007	OH	292,236	8,468,118,143		1,815,583	47,978,007,249	$1,419,234,764	2,107,819	56,446,125,392		13.9%	15.0%
	PA	16,151	2,471,499,247		1,278,519	30,848,265,909	$1,521,707,609	1,294,670	33,319,765,156		1.2%	7.4%
	NJ	598	4,323,014,598		1,086,797	18,270,492,846	$1,684,675,295	1,087,395	22,593,507,444		0.1%	19.1%
		308,985	15,262,631,988	N/A	4,180,899	97,096,766,004	$4,625,617,668	4,489,884	112,359,397,992	N/A	6.9%	13.6%
2008	OH	540	7,999,607,920		2,106,492	46,900,926,069	$1,409,293,437	2,107,032	54,900,533,989		0.0%	14.6%
	PA	20,194	2,942,565,547		1,278,251	30,399,476,682	$1,510,735,669	1,298,445	33,342,042,229		1.6%	8.8%
	NJ	1,303	4,619,155,303		1,091,245	17,754,766,934	$1,912,703,589	1,092,548	22,373,922,237		0.1%	20.6%
		22,037	15,561,328,770	N/A	4,475,988	95,055,169,685	$4,832,732,694	4,498,025	110,616,498,455	N/A	0.5%	14.1%
2009	OH	965,714	7,114,184,921		1,136,101	42,509,063,837	$2,303,423,911	2,101,815	49,623,248,758		45.9%	14.3%
	PA	24,259	2,652,588,704		1,276,576	28,868,833,414	$1,434,718,453	1,300,835	31,521,422,118		1.9%	8.4%
	NJ	9,436	5,594,038,744		1,086,050	15,640,100,996	$1,729,708,362	1,095,486	21,234,139,740		0.9%	26.3%
		999,409	15,360,812,369	N/A	3,498,727	87,017,998,247	$5,467,850,726	4,498,136	102,378,810,616	N/A	22.2%	15.0%
2010 YTD	OH	1,136,231	20,523,672,177		959,685	15,097,557,393	$949,301,742	2,095,916	35,621,229,570		54.2%	57.6%
	PA	25,637	2,003,750,604		1,275,243	19,790,911,695	$1,023,766,534	1,300,880	21,794,662,299		2.0%	9.2%
	NJ	27,237	4,873,346,960		1,070,370	9,985,690,976	$1,117,427,686	1,097,607	14,859,037,936		2.5%	32.8%
		1,189,105	27,400,769,741	N/A	3,305,298	44,874,160,064	$3,090,495,962	4,494,403	72,274,929,805	N/A	26.5%	37.9%

Source: Information Response 734

Exhibit IV-4, however, also shows that the number of shopping kilowatt hours (kWh) of consumption increased from 4.3 billion in 2005 to only 5.6 billion in 2009, an increase of 30%. Like the increase in shopping customers, most of the increased shopping kWhs were in the general service (GS) rate class.

Of the total JCP&L shopping activity in 2009, FirstEnergy Solutions, JCP&L's affiliate and a New Jersey–licensed and –registered TPS, had 186 customers and sold 191,051,706 kilowatt hours for a total revenue of $18,872,408.

In Ohio, the number of shopping customers and the load increased dramatically from 2005 to August 31, 2010. A similar dramatic increase may take place in Pennsylvania when the default option (BGS equivalent) price caps expire on January 1, 2011.

Finding IV-3 **In 2009, JCP&L's percentage of shopping customers was lower, but its percentage of shopping load was higher than it was in FEU's Ohio and Pennsylvania territories.**

Exhibit IV-5 shows that FEU Ohio and Pennsylvania shopping customers represented a greater percentage of total customers.

Exhibit IV-5
2009 FEU States' Shopping Customers and Load
as of December 31, 2009

Year	State	Shopping		Non-Shopping		TOTAL		Customers as a Percent of Total	kWh as a Percent of Total
		Customers [1]	kWh [2]	Customers [1]	kWh [2]	Customers [1]	kWh [2]		
2005	OH	446,627	19,961,150,092	1,667,389	36,364,279,040	2,114,016	56,325,429,132	21.1%	35.4%
	PA	1,717	1,465,219,533	1,279,048	31,285,253,864	1,280,765	32,750,473,397	0.1%	4.5%
	NJ	699	4,301,207,866	1,071,529	18,228,073,754	1,072,228	22,529,281,620	0.1%	19.1%
		449,043	25,727,577,491	4,017,966	85,877,606,658	4,467,009	111,605,184,149	10.1%	23.1%
2006	OH	298,313	9,112,972,933	1,819,468	46,149,880,869	2,117,781	55,262,853,802	14.1%	16.5%
	PA	224	507,107,587	1,289,393	31,911,231,901	1,289,617	32,418,339,488	0.0%	1.6%
	NJ	417	4,035,428,546	1,081,486	17,809,816,473	1,081,903	21,845,245,019	0.0%	18.5%
		298,954	13,655,509,066	4,190,347	95,870,929,243	4,489,301	109,526,438,309	6.7%	12.5%
2007	OH	292,236	8,468,118,143	1,815,583	47,978,007,249	2,107,819	56,446,125,392	13.9%	15.0%
	PA	16,151	2,471,499,247	1,278,519	30,848,265,909	1,294,670	33,319,765,156	1.2%	7.4%
	NJ	598	4,323,014,598	1,086,797	18,270,492,846	1,087,395	22,593,507,444	0.1%	19.1%
		308,985	15,262,631,988	4,180,899	97,096,766,004	4,489,884	112,359,397,992	6.9%	13.6%
2008	OH	540	7,999,607,920	2,106,492	46,900,926,069	2,107,032	54,900,533,989	0.0%	14.6%
	PA	20,194	2,942,565,547	1,278,251	30,399,476,682	1,298,445	33,342,042,229	1.6%	8.8%
	NJ	1,303	4,619,155,303	1,091,245	17,754,766,934	1,092,548	22,373,922,237	0.1%	20.6%
		22,037	15,561,328,770	4,475,988	95,055,169,685	4,498,025	110,616,498,455	0.5%	14.1%
2009	OH	965,714	7,114,184,921	1,136,101	42,509,063,837	2,101,815	49,623,248,758	45.9%	14.3%
	PA	24,259	2,652,588,704	1,276,576	28,868,833,414	1,300,835	31,521,422,118	1.9%	8.4%
	NJ	9,436	5,594,038,744	1,086,050	15,640,100,996	1,095,486	21,234,139,740	0.9%	26.3%
		999,409	15,360,812,369	3,498,727	87,017,998,247	4,498,136	102,378,810,616	22.2%	15.0%
2010 YTD	OH	1,136,231	20,523,672,177	959,685	15,097,557,393	2,095,916	35,621,229,570	54.2%	57.6%
	PA	25,637	2,003,750,604	1,275,243	19,790,911,695	1,300,880	21,794,662,299	2.0%	9.2%
	NJ	27,237	4,873,346,960	1,070,370	9,985,690,976	1,097,607	14,859,037,936	2.5%	32.8%
		1,189,105	27,400,769,741	3,305,298	44,874,160,064	4,494,403	72,274,929,805	26.5%	37.9%

[1] Customer counts for 2005-2009 represent totals as of December 31 of that year. Totals for 2010 are as of August 31.
[2] Annual kWh totals for 2005-2009; totals for 2010 are through August 31. All kWh totals are based on monthly cycle results.
[3] Total commodity revenue paid by shopping customers to Third Party Suppliers is not recorded as revenue by FirstEnergy's utilities.
[4] Total non-shopping generation revenue recorded by FirstEnergy's utilities. All revenue totals are based on monthly cycle results.

Source: Information Response 734

The shopping percentage of total load, however, was greater in the JCP&L New Jersey territory.

C. Recommendations

None

V. Review of Prior Audit Recommendations

This chapter addresses prior audit recommendations.

A. Background & Perspective

Several different investigations of Jersey Central Power & Light (JCP&L) have been performed over the last 10 years, including:

- ***2003 Competitive Services Audit of JCP&L (Docket EA02020096)*** – This periodic review is performed for all electric and gas utilities in the state of New Jersey, as ordered by the New Jersey Board of Public Utilities (NJBPU).
- ***System Reliability Reviews*** – This series of reviews was performed at the request of the New Jersey Board of Public Utilities as a result of perceived system reliability problems being experienced within the JCP&L distribution system. Two major reviews were conducted. They were followed by specific agreements and stipulations regarding JCP&L actions in response to the findings and recommendations of the reviews as follows:
  - ***2004 Focused Audit of JCP&L's Planning, Operations, and Maintenance Practices, Policies, and Procedures (Docket EX02120950)*** – This study was performed by Booth Associates, Inc. It resulted in a draft and final report that contained a series of findings and recommendations. These outcomes were reported in a Draft Report that was issued January 30, 2004 and a Final Report that was issued June 22, 2004. The findings and recommendations were agreed to, in part, by JCP&L through a Memorandum of Understanding and Stipulation of Settlement as discussed below.
  - ***PJ Downes Associates' Review*** – The Board of Public Utilities (BPU) also engaged PJ Downes Associates to act in the capacity of special reliability master (SRM). In this role, the firm made recommendations to the Board to ensure system-wide reliability. This resulted in a separate report issued in 2004 as a result of outages experienced within the JCP&L service territory near the New Jersey shore, among other issues.
  - ***Memorandum of Understanding*** (**MOU**) – This agreement (March 24, 2004) was made between JCP&L and the BPU on the implementation of certain recommendations from the Booth Associates' Draft Report, among other issues.
  - ***Stipulation of Settlement*** (**SOS**) – This agreement (June 8, 2004) was made between JCP&L and the BPU on the implementation of certain recommendations from the Booth Associates' Final Report and all of the recommendation of the PJ Downes Associates' report.

Schumaker & Company consultants reviewed all of the above reports and requested selected documentation to confirm implementation of the recommendations contained within these reports. We

specifically focused on the competitive services audit and the system reliability commitments that were agreed to in the Memorandum of Understanding and Stipulation of Settlement agreements.

2003 Competitive Services Audit of JCP&L (Docket EA02020096)

Exhibit V-1 illustrates the timelines associated with the JCP&L competitive services audit.

Exhibit V-1
Competitive Services Audit History
2002 to 2006

March 20, 2002	Liberty Consulting selected to perform JCP&L competitive services audit.
March 31, 2003	Final audit report issued by Liberty Consulting.
April 22, 2003	BPU acknowledges the receipt of the final competitive services audit report.
May 1, 2003	Board focus shifts to issues at NUI.
November 10, 2005	Board restarts review process on competitive services audit final report.
March 29, 2006	Board issues order accepting competitive services audit final report and ordering implementation of recommendations.
October 27, 2006	After JCP&L files for reconsideration, Board issues order accepting competitive services final audit report and ordering implementation of recommendations.

Source: Information Response 27,786, 833, 834, 892 Schumaker & Company Analysis

Exhibit V-2 displays each of the recommendations from the 2003 competitive services audit of JCP&L (Docket EA02020096) and our comments on the continued viability of these recommendations.

Exhibit V-2
Competitive Services Audit Report Recommendations
as of June 30, 2010
Page 1 of 3

#	Statement Description	Comment
1	Treat General Public Utilities (GPU) Telcom, the MYR Group, and FirstEnergy Facilities Services Group, LLC (FEFSG) as related competitive business segments (RCBSs) of FirstEnergy for the purpose of compliance with NJ standards (page 8).	In 2001, GTE Telecom was merged into FirstEnergy Telecom Services, which subsequently changed its name to FirstEnergy Fiber Holdings Corporation (FEFHC) in 2008, when substantially all of its assets were sold to First Telecom Services, LLC (FTS), a subsidiary of First Communications, Inc. FirstEnergy (FE) currently owns approximately 15% of First Communications. In 2009, FTS transferred the wireless portion of its interests to an outside party, Diamond Communications, LLC, but the land-based fiber optic business remained with FTS. FTS currently remains an RCBS. FE currently owns substantially all of the assets of FEFHC, a land-based fiber business. (See *Chapter III – Affiliated Relationships & Cost Allocation Methodologies* chapter.) The MYR Group was sold in 2006 and, therefore, is no longer an RCBS. FEFSG remains an FE subsidiary structure, but JCP&L management indicates it is no longer an RCBS. In its latest compliance plan, JCP&L management indicates that New Jersey Administrative Code (N.J.A.C.) 14:4-3.3 through 3.5 applies only to FTS and FirstEnergy Solutions (FES); therefore, these two entities are the only entities treated as RCBSs.
2	Refrain from conducting transactions, including but not limited to energy transactions, that violate this section of NJ standards (page 14).	During the 2003 audit period, isolated transactions were found to be in violation of standards, which according to FE management did not reflect a systemic issue. In its latest compliance plan, JCP&L management indicates that such transactions, with certain allowed exceptions, are prohibited. Future competitive service audits should continue to check whether isolated transactions are in violation of New Jersey (NJ) standards.
3	As part of the review of these audit recommendations and their implementation, seek guidance from the Board in interpreting Sections 14:4-5.3(b) and 14:4-5.5(e)(1) of NJ standards in situations in which they appear to be in conflict (page 14).	According to JCP&L management, it has sought guidance from the Board in this respect. (GPU AR is now part of the FirstEnergy Solutions (FES) organization.)

Source: 2003 competitive services audit of JCP&L (Docket EA02020096) final report, Interview 195, and Information Responses 786, 787, 788, 820, and 832

Exhibit V-2
Competitive Services Audit Report Recommendations
as of June 30, 2010
Page 2 of 3

#	Statement Description	Comment
4	Amend the compliance plan either to prohibit providing advice to customers about any holding company RCBS or to provide guidance to employees on what advice is appropriate and how that advice can be provided with regard to competitors (page 31).	Included in existing compliance plan documentation.
5	Complete efforts to put in place an appropriate contract between JCP&L and SERVECO for services provided between them (page 48).	Affiliate agreement dated June 1, 2003 between SERVECO and JCP&L was finally approved by the NJBPU on September 30, 2005. See *Chapter III – Affiliate Relationships & Cost Allocation Methodologies* for related recommendations.
6	Retain complete work papers supporting cost loaders and other material, calculated cost assignment and allocation factors at least until completion of the Board audit covering the period during which they applied (page 58).	See *Chapter III – Affiliate Relationships & Cost Allocation Methodologies*. (Included in audit work papers.)
7	Immediately after FirstEnergy has completed its shared service reorganization, prepare a detailed and comprehensive cost allocation manual (or equivalent document) that is consistent with NJ standards (page 64).	See *Chapter III – Affiliate Relationships & Cost Allocation Methodologies* for related recommendations. (Included in audit work papers.)
8	Perform a structured analysis of the continuing sufficiency of general allocators to align cost responsibility with cost causation; increase the use of direct charges and more specific allocators where found appropriate (page 67).	Performed; according to JCP&L management it was covered through NJBPU's September 30, 2005 order/stipulation. See *Chapter III – Affiliate Relationships & Cost Allocation Methodologies* for related recommendations. (Included in audit work papers.)
9	Add the required disclosure on at least the first web pages for all FirstEnergy competitive services, especially for FirstEnergy Solutions (page 75).	The phrasing was added and currently appears at the bottom of FES's top web pages.[3]
10	Allocate a share of Electric Power Research Institute (EPRI) membership costs to RCBS members during the audit period and deny them membership and access to any information accruing from membership in the future unless they pay an appropriate share of the EPRI membership fees and dues (page 81).	EPRI membership fees are assessed on a project-by-project basis; therefore, the operating company/ business unit benefiting from the project pays the project fees. Membership in and access to EPRI information through a corporate-wide membership has been limited to those entities, including FES, that pay an appropriate share of the EPRI membership fees.

Source: 2003 competitive services audit of JCP&L (Docket EA02020096) final report, Interview 195, and Information Responses 786, 787, 788, 820, and 832

[3] FirstEnergy Solutions Corp., an unregulated subsidiary of FirstEnergy Corp., is not the same company as FirstEnergy Corp.'s regulated electric utilities: Ohio Edison Company, Cleveland Electric Illuminating Company, Toledo Edison Company, Pennsylvania Power Company, Pennsylvania Electric Company, Metropolitan Edison Company, Jersey Central Power & Light Company, and American Transmission Systems, Incorporated. FirstEnergy Solutions is not regulated by the Public Utilities Commission of Ohio, the Pennsylvania Public Utility Commission, or the New Jersey Board of Public Utilities. The electric utility customers do not have to buy a product or service from FirstEnergy Solutions to continue to receive services from the regulated electric utilities.

Exhibit V-2
Competitive Services Audit Report Recommendations
as of June 30, 2010
Page 3 of 3

#	Statement Description	Comment
11	In the event that the Board decides that clause (1) of Section 14:4-5.5(p) prohibits RCBS employees from also being involved in the provision of noncompetitive utility and safety services, JCP&L should refrain from using utility RCBSs, as demonstrated by the Harlan Electric and Elliot-Lewis examples, to maintain its utility infrastructure (page 83).	No longer an issue as RCBS entities mentioned were part of the MYR Group sale.
12	Reposition the duties of the individuals who serve as a director or an officer for both a utility and a related competitive business segment of the utility's holding company so that JCP&L is in compliance with the standard (page 85).	No longer an issue as no members of JCP&L's Board of Directors (BOD) also sit on the BOD of FirstEnergy Solutions or First Telcom Services, LLC, the two RCBSs indicated in the August 31, 2010 affiliate standards compliance filing.
13	Revise either or both the compliance plan and Accounting Policy P-07-B (or its post-merger equivalent) to provide additional guidance regarding the transfer of assets (page 92).	Completed and included in both the compliance plan and the Accounting Policy documentation.
14	Add to the compliance plan a specific statement regarding how new employees are to be trained on the standards, which should also include a specific timeframe for the "refresher" training offered to employees (page 99).	No longer an issue as included in the existing compliance plan documentation; also, training occurs for impacted employees when they are first employed by FE and every two years thereafter.

Source: 2003 competitive services audit of JCP&L (Docket EA02020096) final report, Interview 195, and Information Responses 786, 787, 788, 820, and 832

System Reliability Reviews

Exhibit V-3 illustrates the timeline associated with the JCP&L system reliability reviews.

Exhibit V-3
System Reliability Audits History
2003 to 2004

August 2, 2002	Severe thunderstorms cause major outage in Jersey Central Power & Light Company (JCP&L) service territory (180,000 customers experience outages). The New Jersey Board of Public Utilities (NJBPU or Board) initiated an investigation into the storm-related outages, establishing Docket No. EX02120950.
February 18, 2003	Board and JCP&L signed a stipulation and agreement of dettlement in Docket No. EX02120950.
July 5, 2003	Severe conditions cause outages in barrier islands areas.
July 16, 2003	Board initiates investigations of barrier islands outages.
August 1, 2003	Board hires PJ Downes Associates to assist in barrier islands investigations.
September 24, 2003	Board retained Booth Associates, Inc. (Booth) to perform a focused audit of the planning, operations, and maintenance
December 16, 2003	PJ Downes Associates interim report submitted for BPU and JCP&L review and comment.
January 30, 2004	Booth draft final report submitted for BPU and JCP&L review and comment.
March 24, 2004	Memorandon of understanding agreement issued to resolve some of the issues identified by the Booth report.
June 7, 2004	PJ Downes Associates final report submitted for BPU and JCP&L review and comment.
June 8, 2004	Stipulation of settlement agreement reached to resolve some additional issues from the Booth and PJ Downes reports.
June 22, 2004	Booth final report issued.
June 23, 2004	JCP&L submits position letter regarding the Booth final report.

Source: Information Responses 833 and 834 and Schumaker & Company Analysis

2004 Focused Audit of JCP&L's Planning, Operations, and Maintenance Practices, Policies, and Procedures (Docket EX02120950)/Booth Report

Only certain findings and recommendations that resulted from the Booth Associates' report were agreed to be implemented by JCP&L through agreements with the NJBPU known as the ***Memorandum of Understanding*** and the ***Stipulation of Settlement***. Although Schumaker & Company consultants reviewed the Draft and Final Reports from Booth Associates, we focused most of our efforts on reviewing JCP&L's implementation of those items agreed to in the aforementioned agreements.

PJ Downes Associates' Review

PJ Downes Associates was hired in response to the Board's Investigation into JCP&L's Outages (specifically at the Barrier Peninsula) on the July 4, 2003 Weekend (BPU Docket EX03070503). The interim report was submitted to the New Jersey Board of Public Utilities (the "Board") on December 16, 2003. The fourteen recommendations contained in that report were accepted by JCP&L and have been completed. The significant areas of those recommendations were training, updating planning criteria, updating communications and computer systems, and constructing new facilities.

Memorandum of Understanding (MOU)

Exhibit V-4
Memorandum of Understanding Commitments
as of December 31, 2008
Page 1 of 6

#	Statement Description	Comment
1.	JCP&L will conduct a geographical information system (GIS) field audit in New Jersey to improve the accuracy of its outage management system (OMS) connectivity model. JCP&L issued a request for proposal (RFP) for such a field audit (a copy of which will be provided to the Board staff), reviewed bids, and awarded a contract to a GIS audit contractor (Davey Resources) on March 3, 2004, with commencement of the field audit planned for the end of March 2004. JCP&L shall (i) provide a status report to the Board staff and the SRM by January 31, 2005 about the status of the field audit, (ii) complete the field audit by the end of 2005, and (iii) report to the Board staff and the SRM by February 28, 2006 about the results thereof.	Schumaker & Company consultants identified actions that addressed this issue.
2.	JCP&L agrees that proper grounding of substation fences is a significant safety (as opposed to a reliability) issue and agrees to apply to the Institute of Electrical and Electronics Engineers (IEEE) to request a rule interpretation under the National Electrical Safety Code (NESC) regarding whether the method of grounding/bonding of the barbed wire strands present at the JCP&L substations is adequate and/or whether such grounding/bonding method is grandfathered by previous versions of the NESC. JCP&L will submit a draft of the request to the Board staff by June 1, 2004 for review and approval before it is submitted to the IEEE. Upon receipt of the interpretation from IEEE, JCP&L will provide a copy of the interpretation and a report on any actions JCP&L will undertake based on the NESC's interpretation to the Board staff and the SRM. This report shall be signed by a JCP&L corporate officer.	Schumaker & Company consultants identified actions that addressed this issue.
3.	If a pentahead bolt was provided by the manufacturer as part of a pad mount transformer when it was installed, JCP&L will replace any such bolt found to be missing, in accordance with this paragraph 3. JCP&L will replace by June 1, 2004 any missing pentahead bolts on pad mount transformers about which JCP&L has actual knowledge. Furthermore, JCP&L will include the replacement of missing pentahead bolts as a part of its ongoing five-year periodic inspection program for pad mount transformers. JCP&L will continue to use industry-standard locking devices on all pad mount transformers. In addition, when JCP&L personnel open a pad mount transformer, JCP&L will clear vegetation around the pad mount transformer to the extent necessary to provide sufficient clearance for the safety of its employees	Schumaker & Company consultants identified actions that addressed this issue.
4.	JCP&L will continue and complete its accelerated reliability improvement program (the ARIP), as described in Attachment 1 hereto, which, among other things, includes the fusing of certain circuit lateral taps, where necessary and possible, as well as certain main feeder sectionalizing, consistent with JCP&L's circuit protection philosophy.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 833 and Schumaker & Company Analysis, Interview 195, and Information Responses 790 to 796

Exhibit V-4
Memorandum of Understanding Commitments
as of December 31, 2008
Page 2 of 6

#	Statement Description	Comment
5.	JCP&L will continue and complete the ARIP, which, among other things, includes a specified 34.5 kilovolt (kV) telemetry project to establish clear alarm points for voltage, transformers, and lines. Such alarms will be presented to the regional dispatch offices (RDOs) in the energy management system (EMS), so they will provide additional operational decision-making support for planned and unplanned changes in the operating status of energized equipment. JCP&L will also develop a set of written operating procedures in the RDOs governing prescribed reactions to typical or anticipated common alarm conditions. JCP&L will provide a progress report, signed by a JCP&L corporate officer, to the Board staff and the SRM by June 1, 2004 with respect to the status of the actions required by this paragraph 5.	Schumaker & Company consultants identified actions that addressed this issue.
6.	JCP&L will continue and complete its ARIP that, among other things, includes JCP&L's accelerated implementation of FirstEnergy's Vegetation Management Specifications, which include a "danger" (or "priority") tree management program component. Accelerated implementation means that by July 31, 2005, as a result of the completion of this aspect of the ARIP, all JCP&L lines will be on a four-year cycle under the FirstEnergy specifications. JCP&L will thereafter continue to comply with the Board's four-year "inspect and trim as necessary" cycle standard that has been mandated by the Board's orders dated December 16, 1998 in Docket EX98101130 and December 30, 1997 in Docket EX97080610.	Schumaker & Company consultants identified actions that addressed this issue.
7.	JCP&L will continue to include, as part of its applicable construction standards, the objective to achieve 10 ohms or less on all made electrodes (ground rods) at the grounding connection points to include every arrester location, with respect to its 34.5 kV system lightning arrester or overhead static wire program. JCP&L will demonstrate its commitment to this objective by providing a report to the Board staff and the SRM by August 1, 2004. This report will indicate the measured as-built ground resistance at each of the ground rods on the newly constructed C203 34.5 kV Mantoloking-Seaside Heights line on the Barrier Peninsula, which is scheduled for completion by May 24, 2004.	Schumaker & Company consultants identified actions that addressed this issue.
8.	JCP&L will review and assess the effectiveness of its existing set of written maintenance and testing procedures for all components of its 34.5 kV system, including batteries, switches, and controls. JCP&L will also provide additional training with respect to any changes made as a result of this required review and assessment. JCP&L will provide a report, signed by one of its corporate officers, to the Board staff and the SRM by June 1, 2004. This report will summarize the status of this review and training effort.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 833 and Schumaker & Company Analysis, Interview 195, and Information Responses 790 to 796

Exhibit V-4
Memorandum of Understanding Commitments
as of December 31, 2008
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#	Statement Description	Comment
9.	JCP&L will complete its review to determine if training on substation grounding design practices has been provided to, and attended by, all appropriate JCP&L employees. JCP&L will develop a schedule to provide such training during 2004 to those JCP&L employees who have not yet received this training. It will also track attendance so as to assure that all appropriate JCP&L employees have received such training by the end of 2004. JCP&L will provide a report to the Board staff and the SRM by January 31, 2005 with respect to the number of JCP&L employees that have received such training, both prior to and during 2004. This report will also stipulate the number of employees who have not yet been trained as of the end of 2004.	Schumaker & Company consultants identified actions that addressed this issue.
10.	JCP&L will continue to include substation grounding as part of its monthly substation inspection process and will continue to ground out-of-service equipment. JCP&L shall communicate with all of its regional operations employees who are working in its substations that, as a matter of policy and practice, all equipment in the JCP&L system is to be considered energized and treated as such unless properly isolated from the electrical system and properly grounded. JCP&L represents that it has already addressed the grounding condition at its Rosemont substation.	Schumaker & Company consultants identified actions that addressed this issue.
11.	JCP&L recognizes the Board's concerns with both the potential safety and stray-voltage reduction aspects of a proper substation ground grid and will provide a report to the Board staff and the SRM by June 1, 2004. This report will discuss the various methodologies that are available to test the integrity of a substation ground grid with and without de-energizing the substation equipment	Schumaker & Company consultants identified actions that addressed this issue.
12.	As JCP&L replaces faded, cracked, or otherwise unreadable warning signs on its substation fences and gates, it will do so with signs that comply with the latest American National Standards Institute (ANSI) 2535 and Occupational Safety & Health Administration (OSHA) standards. All new signs will also comply with the latest ANSI 2535 and OSHA standards. In addition, in conjunction with its monthly substation visual inspection program, JCP&L will install signs on all substation gates, providing substation name and address-identifying information and generic emergency telephone numbers (e.g., 911) to be used in the event of an emergency at any substation where the presence of such signage is not confirmed by the monthly inspections.	Schumaker & Company consultants identified actions that addressed this issue.
13.	JCP&L agrees that the Board's order dated July 16, 2003 required it to complete infrared thermography on the 34.5 kV system serving the Barrier Peninsula and to address identified hotspots. JCP&L represents that it has completed the required thermography and has addressed identified hotspots in compliance with such order	Schumaker & Company consultants identified actions that addressed this issue.
14	JCP&L will continue to insulate new 34.5 kV construction of overhead lines at 350 kV Basic Impulse Insulation Level (BIL) as it proceeds with system upgrades on the Barrier Peninsula.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 833 and Schumaker & Company Analysis, Interview 195, and Information Responses 790 to 796

Exhibit V-4
Memorandum of Understanding Commitments
as of December 31, 2008
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#	Statement Description	Comment
15.	(a) JCP&L will take reasonable steps to seek to enforce its contracts with joint-use pole tenants by providing notice with respect to, among other things, engineering notifications and reviews, make-ready work, the failure of the tenant to properly construct attachments (including improper or missing guys), and the obligation of the tenant to replace or repair its facilities. JCP&L will provide notice to the joint-use tenant within five business days of its discovery of the need for the joint-use tenant to repair or replace its facilities or of the joint-use tenant's failure to properly construct its attachments. (b) When JCP&L is the joint-use tenant and becomes aware of a significant structural defect in the joint-use owner's pole, JCP&L will provide notice to the joint-use owner within five business days of its discovery of the defect and of the need for the joint-use owner to correct, repair, or replace. In cases where the joint-use owner fails to take corrective action and its failure to correct creates a substantial hazard with respect to JCP&L's facilities, JCP&L will take steps to correct the deficiency within 90 days of its notice to the joint-use owner. JCP&L will then bill the joint-use owner for the fully loaded cost of the work and will transfer the ownership of that repair and any associated equipment to the joint-use owner.	Schumaker & Company consultants identified actions that addressed this issue.
16.	JCP&L will develop and implement its plans to construct the new D-212 line, which runs approximately 7.7 miles along Route 37, and the new cable crossing attached to the underside of the Route 37 bridge. JCP&L will advise the Board staff immediately of any difficulties in obtaining permitting or any other necessary approvals for the siting of these cables. Beginning April 2004, JCP&L will provide the Board staff and the SRM with a quarterly report of this project's progress in the prior calendar quarter. This report will be due within 15 days of the close of each calendar quarter until the project is completed	Schumaker & Company consultants identified actions that addressed this issue.
17.	For every transformer in the following table of substations, JCP&L shall either provide to the Board staff a record of the dissolved gas analysis and infrared analyses performed since September 1, 2003 or perform these tests by April 2004. To the extent that any of such test results indicate an immediate need for corrective maintenance, JCP&L shall review such test results with the SRM and shall schedule and implement such corrective maintenance in consultation with, and subject to the approval of, the SRM. JCP&L will also provide a report, signed by a JCP&L corporate officer, to the Board staff by July 15, 2004. This report will summarize the actual remedial actions taken as a result of the foregoing sentence.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 833 and Schumaker & Company Analysis, Interview 195, and Information Responses 790 to 796

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#	Statement Description	Comment
	Air Field, Air Reduction, Alderney, Allamuchy, Belford, Belmar, Bernardsville, Blairstown, Boonton, Branchville, Broadway, Change Bridge, Chapin Road, Chester, Clark Street, Colonial Oaks, Crawfords, Fair Haven, Fairview, Flanders, Gillette, Greater Cross Road, Green Village, Hackettstown, Hawks, Howell, Hurdtown, Hyson, Island Heights, Jamesburg, Jerseyville, Kenvil, Lacey, Lavallette, Mantoloking, McGraw Hill, Millhurst, Monmouth Beach, Morristown, Motts Corner, Mt. Fern, Mt. Pleasant, Newburgh, North Branch, North Newton, Ocean Beach, Old Bridge, Ortley Beach, Pine Beach, Pleasant Plains, Riverdale, Rocktown Road, Seaside Park, Stanton, Stewartsville, Sussex, Taylor Lane, Traynor, Washington, Whitesville, Woodbine, Woodland, Woodruffs Gap	
18.	JCP&L will complete, by June 25, 2004, the following major projects: (i) replacement of the transformers at the Airfield substation; (ii) transformer and equipment upgrades at the Atlantic, Freneau, Lakewood Co-Gen, Glen Gardner, and Hackettstown Hospital substations; and (iii) action to permanently relieve the anticipated overloads at the Hurdtown and Colonial Oaks substations or upgrades to the transformers at these substations. JCP&L will provide a report, signed by a JCP&L corporate officer, to the Board staff by July 25, 2004 regarding the actions taken at each of these locations.	Schumaker & Company consultants identified actions that addressed this issue.
19.	To the extent that JCP&L does not have real-time monitoring of loads through either its EMS system or its real-time metering system at the substation transformers listed in the table below, it will either undertake such EMS monitoring or install such real-time metering by June 25, 2004. JCP&L will also provide a report to the Board staff and the SRM regarding the status of the real-time monitoring/metering at these substation transformers by July 25, 2004: Belford 1, Belmar, 1, Blairstown 1, Fair Haven 2, Flanders 4, Hyson Bank 1, Jerseyville Bank 2, North Branch 2, North Newton 1, Riverdale 1, Stanton 2, Stewartsville 1.	Schumaker & Company consultants identified actions that addressed this issue.
20.	For each week of the 2004 summer peak season (June 1, 2004 through September 30, 2004), JCP&L will provide a weekly report to the Board staff and the SRM as follows: (i) the actual measured peak loading for the prior week on each of the substation transformers on the JCP&L system that have electronic metering; (ii) the actual monthly peak reading for the prior month on each of the substation transformers on the JCP&L system that do not have electronic metering but which were read during routine monthly substation inspections conducted during the prior week; and (iii) the State Estimator projections with respect to peak loading for the prior week for any remaining substation transformers not covered in (i) and (ii) above. Each report will be for the week ending 14 days prior to the date of the report.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 833 and Schumaker & Company Analysis, Interview 195, and Information Responses 790 to 796

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#	Statement Description	Comment
	The first report will cover the period spanning June 1 through June 9 and will be due on June 23, 2004. The second report will cover the period spanning June 10 through June 16 and will be due on June 30, 2004. (Each subsequent report will follow in sequence.) In the interest of efficiency, JCP&L may, prior to June 1, 2004, submit to the Board staff and the SRM a sample of an existing report or reports that may satisfy this requirement.	
21.	The timing of completion of any JCP&L commitments as set forth in this MOU (including the ARIP described in Attachment 1 hereto) shall be subject to the occurrence of force majeure events beyond the reasonable control of JCP&L. Such events include, but are not limited to, governmental action or inaction with respect to permitting or other matters.	Schumaker & Company consultants identified actions that addressed this issue.
22.	It is understood that this MOU arises in connection with the focused audit conducted under this specific docketed proceeding and addresses actions that may be of value to improve the reliability of electric delivery for the summer 2004 peak period. As such, the execution by Board staff, the approval by the Board, and the implementation by JCP&L of this MOU shall constitute final resolution of the consultant's draft interim recommendations and any of the consultant's final recommendations addressing substantially the same subject matter that arise from such focused audit. Furthermore, JCP&L's compliance with the tenets hereof shall constitute full, complete, sufficient, and satisfactory resolution of, and compliance with, this MOU.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 833 and Schumaker & Company Analysis, Interview 195, and Information Responses 790 to 796

Stipulation of Settlement (SOS)

Exhibit V-5
Stipulation of Settlement Commitments
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#	Statement Description	Comment
a.	In connection with the various diagnostic tests/inspections/preventative maintenance/corrective maintenance and related work that JCP&L performs in accordance with its asset management program and applicable preferred practices, JCP&L will provide the annual reports listed below.	Schumaker & Company consultants identified actions that addressed this issue.
1.	JCP&L will provide the following reports with respect to JCP&L's distribution transformer maintenance activities: Preventative Maintenance (PM) (including inspections and testing) – the number and percent completed compared to the number of PMs scheduled and as compared to the number scheduled and completed and the percent completed in the prior year Corrective Maintenance (CM) – the number of CMs completed by categories of equipment (e.g., tap changers, bushings, oil treatment, auxiliary equipment, etc.) and the number of total CM man-hours for the year as compared to both the number of CMs by categories of equipment completed in the prior year and the number of total CM man-hours for the prior year Distribution transformer replacements, retirements, refurbishments – the category and number for the year and as compared to the prior year	Schumaker & Company consultants identified actions that addressed this issue.
2.	JCP&L will provide the results of the tests/inspections/PMs/CMs performed.	Schumaker & Company consultants identified actions that addressed this issue.
3.	JCP&L will provide a list of the actions taken/planned on the basis of the tests/inspections/PMs/CMs data indicating that tolerances or accepted ranges have been exceeded or incipient failure conditions have been revealed.	Schumaker & Company consultants identified actions that addressed this issue.
4.	JCP&L will provide, with respect to planned actions from item 3, the schedules for action to be taken.	Schumaker & Company consultants identified actions that addressed this issue.
5.	JCP&L will provide the reports of actions completed as a result of actions planned under item 3 and scheduled under item 4.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 834 and Schumaker & Company Analysis

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#	Statement Description	Comment
b.	JCP&L will provide its running three-year average transformer failure rate compared to a national industry average failure rate, as set forth in "ANALYSIS OF TRANSFORMER FAILURES – A TWENTY-YEAR TREND" by William H. Bartley of The Hartford Steam Boiler Inspection & Insurance Co. USA, as most recently presented at the Proceedings of the 2000 International Conference of Doble Clients, Section 8-5 (copy attached as Attachment A) and as may be amended from time to time hereafter. For the purposes of this reporting, it is understood that the definition of a transformer failure, as used by JCP&L, is as follows: anytime JCP&L cannot refurbish the transformer, replace a component part, or rebuild the transformer on site. For example, if the transformer fails and must be sent to a repair facility for rewind, it is a failure. Replacing a tapchanger mechanism on a planned basis, however, or after testing and inspection show that it cannot be economically rebuilt, would be a corrective maintenance and not a failure. Similarly, replacing the oil, degassing the transformer, or replacing one or more bushings, CT sensors, fans, etc. would also be corrective maintenance and not a failure. JCP&L understands that this definition is consistent with the manner in which failures were considered in the aforementioned paper presented by Mr. Bartley.	Schumaker & Company consultants identified actions that addressed this issue.
c.	In the event that JCP&L's three-year running average failure rate exceeds the national average failure rate, JCP&L will agree to revise its distribution transformer loading guidelines/criteria to a more conservative loading level. These revisions will remain in effect until such time as its three-year average failure rate returns to below the national average failure rate or below the level of the lowest year during the three-year period that triggered the change in criteria.	Schumaker & Company consultants identified actions that addressed this issue.
d.	JCP&L will provide a list of its distribution transformers that are projected to exceed the IEEE Moderate Loss of Life (MLOL) rating under normal conditions on a going-forward basis.	Schumaker & Company consultants identified actions that addressed this issue.
e.	For distribution transformers projected to exceed the MLOL rating under normal conditions on a going-forward basis, JCP&L will take appropriate action to relieve the loading on such distribution transformers.	Schumaker & Company consultants identified actions that addressed this issue.
f.	All of the aforementioned annual reporting requirements may be reviewed by Board staff and JCP&L for possible termination or adjustment after three years.	Schumaker & Company consultants identified actions that addressed this issue.
6.	In addition to the foregoing, JCP&L also agrees to take certain actions with respect to its circuits as follows:	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 834 and Schumaker & Company Analysis

Exhibit V-5
Stipulation of Settlement Commitments
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#	Statement Description	Comment
a.	JCP&L agrees that it will target attainment of 80% of its circuits to a Circuit Reliability Index (CRI) (as described in Attachment B) level of 130 or less within four years. JCP&L will report on all the circuits on an annual basis until such time as the goal has been achieved as follows: (i)The annual average CRI rate by region (ii)The three-year trend on the average circuit CRI rate per region (iii)With respect to the number of circuits with a CRI score of 0–60 compared to a running three-year average number of circuits in the same range, if the number is increasing over 25% or a score change of 8 points, whichever is greater, to take targeted action on the ones that increased; in the case of circuits with CRI scores of 60–100 compared to a running three-year average number of circuits in the same range, if the number is increasing over 15% or a score change of 12 points, whichever is greater, to take targeted action on those circuits that increased (iv) After four years or the earlier achievement of the aforementioned goal of 80% of circuits with a CRI score of 130 or less, JCP&L agrees to adjust the CRI goal in order to use the CRI tool to further improve circuit reliability and customer satisfaction. It may do so by, for example, reducing the targeted CRI score or using the same goal and targeted CRI score on a circuit element basis, which has the effect of measuring circuit performance at a level that is increasingly closer to the individual customer.	Schumaker & Company consultants identified actions that addressed this issue.
7.	Over the course of the five years beginning January I, 2004, JCP&L agrees that it will budget $12 million per year on distribution transformer-related capital investments (the amount of which will be subject to review by Board staff and JCP&L in June 2005) as part of the implementation of its asset management strategy (as described in Attachment C). The $12 million shall be in addition to JCP&L's commitment in Attachment C to spend no less than $30 million annually (including both capital expenditures and operations & maintenance) on reliability enhancements in the areas of capacity additions, reinforcements, replacements, upgrades, inspections, and testing.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 834 and Schumaker & Company Analysis

Exhibit V-5
Stipulation of Settlement Commitments
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#	Statement Description	Comment
8.	It is agreed that JCP&L shall be permitted to seek recovery in its Phase II proceeding in Docket 02080506 for (a) known and measurable reliability-related investments (including associated depreciation and other related adjustments) to be completed in 2004 and 2005 made pursuant to the 3/24/04 MOU and this stipulation that were not included in the .2002 test-year rate base in JCP&L's last base rate case and (b) any operations and maintenance costs associated with reliability-related projects approved by the Board since the end of the 2002 test year in JCP&L 's last base rate case. Thereafter, JCP&L can seek recovery—in proceedings substantially similar to the Phase II proceeding contemplated for 2004 or by other appropriate proceedings before the Board—of future reliability-related costs incurred in connection with projects approved by the Board since the end of the 2002 test year in JCP&L's last base rate case and not included in such Phase II proceeding.	Schumaker & Company consultants identified actions that addressed this issue.
9.	It is understood that this stipulation arises in connection with the Board's investigation and the focused audit conducted under the specific docketed proceedings and that it addresses actions to improve the reliability of JCP&L's electric delivery. As such, the execution of this stipulation by Board staff, its approval by the Board, and its implementation by JCP&L (in compliance with its terms and over the period specified therein), in conjunction with the Board's December 22 order and the March 29 order adopting the 3/24/04 MOU, shall constitute final resolution of the SRM's Final Report, all Booth Associates' recommendations, and any other issues that arise from such investigation and focused audit. JCP&L's compliance with the terms hereof in the time period set forth herein shall constitute full, complete, sufficient, and satisfactory resolution of, and compliance with, the SRM's Final Report, the Booth Associates' Final Report, any other issues raised in the remainder of Booth Associates' draft audit report and this stipulation.	Schumaker & Company consultants identified actions that addressed this issue.

Source: Information Response 834 and Schumaker & Company Analysis

Exhibit V-6
Memo of Understanding & Stipulation of Settlement
Implementation Table
2003 to 2010

3124104 Memorandum of Understanding Implementation:		Original Completion Date	Revised Completion Date
	ARIP		
1	Distribution Capacitors	811/2003	Complete
2	Circuit Reliability Reviews	12/3112004	Complete
3	Distribution Substation Metering	12/3112004	Complete
4	Substation Data Telemetry	12/31/2004	Complete
5a	Vegetation Management (Accelerated Tree Trimming)	7131/2005	Complete
5b	Additional Vegetation Management Cost - FE Policy	On-going	On-going (1)
6	34.5 kV Protection Scheme Coordination & Automation	12/3112004	Complete
7	Mobile Capacitors	12/3112004	Complete
8	Outage Management System	12/31/2005	Complete
9	Regional Dispatch Office Relocation	2/29/2004	Complete
10	Geographical Information System Field Audit	12/3112005	Complete
	Barrier Peninsula		
1	34.5 kV C203 Rebuilt & Reconductored Circuit	5/11/2004	Complete
2	34.5 kV D212 New Circuit	6/8/2004	Complete
3	Barnegat Bay SR37 Bridge - New Conduit & Cable Crossings	6/812004	Complete
4	Manitou Sub Reconductored 34.5 kV Breaker	5124/2004	Complete
5	Ocean Beach - 34.5 kV Capacitor Addition	5/24/2004	Complete
6	Ortley Beach - 34.5 kV Capacitor Addition	5/24/2004	Complete
7	Perform Inspections & Corrective Maintenance on X50 between Seaside Heights & Seaside Park	5/23/2005	Complete
8	Acquire and Maintain Underwater Spare Replacement Cable	5/24/2004	Complete
9	Install Fault Detectors on X50, C203 and V126 *	5/24/2004	Complete
10	Equip Existing Circuit Breakers with Line Relays	5/2312005	Complete
11	Emergency Diesel Generators	7/16/2003	Complete
6108104 Stipulation of Settlement (SOS):			Annual (2)
1	Annual Thermography Schedule (Bt)	Annual	
2	Replace #6 & #8 Copper Primary Conductors on CRI>130 Circuits (C3)	2007	2007 (3)
3	Institute Infra-Red *Survey* & Maintenance Program (C4)	Annual	Annual (4)
4	PlanlBuild Alternate Facilities for Submarine Cable X-50 or V-126 (D1 & D2)	5/2312005	Complete
5	Feasibility Study I Circuit Breakers / 34.5 KV Breaker Automation (E1)	2007	2007 (5) 4
6	Wood Pole 10 Year Inspection Program (GI)	Annual	Annual (6)
7	Replacement Program for Oil-Filled Cutouts (H1, H2, & H3)	Policy Instituted 11/1104	Policy Instituted 11/1/04 (7)
8	Group Lamp Replacement Program (K1)	Policy Instituted 11/1/04	Policy Instituted 11/1/04 (8)
9	Loop Design For Greater than 25 Homes (I1)	Policy Instituted 11/1104	Policy Instituted 1111/04 (9)
10	Distribution Transformer-related Capital Investment Project	Annual (Ending In 2008)	Annual (Ending In 2008) (10)

1 JCP&L will meet BPU requirements to inspect and trim as necessary on a 4-year cycle.
2 This is an annual program. JCP&L is on target to complete this by 12/31/08.
3 24 initially identified, 8 resolved during Engineering review, 2 construction projects completed 2005, 1 Circuit completed in 2006 and one project beginning shortly, 11 in Engineering review.
4 This is an annual program. JCP&L is on target to complete this by 12/131/06.
5 Five locations were evaluated. Four of them have same potential for networking. Cost-benefit will be evaluated for 2007 budget.[1']
6 This is an annual program. JCP&L is on target to complete this by 12/131/08.
7 136 have been removed YTD. 150 are projected by year end.
8 Sections of Avon, Berkeley, Highlands, Loch Arbor, Neptune, Pine Beach, Sea Bright, Seaside, Spring Lake, Dover Complete, Denville, Interlaken, Little Silver, Shrewsbury Boro, Flemington, and Lambertville
9 This policy was implemented on 11/1/04. All new subdivisions meeting this criterion comply with the policy.
10 The $12 million in investment is ongoing and we are on track to meet this 5-year obligation.

Note: the above table reflects a status update as of the 3rd quarter of 2006. All items are now complete except for those which are annual and/or ongoing requirements.
Source: Information Response 833 and 834

B. Findings & Conclusions

Finding V-1 **JCP&L has implemented the recommendations contained within the Liberty Consulting competitive services audit report.**

JCP&L's existing compliance plan was submitted to the NJBPU on August 31, 2010. Schumaker & Company consultants reviewed this plan and requested further backup documentation for selected items. Although each item is included in the Competitive Services Audit Report recommendations, further recommendations are included in *Chapter III – Affiliate Relationships & Cost Allocation Methodologies.*

Finding V-2 **JCP&L has implemented the agreed-to recommendations arising out of the Booth Associates' review.**

JCP&L provided periodic reports to the BPU staff who reported on the actions and status of actions taken to respond to items agreed to by Booth Associates. Schumaker & Company consultants reviewed this material and requested further backup documentation for selected items. Everything agreed to in the ***Memorandum of Understanding*** and the ***Stipulation of Settlement*** has been implemented. Although not all of the recommendations from the Booth Associates' report were necessarily agreed upon for implementation, the improvement in system reliability discussed in *Chapter IX – Electric Operations* is reflective of the results of some of these recommendations.

Finding V-3 **JCP&L has implemented the recommendations arising from the PJ Downes interim and final reports, although more could be done.**

JCP&L provided periodic reports to the BPU staff who reported on the actions and status of actions taken to respond to items agreed to in the PJ Downes Associates' report. Schumaker & Company consultants reviewed this material and requested further backup documentation for selected items. JCP&L agreed to implement everything in the PJ Downes Associates' report. All of the recommendations in the PJ Downes report have been implemented, although it might be beneficial to extend one of the recommendations to the entire JCP&L system as opposed to limiting it to just one specific area.

In particular, the PJ Downes Associates' report recommended a study to determine if proactive relaying could be reasonably and effectively installed to allow the automatic sectionalizing of network operations during faults at various substations along the New Jersey shore on 34.5 kV lines. JCP&L performed these studies and did make changes at certain substations along the New Jersey shore that had been affected by outages covered in the PJ Downes report. While all of the recommendations in the PJ Downes report have been implemented, Schumaker & Company believes that JCP&L should consider whether it might be beneficial to extend this recommendation to the entire JCP&L system as opposed to limiting it to just one specific area. In response to our inquiry, JCP&L indicated that since the PJ Downes' reports, its distribution planning criteria includes requirements consistent with this particular

recommendation for tie and recloser schemes for new and substantially reconfigured circuits, which, over time, will allow for increasing levels of automation with respect to the Company's response to outages. This criteria specifies that a circuit must be looked at for incorporation of these tie and recloser schemes if

- A reconfiguration of an existing distribution system (circuit) results in more than 40% change in geographic area
- New distribution systems should be designed initially for 100% contingency for loss of circuit at peak load.

While this design criteria is a step in the right direction, the extent to which these tie and recloser schemes get implemented into the JCP&L system is largely depended on load growth. Without load growth, there is little need for new distribution circuits or the reconfiguration of existing circuits. Schumaker & Company's concern is that the adoption of this technology has been throttled by recent economic factors and, as a result, it will take a long time for JCP&L to implement such technologies.

Furthermore, we note that the Booth Associates' reports also contained several recommendations dealing with system sectionalizing and/or auto load transfer schemes although these items were not necessarily contained in the Memorandum of Understanding or Stipulation of Settlement.

C. Recommendations

Recommendation V-1 **Provide a report on the number of circuits that have implemented tie and recloser schemes during the past year as a part of the Annual System Performance Report. (Refer to Finding V-3)**

Some other utilities have extended the distribution load switching to a larger part of their distribution system. For instance, in the early 2000, one utility took a serious look at the design of its distribution network with respect to the implementation of more distribution automation in the network. The primary distribution voltages that were candidates for the automation used were 13 kV and 34 kV. The current design criteria for these circuits are shown in *Exhibit V-7*.

Exhibit V-7
Distribution Circuit Design Criteria

	Normal Operating Condition	Emergency Operating Condition
13 kV	7 MVA	11 MVA
34 kV	21 MVA	29 MVA

MVA = Mega Volt Ampere

This utility has designed all of its distribution circuits such that they can be backfed from an adjacent distribution circuit in an emergency condition—defined as in the event of an outage. Before distribution automation, this design allowed the utility to restore service to all customers on an out-of-service 13 kV circuit by manually switching to two adjacent circuits. It also enabled the utility to restore service to all customers on an out-of-service 34 kV circuit by manually switching to three adjacent circuits, even during peak load conditions. Today, the utility's distribution automation scheme provides automated switching and reduces the number of customers affected by an outage. This scheme is illustrated in *Exhibit V-9* and *Exhibit V-10*, with *Exhibit V-8* providing a definition of the symbols that are used.

- 13 kV circuits are usually connected to an adjacent circuit, from a different substation, through a normally open tie recloser, as shown *Exhibit V-9*. The switching on the circuit in the event of a fault is such that, although a momentary circuit outage would be experienced, within approximately one minute the two distribution circuits would get automatically reconfigured to minimize the number of customers impacted by the sustained outage.
- 34 kV circuits are usually connected to more than one adjacent circuit through multiple, normally open tie reclosers as shown *Exhibit V-10*. The switching on the circuit in the event of a fault is such that, although a momentary circuit outage would be experienced, within approximately one minute these multiple distribution circuits would get automatically reconfigured to minimize the number of customers impacted by the sustained outage.

Exhibit V-8
Circuit Diagram Legend

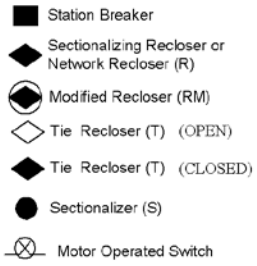
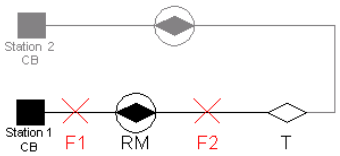


Exhibit V-9
13 kV Distribution Circuit

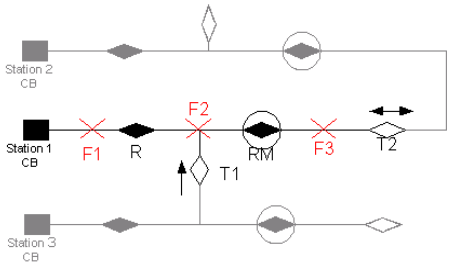
Typical 13kV recloser scheme



FAULT LOCATION	TIME (SEC.)	MOMENTARY FAULT	SUSTAINED FAULT
F1	0+	Station1 CB trips	Station 1 CB trips
	15	Station 1 CB closes	Station 1 CB closes, trips, & locks out
	30		RM opens & locks out
	60		Tie closes
F2	0+	RM trips	RM trips
	15	RM closes	RM closes, trips, & locks out
	60		Tie closes, trips & locks out

Exhibit V-10
34 kV Distribution Circuit

Typical 34kV recloser scheme



FAULT LOCATION	TIME (SEC.)	MOMENTARY FAULT	SUSTAINED FAULT
F1	0+	Station1 CB trips	Station 1 CB trips
	30	Station 1 CB closes & holds	Station 1 CB closes & trips
	45		R changes settings to coordinate with T1 RM opens & locks out
	60		T1 & T2 close R trips & locks out
F2	0+	R trips	R trips
	30	R closes & holds	R closes & trips.
	45		RM opens & lock out
	60		T1 closes, trips & locks out. T2 closes.
F3	0+	RM trips	RM trips
	30	RM closes	RM closes, trips, & locks out
	60		T2 closes, trips & locks out

The load shifted to the adjacent circuit is carried for a period of time following the sustained outage using the circuit's emergency rating. Once the fault is remedied, the circuits are reconfigured back to their normal operating conditions.

This distribution automation scheme is referred to as an automated loop scheme. The customers in the local area served by the automated loop see an improvement in reliability, while the widespread use of reclosers is an attractive investment to supplement other initiatives to improve system-wide reliability.

As a result of discussion during the three party meeting, JCP&L's position is that the revised design criteria effectively implements the tie and recloser scheme throughout the whole JCP&L distribution systems whereas Schumaker & Company's concern is that the design criteria is structured such that, without significant load growth, this technology will not be implemented. Truth is probably somewhere in the middle of those two opposite viewpoints; however, taking steps to measure the implementation of this technology within the JCP&L distribution would begin to shed some light on the truth. Therefore, we are recommending that JCP&L provide, as a part of its Annual System Performance Report, some measure of the number of circuits that have implemented these tie and recloser schemes each year.

VI. Remediation Costs

From the early 1800s through the mid-1900s, gas for lighting, heating, and cooking was manufactured from coal or oil at hundreds of plants nationwide. The gas production and purification processes at these manufactured gas plants (MGPs) yielded gas plant byproducts and residues that included coal-tars, sludges, lampblack, light oils, spent oxide wastes, and other hydrocarbon products. Although many of these byproducts were recycled, excess residues remained at these sites. These residues contain polynuclear aromatic hydrocarbons (PAHs), petroleum hydrocarbons, benzene, cyanide, metals, and phenols. As a result, most of these sites may need to be remediated.

Several cost-effective remediation technologies have been developed for treating the various wastes found at gas and electric industry sites. Schumaker & Company evaluated the following remediation cost attributes:

- The internal controls and flow of information to ensure that all remediation costs that are recovered from JCP&L customers are properly recorded
- Whether the costs were properly recorded and the amount of any outstanding balance
- The reasonableness of the expenses and the efficiency of the engineering and financial methods used to calculate the expenses from the ratepayers' point of view – Additionally, Schumaker & Company investigated whether JCP&L acted in its own self-interest, shared expenses with the ratepayers, and was effective in controlling costs.
- JCP&L's effectiveness in negotiating with the Department of Environmental Protection (DEP), despite pass-through charges

A. Background

JCP&L has been involved in the investigation and remediation of former manufactured gas plant sites since 1982, when it first became aware that some of the soil and groundwater at these sites might contain residues from historic MGP processes. Although such residues were not previously known to present a potential hazard, with the advent of new environmental laws and regulations in the 1980s, it became recognized that some of the residues constituted environmental contaminants. Hence, the sites now required remediation. As a prior owner and operator of these facilities, JCP&L was designated under applicable state and federal law as a legally responsible party that was required to investigate and remediate these sites. JCP&L is performing these required activities under the terms of Administrative Consent Orders (ACOs) or Memoranda of Agreement (MOAs) that have been executed with the New Jersey Department of Environmental Protection (NJDEP).

JCP&L is currently conducting remedial investigation and/or remedial action activities on 17 MGP sites in New Jersey, as shown in *Exhibit VI-1*. JCP&L is no longer responsible for two MGP sites - Long Branch and Toms River, which were sold to New Jersey Natural Gas Company ("NJNG") with BPU

approval and are now the responsibility of NJNG and all the spending listed on the table for these two sites occurred prior to their sale.

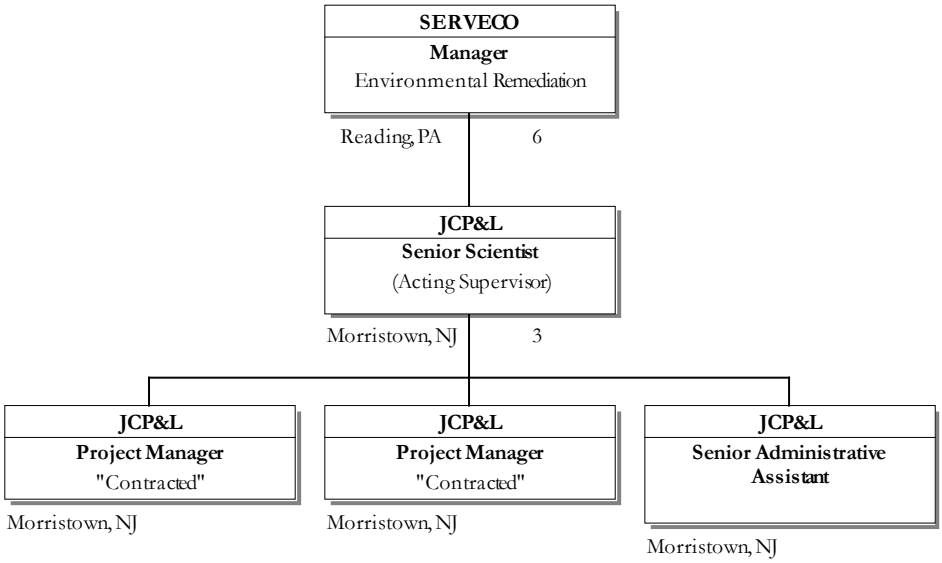
Exhibit VI-1
JCP&L Remediation Sites
as of December 31, 2009

Site Name	O&M and Capital Expense to Date (000)	Estimated Capital Cost to Complete (000)	Estimated O&M Annual Amount (000)	O&M # Years	Total Estimated O&M	Estimated Total Cost of Remediation *(000)
Asbury Park	$110	$77	$0	**15**	$0	$187
Belmar	$9,178	$679	$527	**15**	$7,905	$17,762
Boonton	$4,145	$1,439	$40	**15**	$600	$6,184
Cape May	$9,807	$5,030	$95	**15**	$1,425	$16,262
Dover	$11,502	$5,879	$65	**15**	$975	$18,356
Flemington	$2,097	$1,687	$171	**15**	$2,565	$6,349
Lakewood	$2,827	$4,600	$15	**15**	$225	$7,652
Lambertville	$3,116	$355	$0	**15**	$0	$3,471
Long Branch	$4,163	$0	$0	**15**	$0	$4,163
Newton I	$1,080	$2,316	$78	**15**	$1,170	$4,566
Newton II	$3,885	$1,004	$90	**15**	$1,350	$6,239
Ocean City	$1,910	$1,876	$130	**15**	$1,950	$5,736
Phillipsburg	$26	$68	$0	**15**	$0	$94
Red Bank	$644	$437	$3	**15**	$45	$1,126
Sea Isle City	$14,055	$19,515	$15	**15**	$225	$33,795
Toms River	$2,246	$0	$0	**15**	$0	$2,246
Tuckerton	$1,405	$4,235	$5	**15**	$75	$5,715
Washington	$1,582	$1,010	$20	**15**	$300	$2,892
Wildwood	$5,200	$638	$70	**15**	$1,050	$6,888
General Program	$5,516	$0	$0	**0**	$0	$5,516
2009 Total	**$84,494**	**$50,845**	**$1,324**	**15**	$19,860	**$155,199**

Notes: * Estimated Total Cost of Remediation is the sum of the following columns O&M and Capital Expense to Date (as of 12/31/2009), Estimated Capital Cost to Complete, and Total Estimated O&M
Source: Information Response 334 Supplemental

Environmental staff based in JCP&L's Morristown, New Jersey office manage this program as shown in *Exhibit VI-2*. The staff consists of a senior scientist (currently the acting supervisor), and a senior administrative assistant. Two full-time contracted project managers supplement the staff and are managed by the Supervisor – Site Remediation. The staff reports to the Manager, Environmental Remediation in the FirstEnergy (FE) Service Corporation (SERVECO) Environmental Department.

Exhibit VI-2
JCP&L Environmental Organization
as of June 30, 2010



Source: Information Responses 54 Supplemental

Status Reporting

Internal

The Manager, Environmental Remediation provides a summary report on major JCP&L environmental issues (including MGP sites) to the JCP&L Board of Directors semiannually. Cost projections for remediation of the MGP sites are provided to the Accounting Department at midyear and year end. Significant milestones or issues for individual sites are provided to the Manager, Environmental Remediation during biweekly staff conference calls. The Morristown-based remediation staff conducts project status review meetings approximately every three weeks.

External

JCP&L provides quarterly progress reports to the NJDEP for the MGP sites under ACOs. Annual project cost reviews and annual financial summaries are provided to the NJDEP under each individual MGP site's applicable ACO or MOA. Quarterly, semiannual, or annual progress updates are also provided, as requested by the NJDEP case manager, for some of the MGP sites.

JCP&L submits an annual remediation adjustment clause filing with the New Jersey BPU. This filing includes cost and project status information on the remediation of the MGP sites during the previous calendar year.

B. Findings & Conclusions

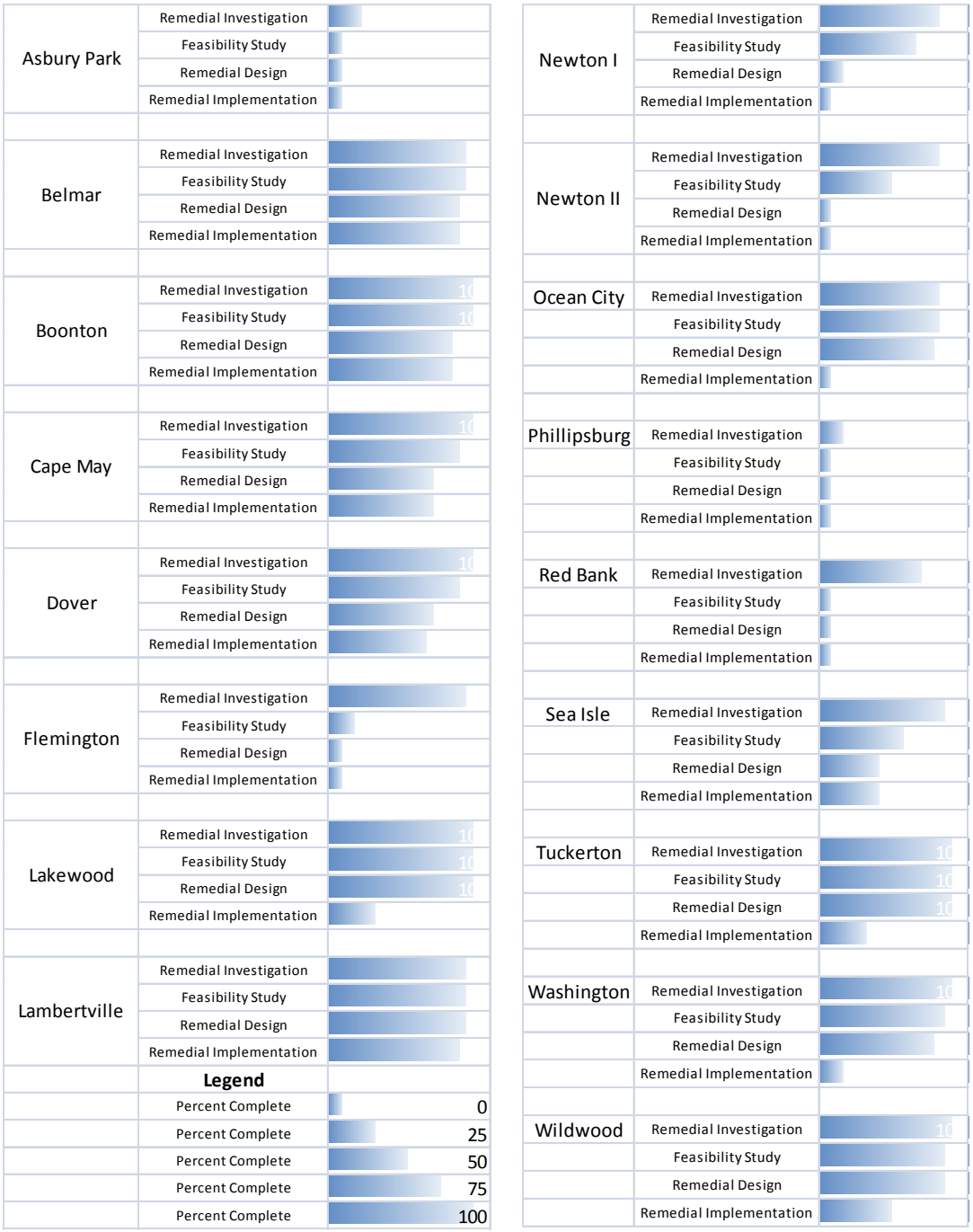
Finding VI-1 JCP&L has created a separate organization that is responsible for managing remediation efforts.

As discussed above, JCP&L has created a separate organization whose sole responsibility is the oversight and management of remediation efforts. This organization is composed of both full-time employees and long-term contract personnel. These team members (called project managers) are assigned responsibility for overseeing remediation activities performed at their assigned sites. The project managers generally follow a four-phase project, specifically:

- Remedial Investigation
- Feasibility Study
- Remedial Design
- Remedial Implementation

Outside environmental consulting firms are contracted to provide the technical resources required to perform the remediation investigations and other activities for each site. There are currently approximately 17 sites in various stages of remediation, as shown in *Exhibit VI-3*.

Exhibit VI-3
Remediation Status
as of April 30, 2010



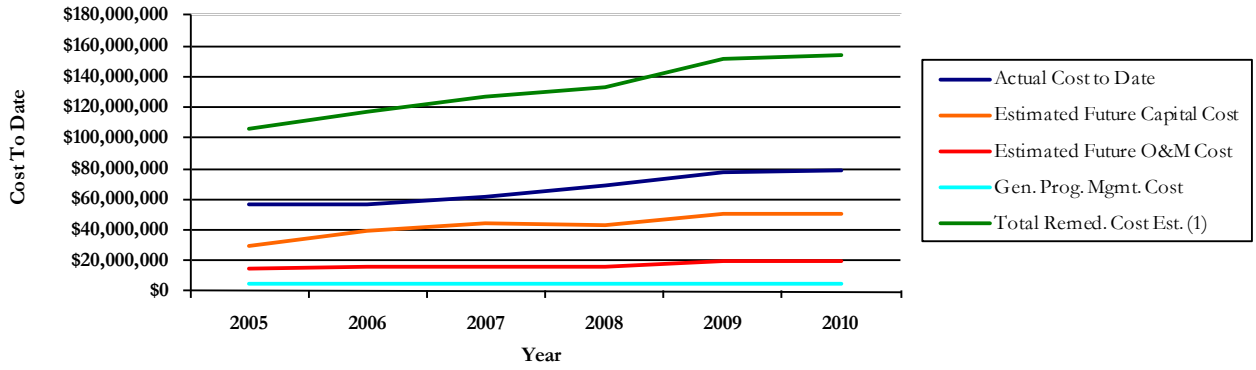
Source: Information Response 333

Finding VI-2 Remediation cost estimates have been increasing.

The Environmental Remediation group performs mid-year and end-of-year reviews of the cost estimates associated with the remediation of JCP&L's manufactured gas plant sites. These estimates are subject to many uncertainties, including but not limited to: 1) JCP&L does not currently own/control all of the sites and 2) the New Jersey Department of Environmental Protection's cleanup criteria /standards and remedial technologies, although acceptable to the NJDEP, are subject to change. Furthermore, until the sites are more fully investigated and the remedial alternatives are approved by the NJDEP, the final extent of the necessary remediation will not be completely known.

Schumaker & Company consultants requested and reviewed the cost estimates for remediation efforts over the last five years. This information is summarized in *Exhibit VI-4*. As of December 31, 2009, JCP&L has spent approximately $83 million on its past remediation efforts (total O&M and capital costs). JCP&L anticipates it will spend an additional $70 million ($50 million in capital, plus $20 million in O&M) on its future remediation efforts.

Exhibit VI-4
Total Remediation Cost Estimates - Past and Future
2005 to 2010



* The Estimated Total Cost of Remediation includes total O&M and capital cost to date (as of 12/31/2009), estimated capital cost to complete and estimated O&M for 15 years.
Source: Information Responses 377 and 334

Finding VI-3 JCP&L's management of the remediation programs is reasonable, although improvements are possible.

Schumaker & Company consultants reviewed a selection of the reports and other documentation created as part of the remediation efforts. In fact, much of the reviewed documentation was the same information that has been submitted to the BPU as a part of the 2009 Remediation Adjustment Clause (RAC) minimum filing requirements—a two-foot stack of paper that, in addition to containing some useful details, contains a significant amount of information that would be useful to only a trained

environmental professional. Given the stack of paper being reproduced, it was somewhat ironic that one of the technical consultants labeled each of the pages of the reports with the tagline:

> "Because we care – 100% recycled paper produced by wind power energy"

Schumaker & Company consultants question whether reproducing all this material serves any more useful purpose than just creating a mechanism whereby the BPU could access the same information for review electronically.

Secondly, in reviewing the documentation, Schumaker & Company consultants believe that several of the responses to the minimum filing requirement questions need further clarification. In particular, in response to

> 5. For each of the same three MGP sites, provide a narrative description and organizational chart for that site, showing the vendors and project control structure for the remediation effort. The response should show what entities supervise all significant contractors and subcontractors and which JCP&L personnel are involved in site and remediation supervision and control.

The response to the above question described in detail the specific contractors' project management practices and procedures but it did not describe JCP&L's oversight role in those practices and procedures, something which needs to be done. To adequately respond to such a question on an ongoing basis begs the need for a well-developed project management methodology within JCP&L.

Thirdly, it is apparent from our review of the documentation that someone (JCP&L project managers) is reviewing invoices and approving payments. Situations leading us to draw such a conclusion include:

- Although we did not identify any invoices stamped with an "OK to Pay" coupled with a project manager's signature or initials, we did discover illegible marks on some of the invoices[4]
- We identified contract change order documentation and sole source justifications within the documentation that appeared appropriate.
- We identified several document certifications showing oversight of site remediation efforts that were tied to self-guarantee applications.

Finding VI-4 Remediation costs are being appropriately handled in JCP&L's accounting systems.

Schumaker & Company consultants reviewed how remediation costs are being processed through JCP&L's accounting systems for inclusion in the RAC filing. In short, all costs are being collected and charged to various accounting codes on a site-by-site basis. These costs primarily arise from monthly invoices submitted by the contractors that are assigned to each remediation site. These invoices are

[4] It is our understanding that hardcopies of invoices are approved, stamped with an approval stamp, and signed prior to submission for electronic approval through the SAP system. After the invoice is processed in SAP, an electronic approval form is printed out and attached to the invoice. It is possible that the auditor did not receive the approved stamped copy of the invoice (as multiple copies are received) and or the approval stamp was not located on the first page of the invoice due to space limitations.

reviewed and approved by JCP&L project managers in addition to being assigned the appropriate accounting code (built into the purchase order system) prior to being entered into accounts payable.

Finding VI-5 **No external audits of contractors have been performed by JCP&L's external auditors or internal auditors.**

Schumaker & Company consultants would expect JCP&L to have the ability to perform random audits of remediation contractors—similar to the requirements the federal government imposes on federal contractors; however, we found no indication that such audits have been performed.

C. Recommendations

Recommendation VI-1 **Institute a formal process to review the existing project management methodology for the remediation program to determine if there are ways to strengthen and improve it.. (Refer to Finding VI-3)**

As of 2011, has spent approximately $83 million on its past remediation efforts (Total O&M and capital costs). JCP&L anticipates that it will spend an additional $70 million ($50 million in capital plus $20 million in O&M) on its future remediation efforts for a total of $153 million, as shown in *Exhibit VI-4*. Much of the information we reviewed during our investigations consisted of documents submitted by the various outside environmental contractors that addressed how they were managing the remediation efforts. In addition, we would have liked to have seen JCP&L practices and procedures documentation that had been developed for managing the effort. It is apparent from Schumaker & Company's review of the various documents and reports submitted during the remediation efforts that JCP&L has implemented some project management methodology for such undertakings.

The individuals currently managing the remediation efforts are environmental technical specialists. Nonetheless, given that JCP&L will continue to spend a significant amount on the remediation efforts and will be subject to oversight from external agencies, including both the NJDEP and NJBPU, on how these dollars are spent, it would be beneficial to develop specific project management methodologies that are consistent with the Project Management Institute's *Project Management Book of Knowledge (PMBOK)*. JCP&L should engage either an internal or external project management professional to assist the current remediation staff in formalizing project management methodologies for the remediation efforts. That formalization process should include methodologies for performing formal risk assessments (as described in the PMBOK) on the projects.

Recommendation VI-2 Investigate the provisions of the RAC minimum filing requirements via an electronic repository that is accessible by the BPU via the Internet. (Refer to Finding VI-3)

There is a significant amount of paper that is currently being submitted as a part of the RAC minimum filing requirements. JCP&L is currently in the process of implementing electronic storage (P8, previously FileNet) and submittal for all documents associated with the remediation efforts. JCP&L should investigate the possibility of providing access to electronic-only documents related to the remediation effort.

Recommendation VI-3 Perform periodic internal audits of external remediation contractors' invoicing. (Refer to Finding VI-5)

JCP&L currently requires the environmental consultants to submit a significant amount of backup documentation for all the charges incurred on a site (especially if these sites are submitted as a part of the RAC minimum filing requirements). Another approach to consider is periodically conducting audits of external billings by the FE Internal Audit group.

Schumaker & Company

Jersey Central Power and Light

Phase II Comprehensive Management Audit

June 2011

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VII. Executive Management and Corporate Governance

This chapter is divided into two sections as follows;

- Executive Management
- Corporate Governance

A. Executive Management

This section addresses FirstEnergy's organizational structure and planning as well as management and administrative communications and control.

Background & Perspective

Organizational Structure and Planning

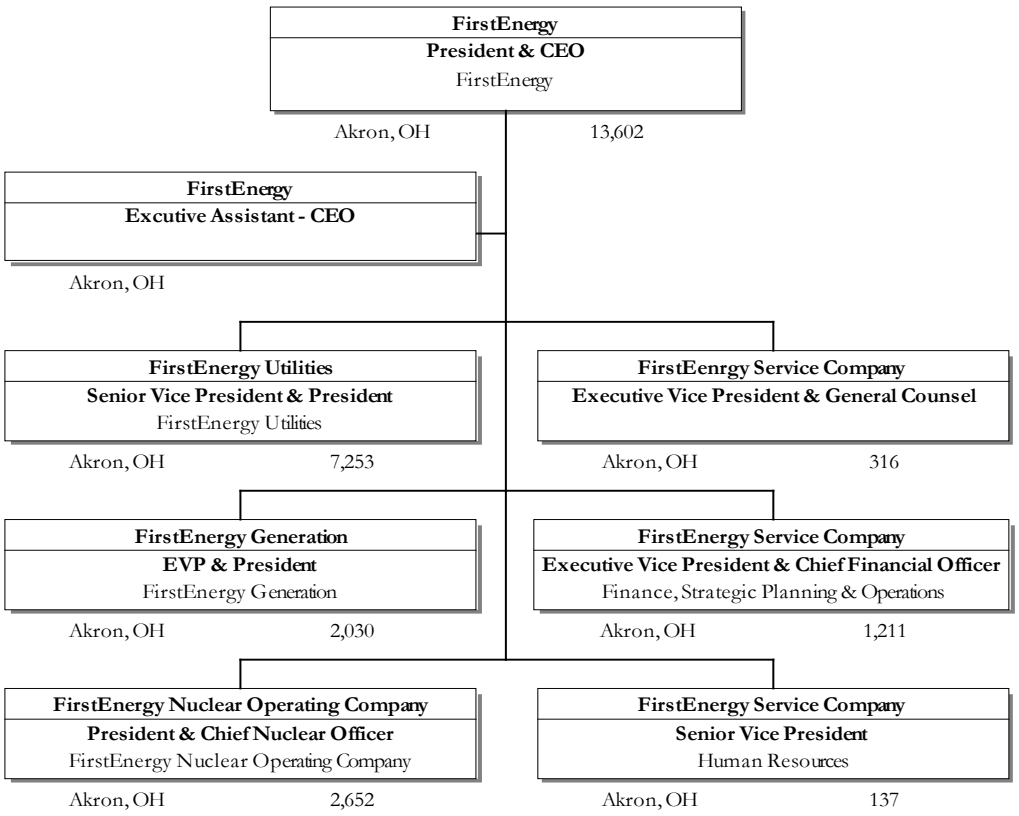
FirstEnergy Corp. (FirstEnergy or FE) is a diversified energy company (public utility holding company) with subsidiaries and affiliates involved in the generation, transmission, and distribution of electricity as well as energy management and other energy-related services. Included in the corporate structure are seven electric utility operating companies, including Jersey Central Power & Light (JCP&L), serving 4.5 million customers in Ohio, Pennsylvania, and New Jersey. FirstEnergy's generation companies own or operate almost 14,000 megawatts of nuclear and fossil capacity.

FirstEnergy's primary revenue is derived from its principal business: holding all of the outstanding common stock of its eight principal electric utility operating subsidiaries (including JCP&L) and of its generating and marketing subsidiary, FirstEnergy Solutions Corp. (FES). FirstEnergy also holds all of the common stock of its other direct subsidiaries: FirstEnergy Properties, Inc.; FirstEnergy Ventures Corp. (FEV); FirstEnergy Nuclear Operating Company (FENOC); FELHC, Inc.; FirstEnergy Facilities Services Group, LLC; FirstEnergy Fiber Holdings Corp.; GPU Power Inc.; GPU Nuclear Inc.; MARBEL Energy Corporation; and FirstEnergy Service Company (SERVECO).

FES owns and operates its fossil and hydroelectric generating facilities through its subsidiary, FirstEnergy Generation Corp. (FGCO). FES owns and operates FE's nuclear generating facilities through its subsidiary, FirstEnergy Nuclear Generation Corp. (NGC). SERVECO provides legal, financial, and other support services for all FirstEnergy subsidiaries.

The FirstEnergy organization is led by its President & Chief Executive Officer (CEO) as shown in *Exhibit VII-1*. (See *Chapter III – Affiliate Relationships & Cost Allocation Methodologies* for further discussion about all of FirstEnergy's subsidiaries and their relationships to JCP&L.)

Exhibit VII-1
FirstEnergy Organization
as of June 30, 2010

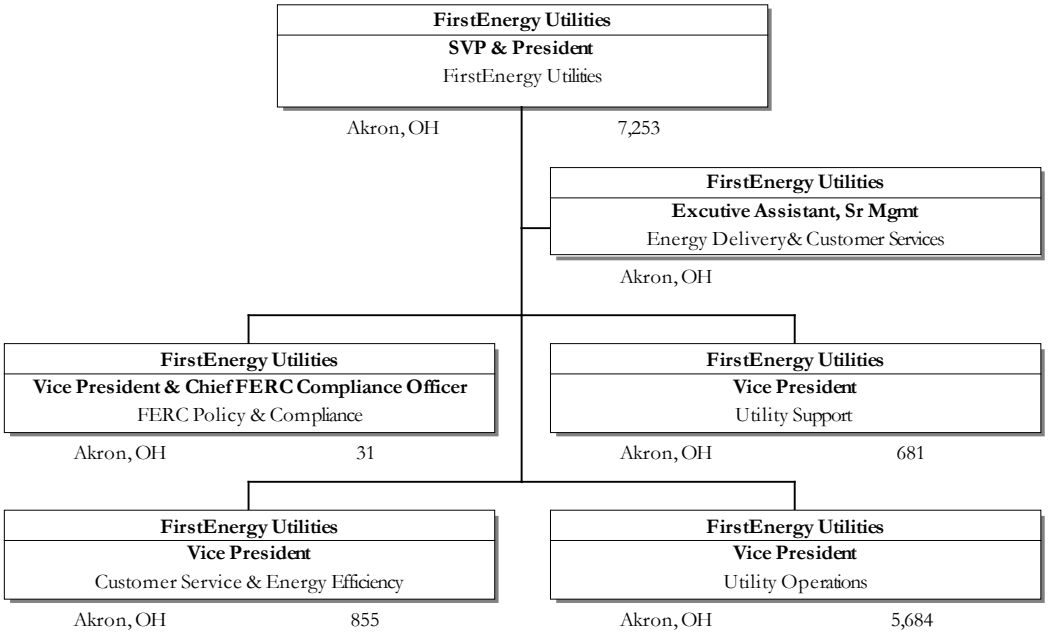


Source: Information Response 54

Reporting to the President and Chief Executive Officer are the three main areas of electric utilities (FirstEnergy Utilities), generation (FENOC and FirstEnergy Generation), and support services (human resources, finance, strategic planning, operations, and legal).

Exhibit VII-2 shows the organization for FirstEnergy Utilities.

Exhibit VII-2
FirstEnergy Utilities Organization
as of June 30, 2010

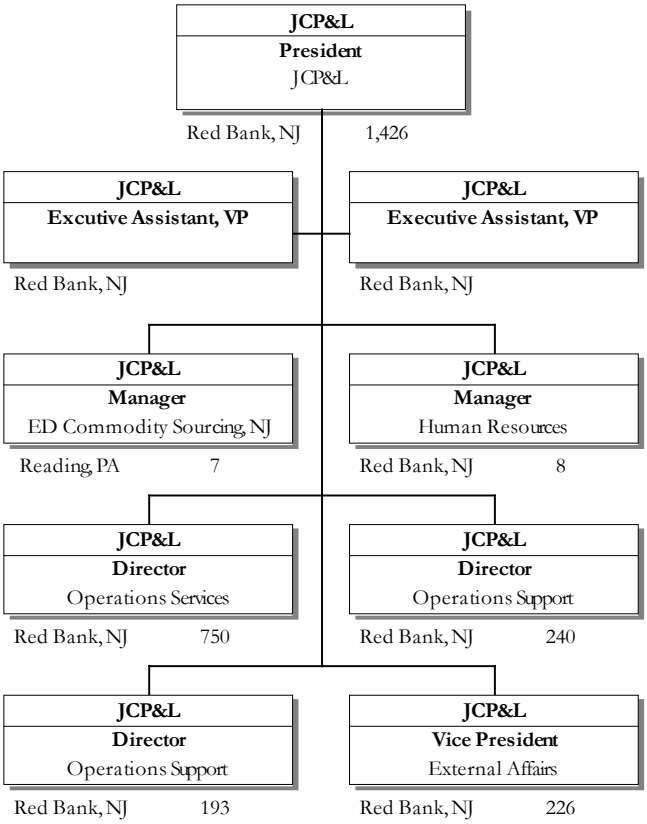


Source: Information Response 54

Functions that broadly support all of the electric utility companies fall under the Vice Presidents. Utility Support includes the functional areas of transmission planning, protections, and operation; distribution engineering, operations, and support; asset, project, and vegetation management; and general workforce development and performance and process improvement. Customer service and energy efficiency also include economic development, customer contact centers, revenue operations, and grid and meter technology. The electric utility companies, including JCP&L, report to the Vice President of Utility Operations.

Exhibit VII-3 shows the organizational structure of JCP&L.

Exhibit VII-3
Jersey Central Power & Light Organization
as of June 30, 2010



Source: Information Response 54

Reporting to the President of JCP&L are the support functions of New Jersey commodity sourcing (two business analysts, one engineer, and three operators) and JCP&L human resources (HR) (four HR representatives, two safety representatives, and one business analyst). The JCP&L organization is primarily focused on New Jersey operations. Also reporting to the President of JCP&L are three operation directors (operations and operations support) and a Vice President of External Affairs.

Operations Services includes engineering and two regional claims units. Two general managers are in charge of regional operating services for the North and Central regions. Each region has seven operation centers with managers in charge of each one. Operations centers include line and substation maintenance/repair and technical support.

One operations support section is in charge of dispatching and related support as well as underground substation maintenance, relay, testing, etc. The other operations support director is in charge of Fleet activities, stores and stores facilities, meter testing, and forestry.

The Vice President of External Affairs is in charge of a Director of Customer Services, whose responsibilities include meter reading and revenue operations. The Vice President of External Affairs also oversees the area managers, whose responsibilities include contact with local publics and government agencies.

FE/JCP&L has no department charters with position descriptions serving to describe the roles of various departments and employees. There is no formal process for evaluating/analyzing the organization, although FE/JCP&L has an ongoing program for developing goals and objectives as well as management coaching and feedback. (See the Strategic Planning chapter). Instead, organizational changes are made on a case-by-case basis, usually as part of the budgeting process, with any changes approved by senior management. There have been no major organizational changes at FE/JCP&L in the past five years.

Management and Administrative Communications and Controls

The highest level of governing administrative controls at FirstEnergy is documented in the Business Controls Manual. This manual establishes programmatic level controls and corporate responsibilities for FirstEnergy programs. These business practices have been developed as corporate-wide policies and procedures, replacing the general orders, corporate references, and other rules from predecessor companies. The Vice-President of Corporate Affairs and Community Development is responsible for developing, reviewing, updating, and otherwise maintaining these business practices.

Business practices generally describe the standards of business conduct and accountability for all FirstEnergy employees. They include a description of the applicable organization and the responsibilities of the departments. Procedural direction is also provided. The President and CEO of FirstEnergy and the Senior Vice President and General Counsel must approve new business practices and revisions to existing business practices. New business practices and revisions to existing business practices must be submitted by a member of senior management for consideration. Supervisors are responsible for disseminating business practices to employees. Business practices apply to all FirstEnergy employees including all of those at JCP&L. They undergo a review every five years and FirstEnergy indicated that a review is currently underway.

There is a sub-tending set of administrative controls called Corporate Policies, which fall under the responsibilities of the Vice-President, Corporate Secretary, and Chief Ethics Officer. There is no formal governing process for these documents, nor is there a central repository of all policies. Key policies are maintained for all important human resources areas such as employment and staffing, equal employment opportunity (EEO) and affirmative action, employee relations, health and safety, and compensation.

There is an Executive Leadership Team (ELT) that includes senior management of FirstEnergy Utilities (FEU) and all utility companies (including the President of JCP&L). Team members meet 10 times per year to review and discuss important issues facing FEU. Topics include customer service, energy efficiency, operations and maintenance (O&M) and capital budgets, operational issues (e.g., transmission, vegetation, facilities), human resources issues, regulatory commitments, and specific programs (e.g., JCP&L Smart Grid, Work Management Initiative), among other topics. The ELT also tracks and addresses progress on performance measures. (See the Strategic Planning Chapter.)

For JCP&L, monthly meetings and reporting are done via operational performance reports and operational performance report meetings. These lengthy reports cover all aspects of JCP&L operations, including reporting and analysis of Occupational Safety & Health Administration (OSHA)/safety, financial/expenditures, reliability, vegetation management, customer services, productivity, staffing/absenteeism, corrective and planned maintenance, among many other topics. There are also summaries to track performance metrics. (See also the Strategic Planning chapter.)

Findings & Conclusions

Finding VII-1 **In general, the FE/JCP&L organization adequately supports ratepayer and corporate objectives, although there is no formal organizational review and evaluation process.**

The FE/JCP&L organization has held steady over the past five years with only minor changes, often related to eliminating positions through the budgeting process. An emphasis on centralizing core services and promoting best practices throughout the organization is appropriate. At the support service company level, spans of control and layers of management were reasonable. At the JCP&L organization, however, spans of control were often wide and many positions were identified in the organizational charts as open.

There are no written charters to fully describe the roles and interrelationships of various FE/JCP&L departments. Likewise, there are no documented processes, criteria, or procedures for evaluating the efficiency and effectiveness of the organization. Organizational changes are not a part of the strategic process and are justified by managers mainly through the budgeting process. There are no requirements to periodically review the organization, nor is there any documented criteria that would define triggers for evaluating the organization or specific organizational units.

Finding VII-2 **Administrative controls and procedures are adequate, and procedures are periodically reviewed and improved, if and as necessary.**

Procedures are adequately documented and follow similar formats. Procedures are clearly written and are readily available to employees. All procedures are approved by senior management, and each procedure undergoes review as requested and/or periodically. A formal review of procedures was being conducted as the audit was underway.

Recommendations

Recommendation VII-1 Develop a periodic organizational review process. (Refer to Finding VII-1)

Periodically (at least every five years), FE/JCP&L should examine the organization to ensure that it is meeting all corporate goals and objectives (customer services, efficiencies, etc.). This process can be incorporated into the annual business planning process. Criteria for review can include spans of control, grouping of like functions, management layering, impact of management training and development, efficiency and performance criteria, level of support required from other organizational units, and lines of reporting and communications requirements. (This is not meant to be an inclusive list.) If these reviews come through management meetings/discussions and committee work, the results should be documented. FE/JCP&L should develop department charters and define conditions that would trigger an organizational review (e.g., a major change of business process, the application of new technology, difficulty in responding to a major or systematic problem or issue, major changes in regulatory requirements). It should also stipulate a required review of additional, new control points for the evaluation of material weaknesses.

The upcoming merger/integration of Allegheny would provide a good point to conduct this review (beyond changes to match Allegheny with the rest of the FE organization).

B. Corporate Governance

This section addresses FirstEnergy's (FE) and Jersey Central Power & Light's (JCP&L) corporate governance policies, practices, and procedures. It also reviews FE/JCP&L's adherence to the Sarbanes-Oxley Act of 2002 (SOX). Specifically this section reviews the makeup and activities of the FirstEnergy and JCP&L Board of Directors and FE committees, board interfaces with external auditors, and actions to comply with both the Sarbanes-Oxley Act of 2002 and New York Stock Exchange (NYSE) requirements.

Background & Perspective

Publicly traded companies have long been subject to financial and disclosure laws and regulations (e.g., the Securities Exchange Act of 1934 and the Foreign Corrupt Practices Act, which among other stipulations required companies to have internal controls). The financial and public business community at large has been active in strengthening corporate governance principles through efforts such as the National Commission on Fraudulent Financial Reporting (Treadway Commission/Report) and the General Accounting Office. In 1998, the NYSE and the National Association of Securities Dealers (NASD) sponsored a committee (known as the Blue Ribbon Committee) that developed recommendations to improve audit committees' effectiveness. Subsequently, the NYSE, the NASD, and the Securities and Exchange Commission (SEC) revised listing standards and developed new rules concerning the corporate governance roles of the audit committees.

Nevertheless, subsequent events surrounding several spectacular company collapses (e.g., Enron in 2001 and WorldCom and Global Crossing in 2002) and the allegations of misdeeds by corporate executives, independent auditors, and other market participants undermined investor confidence in the U.S. financial markets. In response, Congress passed, and the President signed into law, the Sarbanes-Oxley (SOX) Act of 2002, which effected sweeping corporate disclosure and financial reporting reform. This act directed the SEC to enact new rules to meet its intent. The SEC took and considered comments from interested parties and published the new rules in 2003.

The most applicable sections of SOX as they apply to large, publicly traded corporations involve:

- Strengthening auditor independence
- Increasing the roles and responsibilities of the corporate auditing committees
- Requiring senior management to certify and otherwise be generally held responsible for the accuracy of financial statements
- Increasing the disclosure and transparency of financial information in quarterly and annual reports
- Enhancing corporate internal controls (to include the establishment of a code of ethics)

In light of the recent economic difficulties precipitated by the Wall Street/real estate crash, several bills have been introduced in Congress that feature additional elements of business ethics and governance. Features include an independent director as Chairman of the Board (i.e., the Chairman and CEO cannot be the same person), claw back of executive payments in cases of fraud, formation of a Risk Management Board Committee, no severance payments for executives terminated for cause, disclosure of specific bonus targets for senior executives, no "golden parachute" for management of acquired companies as a part of merger agreements, and shareholder votes and limits on executive compensation, among others.

The Board of Directors, whose members are elected and accountable to shareholders, is the focal point of the corporate governance system. The FirstEnergy Board of Directors provides general governance for FirstEnergy and its subsidiaries. Each subsidiary, including JCP&L, has its own Board of Directors. The Board size and composition is not specifically set but rather determined by resolution of the Board majority. This evaluation and determination is conducted annually by the Corporate Governance Committee, which makes its recommendations to the Board as a whole. The Board is not divided into classes; all members stand for re-election annually. Currently, the Board's five standing committees are:

- *Audit Committee* – responsible for overseeing and reviewing the integrity of FirstEnergy's financial statements, including the financial statements of JCP&L; complying with legal, risk management, and regulatory requirements; overseeing the independent auditor's qualifications and independence; performing the internal audit and independent auditor functions; managing the systems of internal control with respect to the accuracy of financial records; adhering to FE policies; and complying with legal and regulatory requirements.
- *Corporate Governance Committee* – develops and reviews corporate governance principles applicable to FirstEnergy, identifies and recommends Board candidates, and oversees the evaluation of the Board and management. The duty to oversee the evaluation of management was delegated to the Compensation Committee.
- *Compensation Committee* – oversees the compensation of certain senior-level officers at FirstEnergy, including the Chief Executive Officer, other non-CEO executive officers, the Chairman of the Board if he or she is not the CEO, and other individuals named in FE's annual proxy statement; reviews, discusses, and endorses a compensation philosophy that supports competitive pay for performance and is consistent with the corporate strategy; assists the Board in establishing appropriate incentive compensation and equity-based plans for FE executive officers; administers such plans in order to attract, retain, and motivate skilled and talented executives and to align such plans with corporate and business unit performance, business strategies, and growth in shareholder value; reviews and discusses with First Energy management disclosures in the Compensation Discussion and Analysis included in FE's annual report and proxy statement; and produces the Compensation Committee Report included in FE's annual report and proxy statement.
- *Finance Committee* – reviews FirstEnergy's capital structure policies, long- and short-term debt levels, dividend policy, issuance of securities, exposure to interest rate fluctuation, share

repurchase programs, and other financial matters deemed appropriate by the Board; approves terms of sales of FE securities and other major financial transactions when powers are delegated by the full Board; reviews FE financial forecasts, operations and maintenance budgets, and capital budgets; reviews FE's pension fund investments, employee savings plans, and corporate insurance coverage.

- *Nuclear Committee* – reviews the safety, reliability, and quality of nuclear operations; reviews the effectiveness of management systems to self-identify problems and potential problems for prompt and complete corrective actions; reviews FirstEnergy's nuclear operational and business plans; and undertakes studies, as the Board of Directors deems appropriate, concerning FE's nuclear activities.

Corporate governance is a major responsibility of both the Corporate Governance Committee and the Audit Committee. The Audit Committee oversees compliance with many aspects of SOX. It also manages the relationships with internal and external auditors. Both committees are composed entirely of outside directors. The Audit Committee is composed of three or more directors (currently, in 2010, four directors), all of whom must be familiar with FE's financial statements and related control processes (financially literate). One member must have (in the Board's business judgment) accounting or financial management expertise. (This determination process is performed annually by the Board.) This committee has full access to FE's and JCP&L's senior management, outside auditors, and internal auditors. It also has authority and funding to retain independent legal, accounting, or any other outside expertise as needed. This committee's basic functions are to oversee and review the integrity of FirstEnergy's financial statements, including JCP&L's financial statements, and the independent auditors' qualifications; the independence and performance of the internal audit function; the adequacy of FE's internal controls and corporate compliance structure, including computerized information system controls and security; adherence to corporate policies and review processes, including FirstEnergy's Code of Business Conduct; and general discussion of FE's policies with respect to risk assessment and risk management.

The Corporate Governance Committee consists of three or more independent directors (currently, in 2010, four outside directors). This committee is responsible for reviewing corporate governance policies and Board committee charters. It is charged with assessing (annually) Board and Board committee size, composition, and membership qualifications and with evaluating the effectiveness of the Board and the Board committees. The Corporate Governance Committee has full access to senior management and funding authority to retain outside expertise if needed.

Practices for director selection are discussed in FE's proxy statements. The Corporate Governance Committee is responsible for identifying and recommending qualified director candidates to the full Board. This committee annually considers candidates in light of anticipated vacancies (e.g., upcoming retirements) and the size and composition of the Board in light of operating requirements (e.g., increased size of the corporation due to acquisitions). Director candidates are typically identified through other directors or by senior management; however, the committee is empowered to retain a search firm for this purpose, as necessary. Shareholders may also nominate director candidates, which

will be evaluated by the committee using the same requirements and processes as for Board/management-nominated directors.

All FE/JCP&L independent directors are compensated for their service, whereas management (non-independent) directors receive no additional financial consideration beyond their employee compensation.

Stated criteria/qualifications (generally) for director candidates include demonstrating or attaining:

- Integrity, honesty, and accountability, with a willingness to express independent thought
- Successful leadership experience and stature in an individual's primary field, with a background that demonstrates an understanding of business affairs as well as the complexities of a large, publically held company
- Ability to think strategically and make decisions with a forward-looking focus
- Ability to assimilate relevant information on a broad range of complex topics
- Being a team player, with a willingness to ask tough questions in a constructive manner that adds to the decision-making process of the Board
- Independence
- Ability to devote necessary time to meet director responsibilities

As a whole, the Board seeks a mix of directors with diversity, age, background and training, business or administrative skills and experience, dedication and commitment, business judgment, analytical skills, problem-solving abilities, and familiarity with the regulatory environment.

The JCP&L Board of Directors consists of five members, two of which are outside directors. Directors include the Senior Vice-President and President of FirstEnergy Utilities, the FirstEnergy Vice President of Utility Operations, the President of JCP&L, and two outside directors with experience in consumer affairs and industry. One of JCP&L's outside directors is also a director for the parent company, FirstEnergy. The JCP&L Board has no committees. The JCP&L Board of Directors derive their authority from the bylaws of Jersey Central Power & Light. JCP&L directors conduct regular meetings eight times a year in addition to occasional special meetings. Meetings are conducted via telephone call unless otherwise stated in the Notice of Meetings.

The Director of Internal Auditing reports to both the Chief Financial Officer (CFO) and the FE Board Audit Committee. Annually, the CFO reviews the performance and evaluation of the Director of Internal Auditing with the Chairman of the Audit Committee. The Director of Internal Auditing cannot be replaced without consultation with the Chairman of the Audit Committee.

FirstEnergy does not rebid audit services, but the Audit Committee does interview and approve new external audit partners, which are assigned every five years (as per SOX requirements). The Audit Committee also reviews and approves the assignment of other PricewaterhouseCoopers (PwC) key staff

to the audit engagements. PwC is not currently performing any non-audit work, but the Audit Committee is reviewing that policy in light of allowing PwC to perform audit-related work that does not result in any conflicts of interest and is in line with SOX requirements.

SOX requires quarterly certification to ensure that internal controls over financial reporting are operating effectively, that significant changes to internal controls or other factors that could affect internal controls are disclosed, and that significant deficiencies and material weaknesses are identified and corrected.

FirstEnergy has documented processes for assessing internal controls, and annual reviews of these processes are conducted. Any internal control deficiencies are identified and corrective actions are defined, implemented, and tracked. Process owners in the affected areas are assigned to conduct control testing to determine the operating effectiveness of key financial reporting controls and to provide input on changes, remediation status, and deficiencies. Internal Auditing conducts quality reviews of all testing performed by process owners to confirm it was conducted properly and adequately, in accordance with the defined test plans. Internal Auditing also ensures that additional testing is performed over new areas and existing areas that undergo changes in people, processes, or technology. The status of these tests and associated corrective actions are reported regularly to the FE Board Audit Committee and the FE Board.

All personnel responsible for SOX compliance testing are given annual training in their duties, with training completions tracked and logged. FirstEnergy reports its compliance with SOX internal control requirements through its 10-K and 10-Q reports and specifically states that:

- It is the responsibility of management to establish and maintain an adequate internal control structure as well as procedures for financial reporting.
- An assessment of the effectiveness of the internal control structure and of the procedures for financial reporting has been conducted.

FirstEnergy's external auditor also reviews and makes comment on the adequacy on FE's internal controls. PricewaterhouseCoopers submits an annual letter to FirstEnergy (as directed by New York Stock Exchange rules) discussing its internal quality control procedures, the results of its most recent quality control reviews of FE, and any steps it has taken to address any issues. Any material issues raised by governmental investigations of PwC and/or its employees within the preceding five years and any actions PwC has taken to address these issues are also addressed. This letter includes a statement that lead audit and quality review partners on each public audit client will be rotated every five years, that no client constitutes a material element of a partner's earnings, and that evaluation and compensation practices prohibit compensation for selling non-audit services to audit clients.

The JCP&L Board addresses issues concerning:

- Environmental issues
- Operations

- Financial status
- Major events (e.g., Tinton Falls substation failure and impacts of storms/hurricanes)
- Local consumer topics (e.g., consumer choice on energy supply and Smart Meter Program)

The FirstEnergy Board receives detailed information prior to meetings on issues coming before it. Likewise, important information is summarized and tracked via a structured dashboard matrix. Topics include regulatory updates, ethics activities, SOX updates, and the status of internal audit recommendations.

The FE Board also monitors FirstEnergy's corporate governance via specific criteria, comparing FE's practices with Standard and Poor's (S&P) 500 and utilities group companies. Factors evaluated include Board of Director makeup and practices, charter/bylaws, executive and director compensation practices, ownership/stock rules, director education, Audit Committee makeup and practices, among other items.

Findings & Conclusions

Finding VII-3 **The review, selection, and composition of the FirstEnergy and JCP&L Board of Directors are appropriate, although some policies should be updated.**

As noted earlier, JCP&L has its own Board of Directors that includes two outside directors (one who also sits on the FE Board), which adds another level of oversight. The JCP&L Board meets at least eight times annually and addresses topics specific to JCP&L, including company-specific financial information (e.g., net income status, budget variances, and short- and long-term debt issuances and obligations), key operational issues (e.g., safety, labor, reliability, relations, and issues with the New Jersey Board of Public Utilities (NJBPU) and status of major projects), and environmental issues (e.g., related to facilities, manufacturing gas plants expenses, and natural resource damage claims). All work is performed by the Board as a whole; there are no committees.

FirstEnergy's Board consists of 11 directors, of which 10 are outside directors (the President & CEO of FirstEnergy is the only management director and he does not sit in on any committees). One of the FirstEnergy independent directors is also an independent director of JCP&L. The Board has a good mix of senior management experience that encompasses finance and accounting, utilities and nuclear generation, academics, human resources, and general business. Four directors have a strong background in finance and accounting. Ten directors are over 60 years old (one is over 70). The remaining two directors (one of whom is the President & CEO of FirstEnergy) are 59 years old. Tenure on the Board ranges from three years up to 22 years, with the average tenure being over 11 years. All independent directors are assigned to two committees. No directors serve on more than three other outside boards.

As mentioned earlier, two of JCP&L's directors are independent, with one director (experience in human resources) also serving on the FE Board. The other independent director has experience in government and consumer services (New Jersey Division of Consumer Services) and has been on the JCP&L Board since 1983.

Although FirstEnergy has retirement guidelines for its directors, no such policy exists for JCP&L. Neither of JCP&L's independent directors is scheduled to retire.

What constitutes independence in a director is specifically documented in the corporate governance policies and includes commercial/business/charitable relationships with First Energy, relationships with major suppliers to FirstEnergy, and any immediate family members who have such relationships. Corporate Governance Policies also require the Board to adhere to the definition of an independent director as promulgated (changed/updated) from time to time by the New York Stock Exchange (NYSE) The Corporate Governance Committee and the Board make specific determinations on any possible conflicts and such conflicts are disclosed in FE's financial statements (proxy statement).

In addition to the FE Code of Business Conduct and Conflicts of Interest policy, directors are further bound by an additional, documented "Board of Director's Code of Ethics and Business Conduct." This code further defines conflicts of interest as they would apply to directors (third-party relationships, compensation, gifts/gratuities, personal use of company assets, and company loans) and requires directors to immediately disclose any potential conflicts of interest to the Corporate Governance Committee. This code also specifically tasks directors to oversee ethical behavior by FE management and employees and to encourage ethical behavior and reporting of unethical conduct. Finally, FirstEnergy has a documented Related Person Transaction policy that specifically defines a person related to a director or other person who is in a position of exercising control over FE decisions, stipulates how that person should be identified, and compiles relevant information, management review, approvals (Corporate Governance Committee), and appropriate disclosures.

Board policies specifically encourage Board training and continuing education programs, which may include internal strategy meetings, third-party presentations, and externally offered programs;. Board training topics are diverse and all FE Board members have made good use of training opportunities.

The Board is required to have FirstEnergy evaluate and, if necessary, recommend replacement of the Chief Ethics Officer and the Director of Internal Auditing. Executive sessions for directors are required at least six times in each calendar year, but in practice, the Board meets in executive session in most meetings.

Although the Board has not adopted a specific policy or philosophy on whether the roles of the CEO and Chairman should be separate, the FE Board Chairman is currently an independent director. Having an independent director serving as the chairman of the Board helps ensure the independence of the Board of Directors and is a good governance practice.

The Board does not believe in establishing term limits. Independent directors are required to resign and retire from the Board on the date they turn 72 years old, although the Board can extend a Board member's service beyond that time if it feels doing so is in FirstEnergy's best overall interest.

Board independence is defined in the corporate governance policies, and all Board members are required to annually update a Director's Questionnaire to reaffirm their independence and lack of any

conflicts of interest. Likewise, FE officers are required to annually update an Officer's Questionnaire. The Chairman of the Board is an independent director.

Although a majority of FE directors reside in Ohio, there is geographic diversity. Three directors come from the East Coast near JCP&L's service territory.

With the upcoming Allegheny merger, the Board of Directors has decided to increase its total numbers to 13 by appointing two additional independent directors who are currently serving on the Allegheny Board.

Finding VII-4 **FirstEnergy has developed a thorough and substantive Code of Ethics. This code could be further communicated to vendors and contractors to assure understanding and alignment.**

FirstEnergy/JCP&L's Code of Ethics is primarily defined in three documents: a business practice on "Ethics, Business Conduct, and Employee Concerns Line"; a corporate policy on "Code of Business Conduct"; and a policy defining the "Corporate Compliance Program." The business practice on Ethics and Business Conduct succinctly states that ethical conduct applies to all employees as well as dealings with outside publics (regulators, government, customers, and suppliers). Authority and responsibility for maintaining these standards are vested with a designated Chief Ethics Officer who is a member of the Senior Management Committee. These stated responsibilities include:

- Establishing procedures to monitor and oversee compliance with ethics and business conduct standards
- Ensuring appropriate action is taken on reports of ethics and business conduct violations
- Developing ethics training programs
- Making appropriate changes to ethics and compliance policies in response to violations and potential legal and regulatory changes.

FirstEnergy's Code of Business Conduct code is a more specific document with a cover statement by the President & Chief Executive Officer stating corporate-wide commitment to ethical conduct. This document lays out basic rules of employee conduct with examples on how to address common situations and how to go about reporting ethical violations without fear of retaliation. Specific areas include dealing with customers, suppliers, and political activities, among others. FirstEnergy's code is reviewed annually by the Internal Audit Department and the Board of Directors.

The FirstEnergy Corporate Compliance Program further defines FirstEnergy's ethics programs and policies by cross-referencing policies and practices to organizational guidelines from the United States' Sentencing Guidelines Manual, which is prepared by the U.S. Sentencing Commission.

The Code of Business Conduct is distributed to each FirstEnergy employee, and all employees (non-bargaining) must undergo ethics training when first hired and acknowledge annually their compliance

with the code. Biennially, all employees must also take a refresher ethics course online and pass a written test with at least an 80 percent score. Training for each employee is documented and maintained on a LOTUS Notes system. In addition, supervisors and managers must undergo an additional ethics training course when they are hired/promoted to that level.

FirstEnergy uses a variety of ethics training courses including courses on ethical decision making, state regulatory codes of conduct, and FirstEnergy code of conduct as well as several courses on human resources topics (e.g., harassment and discrimination) and Sarbanes-Oxley compliance. Training on the state regulatory codes of conduct is conducted biennially for new hires and affected employees. Compliance and ethics training is conducted by a third-party vendor for all non-bargaining unit personnel or, in some cases, just supervisors (Ethics) and specific departments (Compliance). These courses are conducted on an as-needed basis, although a refresher course is conducted annually for all non-bargaining employees and contractors.

Potential ethics violations can be communicated up to the Chief Ethics Officer through local management, the Legal Department, or the Human Resources Department or by contacting the Employee Concerns Line. The Employee Concerns Line is a toll-free, 24-hour-a-day number maintained by an independent and outside entity. Employees using this hotline are assured of anonymity and can get updated actions taken by FirstEnergy on their report.

Follow-up investigations of ethics violations are the responsibility of the Ethics and Compliance Lead/Manager who reports to the Director of Internal Auditing. His duties include, among others, "managing ethics investigations to ensure that all issues are identified, researched, supported with all relevant and objective factual information, reviewed, and reported." Allegations, whether they come through the hotline or by other means (e.g., internal auditing) are documented and maintained in an investigations log. This log includes investigation responsibility and a summary of each investigation's result. All investigations are reviewed by the Director of Internal Auditing and the Chief Ethics Officer, and both individuals must agree to the resolution before the issue is closed out. Results of investigations are reviewed by the Board Audit Committee. All allegations are investigated (assigned out by the Chief Ethics Officer), usually within FE, although investigations will be contracted out to independent sources if specific expertise is required or if the nature of the allegation is deemed sensitive. Fraud is also explicitly addressed by Internal Auditing in developing its annual audit plan.

FirstEnergy has embarked on additional ethics training in the area of fraud. Approximately 150 FE employees have been through this training (none at JCP&L), and there are plans to roll out such training throughout FE.

The Board Audit Committee reviews ethics and fraud at each of its meetings. Important information and statistics are summarized in a dashboard and a detailed presentation is made annually. This annual review includes analysis of ethics/fraud trends, if any.

Annually, the Chief Ethics Officer provides the Board of Directors with a corporate ethics program update. This documentation includes an update of FirstEnergy's Corporate Compliance Program,

noting responsibilities, key policies, communications, and training opportunities presented (e.g., interactive training, onboard training, and fraud training).

FirstEnergy has stated that it expects all vendors and contractors to adhere to ethical standards as outlined in the FE code. Standard contract provisions do include sections on employee obligations regarding gifts and gratuities/conflicts of interest, and a personal statement of compliance with FE ethics-related policies is signed annually by contractors with access to FirstEnergy systems. But no routine communications are made to all vendors and contractors regarding these expectations.

Finding VII-5 Board compensation is proper and committees are appropriately structured, although committee rotation should be further investigated.

FirstEnergy has analyzed annual surveys of Board of Director compensation over the past two years. This information has been provided by Hewitt & Associates (Hewitt), an outside company that specializes in these types of studies. This analysis includes retainer fees, meeting fees, stock-based long-term incentives, and insurance, among other items. The competitive benchmark used in this study compared practices in director compensation for a peer group of energy services companies as well as a general industry group of 130 companies.

In January 2010, FE board compensation was increased to the following levels (changes from 2009 noted in parenthesis):

- Annual cash board retainer – $60,000 (up from $40,000)
- Equity compensation – $86,000 (paid in the form of common stock)
- Cash board meeting fee – $1,500 per meeting (includes corporate office or facility visit and attendance at industry meeting or training at FirstEnergy's request)
- Cash committee meeting fee – $1,500
- Committee chairperson retainer – $10,000 (up from $5,000 except the Nuclear Committee Chairman retainer, which remained the same); $15,000 for Audit Committee chairman.
- Committee member fee (Audit Committee members only) – $5,000
- Chairman of the Board additional cash retainer – $125,000

Equity and cash retainers and chairperson retainers are paid quarterly, while meeting fees are paid monthly. One of FirstEnergy's independent directors also serves as an independent director on the Board of JCP&L for an additional cash retainer of $15,000 and $1,000 per meeting attended ($26,000 in 2009). Total director compensation for 2009 varied from approximately $165,000 to approximately $350,000 (approximately $200,000 on average). Almost all of this compensation came in the form of fees/cash and stock awards.

FirstEnergy has stated that the purpose of the director compensation is to link its personal interests to its long-term financial success. As such, within five years of joining the Board, each director must own

shares of FE common stock with an aggregate value of at least five times the annual equity retainer. Only non-employee directors receive compensation for their service on the Board.

These new levels will put FE director net total compensation at 3.4% above the median of blended peer group companies ($187,500 versus $181,369) from the Hewitt survey.

Directors are provided other benefits such as deferral of up to 100% of their cash retainer into cash or stock accounts, as defined in the Deferred Compensation Plan for Directors. Other benefits include limited use of corporate assets (e.g., corporate aircraft) and other perquisites valued in total of less than $10,000 per director. Independent directors do not receive any pension benefits. All forms of director compensation are listed in FE's annual proxy statement.

Each director serves on two committees and each committee has four independent directors. Although Board policies state that consideration should be given to rotating committee members, this recommendation is not required. In practice, there is little rotation of committee assignments. For example, the four members of the Audit Committee have served in this post for tenures ranging from five to nine years, with the last change coming in 2005.

Finding VII-6 **The Audit Committee and Corporate Governance Committee properly perform their oversight roles for FirstEnergy and Jersey Central Power & Light, although the responsibility for oversight of risk management could be further clarified.**

Internal Auditing makes quarterly presentations to the Board Audit Committee. This demonstration includes a dashboard (summary matrix) on total recommendations, the number of recommendations implemented , and the number of open recommendations; a listing of significant and other findings; and a summary of recommendations by type (including internal control).

The Chief Risk Officer reports to the Audit Committee at each meeting, and it appears that the Audit Committee is responsible for oversight of risk management. The Audit Committee charter, however, provides for the committee to generally discuss FE policies only with respect to risk assessment and risk management.

The Board Corporate Governance Committee provides further oversight by tracking FE corporate governance practices and policies, reviewing the performance of the Board as a whole, and vetting candidates for directorships.

Finding VII-7 **The relationship between the Board of Directors and Internal Auditing is appropriate, although reporting relationships should be further clarified.**

The Director of Internal Auditing reports to both the FE Board Audit Committee and the FE Executive Vice President & Chief Financial Officer. The distinction in this dual-reporting relationship is not stated in corporate governance policies or in the Audit Committee charter. The Audit Committee

Chairman does meet with the Director of Internal Auditing at each committee meeting and gives input to and approves the Director of Internal Auditing's performance evaluation.

A plan is under review to periodically move high-performing employees into Internal Auditing for training purposes. This will help ensure that Internal Auditing is viewed as a career-enhancing experience, thereby attracting capable employees to this function, enhancing the function's independence, and serving to further expand ethical awareness throughout the organization.

Finding VII-8 The Board exerts proper control over external auditors; however, FirstEnergy has no plans to rebid outside audit services.

In accordance with the Audit Committee charter, there have been no fees paid to FirstEnergy's external financial auditing firm for non-auditing services to FirstEnergy or any of its companies and subsidiaries. Non-auditing services include bookkeeping; financial systems design and implementation; appraisal, valuation, or actuarial services; internal auditing outsourcing services; and any broker, dealer, or legal services, among others. External auditing fees have remained stable over the past five years, averaging $6.5 million per year (2005 through 2007) and declining to less than $6.0 million the past two years (2008 and 2009).

The Board Audit Committee can approve the financial auditor's performance of non-audit services only after considering the auditor's independence in regard to the services provided. The external financial auditor performs normal auditing-related services for JCP&L, including financial statement assurance services and tax services.

As mentioned earlier, the Board Audit Committee meets frequently in closed session with PwC and reviews and approves partner rotations and assignment of key staff. FirstEnergy, however, has no plans to rebid external audit services.

Finding VII-9 FirstEnergy and Jersey Central Power & Light have adequately complied with Sarbanes-Oxley/NYSE requirements and have established good internal controls, although outside counsel is not required to report wrongdoing up to the Board of Directors.

The outside financial auditor regularly reports any material weaknesses in internal controls over financial reporting to the Audit Committee.

FirstEnergy has well-established internal processes for evaluating control points, identifying any material weaknesses, and implementing and tracking corrective actions. These processes include charts-listing process narratives to include control ID, control title, process description, scope, organizational unit covered, where preformed, whether the process is significant and a key control, and the process owner, among other information. Each process has a detailed narrative that includes a process flowchart, beginning and ending points of the process, significant systems involved, governing policies, third-party involvement, and recording and reporting, among other information and direction.

All personnel charged with performing SOX control testing are given appropriate training to accomplish their responsibilities. This training includes accessing and using the automated system for test conduction and includes modules for processes, work papers, selecting samples and sample size, and test rejection criteria (Internal Audit review), among other information.

SOX/SEC rules require outside counsel appearing and practicing before the SEC on FirstEnergy's behalf be required to report wrongdoing/ethics concerns up through senior management to the Board Audit Committee. This requirement does not extend to other outside counsel, and FE does not have any policies in place requiring outside counsel (not appearing or practicing before the SEC) to report any observed wrongdoing/ethics concerns up through senior management to the Board of Directors.

Recommendations

Recommendation VII-2 Regularly review and update corporate governance policies. (Refer to Finding VII-3)

Update the Audit Committee charter to state that it is the Board's position that the Chairman role should be filled by an independent director. Also evaluate the impact of not having a policy for retirement for JCP&L independent directors and make any changes, as necessary.

Recommendation VII-3 Periodically send out letters to all vendors and contractors informing them of FE's Code of Conduct. (Refer to Finding VII-4)

Include within the body of this letter explicit language on FE's expectations that vendor/contractor employees will abide by these standards when doing business with FE.

Recommendation VII-4 More routinelyrotate directors through committees. (Refer to Finding VII-5)

This rotation will give directors a broader view on FE operations and governance and help ensure fresh perspectives on each committee. Exceptions can be made for certain committee chairs where a very specific expertise is involved (e.g., Nuclear and Audit).

Recommendation VII-5 Review and update the Audit Committee charter to specify that the Audit Committee is responsible for oversight of all risk management. (Refer to Finding VII-6)

If this stipulation proves to result in work overload for the Audit Committee, establish a Risk Management Committee. Given the upcoming merger with two additional directors coming aboard and the further expansion of potential risk, now is the appropriate time to consider this change.

Recommendation VII-6 Update the Audit Committee charter to state that the Director of Internal Auditing functionally reports to the Audit Committee and uses FE for logistical support. (Refer to Finding VII-7)

Update other documents (e.g., position description) to reflect this change. Update the organizational chart to show a solid line between Internal Auditing and the Audit Committee and a dotted line between Internal Auditing and the CFO (or other report).

Recommendation VII-7 Periodically rebid external audit services. (Refer to Finding VII-8)

This formal process should be conducted periodically (e.g., every five years) and can coincide with the rotation of the audit partner. Competitive bidding can help ensure high-quality services (e.g., oversight) at the best overall value. It is also a way of encouraging fresh and more independent views/points of views.

Recommendation VII-8 Require all outside counsel to report wrongdoing up through the Board, as is now required from outside counsel practicing before the SEC. (Refer to Finding VII-9)

All outside counsel to FE/JCP&L (not just those practicing before the SEC) are in a position to detect fraud within the company, or to identify conditions that could lead to fraud. Outside counsel should view FE/JCP&L as their client (not the department or manager where they are performing work). As such, the Board of Directors should expect the same fraud reporting obligation from all outside counsel as required by attorneys practicing before the SEC. This expectation can be expressed in a letter to all outside counsel in a manner similar to *Recommendation VII-3*.

C. Organization Structure

Organizational structure issues have been addressed in each individual section to the extent that there are findings or recommendations in each area.

D. Human Resources

Background & Perspective

This section provides an overview of the Human Resources (HR) function as provided by SERVECO and JCP&L Human Resources.

Organization and Staffing

The Jersey Central Power & Light (JCP&L) Human Resources organization provides onsite HR support to JCP&L managers and employees. The Human Resources Manager reports directly to the JCP&L

President and has seven direct reports. The HR Manager is responsible for JCP&L HR and safety activities. She coordinates with SERVECO HR to disseminate FirstEnergy (FE) policy and information. In addition, she administers the performance management process for JCP&L and coordinates JCP&L Leadership Team meetings.

Direct reports include three advanced HR representatives. They perform high-level HR generalist functions supporting HR programs and initiatives, including recruiting, testing, and hiring of bargaining-unit employees, benefits open enrollment, investigations, EEO compliance and affirmative action plan development, and monitoring of medical case management. In addition, they provide HR support services for managers and employees.

One of the advanced HR representatives is assigned to northern New Jersey locations. Her specific functions include coaching, training, EEO investigations, and preparation of the JCP&L equal employment opportunity (EEO)/affirmative action plan. In addition, she coordinates new supervisor training with SERVECO HR. She also coordinates medical case management and Family Medical Leave (FML) applications. She also conducts open enrollment meetings during the annual benefits program.

A second advanced HR representative performs similar duties for central New Jersey locations. In addition, she represents JCP&L on the Monmouth County Workforce Investment Board and Disabilities Committee.

A third advanced HR representative supports workforce planning and performs recordkeeping for corporate Human Resources. In addition, she helps create and manage the HR budget. She also does work similar to the other advanced HR representatives. Another of her tasks is to perform EEI testing and bargaining recruitment, including recruiting for the Power Systems Institute (PSI) program (described in *Finding VII-18*).

An associate HR representative supports recruiting, testing, and hiring of bargaining-unit employees, including the Power Systems Institute program's line workers and substation electricians. She also administers JCP&L's drug and alcohol random testing program. In addition, she conducts employee orientations, maintains HR files, conducts EEI testing, and administers the flu shot program.

An assistant business analyst provides data for HR reporting, including the HR scorecard data, the discipline log, and safety recordkeeping. She also conducts discipline process tracking, processes invoices, maintains central New Jersey HR files, assists with commercial drivers license files, administers the flu shot program, and logs United Way pledges.

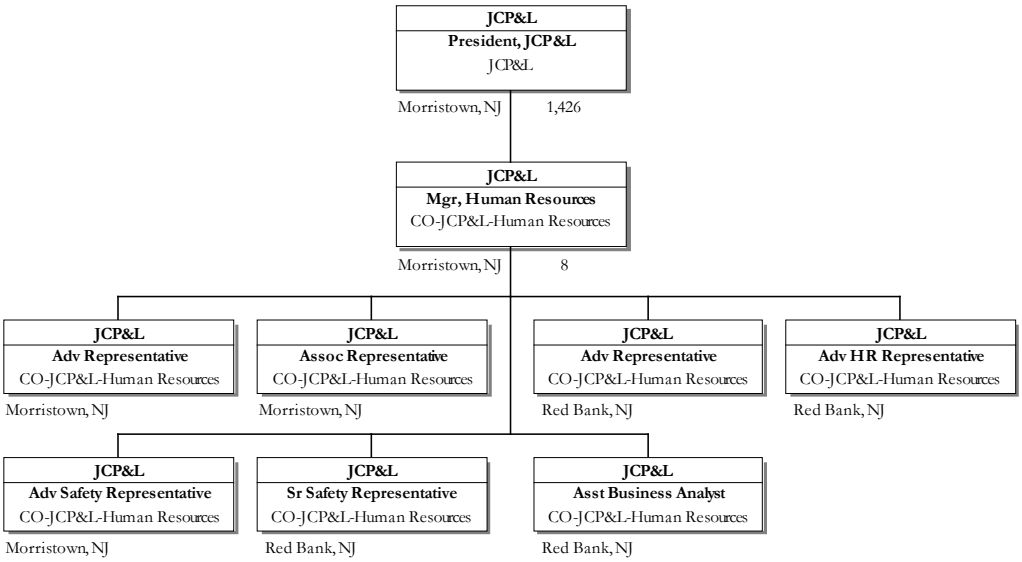
The remaining two staff members are a senior safety representative and an advanced safety representative. These employees are responsible for implementing safety programs, consulting on safe work practices, conducting accident investigations, and participating in corporate safety analysis and planning.

The advanced safety representative maintains New Jersey Commercial Driver License (CDL) files, coordinates first aid training, conducts safety programs/meetings, field audits, and safety orientations, and assists with safety investigations.

The senior safety representative maintains central New Jersey CDL files, conducts safety training for both internal and external groups, participates as part of mutual assistance during storms, and assists with safety investigations. He also researches and distributes safety-related materials to field employees.

The JCP&L Human Resources organization is shown in *Exhibit VII-4*.

Exhibit VII-4
JCP&L Human Resources Organization
as of July 31, 2010



Source: Information Response 54

Although the JCP&L HR Manger reports to the JCP&L President, the JCP&L HR organization is very much a part of FirstEnergy Service Company (SERVECO) HR, which is responsible for policy, strategy, common systems, and company-wide HR initiatives. JCP&L HR is responsible for implementation of these corporate initiatives and direct support of local management and employees.

The SERVECO HR organization is lead by a Senior Vice President (SVP) who reports to the President and CEO of FirstEnergy Corp. Reporting to the SVP of HR is a Vice President with a staff of 50 who are responsible for operational HR. Their functions include benefits and compliance, corporate human resources, labor relations, and health and absence management and safety.

Also reporting to the SVP of HR is a director of compensation, retirement programs, and succession planning. Within her 42-person organization, one team member is responsible for employee

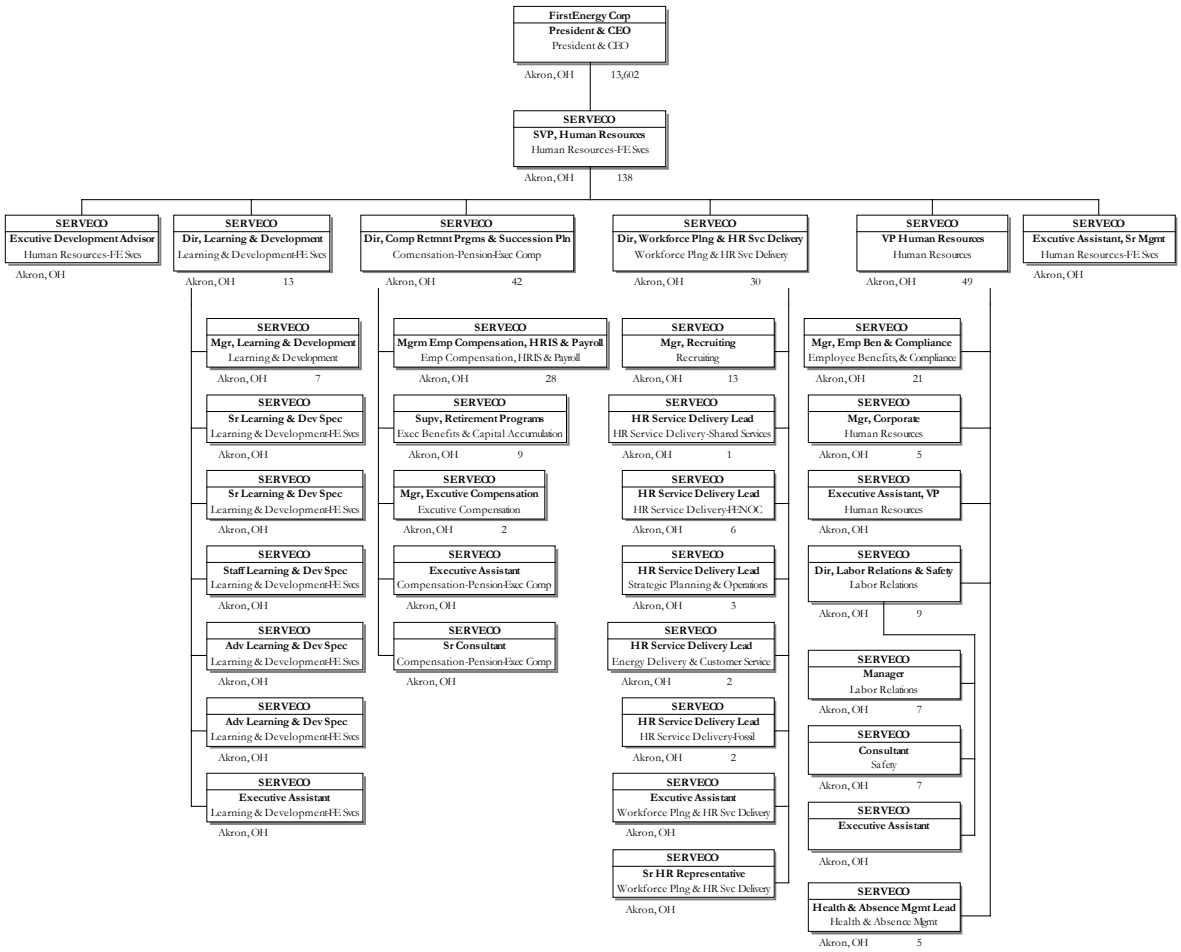
compensation, human resources information system (HRIS), and payroll. This group also includes a supervisor of retirement programs, a manager of executive compensation, and a senior consultant for pension and executive compensation.

SERVECO HR also has a 13-person group that is responsible for learning and development. This group is led by a director. Reporting to her is a manager of learning and development and ten learning and development specialists. These individuals are responsible for developing the learning and development strategy and all have design, development, and delivery experience. In addition, the group performs some facilitation for other groups and new teams, including communications work and group interventions.

A director of workforce planning and HR service delivery also reports to the HR SVP. She has an organization of 30 individuals who are primarily responsible for the recruitment and hiring of non-bargaining-unit employees and for workforce planning.

The FirstEnergy Service Company's Human Resources organization is shown in *Exhibit VII-5*.

Exhibit VII-5
FirstEnergy Human Resources Organization
as of July 31, 2010



Source: Information Response 54

HR Steering Committee

A FirstEnergy HR Steering Committee provides operating management oversight of HR initiatives and assures alignment to business strategies. In addition, this group provides content review and input on training content.

The HR Steering Committee is composed of nine key individuals:

- SVP, Human Resources
- Executive Vice President (EVP) and Chief Financial Officer (CFO)
- SVP and President, FE Utilities

- President and CNO
- Vice President (VP), Fossil
- EVP and President, FE Generation
- Director, Learning & Development
- President, FirstEnergy Solutions
- EVP and General Counsel

HR Technology

SERVECO's HR technology platform is the SAP enterprise resource planning (ERP) system's human capital management (HCM) version 6.0. This system manages the human resources information system's (HRIS) master data, including benefits. This system is a comprehensive, integrated human resources management solution that helps executives and human resources professionals forecast, plan, and hire the best talent as well as cultivate the skills of and train their workforce.

SERVECO uses three SAP HCM modules (in addition to SAP payroll).

- *SAP E-Recruiting*: This application is a fully web-enabled, end-to-end recruiting solution that accelerates and streamlines the recruiting process. Recruiters can take advantage of this talent pool to quickly find the staff they need, while collaborating closely with hiring managers throughout the hiring process. Applicant tracking and reporting functions help organize the processing of job applications and monitor the effectiveness of the recruiting organization. A collaboration platform links SAP e-recruiting to external systems such as job boards, recruiting service providers, and a company's internal systems.
- *SAP Enterprise Learning*: This application integrates functionality for back-office enterprise resource planning, with functionality for both learning management systems (LMSs) and learning content management systems (LCMSs) in a single offering. It provides a comprehensive, blended learning environment for all individuals who address training needs. SAP enterprise learning supports traditional classroom training, virtual learning events, web-based training, and computer-based training as well as collaboration features. It is fully integrated with the SAP ERP HCM solution.
- *The Cross Application Time Sheet* (CATS): This application allows employees or administrators to track employee working times. Time data is recorded (e.g., with information referring to orders and cost centers) and can be transferred to corresponding applications and components of the SAP business suite.

SERVECO performs an upgrade or patch project every 24 months. The next upgrade or patch is scheduled to begin in 2012.

SERVECO has a four-year HR process improvement and technology enhancement plan (2010–2013). 2010 efforts focused on strengthening learning management, payroll process improvements, e-

recruiting, employee on-boarding, open-enrollment enhancements, and workforce planning enhancements. The learning management, payroll, and e-recruiting projects extend into 2011.

2011 will also bring new technology to the performance management process. SERVECO will implement new SAP technology including SAP EhP4, SAP human capital management (HCM), SAP employee and manager self-service (ESS & MSS) and SAP business warehouse (BW).

Subsequent years will bring technology support for compensation budgeting and market pricing, talent management, and succession planning.

Performance Management

FirstEnergy and its operating companies participate in a common performance management program. All full-time regular and part-time employees who are not represented by a labor union are eligible for the Employee Rewards Program.

The performance management process provides guidance and tools to help supervisors establish clear expectations for employees. This process helps supervisors more systematically measure and improve employee productivity and job performance that is aimed at establishing and enhancing a relationship of trust, understanding, and cooperation. This process is management's primary tool for planning, monitoring, and evaluating performance.

Objectives of the Performance Management Process

- Link corporate, department, group, and employee accountabilities and priorities.
- Provide clear—mutually understood—performance objectives, critical success factors (competencies), performance measures, and development plans.
- Promote ongoing feedback and encourage thorough documentation of progress and results.
- Link performance to compensation.

To ensure consistent administration, supervisors are trained to establish job objectives and help employees create developmental plans.

The performance management process is an ongoing cycle and includes four steps:

1. Set objectives.
2. Create development plans.
3. Conduct mid-year review.
4. Conduct year-end review.

These steps are intended to include ongoing communication and feedback.

Objective Setting

Objective setting takes place in the beginning of each year. It begins with a discussion between the employee and supervisor to establish a mutual understanding of the major accountabilities and expected results for successful performance on the job. The objectives are intended to be relevant to corporate and departmental goals, within the employee's control to achieve, and measurable in terms of quantity, quality, cost, and timeliness.

Critical Success Factors (CSFs)

Critical success factors (CSFs) are defined as competencies that encompass the knowledge, skills, and behaviors that distinguish performers. The CSFs were designed to ensure alignment with FirstEnergy's mission, vision, and values. Performance appraisals reflect how an employee's performance measures up against the CSFs required for that position's level. The supervisor and employee discuss and agree upon the specific CSFs that are required to successfully perform the job.

Development Plans

Development plans generally address identified critical success factors as well as job- and performance-related skills. Action plans to improve job performance or to enhance the employee's professional development are discussed with the employee. The supervisor then works with the employee to determine action plans with specific activities and mutually agreed-upon target dates.

The employee and supervisor determine the most effective way to provide the required development, taking into consideration available resources, including time, money, availability, and expertise. A variety of development activities can be considered that generally fall under three categories: experience; education/training; and professional/community involvement. They may include the following:

- On-the-job or external coaching and counseling
- Expanding job assignments
- Acting as project lead
- Rotating assignments
- Facilitating training sessions or meetings
- Participating on task forces or teams
- Preparing and making presentations
- Education/training
- Attending corporate-offered training
- Attending classes at universities or other learning institutions
- Performing writing assignments
- Attending seminars, workshops, or conferences
- Taking self-study courses
- Reading job-related books or periodicals/listening to tapes or CDs
- Professional/community involvement

- Joining and becoming active in technical/professional associations
- Serving on external boards and committees

The Employee's Role

Employees are expected to meet or exceed the standards of performance agreed upon with their supervisor. In addition, employees are expected to track accomplishments, participate in performance discussions, advise their immediate supervisor when problems or obstacles occur, and ask for additional feedback as needed. Employees are also expected to take ownership of their developmental needs by initiating and implementing the action plans drafted in partnership with their supervisor.

Ongoing Feedback and Coaching

Supervisors are expected to provide feedback and coaching on an ongoing basis throughout the performance year by discussing problems, opportunities for enhanced performance, and changes that are occurring. Supervisors are expected to provide guidance and support, identify development needs, and recognize achievement.

Mid-Year and Year-End Reviews

During the mid-year and year-end reviews, the manager and employee discuss the performance results against the major objectives, the critical success factors, and the development plans. Results are documented on specified forms.

At a minimum, formal reviews are completed at mid-year and at year-end. Additional formal reviews may be completed at management's discretion. A formal closeout review is completed any time an employee transfers to a different area.

During the formal review, the employee and supervisor will meet to discuss:

- Results and accomplishments as measured against the established objectives and critical success factors
- Accomplishments of the development plan
- Contributing circumstances that affected performance
- Action plans to begin the next performance-review cycle

Employee Development

The amount of money JCP&L has invested in training and development for its employees has remained stable over the last three years, in spite of the economic downturn. The per-employee training expenditure per JCP&L employee for 2005–2009 is provided in *Exhibit VII-6*.

Exhibit VII-6
Average Annual Training Spending (Actual) Per Employee
2005 to 2009

	Avg. Training Spend per Employee
2005	$882.06
2006	$970.09
2007	$1,288.26
2008	$1,766.78
2009	$1,228.35

Source: Information Response 65

In 2008, the increase in JCP&L's workforce development training dollars was attributable to the opening of a new training location in New Jersey and the start of a new Power Systems Institute (PSI) training class in New Jersey. (See *Finding VII-18* for a discussion of the Power Systems Institute.)

Talent Talks

The Talent Talks initiative is designed to identify the levels of employee performance and potential in order to determine activities that will prepare FirstEnergy's future leaders. Top performers, solid performers, as well as those in need of improvement are discussed in terms of their potential for development. Through discussions with the Leadership Team, developmental opportunities are identified to grow the necessary skills. For management, Talent Talks provide a foundation for succession planning at the business units (including JCP&L). These discussions help leaders at all levels better assess talent, discuss the capability of employees, identify high performers, and ensure that talent is being developed.

Talent Profile

Talent profiles are created in an online template by each employee to record his or her credentials, career aspirations, and future job interests. Employee managers also access the system to record their views on employee strengths and growth needs. Talent profiles are intended to be discussed during performance management discussions and used to create development plans. Employees are responsible for their own development, with input from their managers.

Leadership NJ

Annually, an employee (or two) is selected to participate in year-long Leadership New Jersey seminar sessions. These meetings are intended to educate the participant on the various facets of New Jersey, such as education, social services, criminal justice, politics, government, environment, etc. The

participant interacts and networks with individuals statewide in learning about the fabric of the state and how his or her leadership can effect positive change.

MBA Program/Educational Assistance

JCP&L has partnered with Georgian Court University to provide opportunities for employees to obtain their MBAs, while using JCP&L's Educational Assistance Program.

Compensation and Benefits

FirstEnergy provides a competitive Total Compensation Program, which is intended to help attract, retain, and reward employees whose performance, contribution, and behaviors drive FE's success. The goal of this program is to provide the basis for sound and consistent compensation administration across FirstEnergy. All active, non-represented employees are eligible to participate.

FirstEnergy's program (including the plans and policies) is designed to provide the flexibility to accommodate the individual needs of all FE business units. The program's intents are to encourage desired performance, contribution, behaviors, and results and to deliver rewards in a nondiscriminatory manner that can be easily understood and administered by management while fostering equity and consistency.

Pay Philosophy and Benchmarking

FE's compensation philosophy targets total compensation at or above the 50th percentile with those of other utility companies that are similar in size and revenue scope. FirstEnergy supports a pay-for-performance philosophy in base and variable pay to reward individual, business unit, and corporate results.

FirstEnergy benchmarks standard rates (base pay), short-term incentive targets, long-term incentive targets, and total compensation at the utility industry's median (50th) percentile. The standard rate structure, short-term incentive targets, and long-term incentive targets are benchmarked annually to ensure competitiveness with FirstEnergy's peer group and alignment with FE's compensation philosophy.

The standard rate of non-bargaining jobs is determined through market pricing. Market pricing provides a reliable and sound method to establish standard rates that are consistent with those of other comparable companies. Employees have the ability to achieve increased compensation through their individual performance. To encourage pay for performance, a salary range encompassing 80% to 120% of the standard rate is used. All employees should be compensated within this range. Employees performing the full scope of their job should be compensated within a range of 90% to 105% of the standard rate. The high end of this range is applicable for employees with sustained exceptional performance. Employees not yet performing the full scope of the job are paid at the lower end of the range.

In 2010, the average range position for JCP&L executives and management ranged from 93 to 107.6 percent. The average range position indicates how incumbents in JCP&L's executive and management jobs are paid relative to the standard rate. (100% is equal to the standard rate.)

Annually, FirstEnergy participates in numerous compensation surveys from various major consulting companies to obtain current utility and non-utility market data. Some of the major consulting firms with which FirstEnergy participates include Towers Watson, Hewitt, Mercer, Hay Group, Culpepper, and World-at-Work.

Pay for Performance

FirstEnergy is committed to pay for performance. All employees, including bargaining-unit employees, participate in a short-term incentive. A represented employee may receive up to 6% based on key performance indicator (KPI) results.

KPIs are set by FE and vary by operating unit. All employees have two corporate (FE) financial goals and one operational goal:

1. Achieve earnings-per-share (EPS) guidance (normalized).
2. Achieve reduced net debt balance levels.
3. Drive energy delivery safety performance as measured by the Occupational Safety & Health Administration (OSHA) incident rate.

All New Jersey regional employees have the following five additional operational goals:

1. Achieve distribution System Average Interruption Duration Index (SAIDI) goals to meet state reliability requirements.
2. Achieve local JCP&L OSHA incident rate.
3. Achieve local motor vehicle accident rate (MVAR).
4. Achieve FE Utilities' operating margin goal.
5. Achieve transmission outage frequency (TOF) goals to meet reliability requirements.

In addition, represented employees in New Jersey have an individual "triple play" goal with four components:

1. Achieve zero OSHA safety incidents.
2. Achieve zero MVAR incidents.
3. Attain perfect attendance.
4. Achieve call-out response for a stretch payout.

Executive Compensation

An executive compensation plan is offered to the top 37 executives in FE. At JCP&L, only the President is eligible for this plan. A key element of the executive compensation plan is the Long-Term Incentive Program (LTIP). This is an equity-based program designed to reward executives for achievement of FirstEnergy goals that are intended to increase shareholder value. The LTIP provides preferred shares and restricted stock units. Restricted stock units are distributed on an annual payout based on a three-year cycle. Average performance of the EPS, corporate safety, and operational KPIs forms the basis of this payout. The program also offers a deferred compensation option.

Employee Benefits

FirstEnergy offers a comprehensive employee benefit program. The benefits are similar for represented and non-represented employees, although some differences in coverage and employee contribution exist as a result of the collective bargaining agreement. The benefit program for all employees includes:

- Medical (PPO) options
- Prescription drug options
- Dental and vision options
- Group life insurance
- Flexible spending accounts
- Long-term care
- Home and auto insurance
- Financial planning

Employee Wellness

The following is list of actions taken to improve the health and wellness of JCP&L employees:

- Annual flu shots
- Health education through newsletters
- Health fairs and biometric screenings—under consideration for 2010/2011
- 100% coverage under health care plans for preventive services
- Globalfit discount program on fitness center memberships and exercise equipment
- Know Your Numbers awareness education—scheduled for Fall 2010 (postponed to 2011)
- Medical providers' websites on health and wellness
- Employee Assistance Program (EAP) services
- Smoking-cessation programs through medical vendors
- Disease management program
- Weight-loss programs through medical vendors
- Free diabetic supplies for participation in disease management program
- Onsite physical therapist education regarding body mechanics and injury prevention

Retiree Health Care Benefits

Eligible retirees have health care, vision, dental, and prescription drug plans available to them.

As with compensation, SERVECO benchmarks it benefits programs using data provided by national benefits consulting organizations such as AON and Hewitt. SERVECO participates in a number of benefits surveys throughout the year and keeps up to date on benefit trends and regulations on a regular basis.

Recruiting and Staffing

Recruiting and staffing for JCP&L's represented employees is done by JCP&L HR representatives in New Jersey. Non-represented staffing is performed by SERVECO HR.

In general, the recruitment process begins when the business unit identifies a position to be filled. If the position is a new one, the process will start in compensation with job specification and market pay analysis. Once the job is defined and the pay range determined, the recruiter consults with the hiring manager to agree on process and timeline. The recruiting process is supported in the SAP e-recruiting module (implemented in 2009). The recruiter then begins sourcing. Depending on the position, the posting may be limited to internal or expanded to external sources. The recruiter performs high-level screening for basic qualifications. Qualified applicants are forwarded to the hiring manager for review and the interview process is arranged. Most recruitment is done by SERVECO HR. FE does not rely heavily on executive search firms.

On-Boarding Process

SERVECO has recently implemented a new employee on-boarding process that is designed to rapidly integrate the new hire into his or her position. This program replaces much of the traditional orientation process that was spent completing benefit forms. The new process provides greater standardization and more complete information about FirstEnergy. It is also intended to make better use of the new employee's time, reduce turnover for new hires and the corresponding cost of attrition.

The program begins at the time a prospective employee accepts a position with FirstEnergy. Key elements include online forms and benefits enrollment using the New Employee Hub website for pre-start activities. More significantly, the program provides a connection plan to ensure the employee makes a smooth start. Hiring supervisors follow a Supervisor Connection Plan for pre-start, first-day, first-week, first-month, and close-out actions to be taken for new employees. A peer advisor is also assigned who follows the Peer Advisor Connection Plan with new employees. All new employees attend a central on-boarding session. At this point, the employee is made aware of the connection plan and his or her role. To measure the effectiveness of the on-boarding process, SERVECO (through an external vendor) conducts a survey of the new employee. Survey results, along with connection plan reports, are reviewed by SERVECO learning and development staff.

Safety

This section provides an overview of JCP&L's safety programs and performance.

Safety Personnel

The administration of the overall safety process is managed by a combination of centralized (i.e., shared support across the regions) and decentralized (i.e., local safety representatives who report directly to regional management) resources.

The Corporate Health & Safety Department (SERVECO) is responsible for constructing industry-specific policies/programs (relative to safety), maintaining compliance to regulatory/consensus standard(s), developing and maintaining a safety-specific database and resources, and approving specific personal protective equipment (PPE). In addition, this department oversees the maintenance of the OSHA 300 Log and is responsible for managing all contacts with OSHA.

Within FE, there is also an Energy Delivery Safety Department. This group is responsible for developing strategic measures related to the implementation of policy and programs that are devised by the Corporate Health & Safety Department (SERVECO). Once implemented, the department is further responsible for assessing and enforcing implementation through various audits and applications.

The regional safety departments, including JCP&L in New Jersey, are responsible for overseeing compliance with all programs and policies. This oversight includes federal (both regulatory and consensus), corporate, and local compliance. They maintain the OSHA 300 Log for JCP&L and support the accident/incident investigation process.

In New Jersey, JCP&L has two safety professionals. The senior safety representative (see *Exhibit VII-4*) has an extensive background in workplace safety. His certifications include:

- Certified Utility Safety Administrator (CUSA) – National Safety Council
- OSHA 30 Certification
- Medic First-Aid Instructor
- Defensive Driving Instructor – National Safety Council
- Certified NJ Fire Level 2 Instructor
- Licensed NJ Fire Inspector

In addition, he is active in many safety-related professional groups, including:

- New Jersey Utility Association Safety and Health Committee and past Chairperson
- Board of Trustees – New Jersey State Safety Council and member of Executive Board
- Member of the New Jersey Emergency Preparedness Association Training Committee and Conference Safety Officer
- Member of the Federal Safety and Health, Southern, and Northern Safety Committees

Safety Committees

FirstEnergy has an All Hands' Safety Committee led by the corporate (SERVECO) Health & Safety Department. The committee is composed of safety representatives from Energy Delivery (ED), Fossil Generation, and Nuclear. The group meets three times per year to discuss common issues and concerns, including OSHA investigations, OSHA regulation, new programs and processes, and other safety-related issues.

There is also a Union/Management Safety Committee (ED leadership). This group meets quarterly and is attended by two regional Presidents (committee sponsors), management representatives from each operating company, Union leadership (representing each local), a representative from Workforce Development, and select representatives from corporate Health and Safety (SERVECO) and Energy Delivery Safety. It addresses common issues in the regions and works to devise universal solutions (if applicable).

Corporate Health & Safety also holds a monthly safety conference call with regional safety representatives. Regional safety representatives share information and discuss recent events, lessons learned that are specific to accident investigations (i.e., root cause, methods to prevent recurrence, tracking/trending, etc.), and other common issues across the region.

There are also Regional Safety Committees in each region including one for JCP&L. The Executive Safety Committee is chaired by JCP&L's President and is attended by his direct reports, safety representatives, and Union leadership. The agenda focuses on safety issues that are specific to JCP&L. In addition, there is a Departmental Safety Committee that is chaired by the regional safety representative and attended by executive management and regional supervision.

Safety Programs

SERVECO maintains a health and safety database that is a repository of most safety-specific electronic applications, including health and safety programs, the accident/incident investigation application, the lessons learned application, and the peer review assessment application.

SERVECO also maintains the Accident Prevention Handbook (APH) database. This central repository houses all APH articles, the rationale and support documentation behind each article's question and answer application, and the education schedule.

FirstEnergy health and safety and the operating companies have implemented a series of programs and processes that are compliant with all federal, state, and local regulations. At JCP&L, a number of initiatives have been implemented to improve FE's safety performance.

The Safety Training Observation Program (STOP®) is intended to give managers and supervisors the tools they need to eliminate injuries and occupational illnesses. This goal is accomplished by observing people as they work, talking to them to reinforce their safe work practices, and addressing at-risk behaviors.

The STOP® program contributes to workplace safety in a number of ways. It:

- Helps modify behavior by observing people as they work
- Allows supervisors to talk to people to encourage safe work practices and to eliminate at-risk behaviors
- Helps reduce injuries and modify employees' behavior by reinforcing safe work practices and eliminating at-risk behaviors
- Reduces costs related to incidents and injuries
- Develops communication skills
- Raises overall safety awareness
- Increases communication throughout the organization regarding safety-related behaviors
- Sharpens observational skills
- Develops safety leadership skills
- Communicates management's commitment to safety

FE has also collaborated with Behavioral Science Technology (BST). FE began a pilot with its Met-Ed and JCP&L operating companies, assessing the safety culture at each operating company. BST offers a methodology, which is customized for each operating company based on an assessment that includes the results of surveys given to all employees and feedback from numerous focus groups.

The intent of the BST "Leading with Safety Initiative" undertaken at JCP&L is to change the safety culture. The process begins with a survey to assess the current safety culture, including 360-degree surveys for all levels of management.

At JCP&L, over 90% of the employees participated in this culture survey. This assessment work is seen as critical for understanding how employees currently view safety. The findings help focus BST and JCP&L on specific areas for improvement. The goal is to help JCP&L continue to build and sustain a healthy safety culture.

The behavioral safety program being piloted in New Jersey involves:

1. Employee engagement and field safety assessments focusing on "at risk" behaviors and employee exposures. A JCP&L management team is presently conducting these assessments and identifying exposure risks as well as providing positive feedback.
2. Collaborative accident fact-finding meetings between management and local unions to determine the root cause of an accident and to develop lessons learned for all employees.
3. Developing a JCP&L methodology to include local union representatives in the field safety assessments in 2011.

In addition, there are workshops and coaching session for general managers, managers, and supervisors. Workshop's to date have focused on the subjects of credibility and positive feedback. Senior leadership receives coaching on an on-going basis. There is also a feedback engine accessible via the internet for employees to continue contact with their BST coaches.

The Jersey Accident Reduction Initiative (JARI) was implemented at JCP&L in October 2007, when it was observed that some employees were having repeated accidents and committing repeated unsafe acts. JARI used employee accident records from January 1, 2003 to identify individual employees who would benefit from the JARI focus. It then provided those employees' supervisors with a tool for focusing extra safety attention on them.

A review of the career accident history of all personnel was conducted. From this review, individuals were selected to be enrolled in the initiative on one of two levels (tiers).

- *Tier 1* – consists of employees who have had at least one preventable OSHA recordable accident in the last year.
- *Tier 2* – consists of employees with at least one OSHA recordable accident and one or more incidents, including preventable motor vehicle collisions and minor injury in the past four years.

Employees participating in JARI attend a safety awareness training session. This class was designed to make the employee understand the importance of working accident free. It was facilitated by the JCP&L Safety Department and focused on safety behavior, family, and relationships.

These employees are also subject to increased attention from their supervisor. JARI provides information to the supervisor on which employees have historically displayed evidence of unsafe behavior (e.g., in the form of reported accidents). From this information, the supervisor will perform more frequent safety observations (using the STOP techniques discussed above) on these individuals. Furthermore, documentation in the form of the JARI Safety Observation Report is maintained for these employees. The department manager will review the JARI Safety Observation Report and a copy is then sent to the JCP&L Safety Department.

All JARI participants have completed the program and follow-up activities are handled by the local supervisors.

Data and Statistics

An incident rate is the number of recordable injuries and illnesses (as required on the OSHA 300 Log) occurring among a given number of full-time workers (usually 100) over a given period of time (usually one year). The OSHA recordable incident rate for JCP&L is shown in *Exhibit VII-7*.

Exhibit VII-7
OSHA Incident Rate
2005 to 2010

Year	OSHA Rate
2005	3.87
2006	2.77
2007	2.33
2008	2.25
2009	1.73
2010	1.74

Source: Information Response 861 and February 17, 2011 update

FirstEnergy participates in industry safety-statistics surveys conducted by the Edison Electric Institute (EEI). For the purposes of benchmarking, FE does not report JCP&L data separately to EEI. *Exhibit VII-8* provides the FE ranking for recordable incident rate compared to other utilities that have participated in the EEI survey.

Exhibit VII-8
FirstEnergy OSHA Incident Rate Compared to EEI Benchmarks
2005 to 2009

Year	FE Rate	Rank Among All Reporting Utilities	Number of Utilities Reporting	Rank Among Group 2 Utilities	Number of Utilities Reporting in Group 2
2005	2.14	7	47	2	8
2006	1.68	9	41	3	9
2007	1.46	7	49	3	10
2008	1.76	15	48	5	11
2009	1.33	9	52	3	10

Source: Information Response 561

The lost-time case rate considers only incidents in which work time was lost. It is calculated in a manner similar to the incident rate and indicates how many employees lost time per 100 employees on FE's payroll. The lost-time rate for JCP&L is shown in *Exhibit VII-9*.

Exhibit VII-9
Lost-Time Rate
2005 to 2010

Year	Lost-Time Rate
2005	0.85
2006	1.04
2007	0.41
2008	0.41
2009	0.42
2010 (full year)	0.60

Source: Information Response 909

Again, for the purposes of benchmarking, FE does not report JCP&L data separately to EEI. *Exhibit VII-10* provides the FE ranking for the lost-time rate compared to other utilities that have participated in the EEI survey.

Exhibit VII-10
FirstEnergy Lost-Time Rate Compared to EEI Benchmarks
2005 to 2009

Year	FE Rate	Rank Among All Reporting Utilities	Number of Utilities Reporting	Rank Among Group 2 Utilities	Number of Utilities Reporting in Group 2
2005	0.63	21	47	2	8
2006	0.41	11	41	4	9
2007	0.30	6	49	2	10
2008	0.38	16	48	5	11
2009	0.30	9	52	2	10

Source: Information Response 561

The DART rate refers to the total days away and restricted time cases. It too is calculated the same way as the Incident rate but only using the cases with days away and restricted duty days. The DART rate for JCP&L is shown in

Exhibit VII-11.

Exhibit VII-11
DART Rate
2005 to 2010

Year	DART Rate
2005	2.63
2006	1.87
2007	1.65
2008	1.50
2009	1.18
2010	1.43

Source: Information Response 861 and February 17, 2011 update

Again, for the purposes of benchmarking, FE does not report JCP&L data separately to EEI. *Exhibit VII-12* provides the FE ranking for the DART rate compared to other utilities that have participated in the EEI survey.

Exhibit VII-12
FirstEnergy DART Rate Compared to EEI Benchmarks
2005 to 2009

Year	FE Rate	Rank Among All Reporting Utilities	Number of Utilities Reporting	Rank Among Group 2 Utilities	Number of Utilities Reporting in Group 2
2005	1.37	17	47	3	9
2006	1.03	10	41	4	9
2007	1.05	10	49	4	10
2008	1.17	19	48	6	11
2009	0.88	15	52	3	10

Source: Information Response 561

The motor vehicle incident (MVI) rate reflects the number of incidents (crashes) involving corporate vehicles per million miles driven. The motor vehicle accident (or crash) rate for JCP&L is shown in *Exhibit VII-13*.

Exhibit VII-13
Motor Vehicle Incident Rate
2005 to 2010

Year	Motor Vehicle Crash Rate
2005	4.47
2006	6.42
2007	6.71
2008	5.91
2009	6.75
2010	5.94

Source: Information Response 861 and February 17, 2011 update

Safety Survey

A 2009 employee survey assessed employees' perceptions of JCP&L's commitment to safety. This survey is part of an initiative to change JCP&L's safety culture to prevent future injuries. In March 2010, survey results were shared with the JCP&L Leadership Team, Union officials, and employees. This survey was part of a larger process aimed at identifying opportunities to make the workplace safer. Coaching sessions with the Leadership Team, managers, and supervisors are part of the overall plan. Changes to workplace practices, such as the daily safety hotline, are evolving with input from employees.

Employee Diversity

This section provides a discussion of JCP&L employee EEO, affirmative action, and diversity activities.

Recruitment, Selection, and Promotion

SERVECO HR reported to Schumaker & Company that diversity and affirmative action is always a consideration in the consultation meeting. Job openings where females and minorities are considered to be underrepresented get special attention in the recruitment process, especially if the underutilization is particularly high. Emphasis is on assuring a diverse pool of candidates for all positions, regardless of utilization level. Like many companies, in recent years, FirstEnergy has done less external recruiting and has had fewer open positions to fill. This tendency has led to fewer opportunities to correct for underutilization.

FirstEnergy also tracks female and minority successors for director and above.

The following initiatives are being pursued to increase the number of women and minority candidates for employment at JCP&L:

- Urban League and Morristown Neighborhood House clients were invited to Power Systems Institute (PSI) orientation to encourage participation in the line-worker training program.
- JCP&L provides office space to the Urban League at 300 Madison Ave., Morristown, New Jersey.
- Engineers provide "role model" presentations to Hispanic/Latino middle school students. The volunteers' goal is to share their cultural backgrounds, educational experiences, and professional careers to which students can relate.
- JCP&L hosted visits to the Phillipsburg, NJ, PSI training facility for inner-city Newark students to expose them to jobs in its industry and to its PSI program.
- An HR representative is a member of the Workforce Investment Board for Monmouth County and sits on the Services for People with Disabilities Committee to explore opportunities to hire those with disabilities and to gain a greater understanding of disabilities in the workplace.
- An HR representative presented role model presentations to high school female students through the Urban League.
- An HR representative participated in Chamber of Commerce, Women in Business sessions.
- Employees participated in Vocational Technical High School open house sessions to showcase careers in the utility industry to male and female students.
- The Employee Volunteer Council created opportunities for employees to volunteer and collect women's business clothing for a Dress for Success organization that provides support for women who are entering the workforce.
- JCP&L provides a venue for the Hispanic Engineers Event, where Leadership Team employees present educational business sessions.
- Employees participate in annual Martin Luther King Day events.

Office of Federal Contract Compliance Programs Compliance

The Office of Federal Contract Compliance Programs (OFCCP) has not conducted any audits of JCP&L or FE in the last five years.

Data and Statistics

Workforce Composition

Exhibit VII-14 details JCP&L's workforce composition by gender and race as of September 5, 2009 based on data from the SERVECO's HRIS system.

Exhibit VII-14
Diversity Composition of JCP&L Employees by EEO Category
as of September 5, 2009

Number of Employees

		Male			Female		
Job Categories	Overall Totals	White	Black or African American	Other Minorities	White	Black or African American	Other Minorities
Executive/Senior Officials and Managers	4	4	0	0	0	0	0
First/Mid-level Officials & Managers	173	110	12	11	30	3	7
Technicians	95	46	6	12	24	5	2
Professionals	160	89	9	16	39	6	1
Sales Workers	0	0	0	0	0	0	0
Administrative Support Workers	305	118	16	5	122	33	11
Craft Workers	631	536	38	37	14	5	1
Operatives	79	59	12	4	3	0	1
Laborers and Helpers	1	0	1	0	0	0	0
Service Workers	6	3	1	0	1	1	0
Total	**1,454**	**965**	**95**	**85**	**233**	**53**	**23**

Percentage of Employees

		Male			Female		
Job Categories	Overall Totals	White	Black or African American	Other Minorities	White	Black or African American	Other Minorities
Executive/Senior Officials and Managers	0.3%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
First/Mid-level Officials & Managers	11.9%	63.6%	6.9%	6.4%	17.3%	1.7%	4.0%
Technicians	6.5%	48.4%	6.3%	12.6%	25.3%	5.3%	2.1%
Professionals	11.0%	55.6%	5.6%	10.0%	24.4%	3.8%	0.6%
Sales Workers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administrative Support Workers	21.0%	38.7%	5.2%	1.6%	40.0%	10.8%	3.6%
Craft Workers	43.4%	84.9%	6.0%	5.9%	2.2%	0.8%	0.2%
Operatives	5.4%	74.7%	15.2%	5.1%	3.8%	0.0%	1.3%
Laborers and Helpers	0.1%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Service Workers	0.4%	50.0%	16.7%	0.0%	16.7%	16.7%	0.0%
Total	**100.0%**	**66.4%**	**6.5%**	**5.8%**	**16.0%**	**3.6%**	**1.6%**

Source: Information Response 860

The data for *Exhibit VII-14* was extracted from FE's human resources information system software, SAP, for the corresponding payroll period, August 23–September 5, 2009. This Excel file, which was submitted to Schumaker & Company, however, does not exactly match the JCP&L EEO-1 reports that

were completed on the Equal Employment Opportunity Commission (EEOC) website and submitted in PDF format as part of Schumaker & Company's data request. The Excel file used to create *Exhibit VII-14* provides a picture of employee data at a point in time and may not reflect the employee changes made daily. FE does not report EEO-1 data for JCP&L as a whole (and is not required to do so). For each JCP&L location, it issues an individual report (as required). SERVECO cannot replicate the EEO-1 reports in an Excel file. The EEO files are compiled using a text file, extracted from SAP, in accordance with EEOC guidelines. The text files are written in code that cannot be translated into Excel in any legible or translatable format. Nonetheless, the exhibits provide a sufficiently reliable summary of JCP&L's workforce.

Workforce Utilization

In 2009, JCP&L had two job categories where minorities were underutilized and seven where women were underutilized. The information in *Exhibit VII-15* summarizes JCP&L's minority and female employment and workforce availability data from its 2009 affirmative action plan. The exhibit indicates the categories in which minorities and females are underutilized based on workforce availability data from the appropriate recruitment area.

Exhibit VII-15
Workforce Utilization
as of July 1, 2009

		Minority				
Job Categories	Overall Totals	JCP&L Number	JCP&L Percent	Goal Number	Goal Percent	Underutilized?
Managers	46	8	17.39	7.25	15.77	No
Supervisors	120	22	18.33	19.38	16.15	No
Sr. Professional - Engineering	28	5	17.86	7.18	25.65	**Yes**
Professional - Engineering	15	11	73.33	3.34	22.27	No
Sr. Professional - Business	32	4	12.50	5.69	17.79	**Yes**
Professional - Business	12	4	33.33	2.28	19.08	No
Sr. Technician - Engineering	80	14	17.50	13.59	17.00	No
Technician - Engineering	9	1	11.11	1.18	13.19	No
Sr. Technician - Other	62	16	25.81	13.34	21.52	No
Technician - Other	11	2	18.18	1.96	17.86	No
Sr. Clerical	127	43	33.86	32.98	25.97	No
Clerical	3	0	0.00	0.33	11.26	No
Meter Readers	184	22	11.96	31.52	17.14	No
Sr. Craft	523	67	12.81	66.42	12.70	No
Entry Craft	110	13	11.82	16.36	14.88	No
Operatives	76	17	22.37	11.71	15.42	No
Laborers	1	1	100.00	0.00	0.00	No
Service Workers -Other	7	3	42.86	1.99	28.47	No
Total	**1,446**	**253**	**0.17**	**236.50**	**0.16**	

		Female				
Job Categories	Overall Totals	JCP&L Number	JCP&L Percent	Goal Number	Goal Percent	Underutilized?
Managers	46	9	19.57	10.91	23.73	**Yes**
Supervisors	120	30	25.00	21.46	17.89	No
Sr. Professional - Engineering	28	2	7.14	2.87	10.27	No
Professional - Engineering	15	2	13.30	1.23	8.27	No
Sr. Professional - Business	32	13	40.63	16.85	52.66	**Yes**
Professional - Business	12	10	83.33	7.25	60.49	No
Sr. Technician - Engineering	80	25	31.25	22.83	28.55	No
Technician - Engineering	9	5	55.56	2.61	29.09	No
Sr. Technician - Other	62	12	19.35	22.69	36.60	**Yes**
Technician - Other	11	2	18.18	5.55	50.49	**Yes**
Sr. Clerical	127	119	93.70	106.10	83.55	No
Clerical	3	2	66.67	1.92	64.27	No
Meter Readers	184	46	25.00	101.18	54.99	**Yes**
Sr. Craft	523	7	1.34	23.85	4.56	**Yes**
Entry Craft	110	12	10.91	11.69	10.63	No
Operatives	76	4	5.26	13.10	17.25	**Yes**
Laborers	1	0	0.00	0.00	0.00	No
Service Workers -Other	7	2	28.57	1.50	28.47	No
Total	**1,446**	**302**	**0.21**	**373.59**	**0.26**	

Source: Information Response 401

Affirmative Action Performance

Exhibit VII-16 provides a summary of minority and female employment and the areas of underutilization at JCP&L for the years 2005 to 2009.

Exhibit VII-16
Female and Minority Representation
2005 to 2009

Year	Total Number of Employees	Number of Female Employees	Percentage of Female Employees	Number of Job Categories Underutilized for Females	Number of Minority Employees	Percentage of Minority Employees	Number of Job Categories Underutilized for Minorities
2005	1,378	230	16.69%	N/A	216	15.67%	N/A
2006	1,412	285	20.18%	3	229	16.22%	1
2006	1,419	295	20.79%	5	251	17.69%	2
2008	1,447	308	21.29%	5	256	17.69%	3
2009	1,446	302	20.89%	7	252	17.43%	2

Source: Information Response 401

Employment Complaints

Any JCP&L employee who believes that he or she has experienced or witnessed harassment as defined in FE's discriminatory or sexual harassment policies is instructed to report the situation as soon as possible, but within 180 days of the incident, to any of the following employees as determined by the individual to be appropriate: the individual's immediate supervisor; a higher-level supervisor in the individual's section or department; the local human resources representative; or the Manager, Benefits & Compliance in the Human Resources Department. FirstEnergy will conduct a thorough investigation of the situation in accordance with its internal discrimination complaint procedure.[1]

For complaints of discrimination other than harassment, employees are encouraged to first discuss the issue with their immediate supervisor. If the employee does not believe that the matter can be freely discussed with the immediate supervisor, or the issue remains unresolved, he or she may proceed to the complaint procedure. To initiate the complaint procedure, the employee completes a complaint form, which is available from the local human resources representative, the HR Intranet site, or the compliance area of Human Resources. The completed complaint form is to be returned to the local human resources representative or the Manager, Benefits & Compliance as soon as possible, but within 180 days of the incident.

A human resources representative will conduct a fact-finding investigation of the allegations made. If inappropriate behavior has occurred, Human Resources and functional management will determine

[1] Employees also have a legal right to file a complaint with the State of New Jersey or Federal EEOC without participating in JCP&L's employment complaint process.

what steps will be taken to address the conduct. The individual filing the complaint will be informed of the determination made, generally within 30 days of receipt. Complaints that are particularly complex, however, may take longer.

Employees whose issues are not resolved through the internal complaint process may file complaints with a number of Sate of New Jersey agencies or the Federal Equal Employment Opportunity Commission. They may also seek remediation through the courts. *Exhibit VII-17* details all formal complaints filed with external authorities by JCP&L from 2005 through 2010.

Exhibit VII-17
External Employment Complaints and Court Filings
2005 to 2009

2009		
Agency/Court	**Nature of Claims**	**Status/Disposition**
EEOC	Disability complaint	Pending
New Jersey Dept. of Labor (DOL)	Retaliation complaint	Pending
EEOC	Sex/Disability complaint	EEOC dismissal and issuance of right-to-sue letter[2]
2008		
Agency/Court	**Nature of Claims**	**Status/Disposition**
EEOC	Race/Disability complaint	EEOC dismissal and issuance of right-to-sue letter
2007		
Agency/Court	**Nature of Claims**	**Status/Disposition**
EEOC	Disability complaint	Complaint withdrawn
EEOC	Sex complaint	EEOC dismissal and issuance of right-to-sue letter
2006		
Agency/Court	**Nature of Claims**	**Status/Disposition**
EEOC	Sex/Age complaint	No reasonable cause
Superior Court of NJ	Disability/Race complaint	Pending as to disability; dismissed on summary judgment as to race
2005		
Agency/Court	**Nature of Claims**	**Status/Disposition**
NJ Division on Civil Rights (DCR)	Disability complaint	Complaint withdrawn
EEOC	Sex/Retaliation complaint	No violation

Source: Information Response 411

[2] The EEOC will issue a right-to-sue letter even if it finds there is no reasonable cause to believe that the charge is true. The EEOC may dismiss a charge and issue a right-to-sue letter in any of the following situations:

- The EEOC determines it does not have jurisdiction over the charge, 29 C.F.R. § 1601.18(a)(2003).
- The EEOC closes the file where the charging party does not cooperate or cannot be located, 29 C.F.R. § 1601.18(b), (c)(2003).
- The charging party requests a right-to-sue letter before the EEOC completes its investigation. (If less than 180 days after filing of charge, EEOC must determine that the investigation cannot be completed within 180 days.)
- The EEOC determines there is no reasonable cause, 29 C.F.R. 1601.19(a)(2003).
- The EEOC has found reasonable cause, conciliation has failed, and the EEOC (or the Department of Justice for governmental respondents) has decided not to litigate.

Findings & Conclusions

Finding VII-10 SERVECO and JCP&L's HR roles are appropriately defined and serve the needs to JCP&L.

A key area of concern for Schumaker & Company is the degree to which operating companies in affiliate relationships have appropriate HR resources to support the specific needs of the operating company. In some case, we have seen all Human Resources being provided through corporate shared services that leave the operating companies with insufficient support.

JCP&L's HR function appears to benefit from the resources provided by the larger SERVECO HR organization. There appears to be an appropriate focus on policy, governance, and major programs at the SERVECO level that produces standardization and efficiencies across FE.

At the same time, in New Jersey, the JCP&L HR organization appears to be appropriately staffed to deliver services to JCP&L. Managers in New Jersey appear to receive effective support from HR and have direct access to local HR resources.

Finding VII-11 JCP&L has a highly effective workforce planning process for replacing workers in key job categories.

In 2008, FE developed a workforce analytics (WFA) tool based on a business intelligence solution provided by Cognos. This tool enables FE to track and forecast workforce attrition. Workforce planners in corporate Energy Delivery and throughout FirstEnergy have access to the WFA to monitor and analyze actual attrition by year, business unit, job group, location, etc. WFA pulls active employee and attrition data from the SAP business warehouse. Attrition data is available by retirement, voluntary attrition, and involuntary attrition.

Retirement probabilities are based on data supplied by Hewitt. These probabilities are provided by age, length of service, gender, and bargaining unit. FE's 2002–2006 actual attrition data is used as the current base. Early-out programs in the last couple of years have required the use of older data.

Workforce planners also use WFA data as a base reference to forecast future years' attrition by business unit and job group. The WFA attrition forecasts are based on probabilities (i.e., risk) of employees leaving FE. These probabilities are calculated using five years of FE actual attrition and are broken out by age, gender, and bargaining vs. non-bargaining-unit employees. The WFA applies the probabilities to FE's active workforce and generates future attrition forecasts. Business units reference the forecast data and then apply human intelligence to finalize their attrition forecasts. Attrition forecasts are used by SERVECO Human Resources to anticipate and prepare for future talent gaps, to recruit by job groups, and to conduct both on-boarding and succession planning.

In 2009, FE focused on standardizing and driving consistency throughout the workforce planning process and on enhancing the integration with the business services' headcount budgeting process.

Throughout 2010, SERVECO HR has planned and implemented the Workforce Planning Enhancement project to identify and respond to critical business-unit needs and to implement IT solutions for more effective and efficient analysis and forecasting. Major enhancements include:

- Enabling workforce planners more efficient access to active employee demographics and internal transfer data via ad hoc queries of the SAP business warehouse (BW)
- Implementing SAP's business planning and consolidation (BPC) for business units to enter annual staffing plans with attrition and to hire forecasts by month and job group. BPC enables automated reports reflecting the impact on headcounts and payroll cost, comparison to budget forecasts in order to evaluate consistency, and automated daily upload into the WFA.

Finding VII-12 JCP&L workforce planning does not sufficiently address changes in work and workforce requirements in the future.

SERVECO's staffing strategy process includes an important job analysis component. The job analysis provides an overview of the common activities associated with a given job group and provides direction if the job description needs updating with new knowledge and skill requirements.

Schumaker & Company appreciates the effort to keep the knowledge and skill requirements for critical job groups current. Given the rapidly changing nature of technology, this is an important and often lacking element of workforce planning. That said, we find FE's workforce planning to remain largely oriented toward workforce replacement rather than strategic workforce management.

The focus on retention and workforce replenishment suggests that the workforce of the future will be much the same as the current workforce. Additional consideration could be given to changing needs of the organization, the rapid and disruptive nature of technological change, and the resulting need for redesigned jobs.

Finding VII-13 JCP&L's employee and executive compensation is within acceptable market ranges.

As discussed extensively above, FE's pay philosophy is to target pay at the 50th percentile in its utility peer group. The pay range is 80% to 120% of the standard rate. FirstEnergy is committed to pay for performance. High-performing employees can achieve 120% of market. On average, FE is paying about 100% of the 50th percentile of market. New hires keep the average close to this figure.

FE benchmarks standard rates (base pay), short-term incentive targets, long-term incentive targets, and total compensation at the utility industry's median (50th percentile). The standard rate structure, short-term incentive targets, and long-term incentive targets are benchmarked annually to ensure competitiveness with FE's peer group and alignment with FE's compensation philosophy. In addition, FirstEnergy uses market pricing for all non-bargaining jobs.

The above pay strategy and statements regarding actual pay levels suggest FE maintains a competitive pay structure that is consistent with industry standards.

Finding VII-14 JCP&L's employee benefits are comparable to benchmark utilities.

As discussed above, SERVECO benchmarks benefits to general industry via Hewitt Benefits Consulting. In addition, SERVECO participates in numerous benefits surveys throughout the year and keeps up to date on benefit trends and regulations on a regular basis.

FirstEnergy aims to offer a competitive benefits package. At the same time, it has implemented a number of cost-control initiatives, including plan design changes and employee cost sharing. FE is self-insured on health care (so costs have direct impact) and is working on efforts to control usage. FE implemented a higher cost for spouses with access to subsidized coverage elsewhere (working 32 hours and have health insurance available). To be covered by an FE plan, these spouses now pay $200 per month. FirstEnergy has also made a commitment to wellness education and prevention and is providing education and promotions, preventative screenings, and vaccinations.

Finding VII-15 JCP&L's safety performance is below that of FE as a whole.

Exhibit VII-8, *Exhibit VII-10*, and *Exhibit VII-12* suggest that FE's safety performance consistently ranks in the top half and often in the top quartile of utilities reporting in the EEI safety survey. These exhibits suggest that FE's safety performance has improved during the five-year period. At the same time, *Exhibit VII-7*, *Exhibit VII-9*, and

Exhibit VII-11 suggest that JCP&L's safety performance has improved as well. Nonetheless, it should be noted that JCP&L's safety performance consistently lags behind that of FE as a whole. *Exhibit VII-18* compares JCP&L's and FE's safety statistics for the years 2005 to 2009.

Exhibit VII-18
JCP&L Safety Statistics Compared to FE
2005 to 2009

	2005		2006		2007		2008		2009	
	FE	JCP&L	FE	JCP&L	FE	JCP&L	FE	JCP&L	FE	JCP&L
Incident Rate	2.14	3.87	1.68	2.77	1.46	2.33	1.76	2.25	1.33	1.73
Lost-Time Rate	0.63	0.85	0.41	1.04	0.30	0.41	0.38	0.41	0.30	0.42
DART Rate	1.37	2.63	1.03	1.87	1.05	1.65	1.17	1.50	0.88	1.18

Source: Information Response 561, 861, and 909

Finding VII-16 JCP&L had an employee fatality in 2009.

On August 11, 2009, an employee climbed on an energized breaker mistakenly thinking it was the de-energized breaker in which he was working. The employee suffered a fatal arc flash. The company

reports that the de-energized box was properly marked and barricaded. The reason for employee's mistake is unknown.

On January 8, 2010, OSHA issued a three part citation against JCP&L. Each of the items in the citation were classified as "serious." JCP&L contested the citation.

JCP&L and OSHA reached a tentative settlement relating to this event. Two of the original three citations were withdrawn and the third was reclassified as an "unclassified" violation with a total proposed penalty of $5,000. The tentative settlement also provides that none of the actions by JCP&L is an admission of wrongdoing or an admission that the conditions described in the remaining citation were the cause of any accident, incident, or injury.

The "unclassified" violation reiterates the facts of the incident stating that an employee was fatally injured when he came in contact with energized parts. The citation notes that the law requires an employer to ensure that employees do not approach or take conductive objects close to energized parts.

The final order of the administrative law judge was issued on January 6, 2011. The judge affirmed the settlement agreement. The judge agreed that JCP&L had abated all conditions in the citation, had conducted additional employee training and will continue to comply with the Occupational Safety and Health Act.

As a result of FirstEnergy's and OSHA's investigations, JCP&L has implemented three actions in an effort to prevent future recurrences.

1. An incident command system (ICS) within the substation organization was instituted. Bill Stevenson of the JCP&L Safety Department developed the ICS process and reviewed it with all management employees, who in turn reviewed it with all their staff members. The ICS is a standardized, on-scene, all-hazards incident management system that has applicability for managing any safety-compromising event. ICS is flexible and can be used for incidents of any type, scope, and complexity. It also identifies the single person in charge.
2. The demarcation or barrier system was reviewed with all substation employees. The instructional program explained the process of installing a barrier system, when to install it, and how to complete the installation. In addition, a checklist was provided to each substation employee to assist him or her in completing the task
3. A job-briefing refresher/training class was conducted with substation employees, which included reviews of the documentation forms. Leaders receive feedback, both positive and negative, as to how well their job briefings are conducted.

Finding VII-17 In most job categories, JCP&L's workforce composition reflects the diversity of the New Jersey labor pool.

As shown in *Exhibit VII-15*, JCP&L's workforce is underutilized in two job categories for minorities and seven for women. For minorities, JCP&L's most significant underutilization is in Senior Professionals – Engineering. For women, the underutilization is broader and is most notable in technical job categories.

As noted above, limited hiring over the last few years has limited the opportunities to address these areas of underutilization. Also, *Exhibit VII-16* suggests that the number of job categories experiencing underutilization has remained relatively stable (down one for minorities, up two for women). During periods of downsizing and limited hiring, it is often the lower-seniority employees who leave. This may include women and minorities hired to address underutilization. As such, the relatively low underutilization in difficult economic times suggests an acceptable level of performance by JCP&L.

Finding VII-18 JCP&L has implemented an effective program for attracting and training young people for linemen and substation positions.

FirstEnergy's Power Systems Institute partnerships exist with two colleges in the state of New Jersey: Brookdale Community College and Raritan Valley Community College. Students completing the PSI program earn an Associate of Applied Science degree in Electric Utility Technology. Two programs are available: line worker and substation electrician. The intention of the program is to prepare individuals for a career as a line worker or substation electrician in the electric utility industry.

The program is twenty-one months in duration (four semesters). Students are enrolled full-time, five days a week. A lockstep concept is used to ensure that each student completes the program within the approximately two-year period. Students attend academic classes at the college two and a half days a week. The college curriculum includes both general and technical courses. The remaining two and a half days are spent in hands-on skills training, conducted by FE instructors. The FE training has been awarded credit hours and is, therefore, a requirement of the degree. Following the second semester, students are required to participate in a 10-week credited and compensated summer field experience.

A student must be accepted into the PSI program by FE. This acceptance is accomplished through a selection process that includes technical evaluation, college placement testing, background check, physical abilities testing, ability to obtain a Department of Transportation Medical Examiner's certificate (as part of the CDL requirements), and successful completion and placement at climbing school.

FE pays the cost of tuition, textbooks, college fees, and flame-retardant clothing for all students enrolled in the program. Students must maintain a minimum 2.5 grade point average (GPA) and a C average in the FE training classes in order to receive this financial coverage. The student signs an agreement, with the understanding that he or she will accept a job offer (if one is made) and will remain with the JCP&L organization in his or her chosen profession for a three-year time period.

The information presented in *Exhibit VII-19* identifies the number of graduates and hires from a diversity perspective for the past five years (2006–2010).

Exhibit VII-19
Minority and Female Results for PSI
2006 to 2010

	2006		2007		2008		2009		2010	
	Min.	Fem.	Min.	Fem.	Min.	Fem.	Min.	Fem.	Min.	Fem.
Graduates	1	0	4	1	4	0	6	0	7	0
Hires	0	0	4	1	3	0	4	0	4	0
Summer Program	4	1	4	0	6	0	8	0	5	0

Source: Information Response 799

The summer field experience, which is not a separate initiative, takes place midway through the program and is completed by all qualifying freshmen as part of the degree requirements. Following the second semester, students are required to participate in a 10-week credited and compensated summer field experience. Thus, the number of summer students in one year will be reflected in the number of graduates in the following year.

Finding VII-19 JCP&L appears to place appropriate emphasis on hiring and promoting minorities, but it could do more to attract women.

When hiring and promotion opportunities exist, JCP&L will place an emphasis on women and minorities in job categories where these groups are underrepresented. Consideration is given to these issues in consultation meeting between HR representatives and hiring managers. In addition, FE has started partnering with diverse professional organizations to help ensure a diverse candidate pool.

At JCP&L, special emphasis has been placed on attracting qualified minority engineers through a number of outreach initiatives. In addition, the PSI program is designed to bring women and minorities into noted important craft/technical jobs.

Unfortunately, as *Exhibit VII-16* suggests, attaching females continues to be a challenge. Women are underrepresented in managerial and technical positions. As also noted in *Exhibit VII-16*, the difference between employment levels of women and placement goals is relatively significant in a number of categories. For example, in the technician job category, the placement goal is 50.49% while the actual employment level of women is 18.1%. (Although in fairness, it should be recognized that the category contains only 11 positions, making for relatively few hiring opportunities.)

Also, as noted in *Exhibit VII-19*, no women have participated in the otherwise excellent PSI program for three years.

Finding VII-20 JCP&L's affirmative action plan provides only a limited narrative describing JCP&L's actions and plans for hiring and promoting women and minorities.

JCP&L has submitted to Schumaker & Company affirmative action plans for 2005, 2006, 2007, 2008, and 2009 that appear to fully meet OFCCP requirements. Nonetheless, these affirmative action plans fail to provide depth in understanding JCP&L's efforts to attract, hire, train, and promote women and minorities.

Schumaker & Company requested a description of all efforts related to increasing the pool of qualified women and minority candidates. JCP&L responded with a list of places to which it faxes job openings and a list of diversity-related organizations and agencies it works with. This response is similar to but not the same as the lists of similar activities in the affirmative action plan.

Schumaker & Company again asked for a list of sources used for identifying diverse candidates for job pools. JCP&L's response to this request was a list, by year, of action-oriented programs to support diversity in hiring and promotion. This list differed from the prior list and the affirmative action plan.

In our interview with the JCP&L HR manager, we learned of additional efforts to support diversity at JCP&L. This time, Schumaker & Company asked for a summary of initiatives, such as the Hispanic Engineers' Conference and the relationship with the Urban League, that are being used to increase the number of women and minority candidates for employment at JCP&L. JCP&L's response to this request was a more in-depth list of its involvement in groups that help promote careers at JCP&L to women and minorities. Again, this list differed from the prior list and the affirmative action plan.

In addition, it is difficult to ascertain from the affirmative action plans what the hiring goals were for a given year and specific goal attainment. Schumaker & Company made a separate request for hiring and promotion data for women and minorities that shows the number of opportunities and women and minority placement. This data is presented by EEOC job categories (as requested) but not by the job categories used in the affirmative action plan. Thus, it is not directly relatable to affirmative action plan goals. In addition, it is not clear how many promotion and hiring opportunities existed. Knowing the number of opportunities is essential for understanding the actual level of performance in this area.

Finally, the affirmative action plan makes only a brief reference to the PSI program (described in *Finding VII-18*). This program was described to Schumaker & Company as an important strategy for filling key high-skilled jobs (linemen and substations). Emphasis is placed on recruiting women and minorities to this program and placing them in these high-paying jobs that are not traditionally held by minorities or especially women.

The totality of information presented by JCP&L suggests there is significant activity related to promoting and hiring women and minorities. Unfortunately, such activity is not addressed comprehensively in the affirmative action plan narrative or anywhere else for that matter.

Finding VII-21 The number of Union grievances increased significantly in 2008 and 2009.

JCP&L experienced a significant increase in Union grievances in 2008 and 2009. In most cases, these were related to overtime concerns. *Exhibit VII-20* details the total number of grievances and the number of overtime grievances for the years 2005–2009.

Exhibit VII-20
IBEW SCU-3 Grievances
2005 to 2009

Year	Overtime-Related Grievances	All Other Grievances	Total
2005	62	101	163
2006	94	167	261
2007	85	76	161
2008	156	106	262
2009	269	110	379

Source: Information Response 62

Grievances filed by the International Brotherhood of Electrical Workers (IBEW), System Council U-3 (SCU-3) increased 38% in 2008 and another 31% in 2009. A two-year increase of 58% in the grievance rate indicates a possible deterioration of management/Union relations.

JCP&L reports that the grievance spike is related to the express service technician position. JCP&L wishes to assign qualified employees to this work assignment on straight time, while the Union argues that only employees classified as express service technicians can be assigned this work.

Although the significant increase in grievances is a cause for concern, it is narrowly focused and does not appear to be indicative of an overall worsening of management/Union relations. JCP&L reports that it had been working to resolve the issues, and as of September 30, 2010, the Union had filed only 40 grievances with just 12 related to overtime.

Finding VII-22 JCP&L is improving labor relations.

Despite the increase in grievances, both the IBEW SCU-3 President and the JCP&L labor relations representative reported an improving relationship between the Union and JCP&L. The settlement of longstanding issues and litigation related to JCP&L's call-out procedures is also seen as contributing to improved relations between the Union and JCP&L. System Council U-3 (Union) filed a grievance challenging JCP&L's 2002 call-out procedure that required bargaining-unit employees to respond to emergency power outages. On May 20, 2004, an arbitration panel found that the call-out procedure violated the parties' collective bargaining agreement. At the conclusion of the June 1, 2005 hearing, the

arbitrator decided to hear no testimony on damages and closed the proceedings. On September 9, 2005, the arbitrator issued his opinion and awarded approximately $16 million to the Union. JCP&L appealed this award by filing a complaint in federal court in New Jersey, which initiated the process to vacate the award.

On February 6, 2006, the federal court granted the Union's motion and dismissed JCP&L's appeal, making clear, however, that JCP&L's appeal may be refiled once the damages award has been more formalized. The parties met multiple times and finalized the damages amounts with Arbitrator Restaino providing final rulings on damages at a September 7, 2007 hearing. Arbitrator Restaino issued a final order identifying individual damages amounts on October 31, 2007. The award appeal process was initiated. The Union filed a motion with the federal court to confirm the award and JCP&L filed its answer and counterclaim to vacate the award on December 31, 2007. On February 25, 2009, the federal district court denied JCP&L's motion to vacate the Restaino arbitration decision and granted the Union's motion to confirm the award. JCP&L filed a notice of appeal to the Third Circuit and a motion to stay enforcement of the judgment on March 6, 2009. The parties participated in the federal court's mediation program and private settlement discussions were held.

The parties reached a tentative agreement on a global settlement package, which included an agreed-upon settlement payment and an extension of the collective bargaining agreement (CBA). The U.S. District Court approved and implemented the parties' global settlement and the proceeds were distributed.

JCP&L and the Union have signed a three-year contract extension effective July 25, 2010. This contract extension was approved as part of the settlement agreement. In addition, it is seen as having been achieved within the context of improved relations.

FE has also included a new labor relations module in its supervisor training program that is designed to strengthen knowledge of the collective bargaining agreement and the roles and responsibilities of supervisors related to effective labor relations.

Recommendations

Recommendation VII-9 Continue to strengthen employee safety programs. (Refer to Finding VII-15 and Finding VII-16)

JCP&L has implemented a number of significant safety initiatives (as discussed above). These initiatives reflect a serious commitment to employee safety. Nonetheless, it is imperative that JCP&L continue this commitment, even as the memory of the employee fatality fades. Complacency is the most serious threat to employee safety.

Safety is a corporate goal for JCP&L. Its targets are for an OSHA incident rate of less than 38 OSHA recordable incidents and less than 33 OSHA recordable motor vehicle incidents for 2010. Safety is also a major component of the incentive compensation pay for all JCP&L employees.

Schumaker & Company encourages the ongoing evaluation of safety efforts and continued commitment and strengthening of these efforts. While the goals for 2010 reflect improvement, we believe JCP&L should strive to be the best performing unit of FE. In addition, we recommend that JCP&L's safety performance be benchmarked against comparable utilities independent of FE. These numbers should be reported to all employees in the form of a safety scorecard with the annual safety statistics that are reported for bonus pay-out calculations.

Recommendation VII-10 Develop a strategic workforce plan. (Refer to Finding VII-11 and Finding VII-12)

The workforce planning process at FE is by far the most sophisticated that Schumaker & Company has seen, and it is not a stretch to describe as a best practice. In addition, the job analysis work described in *Finding VII-12* also appears effective.

There is an opportunity to integrate these two initiatives or perhaps do workforce-of-the-future forecasting that can be integrated into the workforce planning process. Schumaker & Company believes that jobs will change significantly in coming years (as discussed in *Finding VII-12*) and that preparing for this potentiality is an important enhancement to FE's highly effective workforce planning process.

Recommendation VII-11 Strengthen efforts to attract women to managerial and technical jobs. (Refer to Finding VII-17, Finding VII-18, and Finding VII-19)

As discussed, women are underutilized in seven job categories and the level of employment is significantly lower than the placement goal for most of the categories. More can and should be done to attach women to management and technical positions. These efforts should be specifically described in the affirmative action plan.

Recommendation VII-12 Strengthen the narrative in the affirmative action plan describing JCP&L's actions and plans for hiring and promoting women and minorities. (Refer to Finding VII-20)

The trend these days is to outsource the preparation of the affirmative action plan and to use largely generic content in its narrative portion. Schumaker & Company would like to see a plan that more fully describes JCP&L's intent and specific activities related to increasing opportunities for women and minorities. This recommendation is especially true when the varying responses to our inquires regarding JCP&L's effort in this area are noted, as described in *Finding VII-20*.

E. Strategic Planning

This section presents the strategic planning processes for FirstEnergy (FE) and Jersey Central Power & Light (JCP&L).

Background & Perspective

FirstEnergy Utilities (FEU) does its long-range planning through a three-year business plan. The Executive Leadership Team (ELT) is the governing body that sets policies, provides oversight to FE Utilities, and maintains responsibility for the development of the business plan. Members of this team include the Senior Vice President & President, FE Utilities and all of his direct report vice presidents, including all regional presidents and utility company presidents (JCP&L among them).

The business plan starts with a defined vision and mission as follows: FE Utilities' vision is to be "an industry-leading performer committed to safety, customer satisfaction, reliability, and financial performance; driven by leadership, skills, diversity, and character of its employees." FE Utilities' stated mission is to provide "safe and reliable electric service at a reasonable cost by optimizing the resources, skills, and diversity of our work force." Defined focus areas include those mentioned in FEU's vision statement as well as regulatory compliance (federal and state). Each focus area has sub-tending objective statements.

Multiple quantitative performance metrics are then defined for each focus/objective area except for regulatory compliance. These metrics include three years of actual performance and three years of looking forward at target performance. Each focus area also has defined fundamental strategies and risks to meet performance metrics, with additional fundamental strategies identified for cross-focus impact areas (Work Management Initiative and Employees). Emerging strategies and risks that will impact FE Utilities over the three-year planning period are also defined. Finally, key events that will drive the business plan are identified on a quarterly schedule.

Key planning assumptions are defined by year for the next three years. The basic elements of this plan haven't changed significantly over the past five years although goals, strategies, and targets get refined each year. Metrics for each utility company are determined in ELT meetings based on historical performance and corporate positions on what can be accomplished going forward.

Capital monies are also planned and tracked via an annual Capital Portfolio Planning (CPP) process that incorporates items set out in the business plan. Capital planning is integrated to the business plan via an FEU Capital Portfolio Development calendar. Events on this calendar include an annual Executive Council summer strategy retreat (early summer) and a FE Board of Directors' strategy meeting in the fall, prior to approving the business plans in December.

The Board of Directors' annual strategic planning retreats are conducted offsite over a three-day period. The first portion of these retreats involves senior management making presentations on what they deem

as important issues facing the corporation going forward. The remainder of the time is spent in private director discussions on a wide range of topics (including what-if analysis) related to FirstEnergy's strategic direction. These meetings are highly confidential. Agendas are produced ahead of time, but no meeting minutes are maintained. The results of these meetings are communicated to senior management for inclusion in business planning and budgeting.

JCP&L does not have a sub-tending business plan to the FE three-year business plan, but business plan metrics are broken down by operating utility with targets going out for the next three years. These targets include safety, reliability, operational, and customer service metrics. Five-year historical actual figures are also maintained by utility company.

Although JCP&L, like other utility and service companies, has numerous metrics to gauge performance in support of the three-year business plan, these metrics are not broken down below the company level (e.g., by departments) nor are they directly related to performance pay. FE has developed an incentive compensation plan that rewards the overall performance of FirstEnergy. The specifics of this plan vary slightly between utility companies and service companies. In the case of JCP&L, however, targets and stretch targets are set for broad-based financial targets (apply to all FE employees); safety, reliability, and financial targets (apply to all business unit employees); and specific safety, reliability, and operational targets (specific to JCP&L employees).

The primary means of tracking operations and performance in JCP&L is through monthly Operational Performance Reports (OPR) and monthly OPR meetings between the President of JCP&L and his direct reports. JCP&L's President uses these reports as the basis of reporting up through the ELT. These reports are detailed and lengthy and include summaries of all JCP&L responsible metrics (23 metrics in the areas of safety operations, reliability/operations, customer satisfaction, financial performance, and employee workforce). Summaries include current and previous status (color-coded from excellent performance down to performance improvement needed) and values. Each is followed by details for each metric on monthly actual to target, definitions of ranking criteria (color codes), monthly analysis of results, a Gap Closure Plan, and any other related information.

Findings & Conclusions

Finding VII-23 FE/JCP&L has a robust, substantive strategic planning process.

FirstEnergy's strategic direction is documented in a three-year business plan that is reviewed and updated annually. This plan includes a mission and vision statement as well as supporting objectives and strategies. Specific performance targets are also defined and quantified as appropriate.

Senior management is closely involved in the process at levels all the way down through the operating companies. The Board of Directors annually takes a three-day offsite retreat to specifically address the strategic direction of FirstEnergy and its companies. An Executive Leadership Team committee, consisting of senior management, meets periodically to develop planning guidelines and performance

measures, to review progress to plan, and to develop corrective actions. The ELT is involved in providing feedback to the Board of Directors through regular Board meetings and the Board retreat.

Incentive compensation plans are established for managers and employees that are largely based on overall corporate performance to strategic plan. (Some incentives are based on business unit targets.) FirstEnergy has stated a preference for motivating employees to work together for FE's overall good as opposed to sub-optimizing performance incentives. This incentive structure is appropriate given FE's corporate philosophy.

Operating utilities, including JCP&L, are integrated into the planning process. The President of JCP&L serves on the ELT and provides input to the three-year business plan. JCP&L has specific performance metrics it must achieve in support of the three-year business plan. These metrics are tracked and reviewed monthly in a structured and detailed report, which is reviewed between JCP&L's President and his managers as well as being part of ELT meetings.

Recommendations

None

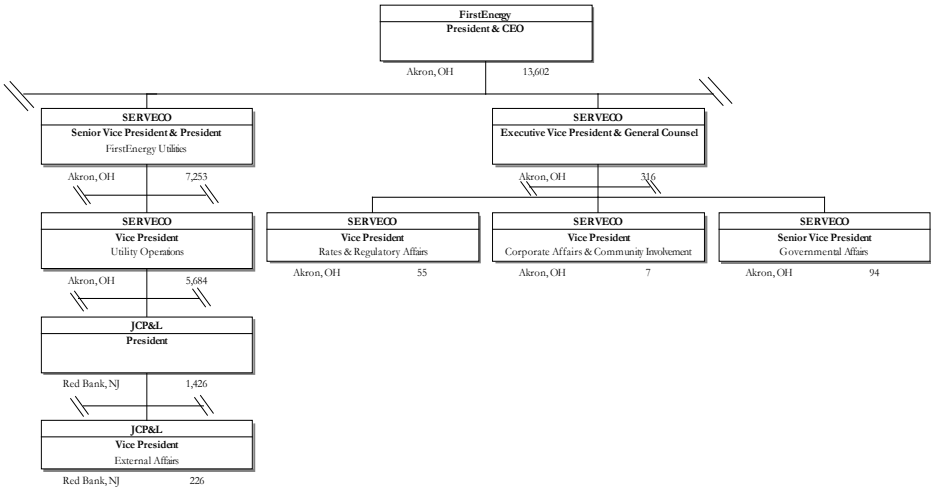
F. External Relations

This section addresses FirstEnergy's (FE) and Jersey Central Power & Light Company's (JCP&L) external relations activities for the public and regulatory areas.

Background & Perspective

The organization of FE/JCP&L's external relations function is shown in *Exhibit VII-21*.

Exhibit VII-21
External Relations Organization
as of June 30, 2010



Source: Information Responses 54 and 203

Much of the external relations functions are handled out of the FirstEnergy Service Company (SERVECO) organization. Rates and regulatory affairs, state government affairs, public relations and outreach programs, external communications services, public affairs and outreach programs, and community involvement programs are all coordinated through the Executive Vice President (EVP) & General Counsel through personnel based in both New Jersey and Ohio. Within the JCP&L organization, an External Relations Department mainly addresses municipal relationships through area managers.

The Government Affairs Department is headed by a Senior Vice President (SVP). Reporting to the SVP are a Vice President (VP) of External Affairs and a director, who are in charge of state government affairs for New Jersey. Reporting to the VP of External Affairs are FE-wide functions, including the federal government affairs, public relations, public outreach, and communications services (employee, executive, advertising, nuclear, production print, and graphic services) functions. Public outreach is

responsible for outreach to important target audiences in Ohio, and there is no equivalent position for New Jersey.

The Director of Federal Government Affairs is a registered federal lobbyist and is responsible for serving as the primary liaison between FirstEnergy and the executive, legislative, and administrative agencies, members of Congress, the House and Senate, and their staff members. The director monitors activity at the federal level and provides FirstEnergy and its subsidiaries information and status on relevant legislative actions and concerns. The director also coordinates with various departments within the FE organization to arrange meetings with and to present FirstEnergy's position before the House/Senate and their staff members.

JCP&L uses lobbyists and consultants to assist with its external affairs activities. Over the past three years, 10 of these firms have provided these services, which have totaled roughly $550,000 per year. Recently, the Vice President of External Affairs has taken over responsibilities for state government affairs, federal government affairs, and communications.

The Director of State Government Affairs for New Jersey is responsible for monitoring legislative issues of interest to FirstEnergy and JCP&L. Responsibilities include managing relationships with state legislators, the Governor's office and staff, the executive branch, and other key public policy officials. This oversight includes working with FE/JCP&L management to develop and communicate corporate policies and positions to responsible outside publics and providing feedback on legislative issues and concerns.

Area managers, who report directly to the JCP&L Vice President of External Relations, are responsible for carrying out the following responsibilities in their locally assigned areas:

- Development and maintenance of favorable relationships with local elected and public officials, customers, and the general public
- Response to inquiries from the news media regarding regional corporate issues or coordination of responses with FE corporate staff on corporate or industry issues
- Preparation and coordination of community contact programs (e.g., disseminating information to the community, soliciting feedback from residents, and attending community gatherings and forums)

FirstEnergy/JCP&L's corporate communications and external relations plan is documented in the *2010 External Communications Plan*. This plan lays out important FE objectives, initiatives, strategy, and tactics for communicating and publicizing FirstEnergy's position on key issues. Included in the plan are overall objectives, which include promoting FirstEnergy's commitment to high standards of operations, financial strength, and environmental stewardship, among others. Such promotion is accomplished through publicity and news stories in local, regional, national, and trade news media outlets (both directly and working with other departments). This plan also includes brief discussions of tactics to

achieve these objectives, including news releases, fact sheets, guest editorials/letters to the editors, editorial board visits, media advisors/media tours, reporter visits, media interviews, and media visits.

In 2010 (through November 30), the Communications Department distributed and placed 89 news releases on a variety of topics (e.g., storm restoration and energy efficiency programs) and made editorial board visits to 10 different FE area newspapers (including the *New Jersey Star Ledger*). All of this was in addition to other FE-wide communication efforts. In New Jersey, stories have been placed in local media regarding issues related to the FE/Allegheny merger, service, energy efficiency goals, outages, rate decreases, and new electric generation prices, among other topics.

Budget and actual expenses for external affairs are tracked only for the Corporate Communications group. They varied between $15 million and $20 million in years 2005 through 2007 before declining to slightly over $11 million for 2008 and 2009. Costs for the Regional External Affairs group were not budgeted for or tracked separately prior to 2010, so this information is not available.

The External Relations group named a task force to examine means of exploring new social media (i.e., online techniques and practices to share information, opinions, insight, experience, and perspectives) technologies to enhance FE's communications. The task force has presented its findings and FirstEnergy is considering implementing its recommendations.

There are no specific procedures or business practices documentation specific to external affairs. Reporting to and from FE's Vice President of External Affairs is informal; there is no written periodic reporting.

FirstEnergy outreach programs in New Jersey include senior assistance and low-income programs as follows:

- *Jersey Statewide Heating Assistance and Referral for Energy Services* (NJ Shares) – a non-profit corporation (JCP&L is a founding member and has a seat on the Board) organized to provide cash assistance to individuals and families in New Jersey who are in need of temporary help in paying their utility bills; funding is provided by JCP&L customers, corporate employees, and FE shareholders. Funds are administered and distributed by community-based organizations.
- *Gatekeeper Program* – JCP&L field personnel are designated to recognize and report customers who may be in some form of distress (e.g., economic difficulty, physical and/or mental impairment, and poor property condition). These customers are referred to the appropriate human service agencies and programs.
- *Comfort Partners Program* – energy education and conservation program for low-income customers; this program includes the installation of energy-efficient measures in low-income homes.

JCP&L also participates in statewide programs, including the Low Income Home Energy Assistance Program (LIHEAP) and the Universal Service Fund (USF).

FirstEnergy has Educational Advisory Councils in Ohio, Pennsylvania, and New Jersey. (Individual state councils combined into a single council in 2010.) The FirstEnergy Educational Advisory Council (FEAC) consists of educators who assist FE/JCP&L in selecting and evaluating educational resources and programs that are provided to schools and youth groups throughout the JCP&L service territory.

Employee Community Involvement Teams (ECITs) have been in place at JCP&L since 2008 (now being rolled out in other states). Their presence helps establish and coordinate local corporate-sponsored and employee-driven community involvement activities.

Contributions made on behalf of JCP&L are done through the FE Foundation. This philanthropy generally consists of a large number of smaller contributions to charitable, educational, and community groups throughout the JCP&L service territory. It totaled $605,197 in 2008 and $149,845 in 2009. Contributions declined over the past two years because economic conditions resulted in an erosion of FE Foundation's asset base. As a result, the FirstEnergy Foundation Board decided to suspend all discretionary grants beyond what had been pledged for the remainder of the year (2009). The grant suspension affected all states.

FirstEnergy's stated giving guidelines and priorities are to:

- Help ensure the health and safety of the community
- Promote economic development
- Support employee involvement and investment

Grants, sponsorships, dues, and charitable contributions for non-profit, tax-exempt organizations all come through the FE Foundation. This effort falls under the Vice President of Corporate Affairs and Community Involvement who also serves as the President of the FirstEnergy Foundation. The Foundation has three trustees that form the Contributions Committee, which reviews and determines the eligibility of applications. Corporate contributions focus on gifts to civic organizations to support special events, community festivals, or other activities that may provide public benefits to FirstEnergy. They also encompass corporate memberships (e.g., chambers of commerce and economic development corporations) and gifts/grants made to organizations representing culture and art, education, and health and human services, among others. Contributions are broken out by operating company (e.g., JCP&L) and the Contributions Committee solicits and relies on recommendations from the regional presidents and area managers. All major gifts (over $10,000) and total budgets are approved by the Contributions Committee. The FE Foundation also has a matching gifts program for employees.

In addition to grants from the FE Foundation, FirstEnergy makes monetary contributions to non-profit and civic organizations in the form of corporate contributions. These contributions typically support fundraising dinners and community events.

Contribution requests can be made by managers/employees through the budgeting cycle/process up through the area managers and regional president, although all contributions are coordinated and

budgeted through the corporate level. Organizations that have requested contributions are tracked through a Lotus Notes database system that is also used for budgeting and reporting contributions.

The Corporate Affairs and Community Involvement Department is also responsible for encouraging and assisting employee involvement in community initiatives (e.g., volunteering for United Way campaigns, serving as community liaisons, and establishing and managing state educational advisory panels and Employee Community Involvement Teams).

In 2010, major issues at the state legislative level included legislation on community net metering (A.915 in Assembly, S-463 in Senate) and JCP&L's compliance with the final version of the state's Energy Master Plan. There are no major issues at the county and municipal level. Issues with the New Jersey Board of Public Utilities (NJBPU) include the Allegheny merger, basic generation service, the Energy Master Plan, smart growth, the Clean Energy Program, and many others. The status of NJBPU matters is reported on weekly by the Rate Department.

JCP&L is a member of the New Jersey Business & Industry Association (NJBIA), a statewide employer/business advocacy association. JCP&L also participates in the Employers Legislative Committee (ELC), an affiliate of NJBIA that is another avenue for interfacing with legislators. ELCs meet monthly to speak with legislators, cabinet members, and local officials on important legislative and regulatory issues affecting employers. Finally, JCP&L also participates in the New Jersey Utilities Association (NJUA), which through its policy committees and the association at large provides a forum for information, ideas, and guidance on topics of interest to the state's utilities.

Findings & Conclusions

Finding VII-24 **External relations functions are adequately staffed with capable personnel, but there is no external relations strategy that incorporates and integrates all external relations functions.**

External relations at FE/JCP&L is an informal effort. Strategic planning efforts are conducted in external communications, but the plan is summary in detail and follow-up actions, programs, reporting, and feedback are not formally maintained. Contributions and grants are well documented, but there are no other strategic planning documents that incorporate state, federal, local, and community publics. Although contacts and presentations are made to various groups, these contacts are not systematically maintained in a format that can be tracked and analyzed. Finally, total external relations expenses are not budgeted for and tracked separately.

Finding VII-25 **Public programs are well thought-out but could be expanded.**

The strategy and process for contributions and grants are well thought-out and explicit. Management of this process is ongoing and explicit: The FE Foundation's Contributions Committee meets quarterly to review fund strategies and performance, and numerous reports are developed from the Foundation and

Corporate Contributions Tracking System (FACCTS) to track outlays and pertinent information about all recipients.

Community activities and involvement as well as corporate citizenship activities are encouraged, but there are no specific programs to track this involvement.

Finding VII-26 Interfaces with government and regulatory agencies are appropriate, although in some cases, reporting could be more robust.

Periodic presentations are made to legislative bodies. These presentations are attended by senior-level FE and JCP&L management and include a wide variety of topics and information. Ongoing contacts are maintained with key legislators and their staff, with contact information documented and periodically updated. Legislative contacts and issues (current and anticipated) are documented and reported weekly. Municipal and county contact lists are documented and updated throughout the year as needed, although area manager contacts are not documented and there are no programs to consistently perform outreach to community groups.

Interfaces at the federal level are neither documented nor reported upon in a formal, periodic manner. Likewise, although there is weekly reporting on the status of NJBPU matters prepared by the Rate Department, there is no formal reporting for functions associated with NJBPU (non-rate) relations, the FE Political Action Committee, and government affairs responsible for labor and management groups.

Recommendations

Recommendation VII-13 Develop a comprehensive and integrated external relations/communications strategy. (Refer to Finding VII-24, Finding VII-25, and Finding VII-26)

FE/JCP&L should develop an integrated external relations strategy and supporting programs, analysis, and reporting that will further their ability to interact with and support all of their stakeholders. Some suggested strategies could include (but not be limited to):

- *Outreach Contact Program* – Identify all regulatory, legislative, local government, local community groups, etc. and develop a program of regular contact. Information on issues, concerns, follow-up actions, etc. should be documented and analyzed. Periodic surveying of these groups can be included.
- *Capital Investment Strategy* – Define various means of communicating to states, local communities, and other key constituencies the need for and value of capital investment projects. Emphasis can be linked to the effect of capital investment in improving the reliability goals already developed by FE/JCP&L.
- *Communications Strategy* – Clearly define programs that will support the tactics, goals, and strategy outlined in the External Communications Plan. Make this document more robust and link it to

other external strategies. Include communication strategies to regulatory bodies and other key stakeholders (not just media).

- *Contributions Strategy* – More specifically, link contributions and grants to other departmental strategies (e.g., human resource future-skill needs to educational/training grants).
- *Corporate Citizen Strategy* – Develop a formal, specific program to promote FE/JCP&L management to give speeches, participate in local events, and serve on local boards.

Expenses for all external relations activities and programs should be tracked.

Variations of these and other external relations strategies have been successfully used by other utilities.

VIII. Finance and Accounting

This chapter discusses finance and accounting activities of Jersey Central Power & Light Company (JCP&L) and FirstEnergy (FE).

A. Finance

This section provides an overview of Jersey Central Power & Light's finances, with an emphasis on how those finances impact it as a regulated utility operation in New Jersey. Specifically, Schumaker & Company completed the following:

- A review of direct and indirect effects of the financing of JCP&L, FE, and all JCP&L affiliates.
- A review and assessment of the financial performance of JCP&L, FE, and all affiliates, including the effects of affiliate interrelationships on individual company performance.
- An assessment of the effects of FE and its affiliates' activities on JCP&L's creditworthiness.
- A review of the debt management policies for JCP&L, FE, and all affiliates, identifying any real or perceived encumbrance of utility assets for non-utility purposes and determining the extent of any negative effects that have resulted from business diversification.
- An evaluation of the investment decisions of JCP&L, FE, and affiliate companies with respect to the degree to which tax considerations may have outweighed other investment criteria (e.g., safety) in making decisions and an assessment of the effect of FE's financing on JCP&L.
- An evaluation of the methods that JCP&L, FE, and its affiliates have used to determine and allocate consolidated income taxes over the past eight years and an evaluation of any other tax treatments allowed by the IRS.
- An assessment of the degree to which the historical and projected tax benefits from diversified activities have been and are projected to be realized as a result of JCP&L's taxable income and a provision of the chief beneficiaries' identities.

Background & Perspective

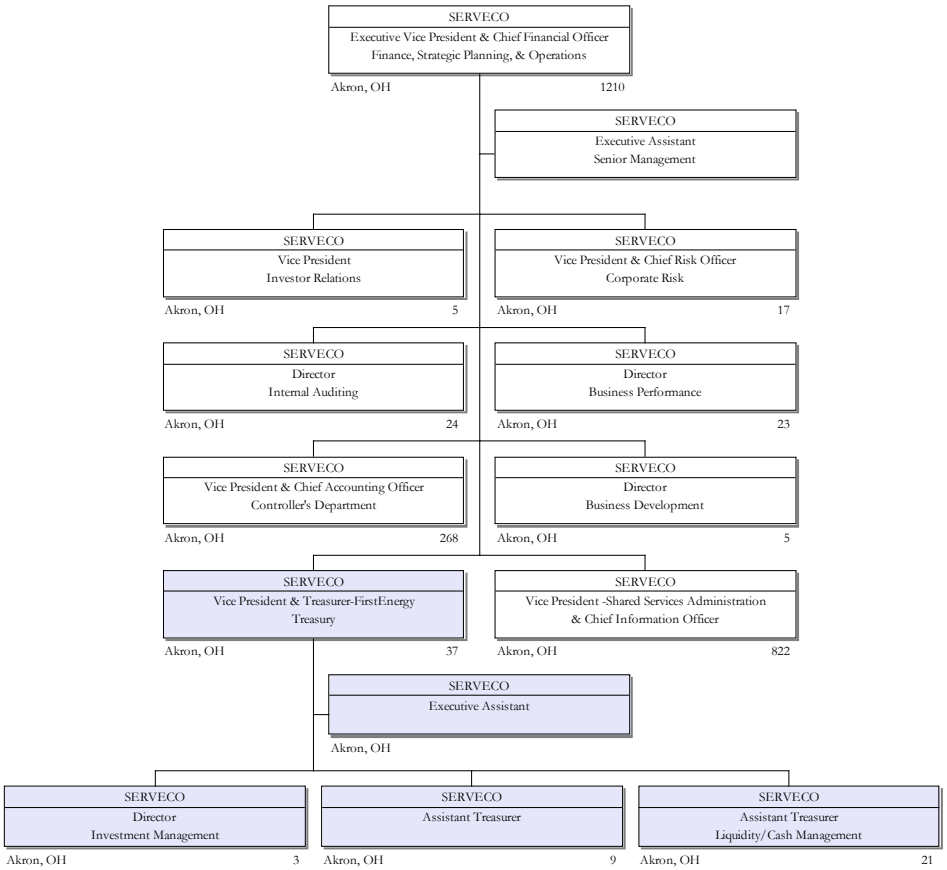
This Background & Perspective section is divided into six segments:

- Overview
- Financing and Debt Management
- Credit
- Investments
- Pension and Other Post-Retirement Benefits (OPEB) Plans
- Tax Treatment

Overview

JCP&L's financing functions are conducted by the Treasury organization of its parent organization, FirstEnergy (FE), in which the Treasury employees are FE Service Company (SERVECO) employees. FE is a diversified energy company headquartered in Akron, OH. It holds all of the outstanding common stock of JCP&L and, either directly or indirectly, the outstanding stock of seven other electric operating subsidiaries. Decisions concerning the areas of debt, credit ratings, investments, and pension obligations are managed by the Treasury Department (highlighted in gray). These decisions report up through the Vice President (VP) & Treasurer, through the Executive Vice President (EVP) & Chief Financial Officer (CFO), to the President & Chief Executive Officer (CEO). The organizations that provide these functions are shown in *Exhibit VIII-1*.

Exhibit VIII-1
Finance Organizations
as of June 30, 2010



Source: Information Response 54. The highlighted boxes show the location and reporting responsibilities of the groups that manage the financing functions concerning JCP&L and FE. The organizations that are not shaded are the other Finance Departments that report directly to the EVP & CFO that are not directly involved in financing activities.

The Treasury Department is managed by the Vice President & Treasurer with three direct reports – two Assistant Treasurers and a Director of Investment Management. The responsibilities of the Assistant Treasurer – Treasury, with a staff of 11, include cash operations and finance. The responsibilities of the Assistant Treasurer – Cash Liquidity & Management, with a staff of 22, include planning, budgets, capital, and finance. The responsibilities of the Director of Investment Management, with a staff of 4, include management of the pension, nuclear decommissioning trusts and savings plans.

Financing and Debt Management

Debt and equity outstanding at the end of each of the last five years (2005 to 2009) is shown in *Exhibit VIII-2*.

Exhibit VIII-2
JCP&L Long-Term Debt & Equity
2005 to 2009

JCP&L Long-Term Debt & Equity
Outstanding As of December 31st:

Debt:	Maturity	2005	2006	2007	2008	2009
7.10% Pollution Control Note (A)	7/1/2015	12,200,000	12,200,000	-	-	-
7.50% First Mortgage Bonds (B)	5/1/2023	125,000,000	125,000,000	-	-	-
6.75% First Mortgage Bonds (C)	11/1/2025	150,000,000	150,000,000	-	-	-
6.85% Medium Term Note	11/27/2006	40,000,000	-	-	-	-
4.80% Senior Secured Note (D)	6/15/2018	150,000,000	150,000,000	150,000,000	150,000,000	150,000,000
5.63% Senior Secured Note (D)	5/1/2016	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000
6.45% Senior Secured Note	5/15/2006	150,000,000	-	-	-	-
6.40% Senior Secured Note (D)	5/15/2036	-	200,000,000	200,000,000	200,000,000	200,000,000
5.65% Senior Unsecured Note	6/1/2017	-	-	250,000,000	250,000,000	250,000,000
6.15% Senior Unsecured Note	6/1/2037	-	-	300,000,000	300,000,000	300,000,000
7.35% Senior Unsecured Note	2/1/2019	-	-	-	-	300,000,000
4.19% 2002 Series Transition Bond	12/5/2007	43,834,017	17,941,438	-	-	-
5.39% 2002 Series Transition Bond	9/5/2010	52,297,000	52,297,000	52,273,041	33,469,193	13,629,341
5.81% 2002 Series Transition Bond	12/5/2013	77,075,000	77,075,000	77,075,000	77,075,000	77,075,000
6.16% 2002 Series Transition Bond	6/5/2017	99,517,000	99,517,000	99,517,000	99,517,000	99,517,000
Total 2002 Series Transition Bonds		272,723,017	246,830,438	228,865,041	210,061,193	190,221,341
5.25% 2006 Series Transition Bond	6/5/2012	-	56,348,000	41,630,656	33,228,715	23,974,378
5.41% 2006 Series Transition Bond	9/5/2014	-	25,693,000	25,693,000	25,693,000	25,693,000
5.52% 2006 Series Transition Bond	6/5/2018	-	49,220,000	49,220,000	49,220,000	49,220,000
5.61% 2006 Series Transition Bond	6/5/2021	-	51,139,000	51,139,000	51,139,000	51,139,000
Total 2006 Series Transition Bonds		-	182,400,000	167,682,656	159,280,715	150,026,378
Total Debt (E)		**$1,199,923,017**	**$1,366,430,438**	**$1,596,547,697**	**$1,569,341,908**	**$1,840,247,719**
Equity:						
4.00% Preferred Stock (E) (F)		12,500,000	-	-	-	-
Common Stock		3,210,763,000	3,159,598,000	3,017,864,000	2,729,010,000	2,600,396,000
Total Equity		**$3,223,263,000**	**$3,159,598,000**	**$3,017,864,000**	**$2,729,010,000**	**$2,600,396,000**

Notes:
(A) Redeemed July 2007
(B) Redeemed May 2007
(C) Redeemed June 2007
(D) Became unsecured debt in 2007 under "Fallaway" provisions in JCP&L's Senior Note Indenture
(E) The balances for debt and preferred stock do not match the numbers shown in JC-97 as balances in JC-97 include amortizations and debt discounts/premiums
(F) Redeemed September 2006

Source: Information Response 91

JCP&L's long-term debt consisted of unsecured notes as well as 2002 and 2006 series transition bonds totaling $1.84 billion at the end of 2009. Interest rates ranged from 4.80% to 7.35%, with maturities ranging from 2010 to 2036.

The 2002 Series Transition Bonds shown are from a June 2002 $320 million bond sale. On February 6, 2002, in Docket No. EF99080615, JCP&L received a bondable stranded costs rate order (financing order) from the New Jersey Board of Public Utilities (NJBPU). This order authorized the issuance of $320 million of transition bonds to securitize the recovery of bondable stranded costs associated with the previously divested Oyster Creek Nuclear Generating Station plus upfront transaction costs. The financing order was issued in accordance with the Electric Discount and Energy Competition Act, which was enacted by the State of New Jersey in February 1999. JCP&L formed JCP&L Transition Funding, LLC (a Delaware limited liability company) on February 24, 2000 for the purpose of issuing these bonds. JCP&L Transition Funding is a wholly-owned subsidiary of JCP&L and, in June 2002, sold all ($320 million) of the transition bonds. The balance amount of these bonds remaining as of the end of 2009 was $190 million.

The 2006 Series Transition Bonds shown are the result of a $182 million bond sale in August 2006. On June 8, 2006, in Docket No. ER03020133, JCP&L received a bondable stranded costs rate order from the NJBPU. This order authorized the issuance of transition bonds to securitize the recovery of bondable stranded costs associated with JCP&L's deferred basic generation service (BGS) net of tax account balance at July 31, 2003 plus upfront transaction costs. JCP&L Transition Funding II, LLC (another Delaware limited liability company and wholly-owned subsidiary of JCP&L) was formed on March 29, 2004. In August 2006, Transition Funding II sold $182 million of transition bonds to securitize the recovery of deferred costs associated with JCP&L's supply of BGS. At the end of 2009, the balance of these transition bonds was $150 million.

JCP&L did not purchase and does not own any of the transition bonds that are included as long-term debt on FirstEnergy's and JCP&L's consolidated balance sheets. The transition bonds are the sole obligation of JCP&L Transition Funding and JCP&L Transition Funding II and are collateralized by each corporation's assets, which consist primarily of bondable transition property.

Credit

FirstEnergy and its affiliates maintain credit relations with and receive credit ratings from three nationally recognized statistical rating organizations (NRSRO) , as designated by the U.S. Securities and Exchange Commission. These three NRSROs, most commonly referred to as credit rating agencies, are Standard & Poor's (S&P), Moody's Investors Service Inc. (Moody's), and Fitch Ratings, Ltd. (Fitch). The credit ratings assigned to JCP&L for the past five years are shown in *Exhibit VIII-3*.

Exhibit VIII-3
JCP&L Credit Ratings
2005 to 2009

Year	Corporate Credit	Issuer	Issuer Default	Senior Secured			Senior Unsecured			Preferred Stock		
	S&P	Moody's	Fitch	S&P	Moody's	Fitch	S&P	Moody's	Fitch	S&P	Moody's	Fitch
2005	BBB	Baa2	BBB-	BBB+	Baa1	BBB+				BB+	BA1	BBB
2006	BBB	Baa2	BBB-	BBB+	Baa1	A-						
2007	BBB	Baa2					BBB	Baa2				
2008	BBB	Baa2					BBB	Baa2				
2009	BBB	Baa2					BBB	Baa2				

Source: Information Response 93

Equivalent credit rating categories for the three credit rating companies in *Exhibit VIII-3* are shown in *Exhibit VIII-4*.

Exhibit VIII-4
Equivalent Credit Ratings
2005 to 2009

Credit Risk	Equivalent Credit Ratings S&P (1)	Moody's (2)	Fitch (1)
Investment Grade			
Highest Quality	AAA	Aaa	AAA
High Quality (Very Strong)	AA	Aa	AA
Upper Medium Grade (Strong)	A	A	A
Medium Grade	BBB	Baa	BBB
Not Investment Grade			
Lower Medium Grade (Somewhat Speculative)	BB	Ba	BB
Low Grade (Speculative)	B	B	B
Poor Quality (May Default)	CCC	Caa	CCC
Most Speculative	CC	Ca	CC
No Interest Being Paid Or Bankruptcy Petition Filed	C	C	C
In Default	D	C	D

(1) The ratings from AA to CC by S&P and Fitch may be modified by the addition of a plus or minus sign to show relative standing within the category.
(2) The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.

Source: Credit rating agency information

The ratings for JCP&L are based on the consolidated credit profile of its parent, FirstEnergy Corp. For the past five years, JCP&L and FE have received investment grade credit ratings at the Medium Grade

(as shown in *Exhibit VIII-3*). The corporate credit ratings for FirstEnergy and its affiliates are based on FE's transformation from an integrated electric utility holding company to a model that encompasses regulated electric transmission and distribution (T&D) operations as well as unregulated merchant electric generation and marketing activities. In its March 25, 2010 report, S&P indicated that the proposed merger with Allegheny Energy Inc. is expected to result in a slightly weaker business risk profile for FE and its affiliates. Other rationales given by Moody's on November 18, 2009 for JCP&L's ratings are:

- The regulated nature of JCP&L's cash flow – benefitting from a monopoly in its service area and deriving its entire revenue base through regulated activities
- The stability and predictability of JCP&L's consolidated financial metrics indicate a strong Baa rating according to Moody's methodology.
- The presence of a reasonably constructive regulatory environment – JCP&L's regulatory risk profile is considered to be average to slightly above average for U.S. electric utilities.
- The significance of JCP&L's capital expenditure requirements – continuing to invest in its aging infrastructure in an effort to improve electric service reliability

Credit ratings are relative measures of risk. An analysis by S&P on March 23, 2010, comparing FE to four similar companies in the energy sector and using averages over the past three fiscal years (2007 to 2009), is shown in *Exhibit VIII-5*.

Exhibit VIII-5
Peer Comparison
Average of Three Years
2007 to 2009

Rating/Ratio	FE	Exelon Corporation	Public Service Enterprise Group, Inc.	Constellation Energy Group, Inc.	Allegheny Energy, Inc.
S&P Credit Rating 3/23/10	**BBB-/Stable**	**BBB/Stable**	**BBB/Stable**	**BBB-/Stable**	**BBB-/Stable**
Adjusted Ratios[3]					
EBIT[1] Interest Coverage (x)	2.5	5.8	5.8	2.4	3.2
FFO[2] Interest Coverage (x)	3.1	6.1	5.4	3.4	3.8
FFO[2]/Debt (%)	15.2	23.1	26.6	16.6	18.5
Discretionary Cash Flow/Debt (%)	(5.5)	3.1	0.6	(8.2)	(6.6)
Net Cash Flow/CAPEX[4] (%)	69.9	111.3	99.5	53.9	73.4
Total Debt/Debt Plus Equity (%)	65.7	60.7	52.1	56.9	60.1
Return on Common Equity (%)	13.2	24.6	18.6	25.1	13.7
Common Dividend Payout Ratio – Unadjusted (%)	53.5	47.9	46.5	21.0	19.0

1 EBIT = Earnings Before Interest and Taxes
2 FFO = Funds From Operations
3 Adjustments to company-reported financial results made by Standard & Poor's analysts
4 CAPEX = Capital Expenditures

Source: Information Response 94, Attachment 28

In S&P's analysis of the average of the past three fiscal years (2007 to 2009), FirstEnergy compares most favorably with Constellation Energy and Allegheny Energy, both of which have similar BBB- credit ratings with "Stable" outlooks. The other two energy companies, Exelon and the Public Service Enterprise Group, have stronger financial ratios and slightly higher credit ratings (BBB). S&P states that the outlook for FE and its subsidiaries is stable based on their projection that the proposed merger with Allegheny Energy will be approved in a timely manner by the regulators, "without a material change to the anticipated financial profile of the combined entity." S&P also indicates that delays in the merger process, significant distractions from merger activities affecting operating performance, or changes in the financial basis of the proposed merger based on modified terms of approval might cause a lowering of the ratings. S&P states that an increase in the credit ratings could occur if financial performance "markedly exceeds expectations." A credit-rating uptick might also occur if "credit metrics fall comfortably in the 'significant' category (20%- 30% FFO to debt and debt-to-capital below 50%)" and if this level of financial performance is maintained.

On February 11, 2010, S&P downgraded the senior unsecured debt of FirstEnergy to BB+. Pursuant to the requirements of a pre-existing NJBPU order, on February 17, 2010, JCP&L filed a plan addressing

the mitigation of any effect from this recent S&P downgrade of FE's debt. This plan was to provide an "assessment of present and future liquidity necessary to assure JCP&L's continued payment to BGS suppliers." Subsequently, the public hearing to address the plan was held, and on March 17, 2010, NJBPU determined that JCP&L had ample resources available to continue uninterrupted payments to BGS suppliers. The NJBPU also concluded that there were no concerns with JCP&L's liquidity, and therefore, no further action was required.

Investments

JCP&L controls no long-term investments. All long-term investments are consolidated and managed by FirstEnergy and include trusts, funds, and pensions and savings plans. All of these investments are managed by outside professional investment managers. Significant long-term investments on JCP&L's balance sheet include a nuclear decommissioning trust (NDT) and a spent nuclear fuel trust. At the end of 2009, the balance in the NDT was $167 million, and the balance in the spent nuclear fuel trust was $200 million.

The Investment Committee has the fiduciary responsibility for certain FE investments held in trusts (e.g., pension, savings plan, nuclear decommissioning trusts, health care plan, non-qualified plans). This committee meets quarterly and sometimes more often. (In 2008, they met more often because of the financial turmoil in the countryand, in 2009, this committee met 17 times.) This committee must consist of at least five members, all of whom are appointed by FE's CFO, and must include representatives from the Legal, Human Resources, and Risk Management departments. As of July 30, 2010, the members of this committee included:

- VP & Treasurer (Chairman)
- Director, Business Development
- Assistant Controller, FEU
- Assistant Treasurer
- Director, Corporate Enterprise Risk Management
- VP, Legal
- Director, Compensation, Retirement Programs, and Succession Planning

As of July 30, 2100, the responsibilities of this committee included:

- Reviewing and monitoring the custody and safekeeping of the assets
- Obtaining and reviewing information that may affect the investment objectives and policies for the assets, including:
  - Tax obligations
  - Actuarial assumptions
  - Funding levels
  - Accumulated benefit obligations
  - Benefits to be paid
  - Expected contributions

  - Anticipated investment time horizons
  - Other liquidity needs
- Establishing and monitoring compliance with investment objectives and policies
- Selecting, appointing, contracting with, monitoring performance, and terminating the services of trustees, custodians, investment managers, advisors, consultants, and other investment-related service providers
- Reviewing the reasonableness of expenses paid for custody and investment management services
- Reviewing the allocation among asset classes and investment managers and monitoring the investment performance of the assets
- Investing assets and monitoring the performance of such investments in situations where an investment manager has not been selected by this committee
- Reporting on the status and investment of the assets at least annually to FE's CEO and CFO and to the Finance Committee

Schumaker & Company consultants were informed that FirstEnergy doesn't "churn" fund managers. Rather, it tends to keep them for an extended period of time. In the August 31, 2009 meeting, however, the committee approved the hiring of a new investment advisor to counsel its activities. That advisor's lengthy investment experience, independence, expertise with alternative investments, macroeconomic research knowledge, proven track record for strategic analysis, and the advisor being available exclusively to FE's Investment Committee were the reasons stated for the hiring. At subsequent meetings in 2010, the Investment Committee approved the termination of several of its active equity managers at the recommendation of its recently hired investment advisor, with proceeds to be allocated to new investment managers recommended by the advisor.

Nuclear Decommissioning Trust

A nuclear decommissioning trust has been established for every nuclear plant unit owned or partially owned by an FE subsidiary. The purpose of these trusts is to segregate and invest monies for funding the nuclear plant decommissioning costs of each nuclear plant. FirstEnergy's NDTs are shown in *Exhibit VIII-6*.

Exhibit VIII-6
Nuclear Decommissioning Trusts
as of December 31, 2009

Operating Company	Nuclear Generating Plants				
	Davis-Besse	Perry	Beaver Valley Unit 1	Beaver Valley Unit 2	Three Mile Island Unit 2
FENOC[1]	X	X	X	X	
OE[2]		X		X	
TE[3]				X	
Met-Ed[4]					X
Penelec[5]					X
JCP&L					**X**

1 FirstEnergy Nuclear Operating Company
2 Ohio Edison Company
3 Toledo Edison Company
4 Metropolitan Edison Company
5 Pennsylvania Electric Company

Source: Information Response 82 and Interview 153

The Investment Management Department oversees management of the NDT trusts. Contributions to these trusts are determined by the Rate Department and mandates from the state utility commissions.

JCP&L has a 25% ownership interest in Three Mile Island Unit 2 (TMI-2). This unit, damaged in an accident in 1979, is jointly owned by JCP&L and two affiliates: 1) Metropolitan Edison Company (Met-Ed) with a 50% interest and 2) Pennsylvania Electric Company (Penelec) with the final 25% interest. This unit has not operated since the accident, and its operating license has been converted to a "possession only" one.

The estimated cost to decommission this unit is $868 million, as determined by a site-specific decommissioning cost study, *Decommissioning Cost Analysis for Three Mile Island Unit 2*, dated January 2009 and escalated to 2009 dollars. At the end of 2009, the amount accumulated in the three NDTs concerning TMI-2 was $577 million. Of this amount, JCP&L's share was $167 million. At the end of June 2010, FirstEnergy has $571 million in this trust, with future estimated earnings to be approximately $400 million. The costs to decommission TMI-2 were evaluated for three decommissioning scenarios:

- *Delayed DECON* – defer decommissioning until the spent fuel has been removed from the site, assuming that the decontamination and dismantling activities at TMI-2 are synchronized with the adjacent unit such that the licenses for both units are terminated concurrently.

- *Custodial SAFSTOR* – assuming that Three Mile Island Unit 1 (TMI-1), owned and operated by Exelon, is placed into long-term storage and that TMI-2 remains in storage until such time that decommissioning activities can be coordinated with TMI-1.
- *Hardened SAFSTOR* – assuming that TMI-1 is promptly decommissioned when it ceases operations in 2034 and that the TMI-2 reactor building is reconfigured for long-term passive storage; that TMI-2's site structures and facilities, with the exception of the reactor building, are decontaminated and dismantled; that the reactor building and its contents are secured and that the site is reconfigured for monitored surveillance; and that decontamination and final dismantling of the reactor building is deferred for approximately 100 years (from Unit 1 shutdown).

Regardless of the scenario or the timing of the decommissioning activities, the cost estimates assume the eventual removal of all the contaminated and activated plant components and structural materials, such that the facility operator may then have unrestricted use of the site with no further requirement for a license.

Through mid-2010, this trust was being funded by JCP&L ratepayers. On February 19, 2010, JCP&L filed a request with the NJBPU to reduce the nuclear decommissioning cost charge to zero by June 1, 2010. JCP&L was to collect $1.2 million from rate payers in 2010, with no additional rate payer–funded collections anticipated, but retains the right to request recovery in the future if estimates / assumptions change.

Eligible investments for JCP&L's NDT are shown in *Exhibit VIII-7*.

Exhibit VIII-7
NDT Eligible Investments
as of December 31, 2009

Investment Category	Asset Allocation		Type of Investment
	Target	Actual	
Fixed Income	**45%**	**49%**	U.S. treasury bills, notes, and bonds
			U.S. Government Agency obligations
			Obligations of state and local governments not in default as to principal or interest
			Obligations of U.S. corporations not in default as to principal or interest
			Mortgage-backed obligations (Collateralized Mortgage Obligations {CMOs}, etc.) not in default as to principal or interest Interest Only or Principal Only mortgage-backed obligations are not permitted in the portfolio.
			Asset-backed securities
			Time or demand deposits in a bank or an insured credit union located in the U.S.
			Other money market instruments
Equities	**55%**	**51%**	Common stock traded on U.S. stock exchanges
			No direct investments in FirstEnergy Corp. (FE) stock other than index strategies that have FE as part of the index
			Derivative contract, financial instrument, or other transaction (including, without limitation, any equity swap) as may be necessary to implement any hedging transaction

Source: Information Response 462

Spent Nuclear Fuel Trust

In 1983 or 1984, the Department of Energy (DOE) imposed a one-time fee (based on kilowatt hours (kWh) generated over the life of a nuclear plant at that time (through 1983) multiplied by 1 mil) toward the cost of disposing spent nuclear fuel at the Yucca Mountain Repository in Nevada. Yucca Mountain was the United States' designated deep geological repository storage facility for spent nuclear reactor fuel and other radioactive waste. It is located between the Mojave Desert and the Great Basin Deserts in the US state of Nevada.

On March 3, 2010, the Department of Energy filed a motion with the Nuclear Regulatory Commission to withdraw with prejudice the license application for a high-level nuclear waste repository at Yucca Mountain. The U.S. Government's Blue Ribbon Commission on America's Nuclear Future is to conduct a comprehensive review of policies for managing the backend of the nuclear fuel cycle. Based on this review, it will provide recommendations for developing a safe, long-term solution to managing the United States' used nuclear fuel and nuclear waste.

This liability (consisting of the cost to dispose of spent nuclear fuel as estimated in 1983)continues to grow, however, at the 13-week Treasury bill rate until such time as Yucca Mountain (or its designated replacement) becomes operational and the spent fuel can be transferred there. The nuclear fuel disposal trust that covers this liability is currently overfunded by approximately $15 million. This fund is taxable and, therefore, invested in tax-free municipal bonds. The JCP&L balance in this fund, including accrued interest, as of the end of 2009 was $200 million. It is being funded by JCP&L ratepayers. The regulatory liability for this fund is set by the Nuclear Regulatory Commission (NRC).

JCP&L owned 25% of the TMI-1 nuclear plant and 100% of the Oyster Creek nuclear plant (and owned corresponding percentages of their spent nuclear fuel). When the Oyster Creek and TMI-1 nuclear generating stations were sold to an Exelon affiliate (AmerGen Energy, LLC) prior to the merger between GPU and FirstEnergy, JCP&L retained a spent nuclear fuel obligation to the DOE.

Pension and Other Post-Retirement Benefits (OPEB) Plans

JCP&L's pension and OPEB plans are consolidated with the rest of FE's plans. They are administered by the Investment Management Department with guidance and oversight provided by its Investment Committee. FirstEnergy provides a noncontributory qualified defined benefit pension plan that substantially covers all of its employees. FE also provides non-qualified pension plans that cover certain employees. These plans extend defined benefits based on years of service and compensation levels. FE's funding policy is based on actuarial computations using the projected unit credit method. Due to a large ($500 million) voluntary contribution in 2009, it is estimated that no additional cash contributions will be required before 2012.

FirstEnergy provides noncontributory life insurance to retired employees as well as optional contributory insurance. Subsidized health care benefits are also available upon retirement to employees, their dependents, and under certain circumstances, their survivors. Pension and OPEB costs are affected by employee demographics (including age, compensation levels, and employment periods), the level of contributions made to the plans, and earnings on plan assets.

Pension and OPEB investments measured at fair market value as of the end of 2009 are shown in *Exhibit VIII-8*.

Exhibit VIII-8
Pension and OPEB Investments
as of December 31, 2009

Assets	Pension Investments		OPEB Investments	
	Asset Value ($ millions)	Asset Allocation (%)	Asset Value ($ millions)	Asset Allocation (%)
Short-Term Securities	337	7	19	4
Common and Preferred Stocks	1,572	36	225	47
Mutual Funds	159	4	12	3
Bonds	1,928	44	208	44
Real Estate/Other Assets	383	9	11	2
Total	**4,379**	**100**	**475**	**100**

Source: Information Response 82, Attachment 5

At the end of 2009, FE's pension fund was funded at an 82% level, leaving a pension benefit liability on the balance sheet of approximately $1 billion. This level was an increase in funding percentage from 2008, which was approximately 80% funded. Nevertheless, it was not as high a funding percentage as that at the end of 2007, which reported a 111% pension funding. The primary reason for the reduction in funding percentage from 12/31/2007 to 12/31/2009, according to FE management, was losses in plan asset value experienced in 2008.

Tax Treatment

JCP&L, along with FirstEnergy Solutions Corporation (FES) and the other FE utility companies, is party to an Intercompany Income Tax Allocation Agreement. This agreement is effective for taxable years ending on or after January 1, 2002, with FE and its other subsidiaries providing for the allocation of consolidated tax liabilities. In accordance with Code Section 1552(b) and Section 1.1552-1(c)(2) of the Internal Revenue Code of 1986, the consolidated tax liability (other than AMT and its related credits) is allocated among all the participants of this agreement in the same percentage of the total consolidated tax as if computed for each participant on a separate return basis. Any tax benefits are allocated to participants who had items of deduction, loss, or credit for which the tax benefit amount is attributable. JCP&L's federal income tax rate has been 35%, the same as for the other FE utilities, FES, and FE, for the past three years. According to the FirstEnergy Tax Department, JCP&L's rate would be no different if it were a standalone utility. JCP&L's taxes are calculated based only on JCP&L's book income.

Net tax benefits attributable to FE, excluding those benefits derived from interest expense associated with the acquisition indebtedness of FE's merger with GPU, are allocated to FE's subsidiaries that have taxable income. This allocation is accounted for as a capital contribution to the recipient company.

Findings & Conclusions

Finding VIII-1 JCP&L's credit standing and financial performance have not been adversely affected by the financing and debt management practices of FirstEnergy and its affiliates.

The credit ratings for JCP&L are based on the consolidated credit profile of its parent company. JCP&L has received an investment-grade credit rating from all three major credit rating companies for the past five years (2005 to 2009). According to these credit rating companies, the corporate credit ratings for FirstEnergy and its affiliates are based on FE's transformation from an integrated electric utility holding company to a model that encompasses both regulated electric T&D operations and unregulated merchant electric generation and marketing activities.

Positive reasons supporting JCP&L's investment-grade rating include the regulated nature of its cash flow, the stability and predictability of its cash flow, the presence of a reasonably constructive regulatory environment, and continued investment in its infrastructure to improve electric service reliability. A recent financial evaluation by one of the credit rating agencies indicates that JCP&L's financial performance and risk measurements over the past three years are comparable to a peer panel of other electric utilities. JCP&L's assets have not been encumbered for non-utility purposes, nor has JCP&L experienced any negative effects from its parent's or affiliates' debt management policies.

Finding VIII-2 Credit rating provisions in BGS contracts could impact JCP&L's liquidity if JCP&L's ratings were to go below investment grade.

Each year, the four New Jersey electric distribution companies (EDCs) – Public Service Gas & Electric Company (PSE&G), Atlantic City Electric Company (ACE), JCP&L, and Rockland Electric Company (RECO) – have procured their electric supply to serve their basic generation service (BGS) customers through a statewide auction process held in February of each year. BGS refers to the service of customers who are not served by a third-party supplier or competitive retailer. In other jurisdictions, this type of service is sometimes referred to as standard offer service, default service, or provider of last resort service.

The auction process has consisted of two auctions that are held concurrently, one for larger customers on an hourly price plan (BGS-CIEP) and one for smaller commercial and residential customers on a fixed-price plan (BGS-FP). The two contracts have non-reciprocating credit terms for margining, which means that JCP&L does not have to post margin to a supplier to cover any market price exposure. In Article 9 of the contract, however, JCP&L would be required to prepay 50% of its previous month's payable to the supplier if two out of the three credit ratings for JCP&L were to fall below investment grade. In the event that JCP&L had only had two ratings, then only one would have to fall below investment grade.

Currently, JCP&L's credit ratings are above investment grade, and therefore, it is not required to prepay. If JCP&L is required to prepay, the prepay amount will be disclosed on FirstEnergy's

Enterprise Risk Management group's monthly liquidity impact report. The amount varies from month to month based on demand. On average, over a one-year period, the amount is approximately $57 million.

After S&P downgraded the senior unsecured debt of FE to BB+ in February 2010, JCP&L filed (in compliance with the requirements of an NJBPU order) a plan to assess the present and future liquidity necessary to assure its continued payment to BGS suppliers. After a public hearing to address the plan was held in March 2010, the NJBPU determined that JCP&L had ample resources available to continue uninterrupted payments to BGS suppliers. It also concluded that there were no concerns with JCP&L's liquidity and no further action required.

Finding VIII-3 The tax methodology applied to JCP&L is reasonable, and tax considerations have not played an inappropriate role in JCP&L's investment decisions.

Although JCP&L's financial operations are combined with the other FE companies in consolidated financial statements and for purposes of filing a consolidated federal tax return, JCP&L's income taxes are computed based on JCP&L's financial results alone. JCP&L's allocated share of consolidated income taxes is the same as it would be if JCP&L were a standalone utility company. JCP&L's federal income tax rate, as well as the rates of the other FE utility companies, has been 35% of book income for the past three years. The only tax consideration impacting investment decisions concerns whether the income from an investment is taxable or not, thereby affecting the return on that investment.

Finding VIII-4 JCP&L's pension plan is funded appropriately.

JCP&L's pension plan is consolidated with that of FirstEnergy and the other affiliated companies. The pension plan is administered by the Investment Management Department, overseen by the Investment Committee. Day-to-day operations are handled by outside professional investment managers and consultants. Although required to meet only quarterly, the Investment Committee has met many more times since the onset of investment markets' economic problems in an effort to safeguard FE's pension plan assets. The committee has taken an active role in monitoring the performance of its professional investment advisors and managers and has made adjustments, including terminating managers and hiring new professional advisors when required. Although the funded ratio (actuarial value of assets divided by actuarial accrued liabilities) has fallen since 2007, FE has taken action, with the insertion of $500 million in 2009, to keep this ratio above 80%.

Recommendations

Recommendation VIII-1 Explore the advisability of ring-fencing JCP&L's operations from FE. (Refer to Finding VIII-2)

JCP&L would be required to prepay 50% of its previous month's payable to its basic generation service (BGS) electricity supplier if two out of the three JCP&L credit ratings were to fall below investment grade. Currently, JCP&L's credit ratings are above investment grade and prepayment is not required. If JCP&L is required to prepay, the annual amount could approximate $57 million. The credit ratings for JCP&L are based on the consolidated credit profile of its parent company, FirstEnergy. In the first quarter of 2010, one of the three credit agencies rating JCP&L and FE downgraded FE's senior unsecured debt to below investment grade. As a result, the specter is raised that JCP&L's credit could also be affected.

Ring-fencing involves an effort to wall off certain elements or subsidiaries of a corporation to protect its assets from creditors in a bankruptcy situation or, in this case, to protect an investment-grade credit rating. Generally, ring-fencing is a defensive or survival move. It comes with a cost and can restrict the way businesses operate. It is a strategy that JCP&L should consider and evaluate, however, based on the possibility of being saddled with an adverse credit rating.

B. Cash Management

This section, which provides an evaluation of Jersey Central Power & Light's cash management methodologies and processes, includes an analysis of cash forecasting, diversification of investments, and the cost of capital.

Background & Perspective

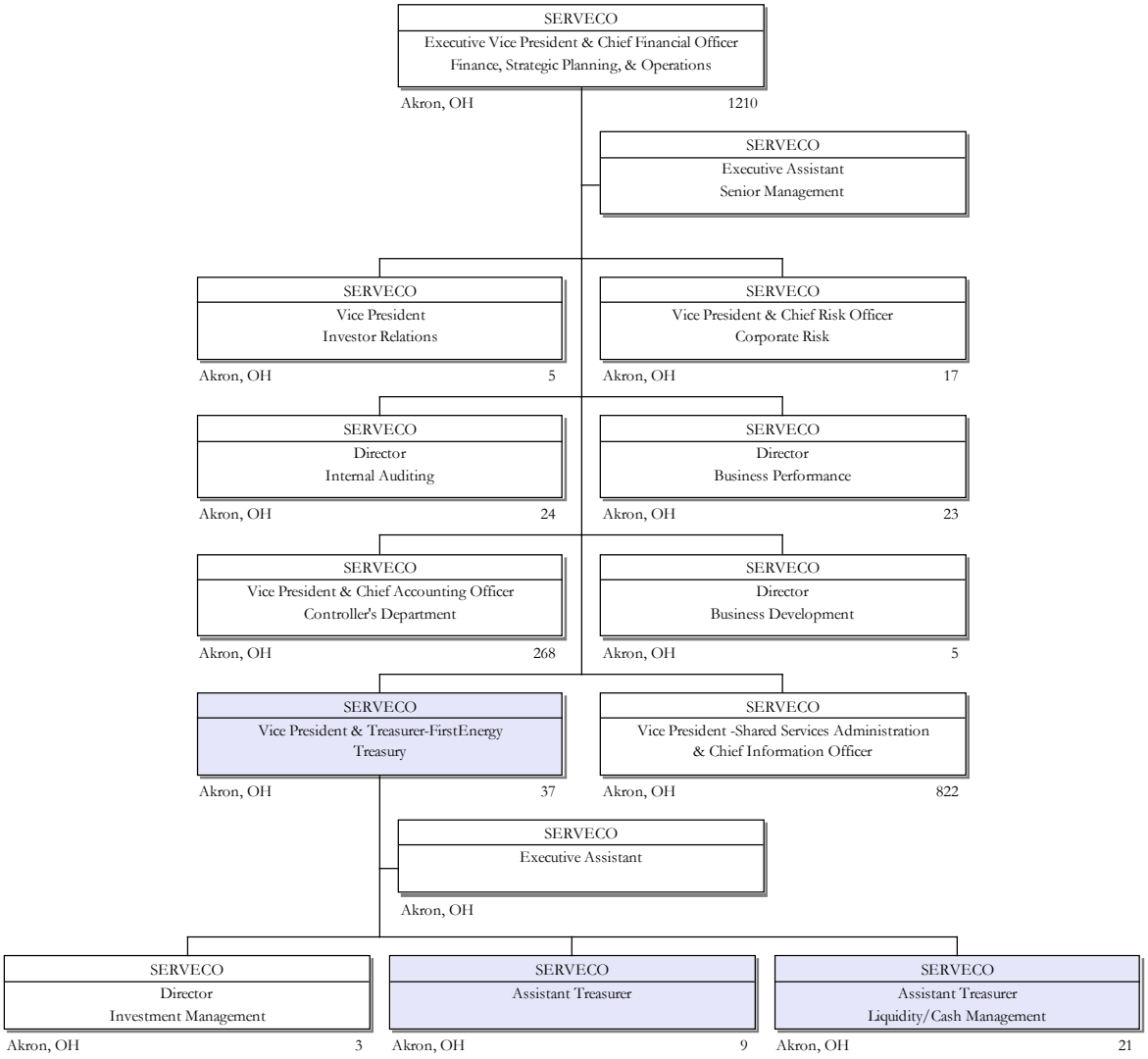
This background and perspective section is divided into five segments:

- Overview
- Cash management methodologies
- Financial performance measurements
- Write-offs
- Cost of capital

Overview

JCP&L's cash management functions are conducted by treasury groups of its parent organization, FirstEnergy. These groups are located within the FE Service Company (SERVECO). FirstEnergy is a diversified energy company based in Ohio that holds all of the outstanding common stock of JCP&L and, either directly or indirectly, the outstanding stock of seven other electric operating subsidiaries. Decisions concerning cash receipts, cash processing, banking relations, short-term borrowings, and cash disbursement are made by treasury groups that report up through the Vice President & Treasurer to the Executive Vice President & Chief Financial Officer and ultimately to the President & Chief Executive Officer. The organizations that provide these functions are shown in *Exhibit VIII-9*.

Exhibit VIII-9
Cash Management Organizations
as of June 30, 2010



Note: The organization blocks that are shaded are the groups that provide cash management functions for JCP&L and other FE entities.
Source: Information Response 54

Cash Management Methodologies

Cash Forecasting

All cash management functions for JCP&L and all of the other FE subsidiaries are centralized in several groups that report to the FE Treasurer. Under this reporting hierarchy, cash operations reports to Treasury's Assistant Treasurer and cash forecasting reports to the Assistant Treasurer for Liquidity,

Cash Management. FE uses the personal computer–based multi-integrated decision analysis system (MIDAS) to forecast financial statements, including income statements, balance sheets, and cash flow statements down to the entity level. MIDAS was developed to integrate decision analysis capabilities into a utility simulation model by, or under the direction of, the Electric Power Research Institute (EPRI). It is now owned by Ventyx, a large software, data, and advisory services provider to the energy, utilities, and communications industries. FE uses MIDAS to produce multi-year financial statements based on data and assumptions provided by its business units.

Cash forecasts are prepared annually from information generated from the annual budget process. The annual budget numbers are, in turn, allocated by month to produce a monthly cash forecast. Actual cash results as well as cash-flow forecast updates obtained from various business units are introduced every month to the forecast. These figures are used to explain variances from forecasted results and to ensure that the most current and accurate information is contained within the forecast. The monthly forecasts are used to establish a daily forecast of receipts and disbursements. Every day, cash operations performs a validity check of all receipts and disbursements against the daily forecast. Unreasonable differences are identified for further investigation. A cash forecast for each entity, including JCP&L, is generated from the corporate cash forecasts.

Cash Collections and Disbursements

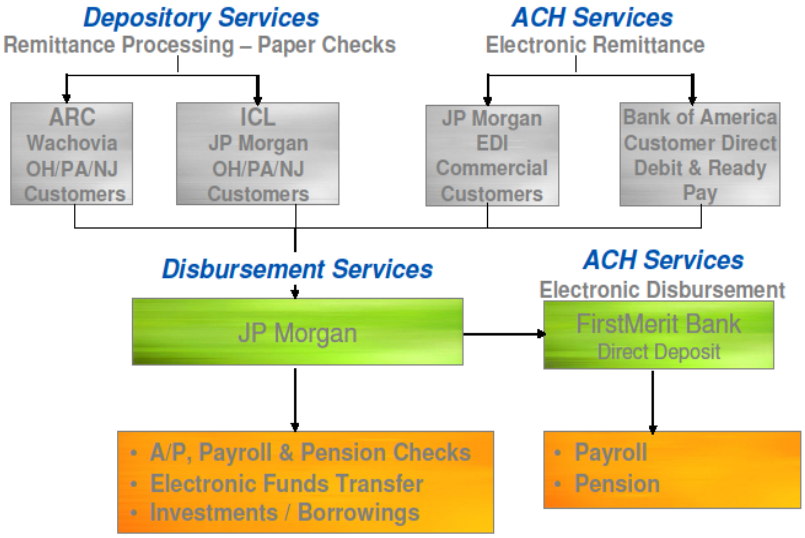
All cash collections and cash disbursements functions for JCP&L, along with the functions of the other FE utility companies, are consolidated by personnel in SERVECO departments.

Cash Receipts

The cash receipts function has been centralized for FE and its subsidiaries since the mid 1980s. General Public Utilities (GPU) also used a centralized remittance processing center at the time of the FE/GPU merger in 2001. The current central remittance center (CRC) has been in operation since 2004. During early 2008, a limited investigation of the concept of opening a New Jersey satellite remittance processing center was conducted with the aim of achieving accelerated remittance. It was determined that this concept was not economically advantageous.

Remittance volume is approximately 56% mail and 44% electronic. JCP&L also uses payment agents and has some walk-in payments. Deposits are made to the bank the same day they are received, and FE has next-day availability of funds (depending on from what banks the checks are drawn). For remittance processing of paper checks, data is sent to FE's banks electronically using the accounts receivable conversion (ARC) process or the image cash letter (ICL) or Check 21 process. Under this latter process, an image of the payment check is sent to the bank electronically. JCP&L's daily cash position is tracked on Excel spreadsheets, along with the other subsidiaries. For electronic payments, two banks are used as depositories of JCP&L customer payments. A graphic description of the cash and information flow for paper check and electronic remittances is show in *Exhibit VIII-10*.

Exhibit VIII-10
Cash Management Flow Diagram
as of June 30, 2010



Source: Information Response 99, Attachment 2

Remittance processing was the responsibility of the Customer Service Department until November 2008. At that time, ARC and ICL technology were implemented and it came under Treasury. Upon implementation of this technology in October 2009, the CRC went back under the control of the Customer Service Department. As of the time of our audit investigation, FE had determined that having the CRC under Customer Service rather than Treasury allowed greater flexibility for alternative or emergency uses of CRC staff.

Cash Disbursements

The SERVECO Accounts Payable Department, located in Johnstown, PA, handles all payables, including expense reports and invoices, for JCP&L, FE, and other affiliates. Invoices are sent to the department that is responsible for buying the service or product. This department is where source documents are faxed/scanned into SAP's accounts payable module using CommonStore, an IBM tool. If some vendors send their invoices directly to Accounts Payable, those invoices will be forwarded to the responsible department to initiate the payment process. Accounts Payable is also responsible for initiating electronic payments through the JPMorgan Order-to-Pay network.

The forms in which requests for payment can be received at Accounts Payable include:

- Electronic invoice presentment and payment (EIPP) transactions (with or without accompanying purchase orders)
- Service entry sheet transactions

- Evaluated receipt settlement (ERS) transactions (purchase order but no invoice)
- Paper invoices for product-related purchases
- Expense reports
- Check requests
- Recurring transactions (with or without accompanying purchase orders)
- Consignment transactions
- Purchase card (P-card) transactions
- Electronic data interchange (EDI)
- Ancillary systems – feeds from internal (payroll garnishments, worker's compensation, etc.) and external (telecommunications vendor invoices, freight/logistics, and contingent/temporary labor) systems

FirstEnergy's standard terms are 2% 10 days, net 45 days, although alternative terms can be negotiated. Payments are made daily. After reviewing a proposed payment report, the report is sent to Treasury at roughly 3:30 P.M. for review and approval. By 5:00 P.M. a check-processing run is completed. Payments can be made electronically or via paper the next day, with a date of one day later. Any checks requiring special handling are printed in Johnstown, PA and sent to the appropriate FE employee via intercompany mail. Any other paper checks are printed in Akron, OH and mailed. Any electronic payments are sent via EIPP (which is preferred, with no bank involvement by FE) or automated clearing house (ACH)/wire transfer (files sent to bank). The Accounts Payable function also supports Treasury in its escheats process approximately twice annually.

Payment approval levels by position type and dollar amount of transaction are shown in *Exhibit VIII-11*.

Exhibit VIII-11
Payment Approval Levels
as of December 31, 2009

Position	Approval Level
Executive Officers as listed in FE's 10-K	$10,000,000
Vice President	$1,000,000
Department Director	$500,000
Department Manager	$50,000
Department Supervisor	$10,000

Source: Information Response 103

Banking

JCP&L does not maintain its own bank accounts. JCP&L and its affiliates participate in a centralized cash management function within the SERVECO organization. All receipts and disbursements for FE and its subsidiaries flow through SERVECO bank accounts. JCP&L's receipts and disbursements as well as its bank accounts are comingled along with the receipts/disbursements and bank balances of other FE companies. The cash balances of each participant FE utility, however, are tracked and accounted for separately to ensure that each company's cash is used only for its own purposes or in accordance with the terms of the FirstEnergy Intersystem Utility Money Pool (Utility Money Pool), which is discussed in the next section of this chapter. Bank account balances are monitored daily using banking systems and electronic bank statement imports into SAP, FE's integrated enterprise resource planning (ERP) system. JCP&L and the other participants use four banks for cash receipt and disbursement functions. These banks are:

- *JP Morgan Chase* – main concentration and disbursement bank as well as depository for a portion of JCP&L customer receipts
- *Bank of America* – depository for JCP&L customer payments received from preauthorized direct debit
- *Wachovia/Wells Fargo* – depository for JCP&L customer check payments received at remittance that are ARC (accounts receivable conversion) eligible
- *FirstMerit* – ACH disbursement (payroll direct deposit)

JCP&L has maintained a relatively small balance in cash and temporary investments on its books over the past five years. The balance of cash and cash equivalents reported by JCP&L on its Form 10-Qs and 10-Ks for the period spanning 2005 through 2009 are shown in *Exhibit VIII-12*.

Exhibit VIII-12
Cash and Cash Equivalents
2005 to 2009

Balance at	2009	2008	2007	2006	2005
1st Quarter	$4,213	$39,900	$46,486	$102,901	$40,900
2nd Quarter	$138,131	$232,001	$87,150	$94,650	$411,586
3rd Quarter	$931	$37,900	$76,530	$58,229	$571,299
4th Quarter	$26,875	$66,209	$93,858	$40,900	$102,284

Source: Information Response 98

Money Pool

SERVECO administers a Utility Money Pool, in which JCP&L is an authorized participant, and tracks all the daily receipt and disbursement activity for each of the pool participants. The Utility Money Pool is set up to coordinate and provide for short-term cash and working capital requirements for the companies that participate in it. It allows companies to lend or borrow, on a short-term basis, from the money pool based on corporate-specific fund availability. FirstEnergy does not use commercial paper but maintains a $2.75 billion revolving credit facility as well as four utility-operating corporate-receivable financing facilities, all of which are available sources of liquidity to the Utility Money Pool.

Twenty-six banks participate in the revolving credit facility, with Citibank serving as the administrator. Usually, participants will have drawn down less than 50% of the available funds at any one time. The month of June is typically the peak demand for funds. The interest rate charged is the one-month London Interbank Offered Rate (LIBOR) plus 42.5 basis points. JCP&L's borrowing limit from the facility is $425 million.

The money pool is designed to provide participating companies with the least expensive source of short-term borrowing and with a secure and easily accessible investment vehicle. The money pool provides cost savings by using available internal funds prior to obtaining outside funds through a more costly external source. External short-term investments made on behalf of the Utility Money Pool or by any individual company within the Utility Money Pool follow FE's short-term investment policy.

On December 17, 2009, JCP&L was granted an extension of time by the New Jersey Board of Public Utilities (NJBPU) through December 31, 2011 to participate in the Utility Money Pool. By means of previous orders, the NJBPU had allowed JCP&L to participate in this money pool through December 31, 2009. Provisions of this latest order stated that JCP&L:

- Cannot borrow money from a bank or issue commercial paper to lend to the money pool
- Cannot borrow from the money pool if it could obtain funds at lower cost from a bank or by issuing commercial paper
- Require that its Chief Financial Officer or Treasurer, or designee, make money pool–related short-term financing decisions based on the best interest of JCP&L's ratepayers
- Can deposit in the money pool only funds that it would have available for investment in short-term money markets or other short-term investments
- Cannot borrow any sum from the money pool for a period longer than 364 days
- Cannot have its borrowing exceed the limitation on unsecured indebtedness that had been contained in its certification of incorporation (Basically, it cannot change JCP&L's money pool borrowing limitation.)

- Must file quarterly comparative statements with the NJBPU indicting the interest rate imposed for borrowing/investing with the money pool and the prevailing market rate at the time for similarly situated utilities
- Must comply with the requirements of New Jersey Administrative Code (N.J.A.C.) 14:4-4A.7 (f), (g), and (h) and the provisions of all other applicable statutes, regulations, and orders. In addition to the provisions listed above, this code mandates that:
  - The Board of Directors approves the money pool participation.
  - Participation in the money pool is restricted to:
    - the public utility holding company
    - other electric or gas public utilities within the public utility holding company system
    - subsidiary companies providing electric or gas utility service outside of New Jersey that are certified or classified as electric or gas utilities by the public utility commission of the state where service is provided
    - any other subsidiary in the public utility holding company system;
  - A subsidiary company in the public utility holding company system that is not a public utility or an out-of-state utility is prohibited from borrowing from the money pool.
  - All borrowers in the money pool have, at a minimum, investment-grade credit ratings from all applicable nationally recognized statistical rating organizations (NRSROs).
  - The fees for administering the money pool must be cost-based and subject to review by the Board for ratemaking purposes.
  - All money pool transactions must be recorded in a separate general ledger account within the electric or gas public utility's books of account on an aggregate monthly basis.

JCP&L was a net borrower from the Utility Money Pool in 2008, but for 2009 and the first half of 2010, it has lent money to the Utility Money Pool for more months than it has borrowed. The average month-end amount borrowed in 2008, when every month was negative (i.e., JCP&L was a borrower), was approximately $137 million. In 2009, when the month-end balance for only four months was negative, the average monthly investment was approximately $42 million. This trend has continued through the first six months of 2010, with JCP&L being an investor for four months and a borrower for two months. During this timeframe, an average month-end investment in the Utility Money Pool of approximately $33 million has been recorded. The Utility Money Pool monthly balances outstanding for the 30 months ending June 30, 2010, including interest rates used either for money borrowed or lent (invested), are shown in *Exhibit VIII-13*.

Exhibit VIII-13
Utility Money Pool Monthly Balances Outstanding
January 31, 2008 to June 30, 2010

Date	Interest Rate	Ohio Edison	Toledo Edison	Pennsylvania Electric	Pennsylvania Power	Metropolitan Edison	Jersey Central Power & Light	American Transmission Systems, Inc.	The Illuminating Co.
1/31/2008	4.3211%	430,193,881.00	(70,585,418.31)	(204,228,917.00)	97,120,000.00	(178,212,304.00)	(78,805,155.00)	17,934,219.00	(291,938,349.62)
2/29/2008	3.3931%	428,900,636.86	(56,172,259.00)	(195,032,992.74)	89,629,361.48	(186,894,763.05)	(48,806,423.74)	16,159,839.89	(265,227,433.19)
3/31/2008	3.1441%	433,191,158.27	(52,820,396.63)	(183,102,670.88)	77,462,339.01	(167,069,785.28)	(82,379,713.15)	17,882,302.30	(245,270,223.73)
4/30/2008	3.0097%	453,272,043.51	(38,780,975.04)	(196,184,912.45)	81,642,677.09	(157,900,946.02)	(2,399,784.12)	(5,336,870.28)	(248,780,970.04)
5/31/2008	2.8133%	325,955,222.92	(44,366,279.77)	(177,248,848.80)	60,967,691.22	(98,357,624.57)	(187,451,914.23)	(23,548,879.97)	(214,452,724.53)
6/30/2008	2.7676%	387,551,124.62	(34,954,271.96)	(211,772,785.65)	64,172,329.81	(107,812,384.36)	(294,739,143.90)	(34,283,577.62)	(256,745,827.13)
7/31/2008	2.7845%	340,497,752.62	(74,072,151.64)	(184,189,226.40)	57,765,742.38	(108,889,704.32)	(276,622,204.15)	(31,806,563.27)	14,278,599.02
8/31/2008	2.7719%	381,198,801.17	(48,979,277.19)	(163,624,528.37)	69,571,285.21	(102,342,637.05)	(224,191,615.50)	(18,769,932.20)	(172,278,581.59)
9/30/2008	3.1664%	271,019,288.30	(95,203,394.01)	(30,482,978.16)	71,064,463.74	(65,285,582.34)	(142,616,922.42)	(5,126,148.64)	(261,261,133.67)
10/31/2008	3.7159%	410,576,421.83	(53,898,885.59)	(20,058,042.03)	76,761,684.66	(54,047,097.60)	(88,887,301.80)	7,179,020.73	(391,591,064.17)
11/30/2008	1.8448%	43,266,825.97	(70,343,140.35)	(22,233,386.97)	74,556,079.83	(43,389,596.83)	(99,907,768.80)	12,158,604.62	(94,284,560.12)
12/31/2008	1.4559%	134,349,725.56	(111,241,978.04)	(31,402,598.30)	68,214,974.76	(15,003,369.27)	(121,379,954.27)	15,022,046.69	(121,395,104.97)
1/31/2009	1.0969%	(139,935,542.84)	(267,450,120.29)	(18,249,442.21)	74,598,326.27	299,390,470.08	201,990,008.43	10,431,521.74	(253,147,493.11)
2/28/2009	0.9674%	(219,786,959.85)	(121,329,448.37)	(33,149,517.16)	74,152,803.13	276,003,810.67	73,117,938.03	9,332,069.83	(159,173,228.52)
3/31/2009	0.8571%	(79,809,621.09)	(107,264,804.29)	(112,034,759.18)	55,449,421.30	218,470,385.49	74,062,699.59	17,147,549.18	(114,523,642.15)
4/30/2009	0.7725%	(140,232,553.08)	61,526,778.52	(191,497,556.39)	75,165,336.04	228,629,874.72	81,158,820.22	22,646,119.99	(74,140,483.00)
5/31/2009	0.7440%	26,837,999.51	(53,514,991.38)	(179,028,411.53)	94,604,563.10	252,808,839.78	(76,923,939.58)	30,497,465.43	(113,246,135.98)
6/30/2009	0.6964%	(114,770,900.49)	(171,179,676.00)	(178,056,442.87)	150,136,210.93	306,179,982.98	(65,113,428.24)	25,991,028.85	(167,606,006.46)
7/31/2009	0.5912%	(248,037,488.86)	(181,094,671.99)	(174,748,688.62)	83,185,115.74	324,624,245.81	(28,073,260.21)	23,614,813.53	(98,854,248.40)
8/31/2009	0.6013%	(59,233,437.57)	(45,271,036.55)	(163,150,703.74)	85,902,732.47	105,726,463.53	35,918,094.74	32,602,943.28	(69,794,952.55)
9/30/2009	0.6741%	(75,001,720.94)	(9,672,868.32)	(41,631,966.33)	68,812,220.71	6,646,335.00	(6,614,019.04)	24,409,350.83	(37,423,161.45)
10/31/2009	0.6726%	(84,417,500.03)	(80,358,097.68)	(36,127,237.19)	70,035,743.87	37,387,438.24	64,920,277.47	28,483,763.21	(87,936,158.08)
11/30/2009	0.5593%	(116,941,128.42)	3,705,977.95	(74,139,741.44)	70,600,855.98	55,395,756.63	59,191,867.42	28,424,350.39	(112,234,374.91)
12/31/2010	0.4586%	(92,863,337.21)	(225,975,107.79)	(41,473,156.29)	101,067,991.29	85,954,854.34	86,807,651.60	195,274,104.86	(257,897,941.06)
1/31/2010	0.4845%	(117,474,573.30)	42,480,178.53	(48,458,819.52)	19,092,333.34	70,543,599.76	122,811,723.44	(5,254,121.56)	(181,001,824.75)
2/28/2010	0.4957%	(26,822,471.98)	61,422,723.86	(40,525,862.45)	28,302,764.62	55,612,856.34	19,103,104.21	6,967,837.82	(248,690,680.18)
3/31/2010	0.4758%	46,027,334.75	36,868,742.48	(92,806,806.50)	35,679,013.88	(48,792,567.52)	93,200,942.23	23,303,695.78	(158,123,873.79)
4/30/2010	0.4567%	39,543,430.52	36,770,765.62	(109,276,354.28)	10,615,310.72	(36,766,289.70)	83,548,223.90	4,639,012.09	(165,978,539.89)
5/31/2010	0.5727%	47,501,427.99	37,896,896.97	(77,895,543.91)	26,877,031.94	(6,448,846.28)	(61,917,493.07)	52,020,144.85	(178,184,996.77)
6/30/2010	0.5797%	43,810,123.06	15,502,034.42	(66,785,842.13)	45,601,624.98	(17,898,125.71)	(57,849,848.60)	29,436,047.40	(148,809,689.83)

Source: Information Response 472

Financial Performance Measurements

JCP&L's financial performance, as measured using standard financial ratios, is shown in *Exhibit VIII-14*.

Exhibit VIII-14
Financial Performance Measurements
2005 to 2009

Measurement	Years Ended December 31					% Change
	2005	2006	2007	2008	2009	
Current Ratio	0.38	0.60	0.92	0.81	1.32	247.4%
Debt-Equity Ratio	0.37	0.43	0.53	0.57	0.70	89.2%
Interest Coverage Ratio	4.89	5.00	4.42	4.36	3.39	–30.7%
Earnings-to-Fixed-Charge Ratio	4.44	4.28	3.91	3.91	3.18	–28.4%
Operating Margin	14.92%	15.13%	12.94%	12.51%	13.04%	–12.6%
Net Profit Margin	7.03%	7.15%	5.74%	5.39%	5.70%	–18.9%
Return on Assets	2.41%	2.55%	2.63%	2.81%	2.63%	9.1%
Return on Equity	5.73%	5.84%	6.03%	6.35%	6.55%	14.3%
Revenue per Employee	$1,838	$1,842	$2,189	$2,362	$2,090	13.7%

Source: Information Response 86

The *Current Ratio* is a liquidity ratio indicating the number of times current assets will pay off current liabilities. It is calculated by dividing current assets by current liabilities. The *Debt-Equity Ratio* measures a company's financial leverage and is calculated by dividing long-term debt and other long-term obligations by stockholder's equity. The *Interest Coverage Ratio* focuses on the number of times interest expense is covered by operating profits. It is calculated by dividing earnings before interest and taxes (EBIT) by interest expense. The *Earnings-to-Fixed-Charge Ratio* is a broader measurement of debt-paying ability. It is calculated by dividing earnings by fixed charges (both as defined in Regulation S-K and as prescribed by the Securities and Exchange Commission (SEC)). *Operating Margin* is a measurement of a company's gross operating profitability. It is calculated by dividing operating income by revenues. *Net Profit Margin* is an indication of how effective a company is at cost control. It is calculated by dividing net income by revenues. *Return on Assets* is a measure of a company's profitability. It is calculated by dividing net income by total assets. *Return on Equity* measures how well a company is using investors' capital to produce profits. It is calculated by dividing 12-month earnings on common stock by the average of 13 months of stockholder's equity. *Revenue per Employee* is a measurement of management efficiency. It is calculated by dividing revenues by the number of employees. The relevance to JCP&L of these performance measurements over this five-year period are discussed in *Finding VIII-9*.

Write-Offs

JCP&L experienced no write-offs of assets in the five years ended December 31, 2009. There were, however, some write-offs of consumer receivables. The net write-offs of consumer accounts for the five-year period ending December 31, 2009 for JCP&L compared to its utility affiliates are shown in *Exhibit VIII-15*.

Exhibit VIII-15
Net Write-Offs of Customer Accounts
(Thousands of Dollars)
2005 to 2009

	2005	2006	2007	2008	2009	% Change
JCP&L	6,693	5,045	8,524	10,961	11,627	73.7%
Cleveland Electric	8,477	8,220	11,302	8,988	9,703	14.5%
Met-Ed	8,959	7,269	9,835	9,770	9,204	2.7%
Ohio Edison	13,433	13,158	15,115	33,747	14,443	7.5%
Penelec	9,069	6,855	8,247	8,494	7,012	–22.7%
Penn Power	2,726	2,097	2,688	2,893	2,808	3.0%
Toledo Edison	3,829	5,072	6,289	5,325	7,791	103.5%
Total	**53,186**	**47,716**	**62,000**	**80,178**	**62,588**	**17.7%**

Source: Information Response 105

Reasons given by FE management for the significant increase in JCP&L's write-offs of customer accounts over the past five years, as compared to most of the other FE utility companies, included the increase in JCP&L revenue during this period as well as the overall decline in economic activity in New Jersey as compared to Ohio and Pennsylvania. Changes in amounts of write-offs of accounts can generally be correlated to changes in revenue. Over this five-year period, from 2005 through 2009, JCP&L's revenue increased by over 23%, which should account for a relatively similar increase in write-off amounts. However, also during this period, the unemployment rate of New Jersey increased by 104% compared to 76% for Ohio and 62% for Pennsylvania, and the number of bankruptcy filings in New Jersey increased by 155.8% compared to 99.5% for Ohio and 52.8% for Pennsylvania. Both of these measurements indicate the relative adverse differences between the economy of New Jersey and that of Ohio and Pennsylvania, which would be reflected in differences in the change in write-off amounts among these states. JCP&L's net write-offs as a percent of revenues for this five-year period were lower than the Ohio operating companies (Cleveland Illuminating Company, Ohio Edison, and Toledo Edison), the Pennsylvania operating companies (Penn Power, Met-Ed, and Penelec), and the average of all FirstEnergy utility companies.

Cost of Capital

JCP&L's cost of capitalization (cost of capital) is calculated each quarter based on the weighted-average cost of long-term debt and preferred stock and the cost of equity. The cost of equity is the return on equity (ROE), which is calculated by dividing 12 months of earnings on common stock by the average of 13 months of stockholder's equity. JCP&L's cost of capital for each quarter for the past five years is shown in *Exhibit VIII-16*.

Exhibit VIII-16
Weighted Average Cost of Capital
2005 to 2009

Quarters Ended	Years					% Change 2005–2009
	2005	2006	2007	2008	2009	
March 31	4.30%	6.28%	6.02%	5.94%	6.25%	45.3%
June 30	4.66%	5.97%	6.18%	5.85%	6.27%	34.5%
September 30	5.18%	5.97%	6.21%	5.88%	6.08%	17.4%
December 31	5.83%	5.91%	5.98%	6.18%	6.38%	9.4%

Source: Information Response 97

The relationship between the balance amounts of long-term debt and equity at JCP&L that were used to calculate the weighted-average cost of capital at the end of each quarter is shown in *Exhibit VIII-17*.

Exhibit VIII-17
Long-Term Debt and Equity Percentages
2005 to 2009

	2005		2006		2007		2008		2009	
Quarter Ended	% Debt	% Equity	% Debt	% Equity	% Debt	% Equity	% Debt	% Equity	% Debt	% Equity
March 31	28.4	71.6	26.7	73.3	29.7	70.3	34.7	65.3	42.1	57.9
June 30	27.1	72.9	27.2	72.8	34.2	68.8	35.1	64.9	41.8	58.2
September 30	26.8	73.2	29.7	70.3	34.6	65.4	34.6	65.4	41.4	58.6
December 31	26.8	73.2	30.0	70.0	34.5	65.5	36.4	63.6	41.3	58.7

Source: Information Response 97

Findings & Conclusions

Finding VIII-5 Cash management methodologies are efficient and adequately safeguard JCP&L's assets.

The centralized cash functions performed for JCP&L and its affiliates provide an effective and efficient way to manage cash. At the same time, they provide transparency of activities and segregation of entity cash balances. Cash forecasts are automated and integrated into JCP&L's financial forecasting, budgeting, and cash management functions. Remittance processing is performed in an efficient manner, and cash collections are deposited in financial institutions in a minimum timeframe. JCP&L generally has access to its cash funds within one day of receipt of payments. The consolidation of the remittance processing function into a single center is cost-effective and allows for maximum efficiency of operation.

Finding VIII-6 FirstEnergy's centralized money pool arrangement provides JCP&L with an effective method of managing cash resources on a short-term basis.

By participating in a centralized money pool with other FE subsidiaries, JCP&L is able to borrow or lend money in a cost-effective manner. The contractual arrangement that governs JCP&L's participation in this centralized money pool provides safeguards to protect JCP&L's assets. It also ensures both the least cost in borrowing funds and a competitive rate for investing funds. JCP&L receives the same rate other FE subsidiaries receive in borrowing or investing on a monthly basis. Quarterly reports are sent to the NJBPU. They provide information on interest rates imposed for borrowing or investing funds compared to the prevailing market rates at the time. JCP&L is in compliance with all provisions of the NJBPU Board Order concerning its Money Pool participation.

Finding VIII-7 Approval for JCP&L's participation in the Utility Money Pool expires at the end of 2011.

On December 17, 2009, the New Jersey Board of Public Utilities (NJBPU) granted JCP&L an extension of time to participate in the Utility Money Pool. This extension expires December 31, 2011. This was the latest of several extensions of approval that have been granted by the Board. Without Board approval, JCP&L will have to drop out of the Utility Money Pool and utilize other, possibly more expensive, means of fulfilling short-term financing requirements.

Finding VIII-8 Cash disbursements are managed in an efficient, cost-effective manner.

FirstEnergy's Accounts Payable Department handles the accounts payable and cash disbursements functions for JCP&L and all the other FE subsidiaries in a consolidated operation. The accounts payable function is automated using SAP's accounts payable module and a number of automated payable and disbursement systems. Invoices are received in a variety of ways and are automated as much as possible. The review, approval, and disbursement functions are likewise automated and

operate efficiently. The consolidation of these functions for all of FE's subsidiaries helps to ensure that they are performed in a cost-effective manner.

Finding VIII-9 JCP&L's financial performance measurements reflect a general improvement in financial condition.

Most of JCP&L's profitability measurements (return on assets, return on equity, and revenue per employee) have shown steady increases over the past five years. Other profitability measurements (operating margin and net profit margin) have shown increases since the low economic point of the latest recession (2007–2008). The current ratio, a liquidity measurement, has also shown improvement over the past five years. The only negative effects showed up on the debt coverage ratios, which indicate an increase in debt over this same time period. Overall, however, JCP&L's financial condition has generally improved over the past five years. The decrease in JCP&L's net income (8.4%) is explained primarily by the decrease in revenues (7.7%). The use of JCP&L's income by JCP&L or FE (through dividend payments) does not seem to be a factor that influences the financial performance measurements.

Finding VIII-10 Write-offs did not have a material adverse effect on JCP&L.

JCP&L did not experience any write-offs (other than customer accounts) in the past five years. The effect of write-offs experienced by JCP&L's affiliate utility companies was limited to their operations. Although JCP&L's customer account write-offs did increase significantly (75%) in the past five years, in 2009, they still amount to less than one-half of 1% of electric sales revenues. JCP&L's cash flow was not materially impacted by customer account write-offs.

Finding VIII-11 JCP&L's increased cost of capital over the past five years has not negatively affected its financial condition.

JCP&L's cost of capital calculations show a steady increase in the cost of capital from 2005 to the end of 2009. In 2005, JCP&L's cost of capital ranged from 4.32% in the first quarter to 5.83% by the end of the year. In 2009, its cost of capital ranged from a low of 6.08% to 6.38% by the end of the year. This increase is the direct result of an increase in JCP&L's return on equity, which is offset somewhat by a shifting of the capitalization relationship from equity to long-term debt. ROE is used as the cost of equity in JCP&L's cost-of-capital calculations. The increase in ROE is a positive measurement, generally indicating improved profitability and company management.

Recommendations

Recommendation VIII-2 Seek an extension of approval to participate in the Utility Money Pool. (Refer to Finding VIII-7)

Approval by the NJBPU for JCP&L to participate in FE's Utility Money Pool expires December 31, 2011. Participation in the Utility Money Pool has proven to be an efficient and cost effective means for JCP&L to satisfy its short-term funding requirements. The approval by the Board includes a number of provisions that safeguard the rate-payers from any negative possibilities. JCP&L should continue their involvement in the Utility Money Pool, and should petition the NJBPU for a multi-year extension of their approval to do so.

C. Accounting and Property Records

This section provides a review of the accounting and property records operations of Jersey Central Power & Light that impact its regulated utility operations in New Jersey. This focused review will include an evaluation of resources and processes used in the accounts payable, accounts receivable, and payroll functions. It will also assess work order procedures, the corporate accounting manual, and property records supporting JCP&L's operations. The tasks accomplished in this assessment include:

- An evaluation of the processing, recording, authorization, and accountability of the accounts payable function among all levels of affiliate management
- A review of the processes for receiving and securing accounts receivable
- A review of the independence, processing, and accountability of the payroll function, including the time and resources spent by employees on payroll
- An evaluation of the budget reporting, tracking, revision, and analysis performed
- An evaluation of work order procedures, the corporate accounting manual, and property records

Background & Perspective

This Background & Perspective section is divided into seven segments:

- Overview
- Accounts Payable
- Accounts Receivable
- Payroll Functions
- Budget Processes
- Property Accounting
- Internal Auditing

Overview

JCP&L's general accounting functions are conducted by FirstEnergy Service Company (SERVECO) Controller's Department employees. Accounting functions are performed by the Controller's Department within the following functional areas:

- General accounting services
- Property accounting services
- Accounts payable
- Financial reporting
- Accounting strategy and compliance

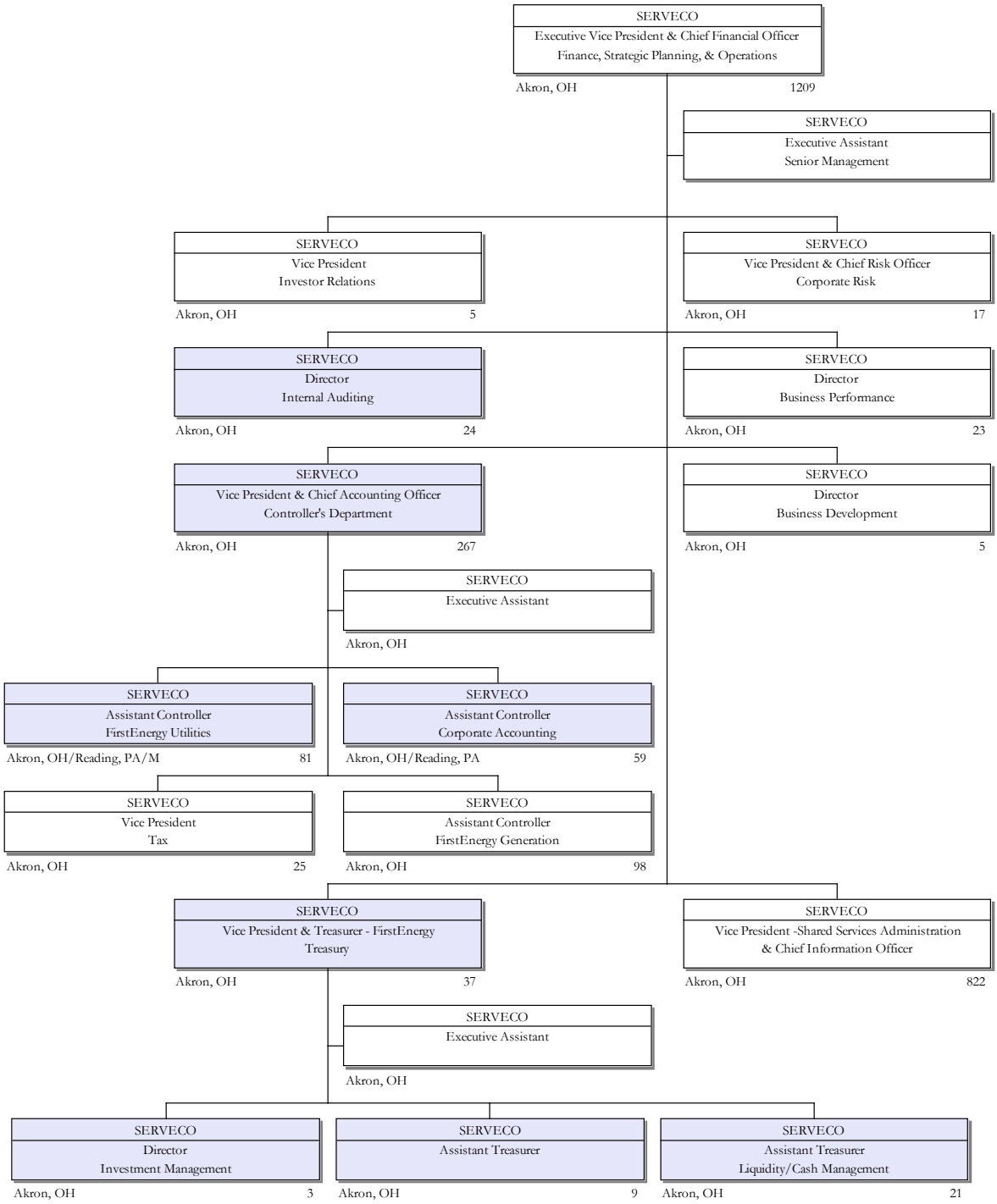
- Tax services
- Business services for FirstEnergy Generation
- Business services for FirstEnergy Utilities

Software systems used to support these functional areas include:

- SAP – an integrated enterprise resource planning (ERP) system
- PowerPlant – a fixed asset management system
- Contractor Verification System (CVS) – used for fossil and nuclear generation
- ABP (revenue manager, preprocessor, write-offs, operational data store (ODS), archiving)
- FuelWorx/Aligne – used for fuel accounting
- ZaiNet/Aligne – commodity sales
- Customer Request Work Scheduling System (CREWS) – transmission and distribution (T &D) work management system
- PowerOn – issues orders for outages
- JP Morgan Order-to-Pay Network – third-party electronic invoice presentment and payment
- IBM® CommonStore for SAP – used for archiving and viewing documents
- PowerTax – used to record monthly taxes

Decisions concerning the general accounting functions of accounts payable, accounts receivable, payroll, property accounting, and work order processing are managed by the Controller's Department, either in Johnstown, PA, Akron, OH, Reading, PA, or Morristown, NJ. These general accounting functions report up through the Vice President (VP) & Chief Accounting Officer (CAO), through the Executive Vice President (EVP) & Chief Financial Officer (CFO), to the President & Chief Executive Officer (CEO). The organizations that provide these functions are shown in *Exhibit VIII-18*.

Exhibit VIII-18
Finance Organizations
as of June 30, 2010



Source: Information Response 54 and Company Update

Other functions discussed in this chapter are handled by the cash remittance center (CRC) or the Human Resources (HR) Department.

Accounts Payable

The Accounts Payable Department is responsible for all accounts payable functions for FirstEnergy and its affiliates, including JCP&L. Invoices are normally routed through the originating department that is responsible for buying or authorizing the service or product acquired. The originating department is responsible for faxing all source documents to images into SAP's accounts payable module, using CommonStore, an IBM tool. If vendors mistakenly send invoices directly to Accounts Payable (A/P) that should be entered in the field, they will be forward to the originating department. In addition to invoices, Accounts Payable is also responsible for processing all electronic invoices and payments through JP Morgan Order-to-Pay Network.

Invoices are received at Accounts Payable in various formats, including:

- Electronic invoice presentment and payment (EIPP) transactions (with or without a purchase order) are received using JP Morgan's Order-to-Pay Network, which allows suppliers to pass invoices electronically to FE. If a service purchase order (PO) is associated, the invoice is passed automatically to the inbox of the person previously identified in the system on the PO. The SAP workflow allows for receipt and subsequent approval of the invoice. If no PO is associated, then the supplier is supposed to put the receiver's ID into the system for transfer to his or her inbox. In the event that no ID is input, the invoice is passed automatically to A/P's inbox for rerouting. As of June 30, 2010, FE had approximately 74,000 EIPP invoice transactions, or 17.5% of its total invoice transactions (and increasing). An EIPP transaction also results in electronic payment. Invoices not received via JP Morgan may also be paid electronically. Any time a vendor is paid electronically, that vendor has already received an e-mail notification two days prior that indicated payment was forthcoming. If an EIPP is used for product-related purchases, a three-way match (material receipt, PO, invoice) is performed.
- Service entry sheet transactions are paper invoices sent to field locations. They require a fax number for documents to be sent in, followed by workflow approvals through SAP.
- Evaluated receipt settlement (ERS) transactions (PO but no invoice from supplier) are product-related purchases that require a two-way match (material receipt and PO), whereas EIPP transactions that happen to be product-related purchases require a three-way match (material receipt, PO, invoice). FE buyers encourage use of ERS rather than EIPP for product-related purchases, although in a few cases, paper invoices, rather than EIPP or ERS, are used.
- Paper invoices for product-related purchases also require a three-way match. Approximately 5,600 paper invoices as of June 2010 YTD have been processed (1% to 2%) versus 122,000 for ERS transactions (29%).
- Expense reports (no PO/no invoice) use SAP's online reporting process in which employees input expenses online. Then, if receipts are required, a fax number for the trip is provided to

the employees. When the employee faxes the receipts, SAP automatically matches them to the trip. Workflow dictates that a transaction won't go to an employee's supervisor for approval until receipts have been attached. It is up to the employee's supervisor to confirm that receipts match what has been entered into SAP because A/P verifies receipts only for FE officers. Employees are typically reimbursed electronically. (The Internal Audit group audits employee expense reports every other year.)

- Check requests (no PO/no invoice) are used for such transactions as contribution to charitable organizations. If such organizations are not already set up as a vendor in SAP, the newly established vendor requires A/P review, including W-9 supplier verification.
- Recurring transactions (no PO) encompass such transactions such as Board of Directors' (BOD) fees or Power System Institute (PSI) stipends.
- Recurring transactions (PO) occur for items like medical services at plants.
- Consignment transactions refer to vendor storing items (like poles) at FE sites. When poles are used, invoicing occurs automatically.
- Purchasing card (P-Card) transactions (Treasury)
- Electronic Data Interchange (EDI) happens for only one vendor.
- Ancillary systems include automatic feeds from:
  - Internal FE systems
    - Payroll garnishments (HR)
    - Worker's compensation (HR)
    - Customer deposit refunds
    - Fleet leased vehicles
    - Forestry vegetation management system (VMS)
    - Real estate lease payments
    - Contractor verification system at plants, usually dealing with outages
  - External systems
    - Telecommunications vendor invoices (twice weekly)
    - Freight/logistics
    - Contingent/temporary labor

Invoice processing statistics for the Account Payable Department for the first six months of 2010 are shown in *Exhibit VIII-19*.

Exhibit VIII-19
FE Invoice Processing Statistics
as of June 30, 2010

2010							
	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	YEAR-TO-DATE TOTAL
Manual Invoices	1,024	873	1,128	836	862	932	5,655
On-Line Processing:							
Expense Reports	7,057	8,260	10,690	8,686	9,221	10,356	54,270
Check Requests	929	740	841	1,014	701	749	4,974
No-PO	3,395	3,152	4,045	5,672	5,129	3,386	24,779
Service Entry Sheets	6,407	5,917	7,230	7,228	7,488	7,590	41,860
On-Line Processing Total	17,788	18,069	22,806	22,600	22,539	22,081	125,883
Electronic Commerce:							
ERS (Automated)	15,635	18,545	25,011	22,009	20,621	20,176	121,997
Invoicing Plan	65	60	59	39	37	78	338
Other EDI (Power-On)	6,566	7,525	9,209	6,968	6,687	7,627	44,582
EIPP PO	9,429	10,922	12,544	13,094	14,275	11,238	71,502
EIPP No-PO	381	391	438	424	390	522	2,546
Human Resources (Third Party)	2,476	2,504	2,559	3,355	2,548	2,532	15,974
Customers	5,502	4,740	5,110	5,504	7,899	7,049	35,804
Electronic Commerce Total	40,054	44,687	54,930	51,393	52,457	49,222	292,743
Total Automated Invoices	57,842	62,756	77,736	73,993	74,996	71,303	418,626
Total Invoices	58,866	63,629	78,864	74,829	75,858	72,235	424,281
Manual Percentage	1.7%	1.4%	1.4%	1.1%	1.1%	1.3%	1.3%
On-Line Processing Percentage	30.2%	28.4%	28.9%	30.2%	29.7%	30.6%	29.7%
Electronic Commerce Percentage	68.0%	70.2%	69.7%	68.7%	69.2%	68.1%	69.0%
Employee Count	16	16	15	15	16	16	16
Average/Employee	3,679	3,977	5,258	4,989	4,741	4,515	27,159
EIPP Presentment:							
No-PO	381	391	438	424	390	522	2,546
PO	9,429	10,922	12,544	13,094	14,275	11,238	71,502
EIPP Presentment Total	9,810	11,313	12,982	13,518	14,665	11,760	74,048
EIPP Percentage	16.7%	17.8%	16.5%	18.1%	19.3%	16.3%	17.5%

Source: Information Response 503

This schedule indicates that 424,281 invoices were processed during the first six months of 2010, an average of 70,714 invoices per month, or 4,420 per Accounts Payable employee per month. Of these invoices, 1.3% were processed manually and 98.7% were processed automatically—either online (29.7%) or via some form of electronic commerce (69.0%).

Accounts Receivable

The central remittance center (CRC) is the initiation point for customer accounts receivable (A/R) functions. The CMC in Akron, OH processes customer remittances for JCP&L and all of the other FE utility and non-utility subsidiaries. It is one of the two largest remittance processing centers in the Akron area. The CRC has a three-hour battery backup that allows it to make a clean shutdown in the event of a power outage. Although the CRC does not have generator backup, it does have two power feeds from different substations. There has never been a power outage at the CRC longer than 1.5 hours.

In the event of a disaster at the CRC, remittance processing can be moved to suburban Charlotte, NC to run on Disaster Recovery Services (DRS) facilities, or remittance processing trucks can be brought to Akron. In either case, operations are supposed to be able to begin again within 48 hours. Testing of this process is performed annually, although the CRC has not had to use it in production. DRS has pledged not to serve another customer from the same geographic area as FE or, if it does, to have sufficient resources to serve both simultaneously.

The CRC was the responsibility of the Customer Service Department until November 2008, when it came under the control of the Treasury Department during the implementation of the accounts receivable conversion (ARC) and image cash letter (ICL) technologies. ARC allows the CRC to transmit personal (residential) checks and payment coupons to the bank electronically. ICL provides the means to electronically transmit an image of business checks and payment coupons to the bank. Upon implementation of this technology, responsibility for the CRC reverted to the Customer Service Department in October 2009, allowing for more flexible use of the CRC staff.

At the CRC, incoming mail is delivered via a courier service five times each evening (Monday through Friday) at 8:00 P.M., 10:00 P.M., midnight, 2:45 A.M., and 4:30 A.M. Incoming mail goes through a four-step process.

CRC First Step

Mail sorting equipment (OPEX Model 30) at the loading dock is used to sort "singles" (clean mail containing one document and one check, with no metal included, in a standard envelope and addressed to one of the utility companies processed at the CRC) from all other types of mail ("multiples"). Mail is sorted into four separate job categories: Ohio Edison (OE), Cleveland Electric Illuminating (CEI)/Toledo Edison (TE), FE Solutions (FES) (with the CRC essentially functioning as a lockbox), and Shared Services (SS) for all other mail.

Mail in these four categories is not commingled because of banking contractual requirements. Approximately 75% to 80% of all envelopes fall into the singles category. Any singles are processed using OPEX equipment. The OPEX Corporation manufactures high-speed mailroom automation and document imaging equipment. Any multiples are sent to a group that hand opens the mail, puts the documents into the proper order, and processes them using different equipment. OE, CEI/TE, and

companies in the SS category are charged for the CRC's services based on their number of customers (JCP&L has approximately 24% of all utility customers), while the CRC charges FES based on the number of pieces of mail processed.

Approximately 100,000 envelopes (on average) are processed each evening, with Mondays and Wednesdays being the highest-volume days and Tuesdays the lowest-volume. Hours for processing mail payments (operations) are primarily 8:00 P.M. to 6:00 A.M., with control group functions (balancing, electronic payments via website, clarification work list, and escheat functions (less than $5,000 annually)) handled during daytime hours. The CRC receives approximately $35,000 to $40,000 in cash payments each year. Next year, the CRC will likely need to upgrade its Type 30 OPEX sorter equipment to Type 40 to be able to handle the introduction of intelligent bar codes by the post office.

CRC Second Step

Singles mail is machine-processed further using OPEX Model 150 equipment (which can handle 30,000 pieces of mail per hour). During such processing, envelopes are ripped off and thrown away, any further multiples are removed, and singles are further segmented by the following categories for electronic deposit:

- ARC processing
- ICL processing
- Remittances that cannot be electronically deposited

In the last case, paper checks are sent via courier to the Treasury Department, which deposits these checks into the local Chase bank. Virtually all of FE's deposits are processed electronically. Typically, the only deposits that cannot be made electronically are foreign and unreadable checks.

In 1999, FE began a process of "read and keep" imaging of documents. Approximately 70% of all payments are from residential customers, and 30% of payments are from business customers. These percentages are reversed, however, when measuring the dollar amount of payments, with roughly 70% of the value of payments coming from business accounts and 30% of the value of payments coming from residential customers.

CRC Third Step

After all data, such as images of documents and checks, scan lines, and magnetic ink character recognition (MICR) codes, has been captured, the clarification work list is examined and any problems are addressed before a batch can be processed for deposit and customer account application. This step includes making all necessary corrections to amount entry, implementing scan line fixes, and ensuring that batches are balanced. Usually, more than 80% of all items processed are considered "kills" (the payment amount received equals the payment coupon amount) and do not require this step.

CRC Fourth Step

Files (by job/batch/sequence) are then sent to FE's servers (located in a secure location within the CRC facility), where additional files are created to send to banks for check deposit data and to the customer service system for application of payments to customer accounts. Documents are kept for two days and checks for five days before being destroyed. Paper checks not yet destroyed are kept under lock and key at the CRC. An outside bonded vendor comes to the CRC twice a week to remove and destroy all checks and payment documents.

Payroll Functions

Payroll functions for JCP&L, as well as for all other FE subsidiaries, are the responsibility of the SERVECO Human Resources Department. This functional area is managed by the Employee Compensation, Human Resources Information System (HRIS), & Payroll Department and reports up through the Director, Compensation, Retirement Programs, & Succession Planning to the Senior Vice President (SVP), Human Resources.

SERVECO and affiliate companies use SAP's Human Resources module as part of the SAP-integrated ERP or financial system. This approach ensures that: 1) transactions between affiliates are recorded in separate books and records; 2) intercompany transactions and related billings are structured so that non-regulated activities are not subsidized by regulated affiliates; and 3) adequate audit trails exist on the books and records.

Additional HR systems or modules used are:

- *Cross Application Time Sheet* (CATS) – an SAP module that is used to maintain time
- *Customer Request Work Scheduling System* (CREWS) – a work management system used by Energy Delivery that feeds time data to CATS
- *FieldNet* – a work management system used by Meter Services that also feeds time data to CATS

These systems provide the technical means for FE to process the payrolls of SERVECO and its affiliates, including JCP&L; to capture time and accounting distribution; to file federal, state, and local payroll tax returns; to maintain employee payroll records; and to generate checks, direct deposit statements, and employee W-2 forms. These systems, modules, and processes interface with FE's inter-company billing, accounts payable, and general ledger processes and systems.

Time Entry

All employees are required to complete a timesheet, recording hours worked and accounting codes for time charges. Time recorded in the SAP HR/Payroll process is stored in CATS. Time is entered for hourly, non-exempt, and part-time employees in the appropriate timesheet system (CATS, CREWS, or FieldNet) or is recorded on a paper timesheet and then input to one of these systems by a timekeeper.

Employee time is reviewed by the timekeeper/time coordinator for appropriate hours and accounting charges. Time is transferred from CREWS and FieldNet to CATS.

Time for exempt, salaried, full-time employees is also entered in the appropriate timesheet system (CATS, CREWS, FieldNet) or is recorded on a paper timesheet and then input to one of these systems by a timekeeper. If one of these employees is unavailable, a timekeeper/time coordinator has the authority to enter a timesheet for that worker. Even if no timesheet is entered, such an employee will receive his or her biweekly salary; however, he or she will have to enter a timesheet for cost distribution of that period's time in a subsequent period as a prior-period correction.

Time is transferred from CATS to the SAP HR module, thereby updating each employee's quotas for hours taken for vacation, personal absences, sick days, etc. The Time Evaluation function is executed to evaluate the time transferred from CATS to the HR module as a means of creating payroll wage types for processing. Time data is transferred to SAP modules: controlling (CO); plant maintenance (PM), which updates service orders; and project system (PS).

Payroll Transaction Processing

This function is composed of two SAP processes (gross payroll processing and net payroll processing) and uses time-reporting data to process payroll and distribute costs. The consolidation and starting point for the payroll calculation process is gross payroll processing, which derives applicable gross balance data from master data and the time input/evaluation process. It is followed by net payroll processing, which is the output phase of the payroll operation.

The net payroll processing component processes deductions, taxes, and benefits for employees during a payroll run. The processing is based on wage types entered in the SAP HR master data as well as wage types that are calculated in the gross payroll processing component. A results cluster containing wage types and amounts for all employees in a payroll run is generated and serves as the basis for all output from the payroll system. This output is used to drive subsequent payroll processes, such as disbursement (checks and direct deposits), third-party remittances, statutory reporting, and posting of results to the accounting component.

At the completion of each weekly or biweekly payroll process, a report of each employee's time charges is sent to his or her supervisor via Lotus Notes e-mail and the SAP workflow inbox. Supervisory personnel are required to review and approve time and accounting information that is entered into SAP for their employees. Corrections for missing and/or incorrect time charges will appear in a subsequent time approval report as a prior-period correction for review and approval.

Budget Processes

JCP&L's budget processes for both operating and capital budgets are managed on a consolidated basis by several financial departments in the Controller's and Treasury Departments that report to FE's Executive Vice President (EVP) and Chief Financial Officer (CFO). At FirstEnergy, these processes are referred to as the integrated business planning (IBP) process.

Operating Budget

Development of the business plan and operating budget starts in early spring, and planning assumptions are distributed to all of the budget units in late summer. From an executive retreat in the summer come perceived corporate needs and strategies to achieve or address these needs. These needs and strategies are addressed in the business plan and operating budget. The budget process is usually completed by the end of the calendar year and occasionally by January of the budget year. The business plan has been either a three- or five-year plan. Lately, it has been a three-year plan. The first year of the business plan will become the operating budget. The budget data developed is entered in SAP's budget module. The time required to input the entire budget data is approximately five days, with three days required for revisions to the budget.

The corporate budget calendar for both the operating and capital budgets developed by FE governs the timing of the budget processes for all of subsidiaries, including JCP&L and its budget units. The draft 2010 business planning calendar is shown in *Exhibit VIII-20*.

Exhibit VIII-20
Draft 2010 Business Planning Calendar
As of June 30, 2010

Business units complete draft business plan write-ups.	July 31
Executive leadership reviews five-year enterprise capital.	Aug 3 & 6
Draft business plans including financials and capital plans approved and signed by business unit (BU) leadership.	Aug 7
Business unit leaders review plans with FE's President and CEO.	Aug 10–Sept 4
Approve business plans including financials and capital plans.	by Sept 8
Business units enter detailed 2010 budget financial data in conformance with approved assumptions (including capital) and business plans.	Aug 17–Sept 14
IBP Department conducts 2010 budget close and processing.	Sept 21–25
IBP publishes forecast to the Operational Leadership Council (OLC) and other business unit leadership as appropriate for review, adjustment if needed, and approval.	Oct 6
Executive Council and OLC review budget and forecast at financial performance review (FPR) meeting	Oct 21

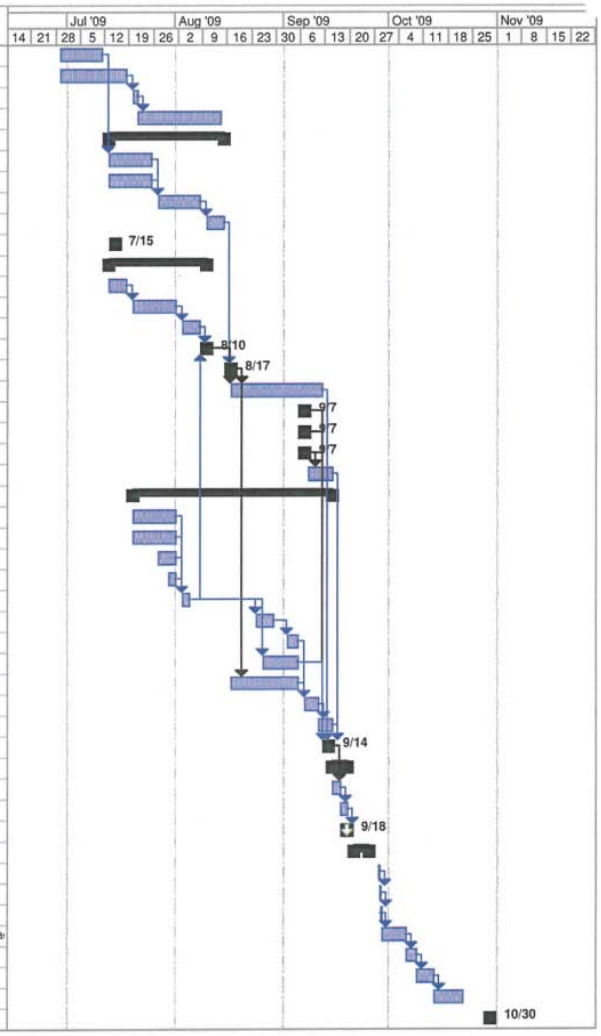
Dates are tentative based on IBP management review and the Capital Management Group (CMG) finalization.

Source: Information Response 117

Budget guidelines providing instructions on preparing the budget and assumptions to be used are distributed to all budget units. They help provide for consistency of input throughout the FE corporate structure. In addition to assumptions, these guidelines provide definitions and accounts to be included in budgeting for all types of labor, overhead, and various other-than-labor (OTL) expense accounts. Guidelines are included for both the operating and capital budgets. A typical budget time schedule is shown in *Exhibit VIII-21*.

Exhibit VIII-21
Typical Budget Schedule
as of June 30, 2010

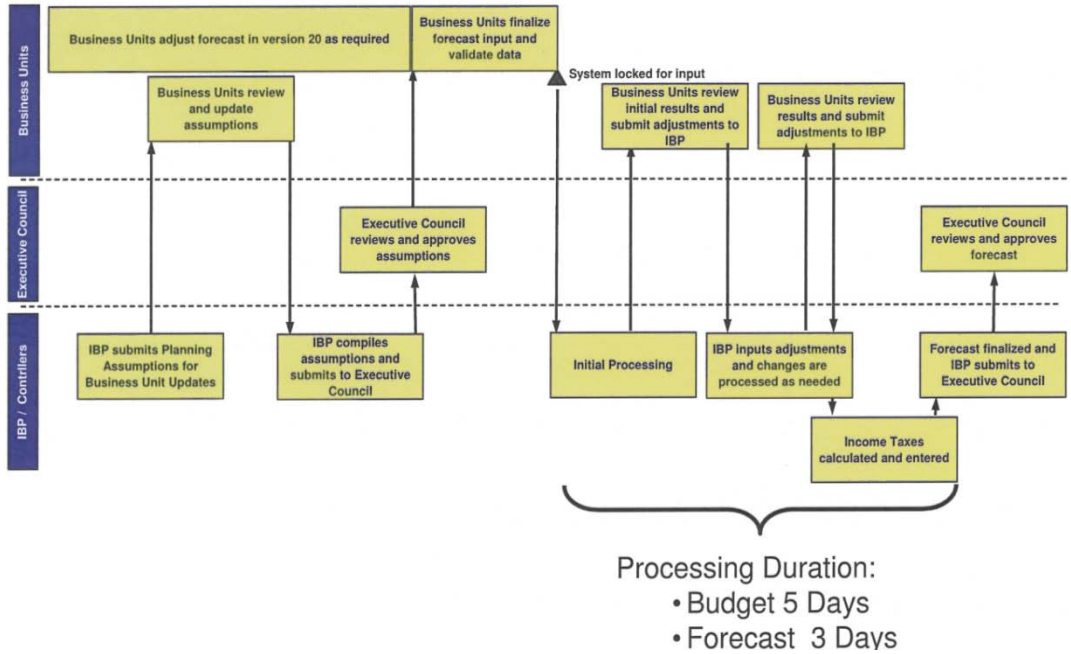
ID	Task Name
1	IBP sends Budget Guidelines to various business units for updates
2	IBP drafts 2009 Budget Guidelines & Training materials
3	IBP issues Budget Guidelines to business Units
4	IBP offers Budget Training in SAP
5	**Development of Activity Prices**
6	IBP request payroll data from HR for activity price development
7	HR Provides Preliminary Benefit Info for Activity Price Calc
8	IBP develops 2010 activity prices
9	IBP has 2009 activity prices uploaded into SAP
10	IBP Publishes Budgeting Timeline
11	**2010 Budget Assumptions**
12	IBP Distributes Existing Budget Assumptions to Business Units for Updated
13	Business Units Review and Updated Budget Assumptions
14	Executive Review and Approval of Budget Assumptions
15	Budget Assumptions Approved
16	Budget Input Begins
17	Business units enter budget in conformance with approved assumptions (including capital)
18	Business Units input gross payroll and headcount
19	Business Units input HR Benefits
20	Business Units Provide InterCo Transactions to Gen'l Acctg / IBP
21	InterCo Transactions Entered
22	**Develop Load/Revenue and Deferral Forecast**
23	Develop Load Forecast, place on Filenet and Communicate
24	Determine Shopping Assumptions
25	Determine Power Costs
26	Rates Identifes Riders/Deferrals to be included in the Budget
27	Executive Mgmt Approval of Load and Shopping Assumptions
28	Tariffs Applied to load forecast to Determine Revenues
29	Business Units Input Electric Rev / Purchased Power including InterCo
30	Business Units Input Transmission Revenues & Expenses
31	Business Units Determine and input Other Expenses affecting Deferrals
32	Calc and Enter Deferrals and Amortizations
33	Check and Finalized Deferrals and Amortizations
34	Initial Lockdown @ 5PM
35	**Scrub Period**
36	Scrub Period
37	Enter Changes
38	Final LockDown @ 5PM
39	**Gen'l Acctg / IBP Dept. conducts budget close and processing**
61	Input Taxes
62	Run ECCS
63	Update BI
64	IBP publishes forecast to OLC and other business unit leadership as appropriate for review, a
65	IBP assembles Executive Review Package
66	Executive Council and OLC review of budget
67	Tony Alexander approval of 2009 budget
68	Budget Approved



Source: Information Response 119
ECCS=Enterprise Controlling – Consolidation System
BI=Business intelligence

An overview of FE's budget and forecast process is shown in *Exhibit VIII-22*.

Exhibit VIII-22
Budget and Forecast Process
as of June 30, 2010



Source: Information Response 119

At the JCP&L level, the operating (and capital) budget process starts in the March or April time period. JCP&L uses the guidelines and templates that have been developed by FE to ensure consistency of input. JCP&L usually completes the budget templates in August to develop a preliminary budget. JCP&L's Business Services Department inputs the budget data into SAP after receiving approval from JCP&L management. The primary difference between the business plan and the operating budget is the level of detail.

Monthly, a financial performance report is prepared to present actual performance against the budget and reforecast and to explain the variances. The variance analysis conducted will compare actual results to the most recent forecast. There is no specific threshold for actual versus budget variances, as FE generally attempts to investigate and explain all relevant differences – variance thresholds are subjective in mature and depend on the account, risk, and the variance relative to management's expectations. If budgets need to be adjusted or revised, they will be—either monthly for the operating companies or quarterly for FirstEnergy Utilities (FEU) and FirstEnergy. Actual results are compared against the revised budget numbers or targets, not the original budget. The original budget will be shown only in external reports, not in internal management reports.

At the JCP&L level, there are no hard and fast rules or thresholds for variance amounts. Actual results are compared to the most recent forecast. A monthly analysis is prepared for the President of JCP&L and the cost center managers. This document is the agenda for the JCP&L monthly performance review meeting. JCP&L management who typically attend this monthly review meeting are:

- President
- Vice President and Area Managers
- Director Operations, plus:
  - General Managers
  - Lines Managers
  - Engineering Manager
  - Engineering Supervisors
  - Director, Operations Support
  - Substation General Managers
  - Substation Managers
  - Regional Dispatch Office (RDO) Managers
- Director Operations Support Services, plus:
  - Stores Managers
  - Forestry Manager
- Director, Business Services
  - Business Services Analyst IV
- Director Human Resources
- Director Customer Support
- Director Meter Reading and Revenue Operations

The financial performance section of the JCP&L monthly performance review report includes information on monthly and year-to-date (YTD) comparisons of actual operations and maintenance (O&M) expenses and capital expenditures (CapEx) compared to the latest forecast. Schedules show forecast, actual, variances, and trends and identify degrees of variance to highlight strengths and areas of concern. This report and the JCP&L meeting provide input for JCP&L's portion of FE's Executive Leadership Team (ELT) Performance Report, which includes analysis and gap-closure ideas and recommendations.

FirstEnergy's monthly ELT Performance Report is prepared by the tenth workday of the month. This report consists of monthly financial, operational, safety, and environmental actual results compared to the budget. Data is provided by company and is consolidated for all of FEU operating companies. This report also includes some, but not all, of the key performance indicators (KPIs) measured by JCP&L and FE.

The monthly ELT Performance Report meeting is a video conference that is attended by the operating company presidents and FEU's corporate management and is run by the Assistant Controller, FEU or the SVP & President, FEU. During this meeting, the monthly operating results reported in the ELT

Performance Report are reviewed. The meeting lasts approximately four hours, and no minutes are taken or saved.

JCP&L revises its operating budget by executing a reforecast after the third month of the year. This reforecast consists of three months of actual results plus nine months of estimates. At the end of six months, a six-plus-six reforecast is generated, and a nine-plus-three reforecast is developed after the ninth month of the year. As events dictate, reforecasts can be generated more often. Last year (2009), for example, there was a four-plus-eight reforecast. The original budget always remains the budget and the official document against which actual results are measured, as submitted to the Board of Directors for its review. Actual results compared against the reforecast results are used internally for corporate management. Topside changes in the business plan or the operating budget can be done using the multi-integrated decision analysis system (MIDAS). This system is used to assemble and model long-term financial forecasts.

A schedule depicting JCP&L's O&M (or operating) budget variances for the past five years is shown in *Exhibit VIII-23*.

Exhibit VIII-23
JCP&L O&M Budget Variances
2005 to 2009
($ Millions)

	2005				2006				2007				2008				2009			
			Variance				Variance				Variance				Variance				Variance	
Description	Actual	Budget	Amount	%	Actual	Budget	Amount	%	Actual	Budget	Amount	%	Actual	Budget	Amount	%	Actual	Budget	Amount	%
Revenue	2,688.1	2,431.5	256.6	10.6%	2,766.5	2,747.6	17.8	0.6%	3,342.6	3,319.6	23.1	0.7%	3,561.3	3,639.2	(77.9)	-2.1%	3,076.2	3,565.6	(489.4)	-13.7%
Operating Expenses	2,199.1	2,020.2	179.0	8.9%	2,257.8	2,236.6	21.2	0.9%	2,814.8	2,816.3	(1.5)	-0.1%	3,033.9	3,105.4	(71.5)	-2.3%	2,596.4	3,050.7	(454.2)	-14.9%
Operating Margin	489.0	411.4	77.6	18.9%	507.7	511.1	(3.4)	-0.7%	527.9	503.3	24.6	4.9%	527.4	533.8	(6.4)	-1.2%	479.7	514.9	(35.2)	-6.8%
Income Before Taxes	318.3	232.2	86.2	37.1%	336.3	333.9	2.4	0.7%	335.2	303.2	32.0	10.6%	335.2	334.5	0.1	0.0%	279.3	305.6	(26.3)	-8.6%
Net Income	182.5	136.5	46.0	33.7%	189.6	195.8	(6.2)	-3.2%	186.1	170.6	15.5	9.1%	187.0	188.9	(1.9)	-1.0%	170.5	174.5	(4.0)	-2.3%

Note: Minor differences due to rounding
Source: Information Response 116

Capital Budget

FirstEnergy's capital budget development process is driven by the receipt of the system health reports, usually in the fall, from the operating companies and the plants. These reports of equipment and plant condition provide the basis for capital projects to be defined and for cost and benefits to be estimated. The capital requirements for different operating entities are not mixed; there is no trade-off of capital needs between generation and utilities, or among utilities. Proposed capital projects are prioritized, with safety and reliability given higher priority than proposed projects that add economic value.

The FE Board of Directors' Finance Committee recommends the annual capital budget to the full BOD for approval in December. Major projects are separately identified, and new projects with a cumulative cost of $50 million are approved individually. Emergent projects that were not included in the approved

annual capital budget and which exceed $50 million, either individually or cumulatively, must be approved by the Finance Committee. Any proposed changes of $50 million or more to an approved capital project must be reapproved by the Finance Committee. A schedule depicting the approval limits governing FE's spending for capital projects and other major financial activities is shown in *Exhibit VIII-24*.

Exhibit VIII-24
Governing Approval Amounts
as of June 30, 2010

Major Categories	Capital Spending	Balance Sheet Activity	Strategic Investments & Divestitures	Commodity Authorization	Non-Commodity Authorization
TYPES OF ITEMS	■ On-cycle – Mandatory – Maintenance – Discretionary ■ Off-cycle	■ Debt issuance ■ Early debt retirement ■ Restructuring	■ Strategic acquisitions ■ Strategic investments ■ Non-core asset divestiture	■ Electricity ■ Coal ■ Nuclear Fuel ■ Natural Gas ■ Allowances	■ Materials/Services ■ Leases ■ Benefit Plans
APPROVAL AMOUNTS					
Business Unit	< $0.5M – Director > $0.5M – VP > $10M – SVP, Pres.	n/a	n/a	Various levels – amounts and contract length	< $0.5M – Director > $0.5M – VP > $10M – SVP, Pres.
Enterprise Sr. Management	> $15M – CFO/COO > $25M – CEO	All	> $15M – CFO/COO > $25M – CEO	Risk Policy Committee Limits	> $15M – CFO/COO > $25M – CEO
Finance Committee	> $50M	> $50M	> $50M	>$ 500M Estimated value of contract until first termination option	> $50M
Board of Directors	Total Plan (periodic report showing all projects)	Stock issuance, dividends	All projects with impact on corporate strategy		

Emergency Approval Process: Where business circumstances and prudent management require that contractual commitments or expenditures requiring Finance Committee or Board approval be made prior to a Finance Committee or Board of Directors meeting, as applicable, management may authorize entering into such commitments on behalf of the Company provided that management has made good faith efforts to contact all Committee or Board members, as applicable, to explain the exigency of the situation and has obtained consent of at least a majority of the Committee or Board members, as applicable. Such contact or consent may be made in person, by telephone, by electronic mail or any other reasonable communication method. In such a case, the actions of management will be ratified at the next Committee or Board meeting, as appropriate.

Source: Information Response 329, Appendix 6.1a

JCP&L's business units develop their own long-term forecasts. Operating forecasts are from three to five years, and capital forecasts are for five years. Business units classify capital projects in one of four ways:

- *Mandatory* – non-discretionary investment required by law, regulatory order, or duty to serve customers (e.g., new business), or required to meet externally driven regulatory commitment. These projects are "must spend" investments.
- *Maintain* – discretionary investment to support and sustain existing infrastructure at existing performance levels. Specific operational performance and financial tracking support these projects. These projects are "should spend to maintain operations" investments.

- *Improvement* – discretionary investment to improve existing infrastructure or performance levels beyond the existing business plan's key performance metric commitments. Improvement in specific operational performance or financial benchmark targets supports these projects. These projects are "may spend to improve operations" investments.
- *Value Add* – discretionary, non-recurring investment for a defined initiative that improves or expands existing infrastructure or creates new business opportunities and drives improved economic value. These projects are "may spend based on economics" investments.

For the past four or five years, FEU has had a series of challenge sessions to review and evaluate proposed capital projects of JCP&L and the other FE utilities. There are typically three capital project challenge sessions or evaluation rounds, as described below:

- Round 1 takes place in the April/May timeframe and is the session in which the operating companies build and present their proposed capital portfolio. Participants in this session include company presidents, key managers (especially the engineering managers), and staff engineers to present the projects. Projects are rated 1, 2, or 3, with 1 being those ranked the highest and consisting of those projects that are ready to be presented to higher management. Projects rated 2 and 3 are either not acceptable or require some additional work or justification. Questions raised about the projects presented in this round generate action items to be addressed and discussed in Round 2. In the 2011 (for the 2011 budget year) Round 1 challenge session, JCP&L had 64 FEU projects and 65 transmission projects.
- Round 2 takes place in June with the same attendees as Round 1. In this session, the final project estimates are prepared and the focus is on projects that required follow-up or had action items to be addressed. Projects that were awarded a numerical rating of 1 are not addressed in Round 2. At the end of this round, the operating company needs to be comfortable with its capital proposal.
- Round 3 is the final session and combines O&M and capital projects. This round will include higher FEU management as well as FirstEnergy's EVP & CFO, VP – Utility Support and the Senior Vice President & President, FE Utilities.

JCP&L's capital budget actual expenditures compared to budget are shown in *Exhibit VIII-25*.

Exhibit VIII-25
JCP&L Capital Expenditures' Budget Variance
2005 to 2009
($ Million)

	2005				2006				2007				2008				2009			
			Variance				Variance				Variance				Variance				Variance	
Description	Actual	Budget	Amount	%	Actual	Budget	Amount	%	Actual	Budget	Amount	%	Actual	Budget	Amount	%	Actual	Budget	Amount	%
CapEx	204.9	179.2	25.7	14.3%	159.7	176.0	(16.3)	-9.3%	194.4	192.0	2.4	1.3%	176.6	173.1	3.5	2.0%	170.6	160.2	10.4	6.5%

Source: Information Response 116, Attachment 2

FirstEnergy is using a SAP capital evaluation module, xRPM (run by the Corporate Budget & Planning group), as the central repository for capital project information. FE's goal is to include all FE business unit capital portfolios in xRPM, although only a small portion of the FEU portfolio is currently in the module. Business units document their capital projects and blankets in xRPM for planning purposes, and these portfolios will automatically roll up to an enterprise view of capital portfolios. xRPM is used to facilitate the review and approval of the business unit and enterprise five-year capital portfolios. This module has been customized over the past three years and was just finalized last year (2009). There are a number of questions that are asked of each proposed capital project, and based on the answers, the proposed projects are ranked.

Rather than use xRPM, all of the entities in FEU, including JCP&L, use the request for project approval (RPA) system, a Lotus Notes application, to initiate, plan, track, and manage the approval process for capital projects. RPA does not electronically interface with SAP, CREWS, or other systems; however, it enables correlation to the cost collectors, work requests, accounting, and other data in those systems. FEU's engineering and project management personnel are the principal source of information housed in the database, although Business Services users access RPA for reporting and analysis of out-year capital forecasts and as a reference on the status and approval of capital projects. Capital budget data from this database must then be manually loaded into SAP. Each operating company ranks its own capital projects,utilizing Energy Delivery's capital allocation tool (ECAT).

ECAT is used to calculate a benefit-to-cost metric and to support the prioritization of capital projects for each of the operating companies. ECAT enables each operating company to rank proposed projects based on their benefit-to-cost ratio and to estimate the reliability impact of these proposed projects. Acknowledging that there will be some outages on an electric system due to unforeseen events, the model attempts to rank proposed projects by how cost-effectively they reduce the potential for outages by adding capacity, system flexibility, or automation, as examples. In a theoretical situation where two enhancements were proposed, the model looks at how much investment is needed in each case to improve overall performance. The project that provides the largest improvement in reliability for the dollars invested is given priority over the other project. Where a potential criteria violation has been identified, ECAT can be used to choose the most beneficial way to solve the situation. This Excel-based model uses templates for consistent data input from Engineering personnel regarding project details and benefits. The financial parameters in ECAT are refreshed on an annual basis, and results are validated through each operating company's capital challenge process. ECAT is used only for specific capital projects; high-volume, repetitive capital work (i.e., blanket projects) is not modeled.

FirstEnergy Utilities' capital planning management believes that xRPM is too limited and not practical for use by the FEU operating companies. Each iteration of xRPM is limited to approximately 70 projects, while FEU has over 600 projects to rank. Additionally, FEU believes that xRPM misses labor costs and lacks needed functionality.

There are no major changes planned for xRPM for capital project evaluation. FirstEnergy hoped to have FEU fully involved this year but decided to hold off (because of the proposed merger with Allegheny Power). Currently, 15 FEU staff members have been trained in xRPM. FE management

believes that including FEU in xRPM would provide FEU and FE an overall enterprise view of all capital projects. SAP currently gives management access to the enterprise view of all capital projects.

FirstEnergy Utilities reports on approximately 600 capital projects, worth $450 million in "direct view" costs (direct labor, material, etc.) and $725 million to $730 million in "settled view" costs (supervision, administrative and general (A&G), stores, handling, etc.). Reporting is done in both views – direct for FE management and settled for corporate management. Almost all projects are for a one-year duration, but specific projects can be multi-year in duration. Analysis is by cost category. Variance thresholds are not used as reporting criteria; all variances are reported. Variance percentages tend to be small, generally less than 10%.

Property Accounting

Property Accounting for JCP&L and all of FE's subsidiaries is handled by FE's Property Accounting Department, reporting through the Assistant Controller in the Corporate Accounting Department and the VP, Controller & CAO to the EVP & CFO. The Property Accounting Department staff is located in Reading, PA and Akron, OH.

This department is responsible for accounting and reporting of all property, plant, and equipment (PP&E) assets of JCP&L and the other FE subsidiaries. PP&E consist of all tangible non-current fixed assets such as real estate, plant, and equipment and all intangible non-current assets such as software. The Property Accounting function includes identifying, capturing, and capitalizing all costs incurred in acquiring PP&E, including the cost of preparing the asset for its intended use and related overheads such as supervision, engineering, and financing. Additional costs for additions and improvements incurred after an asset is installed are also captured and included in the cost of the asset. This function also encompasses calculating and recording depreciation over the useful life of the asset as well as accounting for asset retirement after the asset is removed from service.

The responsibility for unitizing JCP&L assets rests with FEU's Business Services Department for New Jersey. Assets are targeted to be unitized within nine months of being placed in service, although management has indicated that they are usually unitized within three months. Assets that have not been unitized are included in an aging report and their progress is monitored. Management's primary purpose for the unitization process is quality control for the classification of assets, which drives depreciation expense. Depreciation of an asset begins as soon as it is placed in service. Slight depreciation differences that could occur if the asset has not been placed in the correct account are immaterial and of no apparent concern to management.

The Property Accounting function uses the PowerPlant system, an asset management system that provides capitalized interest for projects, maintains depreciation rates, calculates monthly depreciation expense, and provides for various asset-related reporting requirements. PowerPlant, rather than SAP's asset module, is used because it is more flexible in creating asset-related information, it provides more detailed reporting, it allows for greater detail concerning depreciation, it allows the use of Federal

Energy Regulatory Commission (FERC) Account 106 (Non-Unitized Assets), it provides a seamless interface with the PowerTax system, and it provides as-built and auto-unitization features.

A PowerPlant upgrade, which should be implemented in the first quarter of 2011, will provide an auto-unitization feature and will allow FE to eliminate the broad use of blanket projects. This upgraded version will require additional work on the front end of the unitization process, but less work will be required at the end of the unitization process. Following the implementation of this upgraded version, it is estimated that as much as 85% to 90% of all assets will be unitized automatically.

JCP&L's aging report showing the value of assets not unitized as of the end of 2009 compared to the other FE utilities is shown in *Exhibit VIII-26*.

Exhibit VIII-26
Asset Values Not Unitized
as of December 31, 2009

	Months in GL 106 Account									
	Up to 6 Months		7 to 9 Months		10 to 12 Months		Over 12 Months		Total	
Company	$	% of Total	$	% of Total	$	% of Total	$	% of Total	$	% of Total
ATCO	12,376,705	6.86%	114,101	1.34%	10,568	0.21%	154,130	6.62%	12,655,504	6.45%
CEI	31,244,151	17.33%		0.00%		0.00%		0.00%	31,244,151	15.93%
JCP&L	40,579,834	22.50%	7,387,750	86.90%	4,978,930	99.90%	1,950,700	83.82%	54,897,216	27.99%
Met-Ed	14,795,076	8.20%	97,740	1.15%	(104,787)	-2.10%	(128,513)	-5.52%	14,659,516	7.47%
OE	26,032,056	14.44%	582,290	6.85%	115,910	2.33%	504,098	21.66%	27,234,354	13.89%
Penelec	39,561,538	21.94%	150,656	1.77%	(34,519)	-0.69%	(141,874)	-6.10%	39,535,801	20.16%
Penn Power	6,761,491	3.75%	177,721	2.09%	45,333	0.91%	(8,473)	-0.36%	6,976,072	3.56%
TE	8,972,377	4.98%	(8,693)	-0.10%	(27,485)	-0.55%	(2,813)	-0.12%	8,933,386	4.55%
Total	180,323,228	100.00%	8,501,565	100.00%	4,983,950	100.00%	2,327,255	100.00%	196,136,001	100.00%

Source: Information Response 744

Internal Auditing

Reporting Responsibility

Internal audit responsibility for JCP&L and all of FE's operations and subsidiaries rests with the SERVECO Internal Audit Department. The Internal Audit Director reports directly to the Audit Committee of the BOD and administratively to FE's EVP & CFO. Organizational charts show a direct line to the EVP & CFO. The Chair of the Audit Committee provides feedback to the CFO on the

Internal Audit Director's performance evaluation and compensation. The Audit Committee Chair provides performance evaluation input to the CFO and then reviews the draft performance evaluation before it is finalized. He also sits down privately with the Internal Audit Director on various occasions and can discuss his performance evaluation (although this is not always done). The Audit Committee Chair views the Internal Audit Director as reporting functionally to him. The Internal Audit Director cannot be fired without approval of the BOD's Audit Committee. Practice Advisory 1110-2 from the Institute of Internal Auditors (IIA)suggests that a company's Chief Audit Executive (CAE) should report administravely to the company's Chief Executive Officer (CEO). Although Practice Advisories are not mandatory, they are recommended and endorsed. First Energy's Internal Auditing Department underwent quality assurance reviews in 2004 and 2009 and received a rating of "Generally Conforms", the highest level of compliance with the IIA's *International Standards for the Professional Practice of Internal Auditing*.

Internal Audit is involved in a total of nine planned meetings with the Audit Committee and Board of Directors—five Audit Committee meetings plus four earnings calls meetings (quarterly to discuss the 10Qs and 10K). The Internal Audit Director sets the agenda for the five meetings with the Audit Committee along with the BOD Chair. The timing and primary subjects covered in each of these Audit Committee meetings is: February – financial review, Sarbanes-Oxley (SOX) 404 issues, financial performance dashboard, ethics; May – results of the prior year and the first quarter; July – risk and compliance (laws & regulations); September – PricewaterhouseCoopers (PwC) outside auditors, discussions mainly involving IT and purchasing; and December – audit plan, code of conduct review.

Audit Planning

Audit planning meetings are held with business units to discuss their areas and to solicit audit concerns. From these meetings will come potential projects that are entered and tracked in the audit planning, tracking, and reporting (APTR) system. APTR is a project management tool that is used for annual planning and tracking of audits. This Access database, which can be downloaded into Excel, contains the audit universe. Also kept in APTR are actual projects, including audit findings, conclusions, and recommendations. Audit work papers are kept in a different database, the TeamMate software package. In the September to November time period, the Internal Audit group reviews these topics and performs a risk assessment of each topic, based on:

- Risk ranking (high, medium, or low) with help from the Enterprise Risk Management group for identifying FE's risks and business units' business plans
- Customer interest
- Value to the corporation

Risks are ranked using a formal risk assessment, considering: 1) *Compliance Risk* – required by federal and state laws; 2) *Fraud Risk Assessment* – selected after considering SOX controls, guidance on fraud from the American Institute of Certified Public Accountants (AICPA), emerging risk areas, and the

history of fraud within the company; and 3) *General Risk* – after discussion with senior management of areas they would like audited.

Based on this risk assessment, an audit plan is developed and sent to the BOD Audit Committee for approval. Approximately 55% to 60% of all audits are based on requests, either planned or unplanned (those identified after the audit plan has been approved). At the end of each year, a results report is sent to the BOD Audit Committee, in which each project is shown as completed, in progress, deferred, or dropped. The BOD Audit Committee also receives a copy of all reports, summaries, and any open recommendations.

Audit Plan Execution

Audit steps include:

- Research into the audit topic
- Assignment of staff at the beginning of each year to audits, by quarter
- Engagement planning using a risk-assessment template, including identification of business assessment risk, specific risk, and associated controls
- Risk ranking, both inherent (before controls in place) and residual (after controls in place)
- Developing individual audit plans
  - Brainstorming by team
  - Developing audit agreement, including purpose, scope, objectives, and milestones
  - Holding entrance conference
- Execution of audit plan steps

Upon completion of fieldwork, the audit team discusses issues and how to correct them. Internal Audit would rather have issues corrected during the fieldwork, if possible. Recommendations and action plans are drafted and discussed, with business unit management receiving acceptance and developing action plan due dates. The draft audit report is developed and reviewed with the Internal Audit Manager and the Internal Audit Director (sometimes multiple times) before being provided to business unit management. If the audit is of a financial nature, the SOX team may also review the audit report. After a review of the draft audit report by business unit management, the final report will be issued with any necessary changes. If business unit management doesn't agree with the audit recommendations or action plan steps, Internal Audit attempts to determine why and provide alternatives, making note of this effort in the final report.

Audit issues and recommendations are entered and tracked in both the TeamMate and APTR systems. Audit reports are sent to the business unit SVP, CFO, Controller, Legal Department (in selected situations), the supervisor who is responsible for action plan steps, and the BOD Audit Committee. A typical audit takes approximately 25 to 35 hours from start of developing the individual audit plan to final report. The lead auditor is responsible for audit follow-up. Open and past-due recommendations are provided to the BOD Audit Committee five times throughout the year.

Staffing

The internal audit staff is located in Akron, OH or Reading, PA and in addition to the Internal Audit Director consists of 22 internal auditors. The average number of years of experience at FE for this group is almost 19, with an average of over 12 years of auditing experience. All auditors have earned one or more undergraduate college degrees, and seven have earned graduate degrees. Almost all have, or are pursuing, professional certifications. Professional certifications and audit staff holding or working toward certification are shown in *Exhibit VIII-27*.

Exhibit VIII-27
Internal Audit Professional Certifications
as of December 31, 2009

Professional Certifications	Number of Internal Auditors	
	Holding Certification	Pursuing Certification
Certified Public Accountant (CPA)	5	1
Certified Internal Auditor (CIA)	11	1
Certified Fraud Examiner (CFE)	1	2
Certified Information Systems Auditor (CISA)	7	1
Certified Polygram Examiner (CPE)	1	
Certified Forester (CF)	1	
Certified Tree Expert (CTE)	1	

Note: Internal auditors may hold multiple certificates.
Source: Information Response 474

For work assignments, the auditors are not segregated based on functional areas (i.e., as information technology (IT), financial, or operational audits). Their backgrounds, training, and experience include public accounting, economics, information technology, investigations, and general business.

The goal is to have each audit staff perform four to six audits annually and for audit managers to perform two to three audits. This equates to approximately 1.5 audits per auditor per quarter. There is a limited budget for outsourcing audits. Outside internal audit assistance is used occasionally in three types of instances: 1) as audit staff augmentation – FE has contracted with three or four local firms to provide assistance as needed, working under Internal Audit's direction; 2) on outsourced audits – audits of contracts, system interface audits, and validations of code-of-conduct responses conducted; and 3) for added expertise – generally with one of the remaining three international CPA firms out of the Big Four (excluding their external auditors); such work can take the form of training or consulting engagements.

Recently, FirstEnergy has initiated a professional accounting rotation program, whereby an accountant will rotate into Internal Audit from the Finance and Accounting Departments for a two-year stint to gain more and varied exposure. It is possible that Internal Audit will be implementing a similar rotation program, especially after the career development model in the Finance, Strategic Planning & Operations

organization is fully implemented. The hope is that by rotating auditors throughout the corporation, the audit staff's professional experience will be enhanced.

Ethics Auditing

FirstEnergy has a separate Ethics Auditing work group that is staffed by an ethics auditor with a CFE certificate and a background in criminal investigation and fraud examination. He is supported by several auditors who are pursuing their own CFE designations. FE requires all non-union employees to complete an Annual Certification of Compliance, declaring whether they have any knowledge of impropriety regarding FE's operations. FE's conservative interpretation of the Weingarten Rule (requiring union representation to be present to review bargaining unit personnel questionnaires) effectively limits the audience for the questionnaires to the non-bargaining unit employees. The questionnaires are sent out to approximately 8,000 employees. The ethics auditor receives back disclosures on approximately 1,500 of these certificates annually. Disclosures can be as insignificant as indicating that the employee is a member of the local water authority board, or they can be as significant as revealing observed or suspected fraudulent behavior. As the questionnaire has been refined over the years, the questions have become more focused and Internal Audit has received a greater number of disclosure responses. The responses are completed online and are stored in a Lotus Notes database. If the employee does not have access to a computer, the questionnaire can be completed in hard copy.

FirstEnergy has a 24/7 hotline or employee concern telephone line operated by an outside third party. Communication is anonymous, and response is available to the caller if he or she calls back in 30 days. The Internal Audit Director and the Chief Ethics Officer review all calls and assign the disposition of each. It is estimated that this line will receive 60 to 70 calls per year, maybe one-third of which involve ethics. The others are generally Human Resources (HR)-related. Approximately 20% of the ethics calls have some substance to them. All calls are referred to the ethics auditor. The ethics calls are further referred to the Legal Department and the HR calls are referred to the Human Resources Department. Every quarter, the Internal Audit Director, the Chief Ethics Officer, and the ethics auditor review all the calls that have come through to determine if they were handled correctly. A record of all investigations is recorded in the investigative reports log, which is maintained by the Chief Ethics Officer. In 2009, there were 50 to 60 investigations. The Chief Ethics Officer will meet with the BOD in July and December to discuss ethics issues.

A fraud training program, "Take the Mystery out of Employee Fraud," referred to as "Fraud 101," was initially developed by the ethics auditor as a diagnostic audit tool. It has been expanded into a fraud training program in response to a perceived need. Demand for this program has been fairly high, with the last few training sessions being attended by approximately 150 participants. This program had not been offered to JCP&L employees as of the date of our interview with the ethics auditor. The BOD Audit Committee supports rolling out this training for more employees.

An ethics audit of JCP&L's Smart Program (an energy efficiency program) concluded that $9.7 million in expenditures were fraudulent. This audit started in July 2006, with the report being finalized in February 2007.

A fraud risk assessment is conducted annually as part of the engagement risk-assessment process. This 60-page document was built with information derived from: 1) SOX; 2) management concerns; 3) prior fraud/risk experience; and 4) emerging pressures regarding incentives for fraud. Approximately 50 schemes have been identified in terms of financial statement effects, misappropriations, and general employee corruption. The possibility of fraudulent activity has been assigned based on the impact of the fraud and the likelihood of occurrence in terms of two numbers. Using numerical scores has resulted in ranking fraud risk higher in 2011 than in 2010, when a number score was not used.

SOX Controls

SOX functions for JCP&L and all of the FE operating companies and entities are managed by the Internal Audit Department. The SOX process at FE is a self-assessment that is performed by SOX liaisons in the business units. Internal Audit maintains continuous involvement with the SOX liaisons throughout the year. A SOX Steering Committee that meets five times a year provides overall guidance for the SOX program. Meetings typically discuss current SOX functions, scheduling, testing, hours of effort spent, and SOX issues. A presentation developed for each meeting presents root-cause analysis of SOX issues identified. The SOX Steering Committee membership includes:

- VP, Shared Services, Admin & CIO
- Director, Compensation, Retirement Programs, & Succession Plan
- Assistant Controller – FirstEnergy Generation (FEG)
- VP, Controller & CAO
- Director, Internal Auditing
- Assistant Controller – FEU & Controller – JCP&L
- Assistant Controller

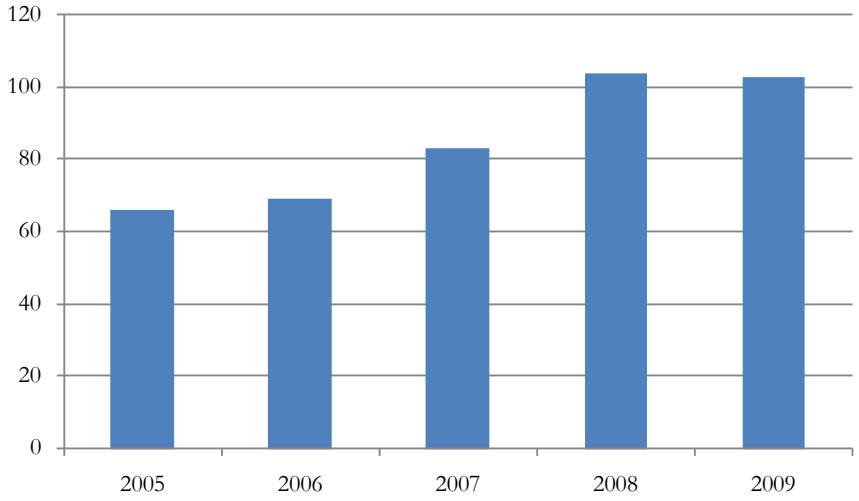
There is also a meeting with FE's external auditors at the end of the year and continuous involvement or meetings throughout the year. Another related oversight group, the Disclosure Committee, meets four times per year, although it can meet more often. There are approximately 20 members on this committee, including the Controller, representatives from Legal and the business units, and the Chief Ethics Officer. This committee will discuss risk factors in the 10Q and 10K, including contingencies, liabilities, appropriate disclosures, regulatory requirements, and FE's position on whether financial information is fairly presented.

A training program on SOX testing is presented annually to the SOX testers. Testers have access to SERTUS, which stores training material and SOX work papers.

Audit Results

The number of audits conducted and reports issued by the Internal Audit Department for all of the FE operating companies and entities, including JCP&L, has increased over the past five years. The number of internal audit reports issued by year is shown in *Exhibit VIII-28*.

Exhibit VIII-28
Audit Reports Issued
2005 to 2009



Source: Information Response 123

In a presentation given to FirstEnergy's BOD in May 2010, the Internal Audit Department reflected on its performance against the goals it set for itself in 2009. For all the metrics listed, the Internal Audit Department achieved its results, as shown in *Exhibit VIII-29*.

Exhibit VIII-29
Performance Metrics Summary
2009

Metric	Results	Comments
Execute audits identified in the annual plan and on-going risk assessment of new topics for a total of 100 completed audits	Achieved	Issued 103 reports
Achieve target savings of $12 million	Achieved	Identified $17.4 million in savings
Reduce SOx compliance cost by 5%, using 2007 SOx compliance cost as a baseline	Achieved	Cost was reduced by 16%
Resolve SOx deficiencies in 90 days or less	Achieved	95% of issues were resolved in 90 days or less
Complete 33 percent of corporate compliance program audit universe annually to achieve complete coverage on a three-year cycle	Achieved	Completed audits on 5 of 12, or 42%, high risk federal laws.
Receive average customer satisfaction score of 6, on a scale 1-7, with 7 being highest	Achieved	Received average score of 6.67
Achieve audit cycle time measures:		
Project completion cycle time (report promise date to actual report issue date) is equal to or less than 5 days	Achieved	Average = 4 days
Audit cycle time of 100 days (audit agreement date to report issuance)	Achieved	Average = 94 days
Audit report cycle time (exit conference to audit report date) is equal to or less than 15 days	Achieved	Average = 14 days

Source: Information Response 474, Attachment 2

Findings & Conclusions

Finding VIII-12 The accounts payable function is effective and efficient.

JCP&L's accounts payable function is consolidated at the FE corporate level within the SERVECO organization. This consolidated function is highly automated, thereby minimizing paperwork and manual processing. Using modern business processes and systems, such as JP Morgan's Order-to-Pay electronic invoice presentment and payment Network and evaluated receipt settlement allows the accounts payable function to maximize the speed and certainty of processing payables and payments. In the first six months of 2010, approximately 99% of all invoices were processed electronically, at an average rate of over 200 invoices processed per Accounts Payable employee per day.

Finding VIII-13 The process for receiving and securing accounts receivable operates in a safe and efficient manner.

The accounts receivable function that services JCP&L rate payers as well as those of the other FE subsidiaries is consolidated into a single remittance processing center that is connected electronically to customer service, billing, and banking or cash management systems. Use of modern remittance-processing hardware and software, such as the accounts receivable conversion and image cash letters technology, allows payments from JCP&L customers to be recorded quickly and accounts to be updated with minimal delay. Transfer of funds from receipt to the outside banking system is achieved electronically, helping to ensure security of funds and facilitates as well as JCP&L's quick access to and use of funds.

Finding VIII-14 The payroll function is sufficiently independent and accountable, and payroll processing is achieved effectively and efficiently.

JCP&L's payroll function is consolidated at the corporate FE level within the SERVECO organization and the standardization of processes, practices, and systems allows for efficiencies and cost savings. Time entry has been pushed down to the individual employee level, using automated systems whenever possible. Time and account charge review and approval are likewise automated and speed the process of payroll processing while minimizing opportunities for manual errors. The payroll function is located in the Human Resources Department, thus reducing the opportunity for misunderstandings and delays attributable to the transfer of personnel data among departments. The payroll function is adequately explained and documented in a series of desk and employee manuals and procedures.

Finding VIII-15 The operating budget process is efficient and effective.

The budget process for JCP&L is managed and controlled by the overall plans and policies of its parent company. Budget schedules and assumptions are dictated by the FirstEnergy Budget Planning Department. Certain plans and directions guide the budget development process so that the end resultant budget conforms to the standards and goals of the larger corporate body. System automation is sufficient to not only allow an efficient budget-entry process but also promote efficiency in the

revision and comparison processes (basically, making it easy to revise or reforecast budgets and make comparisons between actual results and both budgets and prior-year actuals). From 2005 to 2009, JCP&L's O&M budget process became more accurate, with over-spend variances seen in 2005 either decreasing (as in 2007) or becoming under-spend variances (as in 2006, 2008, and 2009).

Finding VIII-16 JCP&L and FirstEnergy Utilities use a different system than the rest of the organization to develop their capital budgets.

JCP&L and the other utility companies in FirstEnergy Utilities use a different system to rank their proposed capital projects than the other operating units in FirstEnergy use. FE's stated goal was to use xRPM, the SAP capital evaluation module run by its Budget & Planning group, as the central repository for all capital project information for all FE entities. The module has been implemented and modified over the past three years so that it could serve this purpose as well as provide FE with a standard, integrated capital planning and evaluation system. All of the entities in FEU, including JCP&L, however, continue to use an older database system, RPA, a Lotus Notes application, to initiate, plan, track, and manage the approval process for their capital projects. RPA does not electronically interface with SAP, CREWS, or other systems. Capital budget data from this database must then be loaded into SAP using Excel templates. FEU capital management doesn't believe that xRPM provides the functionality needed for the management of its capital projects. This continued use of separate systems may make it more difficult for FE to compare proposed capital expenditures from all its entities, recognizing that the goals and associated capital project evaluation criteria may be different among the FE business units. This limitation promotes the continued use of database silos for capital projects, making it more difficult to automatically roll up capital projects to an enterprise view of capital portfolios. This barrier, in turn, can prevent the optimum use of available funds across the FE spectrum of capital opportunities.

Finding VIII-17 JCP&L's work order procedures, corporate accounting manual, and property records are maintained in accordance with generally accepted accounting practices.

JCP&L's work order, property record, and general accounting functions are centralized under the management of SERVECO long with those of all the other FE operating companies and entities. The consolidation of responsibility for these processes under one financial organization allows JCP&L to take advantage of the cost benefits that can be realized from economies of scale. It also ensures that all functions are standardized and operated in accordance with generally accepted accounting practices and the requirements of various federal and state regulatory authorities. Automation benefits are realized through the use of SAP (FE's integrated ERP system), PowerPlant (the property accounting system that is favored by the majority of utility companies in the U.S.), and the other common accounting modules and systems interfaced with SAP. SAP is an integrated accounting system that allows costs to be accumulated via a work order management process and ensures that the transactions of FE's various entities and operating companies are recorded in separate books, intra-company transactions between and among FE's affiliates are properly separated, and appropriate audit trails of transactions exist.

Finding VIII-18 JCP&L's assets are not unitized in a timely manner.

After construction has been completed and assets are ready to be placed in service, those assets are transferred from GL Account 107 (Construction Work in Progress) to Account 106 (Completed Construction Not Classified). At this point in the process, depreciation will start and analysis of the project can begin. After analysis of the project is completed, assets are unitized and transferred to Account 101 (Electric Plant in Service Classified). The unitization process ensures that assets are assigned to the proper asset groups and depreciation rates.

In interviews, SERVECO management stated that unitization usually occurs within three months of assets being placed in service, although the stated goal across FEU is to unitize assets within none months of being placed in service. Assets that are eligible to be unitized but have not been (they are still in Account 106) are monitored and reported on a GL 106 Vintage Bucket Detail Report. A review of this report indicates that as of the end of 2009, JCP&L had almost $55 million of assets in this category. This figure represented approximately 28% of the total Account 106 balance for all of the FE utility companies. Looking at the categories of time subsequent to six months, JCP&L's percentage of assets in the account is even greater, between 83.8% and 99.9% of the total, depending on the time category.

The delays in unitizing assets did not improve any in 2010 by the time Schumaker auditors had completed their field work, with an August 2010 GL 106 Vintage Bucket Detail Report showing JCP&L with a balance of assets in the 106 Account of almost $59 million, approximately 29% of the total for all of the FE utilities. As of the end of 2010, the balance of assets in Account 106 longer than nine months had been decreased to zero. As was the case at the end of 2009, the percentage of total assets attributed to JCP&L was larger the longer assets remained in this account. JCP&L's percentage of total Account 106 assets was approximately 74% of assets in this account for more than six months.

Finding VIII-19 The Internal Audit function is not independent from FE's Finance organization.

The Director, Internal Audit has a direct report responsibility to the Chair of the BOD Audit Committee and an indirect reporting responsibility (for administrative matters) to the EVP & CFO. However, the organizational charts don't indicate this type of relationship. Rather, they indicate a direct reporting relationship to the EVP & CFO. The Chair of the BOD Audit Committee views the Internal Audit Director as reporting functionally to him. He stated that he provides feedback to the CFO regarding the Internal Audit Director's performance evaluation and compensation. He also reviews the draft performance evaluation (presumably developed by the CFO or his office) before it is finalized. The Chair also sits down privately with the Internal Audit Director on various occasions and has stated that the Director's performance evaluation can be discussed (although this is not always done). Because the Director's performance evaluation is developed by the CFO, who certainly has more access to the Director, Internal Audit (the Director's contact with the Chair of the Audit Committee seems to be limited to Board of Directors' meetings), however, it appears that he may not be independent from the CFO's influence. It also appears that way on the organizational chart.

Finding VIII-20 There is adequate planning and coverage of audit activities based on risk management assessment techniques.

Internal Audit employs adequate practices and tools in determining areas to audit. FE relies on risk ranking, customer interest, and perceived value to the corporation in developing its annual audit plan. Risks are ranked using a formal risk assessment, considering federal and state requirements, perceived fraud risk, SOX controls and test results, guidance on fraud from the AICPA, emerging risk areas, the history of fraud in FirstEnergy, and general risk—following discussion with senior management of areas they would like audited. Audit coverage has been distributed fairly among business area (FEU, FE Generation, SERVECO/corporate support services, and SOX controls) and by audit objective (compliance, financial, ethics, and operational).

Finding VIII-21 The Internal Audit resources appear adequate for the tasks covered.

The Internal Audit staff consisting of 22 professional auditors has adequate experience, background, and training to competently carry out its assignments. As a group, the Internal Audit staff members hold 27 professional certificates and are pursuing an additional five. In addition to its normal public accounting, internal auditing, and information systems expertise, the Internal Audit Department contains fraud investigation experience and capabilities not normally seen in an internal audit group. This department uses information systems, applications, and databases that allow it to operate in an efficient and effective manner.

Finding VIII-22 FE's fraud training program has not been offered to JCP&L employees.

The Ethics Auditor in FE's Internal Audit Department developed a fraud training program to present to FE's employees to alert them to the possibilities of fraud existing in their business activities and to help them identify it if it does exist. This program has been well received by FE's management and the BOD. At the time of our fieldwork in 2010 this program had not been offered yet to JCP&L's employees.

Recommendations

Recommendation VIII-3 Study and evaluate combining FirstEnergy's capital budget systems and databases. (Refer to Finding VIII-16)

Using two separate processes and systems to evaluate capital budget projects could make it more difficult for FE to optimize its available capital funds. All capital projects should be judged using a consistent and standardized evaluation methodology. Otherwise, capital investment decisions could be made without adequate information on available alternative uses for limited capital funds. FE should evaluate which budget system makes the most business sense and make changes to the current systems and processes, as necessary, over a reasonable period of time. This evaluation should include modifying its existing SAP capital evaluation module, xRPM, so that it includes the functionality needed for the FEU projects, and developing or purchasing another system that will allow inclusion of all capital portfolios and enable a true enterprise-wide evaluation of capital budget projects.

Recommendation VIII-4 Provide the resources or effort to reduce the backlog of assets in Account 106. (Refer to Finding VIII-18)

The backlog of JCP&L assets in Account 106, Completed Construction Not Classified, should be reduced and not allowed to reach the level it was at the end of 2009 ($55 million) or August 2010 ($58 million). Until projects are analyzed, assets cannot be placed in their proper accounts and any assets being replaced may not be retired. The upgrade of PowerPlant is supposed to include an automatic unitization function that may solve this problem on an ongoing basis. The upgrade, however, will not be able to eliminate the current backlog. Sufficient resources should be introduced to this problem to eliminate the backlog and to ensure that the unitization process is accomplished in a timely manner (closer to three months than to one year).

Recommendation VIII-5 In conjunction with the FE/Allegheny Energy merger integration process, identify and implement the most efficient organizational design to effectively and independently perform the Internal Audit function. (Refer to Finding VIII-19)

The Director, Internal Audit reports only administratively to the CFO. It appears, however, that the CFO's office has more than administrative authority over the Director. The organizational charts do not represent a dotted-line or non-direct reporting relationship to the CFO. In addition, the CFO or his office is responsible for initiating the Director's personnel evaluation, even if the Chair of the Audit Committee reviews it. The Director's contact with the Chair of the Audit Committee is infrequent, usually occurring only at the Board of Directors' meetings. The meetings between the Chair of the Audit Committee and the Director, Internal Audit should be increased so that effective management of this function can be enhanced. Consideration should be given to having all administrative functions not undertaken by the Chair of the Audit Committee be performed by a group outside the CFO organization.

Recommendation VIII-6 Provide the fraud training program to JCP&L employees. (Refer to Finding VIII-22)

FE's fraud training program titled "Take the Mystery out of Employee Fraud" should be provided to JCP&L employees. This program was developed to meet a perceived need for information in this area and has been well received by management and the BOD. At the time of our fieldwork in 2010, however, this program had not been offered to JCP&L employees, although it had been provided to a number of the other FE companies and JCP&L affiliates.

IX. Electric Operations

This chapter covers activities associated with the electric system operations and maintenance.

A. Transmission and Distribution

This section addresses the transmission and distribution (T&D) of electricity to Jersey Central Power & Light (JCP&L) customers.

Background & Perspective

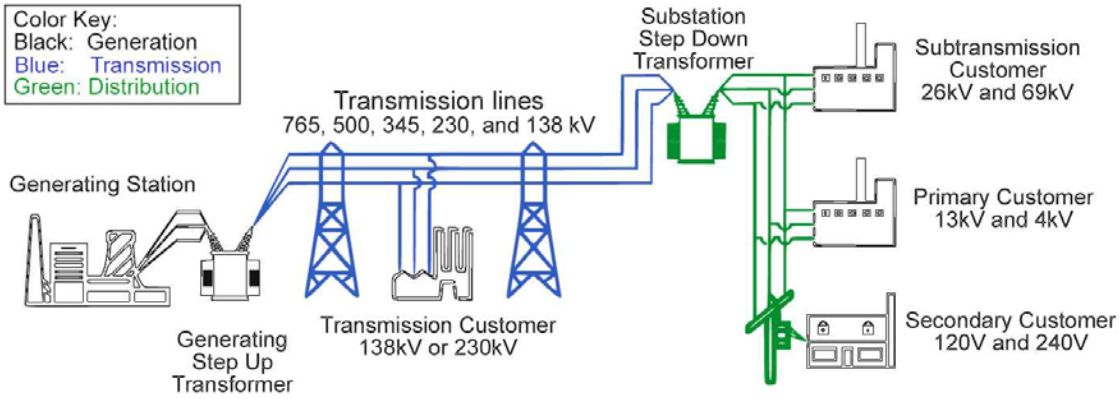
JCP&L has two non-contiguous service territories, the Northern and Central Regions in New Jersey, as shown in *Exhibit IX-1*.

Exhibit IX-1
Jersey Central Power & Light New Jersey Service Territories
as of July 2010

Source: http://www.firstenergycorp.com/outages/outages.do?state_code=NJ and modified by Schumaker & Company

The transmission and distribution facilities are two components of a typical electric supply system, as shown in *Exhibit IX-2*. In early 2000, New Jersey restructured its electric supply system and JCP&L does not provide any generation to end-use customers directly who are served by Basic Generation suppliers or by other electric generation suppliers. JCP&L's affiliate, FirstEnergy Solutions (FES), sells FirstEnergy-owned generation into the PJM Interconnection[3] (PJM) market and to end-use customers.

Exhibit IX-2
Typical Electric Supply System
2010

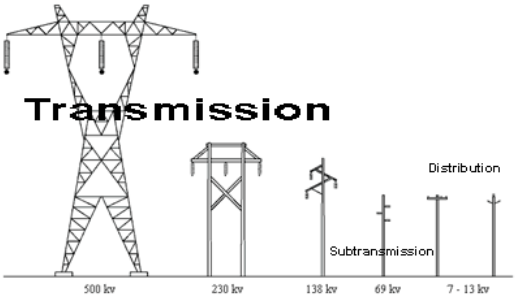


Source: http://upload.wikimedia.org/wikipedia/commons/4/41/Electricity_grid_simple-_North_America.svg

The transmission system delivers bulk energy electricity at high voltages to transmission substations and transmission voltage-level customers. Typical transmission structures are much larger than sub-transmission and distribution structures. *Exhibit IX-3* provides a comparison of the structures. The main components of transmission are structures, insulators, and conductors.

[3] PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

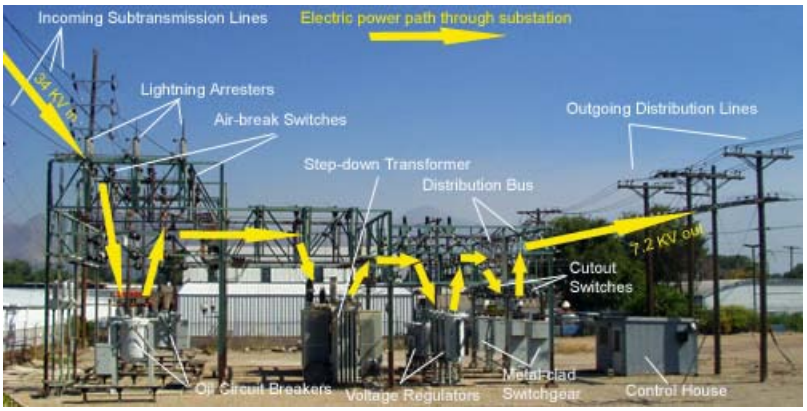
Exhibit IX-3
Typical Transmission Structures
2010



Source: http://www.osha.gov/SLTC/etools/electric_power/illustrated_glossary/transmission_lines.html#Overhead

Substations transform voltages from one level to another. A typical substation and the power flow through that substation are shown in *Exhibit IX-4*.

Exhibit IX-4
Energy Flow Through a Typical Substation
2010



Note: Cutout switches are also know as disconnect switches

Source: http://www.osha.gov/SLTC/etools/electric_power/illustrated_glossary/substation.html

Exhibit IX-5 shows that substations contain numerous pieces of equipment.

Exhibit IX-5
Major Components of a Typical Substation
2010

Substation Equipment TOP

The major components of a typical substation are:

Air Circuit Breaker	Distribution Bus	Potheads
Batteries	Duct Runs	Power-line Carrier
Bus Support Insulators	Frequency Changers	Power Transformers
Capacitor Bank	Grounding Resistors	Rectifiers
Circuit Switchers	Grounding Transformers	Relays
Concrete Foundation	High-Voltage Underground Cables	SF_6 Circuit Breakers
Conduits	High-Voltage Fuses	Shunt Reactors
Control House	Lightning Arresters	Steel Superstructures
Control Panels	Manholes	Supervisory Control
Control Wires	Metal-clad Switchgear	Suspension Insulators
Converter Stations	Meters	Synchronous Condensers
Coupling Capacitors	Microwave	Transmission Bus
Current Transformers	Oil Circuit Breakers	Vacuum Circuit Breakers
Disconnect Switches	Potential Transformers	

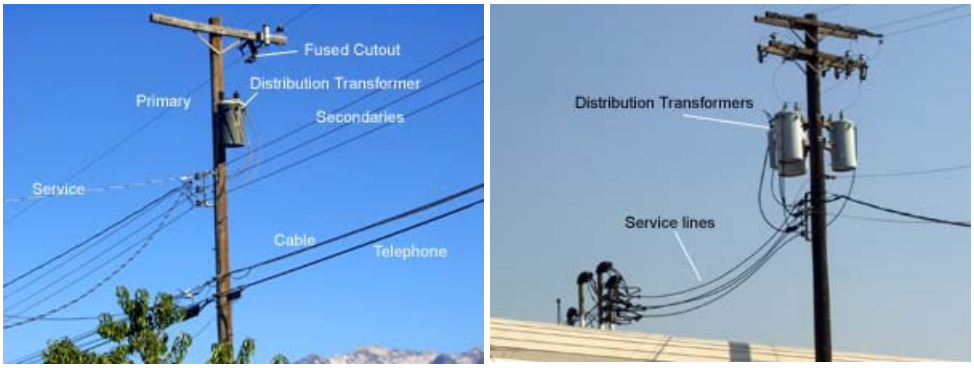
Additional information:

- The Lineman's and Cableman's Handbook, Shoemaker, T. M., Mack, J. E., Tenth Edition 2002, McGraw-Hill.

Source: http://www.osha.gov/SLTC/etools/electric_power/illustrated_glossary/substation.html

Distribution circuits run from distribution substations either overhead on poles or underground through conduits or direct buried (no conduits) to serve customers. Services from distribution circuits connect to the customers' electrical systems. An electric meter measures the consumption of electricity and, for larger customers, the demand (consumption of electricity in a given period) at the end of the service. *Exhibit IX-6* shows typical overhead distribution components.

Exhibit IX-6
Typical Distribution Equipment
2010



Source: http://www.osha.gov/SLTC/etools/electric_power/illustrated_glossary/distribution_system.html and http://www.osha.gov/SLTC/etools/electric_power/illustrated_glossary/distribution_system/distribution_transformers.html

The JCP&L transmission system is controlled by a transmission dispatch office in Reading, Pennsylvania, and the distribution system is controlled by distribution regional dispatch offices (RDOs) in the Northern and Central Regions. JCP&L serves 1,099,417 customers with 18 miles of 500 kilovolt (KV) transmission lines, 446 pole miles of 230 KV transmission lines, 138 pole miles of 115 KV transmission lines, 26 transmission substations, 303 distribution substations, 30 combination transmission and distribution substations, 11,999 overhead distribution circuit miles, 6,960 underground distribution circuit miles, and 192,278 streetlights.

This *Background and Perspective* section is divided into seven subsections:

- Organizational Structure
- Performance Management
- Asset Management
- Operations and Maintenance
- Capital Program
- Workforce
- Operations Support Systems

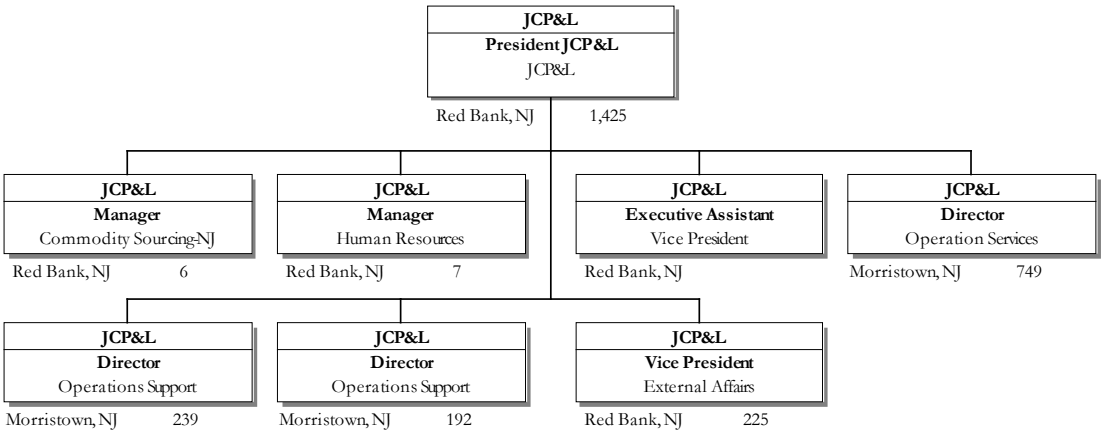
Organizational Structure

The FirstEnergy Utilities (FEU) business unit, which includes JCP&L has a hybrid centralized/decentralized organizational structure for T&D operations. In general, personnel who are responsible for T&D construction and maintenance activities are physically located in the New Jersey service territory. On the other hand, transmission and substation planning and engineering responsibilities are centralized in the FE Service Company (SERVECO) in Akron, OH and Reading, PA. All distribution system Planning and Engineering is decentralized. It is the responsibility of JCP&L and is located in New Jersey. JCP&L distribution system planning and engineering, however, is supported by centralized SERVECO staff functions. Bulk power dispatch operations, planning, and engineering for transmission and substations as well as contract services for transmission patrols and vegetation management are centralized for all of FEU and are provided to JCP&L as affiliate services. Both the centralized SERVECO functions and the decentralized JCP&L functions are organizational units within FEU.

JCP&L

The physical delivery of electricity to JCP&L customers is primarily the responsibility of three directors who report to the JCP&L President, as shown in *Exhibit IX-7*.

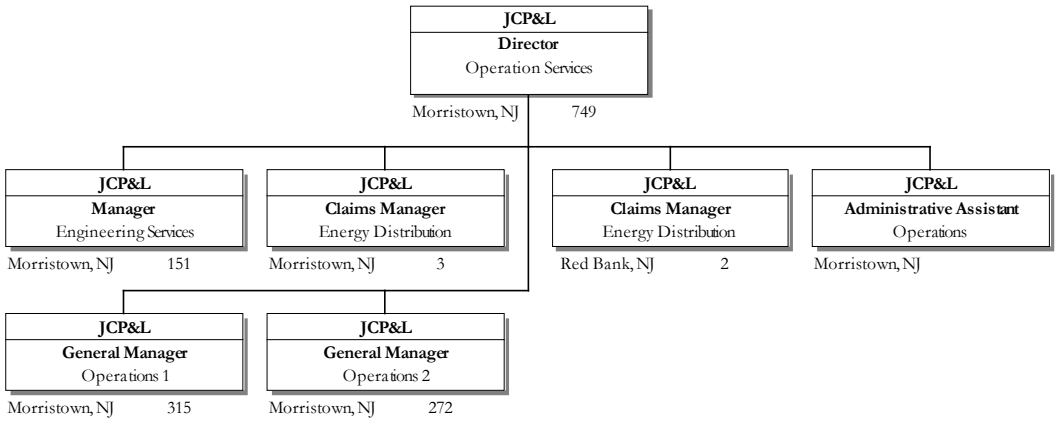
Exhibit IX-7
Jersey Central Power & Light T&D Organization
as of June 30, 2010



Source: Information Response 54 and Interview 124

The Director of Operations Services manages the engineering, transmission, and distribution lines and the claims functions, as presented in *Exhibit IX-8*.

Exhibit IX-8
Jersey Central Power & Light Engineering, Transmission, Distribution, and Claims Organization
as of June 30, 2010



Source: Information Response 54-449 and Interviews 30 and 128

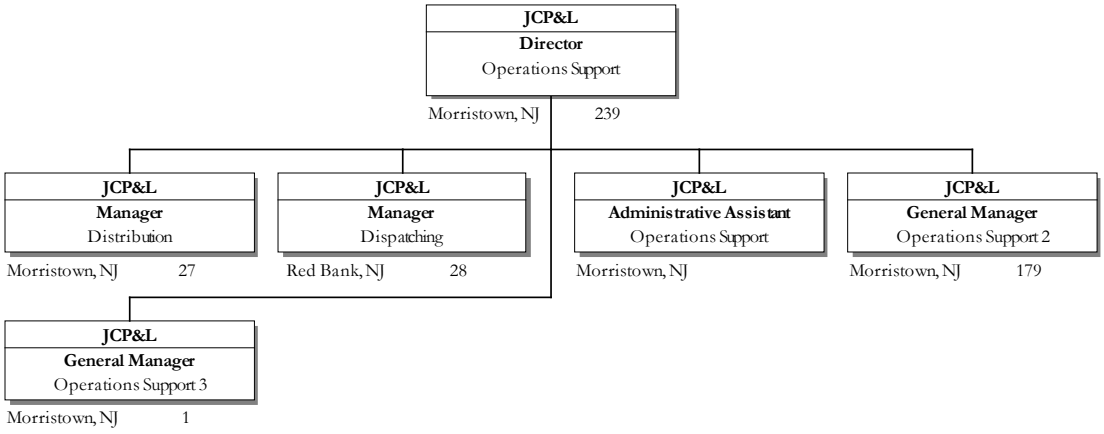
JCP&L Engineering Services (Engineering) is responsible for the JCP&L distribution electric system's planning and engineering. Transmission planning and engineering is done by FEU. JCP&L Engineering performs all distribution lines capacity and protection planning and engineering, except for simple line extensions, which are done by layout technicians in the Lines Department. One Engineering

section addresses all new business. JCP&L Engineering manages corporate equipment reliability programs (transformers, capacitors, poles, etc.) and performs the bulk of the capital program planning and budgeting as well as large project management. It also has units that oversee joint-use poles, rights of ways, storm response, mapping, and drafting.

The two JCP&L Regional Operations Services (Lines) business units are responsible for the construction and planned and corrective maintenance (CM) of all transmission and distribution lines and of all related equipment in the two regions in the JCP&L service territory. In addition to construction and maintenance crews, the Lines organizations include the trouble technicians ("express technicians") who are the JCP&L first responders. Trouble technicians are available 24/7 throughout the service territory. Almost all line construction and maintenance work is performed by employee crews. Only pole and underground cable inspections, transmission patrols, and state Department of Transportation (DOT) road projects are routinely contracted. Planner schedulers undertake month-ahead scheduling with more detailed weekly schedules. The Claims function is covered in the Risk Management chapter.

The first Director of Operations Support manages the North and Central regional distribution operations (RDO) dispatch centers and substation organizations, as displayed in *Exhibit IX-9*.

Exhibit IX-9
Jersey Central Power & Light RDO and Substation Organization
as of June 30, 2010



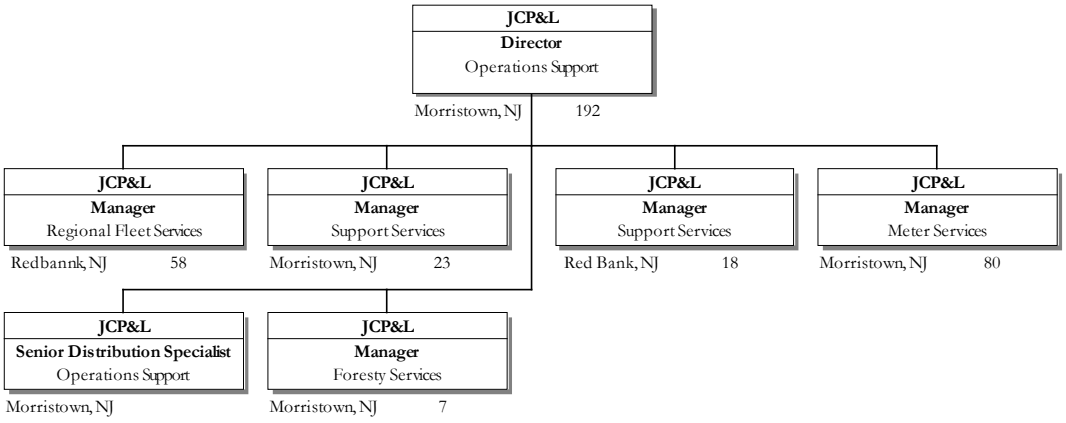
Source: Information Response 54 and Interview 32

The RDO dispatch centers operate the sub-transmission and distribution (34.5 kV and below) system. There are two centers now, one in each region. Transmission operations are performed by the transmission regional dispatch center in Reading, Pennsylvania. The FEU transmission dispatch center and the JCP&L RDOs are staffed 24/7. 99% of the JCP&L substations have remote terminal units (RTUs) that send data to the RDO regarding electric system status. The RDOs are able to remotely operate some equipment. The RDOs manage customer outages, trouble orders, streetlight repair orders, and the storm restoration process.

While transmission substation planning and engineering is done by FEU, the JCP&L Engineering organization is responsible for distribution planning, the physical operation of the substations is the responsibility of the Dispatching group, and the JCP&L Substation organization handles the maintenance and construction of all transmission and distribution substations in its territory. It performs the planned maintenance as specified and keeps detailed records of substation performance and maintenance. Corrective maintenance identified by planned maintenance or equipment failure is also performed by this group. Normally, all transmission and distribution substation construction and maintenance work is performed by employees. Only below-grade civil work (e.g., conduit installation) is contracted. Because New Jersey is fairly well-developed, most substation construction work involves breaker and transformer capacity additions and reliability-related equipment replacements rather than new substation construction.

Exhibit IX-10 shows the organization of the second Director of Operations Support, who manages the Fleet, Stores, Facilities, Meter Services, and Forestry functions for both regions. On August 29, 2010, Meter Reading was transferred into this organization as well. Please see the Customer Services chapter for a discussion of Meter Reading.

Exhibit IX-10
Jersey Central Power & Light Fleet, Stores, Facilities, Meter Services, and Forestry Organization as of June 30, 2010



Source: Information Response 54 and Interview 31

The JCP&L Meter Services Department installs, replaces, and maintains all meters in the service territory. It performs all New Jersey Board of Public Utilities (BPU) required meter replacements and tests. Both customers with high-voltage primary service and large-use customers have digital meters that communicate with the FEU's MV90 system (meter data acquisition and management) via land lines or wireless communications. All large meters with current transformers (CTs) and potential transformers

(PTs) are retested and double checked 30 days after installation.[4] A centralized FEU unit tests and supplies all meters and related equipment to JCP&L from the FirstEnergy warehouse and meter test facility in Bethel, Pennsylvania. JCP&L, however, performs customer-requested BPU meter tests in Morristown, New Jersey under the BPU's supervision. The customer pays a small fee to have the meter tested with BPU oversight. Normally, all removed meters are returned to the Bethel facility for testing and disposition.

The Forestry Department is responsible for vegetation management for all sub-transmission and distribution (34.5 kV and lower) corridors. An FEU centralized unit is responsible for vegetation management on the transmission line corridors in JCP&L's territory. Distribution vegetation management is contracted to tree-trimming companies and is managed by a staff of six employee and three contract foresters. In addition to their regular trimming cycle work, tree-trimming contractors are also required to provide storm response assistance. JCP&L procedures call for a four-year tree-trimming cycle, as prescribed by the BPU code, on all circuits with intra-cycle trimming as needed. JCP&L is in the midst of an experimental capital program to enlarge parts of the distribution corridors and to remove danger trees in the lockout zone (line exposure from substation breaker to the first-down line recloser or fuse-protective device) and for all three-phase circuits.

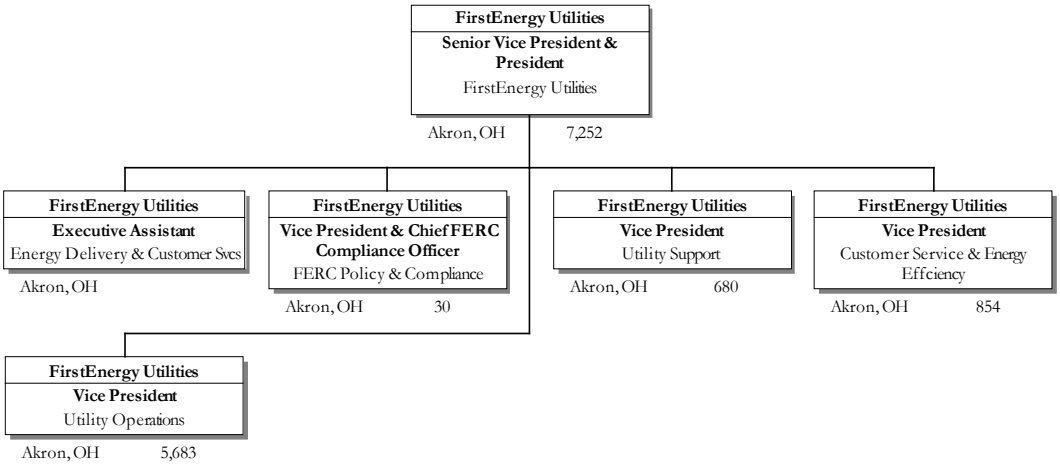
In addition to the three directors with T&D responsibility, a Director of Business Services is a member of the JCP&L President's leadership team but reports directly to the FirstEnergy (FE) Assistant Controller. Until 2008, this position reported directly to the JCP&L President. The Business Services unit, with a staff of 11, is located in New Jersey and provides O&M budgeting and cost control services to the JCP&L President's organization. This business unit is the focal point for the O&M budgeting and reporting processes and assists with capital budgeting for blanket orders based on history. This unit's scope of responsibility is limited to the President's direct reports. It does not do budgeting or reporting for the New Jersey Rates Department nor does it perform FE-centralized services like information technology that charge JCP&L. The Business Services unit prepares the Monthly Operating Report and reviews the JCP&L income statement with the President on a monthly basis. The President, however, is not responsible for the income statement results. His responsibilities encompass only the cost performance of his cost centers. Business Services does budget for non-consumptive revenue (not based on consumption rates), such as pole rentals, late payment fees, and engineering and construction charges for customer-requested non-tariff work (e.g., undergrounding on an overhead line).

FirstEnergy Utilities

JCP&L's T&D functions receive governance, staff support, and some centralized services from the FirstEnergy Utilities (FEU) business unit. The FirstEnergy Senior Vice President/FEU President has four executive direct reports as shown in *Exhibit IX-11*.

[4] CTs and PTs reduce high-voltage services to a lower level for the meter. The customer is served at the higher voltage but it is metered at a lower voltage and computations are used to translate the lower-voltage metered consumption to the higher voltage actually delivered.

Exhibit IX-11
FirstEnergy Utilities' T&D Organization
as of June 30, 2010

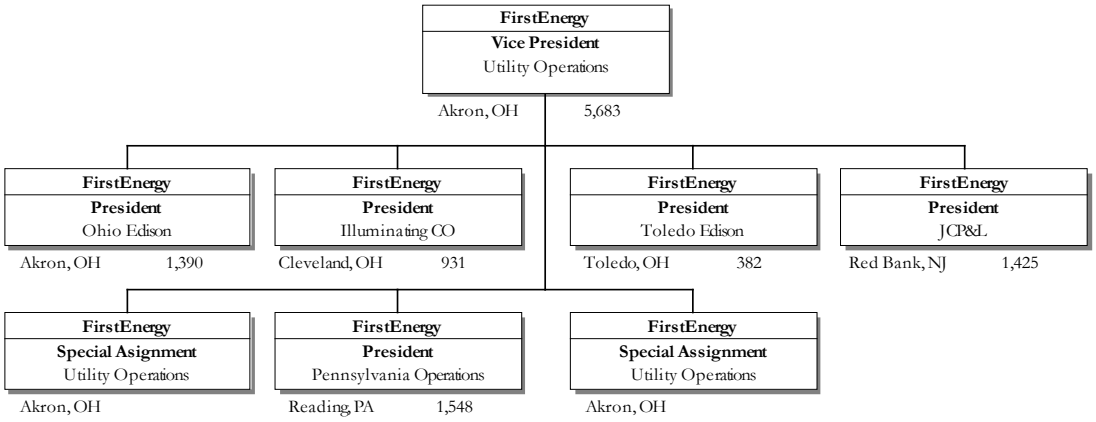


Source: Information Response 54 and Interview 82
Note: FERC is the Federal Energy Regulatory Commission

The Vice Presidents (VPs) of Utility Operations and Support have T&D responsibilities. The VP of Federal Energy Regulatory Commission (FERC) policy addresses corporate-wide FERC issues (see the Affiliate Relations chapter). The Vice President of Customer Service and Energy Efficiency's responsibilities are covered in the Customer Services chapter.

The Vice President of Utility Operations has the Presidents of JCP&L, Ohio Edison, Cleveland Electric Illuminating Company, Toledo Edison, and Pennsylvania Operations (which has three Pennsylvania operating companies (opcos)) reporting to him. *Exhibit IX-12* displays the FirstEnergy Utilities' Operations organization.

Exhibit IX-12
FirstEnergy Utilities' Operations Organization
as of June 30, 2010

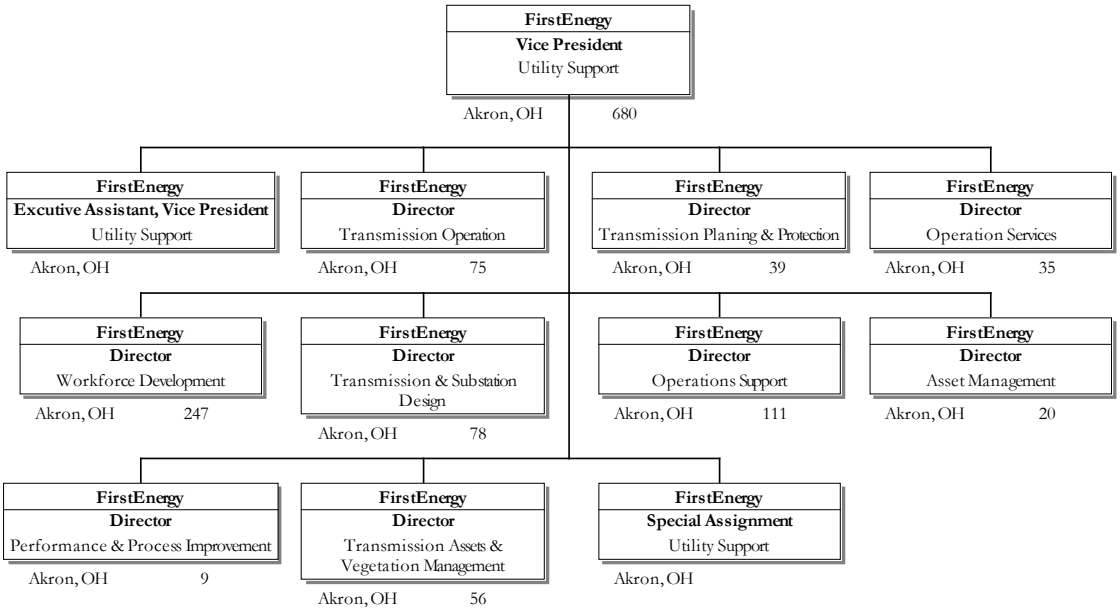


Source: Information Response 54 and Interview 81

The two special assignment positions are the utility operations safety directors. See the Human Resources chapter for a discussion of safety. This FEU Utility Operations Vice President regularly sees a roll-up view of the FEU operating companies' income statements and can drill down into JCP&L and the other opcos. The Vice President has profit and loss responsibility but holds direct control over only a portion of the expenses. He has no direct control over rates and revenue. The Vice President sees costs in two views. The first is the view of direct costs from his direct report cost centers. The second is the "fully loaded" or "settled view" that includes overheads on direct costs and shared services allocations. This Vice President has no direct involvement in shared services budgeting or allocations, but he could influence costs for opco projects, such as IT projects specifically for FEU.

The Vice President of Utility Support has centralized line responsibility for transmission planning, protection, engineering, and dispatch. His group also performs substation engineering for all FEU opcos. In addition, his staff is responsible for virtually all other T&D functions performed by JCP&L and the other FEU opcos. *Exhibit IX-13* presents the FirstEnergy Utilities' Utility Support organization.

Exhibit IX-13
FirstEnergy Utilities' Support Organization
as of June 30, 2010



Source: Information Response 54 and Interview 73

Transmission Operations Services operates the transmission dispatch centers. The center controlling the JCP&L transmission system is located in Reading, Pennsylvania.

Transmission Planning and Protection is the centralized organizational unit for all FEU transmission and substation planning and protection. It models all systems every year. Currently, all work is done by in-house employees. This unit does not engineer or estimate projects. Rather, it develops conceptual projects for detailed engineering and estimating by the counterpart central transmission and substation engineering units and for construction by the opcos. Presently, this unit is dealing with much planning uncertainty attributable to demand response programs, new generators, energy efficiency, and the economy. New Jersey generation connection requests first go through a PJM process. This unit will plan the connection to the transmission system in the JCP&L territory if it is approved. It will also plan any PJM-requested transmission congestion relief or transmission efficiency projects for JCP&L. Much of the JCP&L bulk power transmission and substation work is related to PJM requirements.

Transmission and Substation Design is the centralized unit for all FEU transmission and substation engineering design work. It has about 100 projects in process for JCP&L. The scope of its responsibilities includes transmission siting, rights of way, and surveying. Most work is done in-house, but approximately one-half of substation and 15% to 20% of transmission design is contracted. In-house billable hours are approximately 80% capital and 20% operations and maintenance (O&M). Design standards for transmission and substations are incorporated into the computer aided design

(CAD) system in a manner similar to compatible units in distribution design. This unit receives conceptual work packages from the Planning group, designs and estimates the projects, and turns them over to the opco project management units for implementation. (The FEU Asset and Project Management group may help opcos with large projects or in times of peak workloads.)

The Asset and Project Management unit has four main functions: asset management, project management, Primavera scheduling, and capital program planning and budgeting. The Asset Management section develops asset management programs and processes, such as ad hoc lifespans of equipment analyses and the five-year circuit inspection program. The Project Management group undertakes major project management, primarily on the bulk power system. Examples include a 500 kilovolt (kV) transformer replacement, 230 kV line extension, and a 345 kV station upgrade. This group will also assist the opcos with projects, usually on the 34.5 kV sub-transmission system. The Project Management unit also provides central staff assistance for the project management processes, organization, and staffing. There is no hard cutoff between corporate and opco projects; however, corporate tends to do bulk power and opcos tend to do distribution. Permitting issues in NJ lead to more projects being locally managed. The three-person Primavera scheduling and project controls group supports FEU's standard Primavera scheduling tool. FirstEnergy Utilities does not use any other scheduling tool, including MS Project. Primavera is generally used for projects over $100,000 and of longer duration. The T&D work management system, CREWS, handles smaller, shorter-duration jobs well. The Capital Program Planning and Budgeting function drives the calendar and process.

The Transmission Assets and Vegetation Management unit has centralized line responsibility for transmission corridor vegetation management and provides staff support to the opcos for transmission and substation maintenance. Transmission vegetation management work is contracted but is supervised by a staff of foresters. This group also provides some distribution vegetation management staff support to the opcos. The Substation Maintenance unit has a supervisor and four commissioning engineers deployed to New Jersey who inspect and accept substation construction work and perform root-cause failure analysis. The Transmission Maintenance group manages the centralized, contracted transmission aerial and ground inspections and the pole inspection contracts. It also provides staff support to the opco transmission crews.

Operations Services provides T&D staff support in four areas: reliability and outage management, distribution standards and joint use, distribution planning and protection and regulatory reporting. The Reliability & Outage Management Section is responsible for the development and promotion of effective strategies and procedures associated with the operations of the Regional Dispatching Offices (RDO) and are responsible for system enhancements and data management practices of the PowerOn Outage Management System (OMS). The Reliability & Outage Management Section also compiles and distributes the monthly Energy Delivery Reliability Report. The Standards and Joint Use group provides purchasing specification and field guidance for the selection of distribution material, selection of construction standards and joint use of FE facilities by communication and other utilities. In addition, the Standards group provides detailed engineering practices, reviews industry trends and shares best practices with JCP&L. The Joint Use function also includes the development and coordination of joint

use contracts for pole attachments and oversight of billing practices. Much of the activity in Joint Use is related to pole, vault and conduit rental by schools, telecommunication companies and hospitals. Joint use activities also include the dissemination of pole attachment requirements to attaching companies. The group manages a "call before you dig" ticket screening operation that validates the dig area against JCP&L known boundaries. Distribution Planning and Protection (DPP) is responsible to develop, document and promote consistent policies and procedures associated with distribution system planning, protection, automation, power quality, reactive support and retail distributed generation. DPP is responsible for system enhancements and data management practices associated with related tools including the GIS mapping system, CYME planning and protection system analyses tool, PQView power quality analyses program and Load Forecasting Demand Management System (LFDMS) distribution load forecasting model. They also facilitate and administer the retail distributed generation process for connecting customer solar, wind and gas generation to the distribution system. Regulatory Reporting supports JCP&L by facilitating the completion of JCP&L's Annual System Performance Report; supporting the completion of various data requests; providing input to proposed new or modified state regulations; and compiling internal status reports.Electric Delivery Operations Support provides centralized service depots for transformer repair, rubber goods, and meters. It also provides centralized Fleet Services staff support. (See the Fleet Management chapter for a discussion of fleet services.)

The Performance and Process Improvement unit is primarily engaged in the Work Management Initiative (WMI). (See the Operations Support System section below). Six of the eight staff members are deployed to the WMI team. One of the remaining staff is working on the redesign of the Energy Delivery web portal and the eighth staff member is working on a root-cause analysis of an outage event in Metropolitan Edison. The director of the unit has been assigned to the Allegheny Power merger team on a substantially full-time basis.

Performance Management

FirstEnergy has a cascading performance management program that flows from corporate to the business units (including FEU) to the operating companies (including JCP&L). Key performance indicators (KPIs) are developed for each level, and targets are set for achievement each year. (See the Human Resources chapter for a discussion of the integration of performance management and incentive compensation.) *Exhibit IX-14* shows the high-level corporate, business unit (FEU), and local (JCP&L) KPIs for 2010.

Exhibit IX-14
2010 FE Utilities' KPI Goals
January, 2010

SUMMARY - KEY PERFORMANCE INDICATOR		KPI Type
CORPORATE	Earnings Per Share	STIP
	Balance Sheet Debt	STIP
BUSINESS UNIT	Safety - OSHA	STIP
	T&D Reliability Index	
	T&D Reliability Index Component TOF	STIP & Savings Plan Match
	T&D Reliability Index Component SAIDI	
	FEU Operating Margin ($M)	STIP
	CustomerFirst Index	
	Contact Center Survey	Savings Plan Match
	Avg. Speed of Answer	
	Street Lighting	
	Justified Complaints	
	Estimated Time of Restoration (ETR)	
	First Call Resolution	
	Meter Reading Accuracy	
LOCAL	Safety - OSHA (operating company)	STIP
	Motor Vehicle Accidents (operating company)	
	SAIDI (operating company)	
	Safety Triple Play (individual)	
	Justified Complaints (CS&EE only)	
	Average Speed of Answer (ASA) (CS&EE only)	
	Arrears - % of Revenue (CS&EE only)	

Source: Information Response 609
Notes: STIP is Short-Term Incentive Plan, OSHA is the Occupational and Safety Agency, TOF is the Transmission Outage Frequency, SAIDI is the System Average Interruption Duration Index, CS is Customer Service, EE is Energy Efficiency, and ASA is Average Speed of Answer

The KPIs cover financial, safety, reliability, and customer service performance. The local targets are consistent for all FEU opcos, including JCP&L, except for the reliability target, the System Average Interruption Duration Index (SAIDI). SAIDI targets are set for each opco according to past performance and the state regulatory service quality index (SQI) requirements or guidelines. JCP&L's SAIDI target for 2010 is the third most stringent of the seven FEU opcos. Only Toledo Edison and Ohio Edison have higher targets for improved reliability.

JCP&L submits an Annual System Performance Report to the BPU in compliance with state requirements. The report is focused on reliability and provides information on reliability metrics, interruptions by cause, reliability management programs, staffing, training, major storm events, and the storm response process. The table of contents for the 2009 report is given in *Exhibit IX-15*.

Exhibit IX-15
Table of Contents from the 2009 JCP&L Annual System Performance Report
June 2010

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§ 14:5-8.7 (g). Each EDC shall include in its Annual Report the greater of four percent or a quantity of five of its worst-performing circuits identified in each of its operating areas ... 68
§ 14:5-8.11 (d). The implementation of smart grid technology shall be reported in the Annual System Performance Report. ... 71
§ 14:5-9.5 (d) Each EDC shall provide a copy of its vegetation management standards and guidelines to the Board as a chapter in the Annual System Performance Report ... 72

Source: Information Response 132

All FEU opcos, including JCP&L, have a Monthly Operations Performance Report prepared by Business Services. An example of the summary page of this report is reproduced in *Exhibit IX-16*.

Exhibit IX-16
Example JCP&L Monthly Performance Report
May 2010

Safe Operations

Metric Code	Metric Name	Current Status	Current Value	Previous Status	Previous Value
JCPL-SO-01	OSHA Safety Rate	Red	1.87	Red	1.88
JCPL-SO-02	DART Rate	Red	1.36	Red	1.46
JCPL-SO-04	Motor Vehicle Accident Rate	White	4.77	Red	5.79

Reliability/Operations

Metric Code	Metric Name	Current Status	Current Value	Previous Status	Previous Value
JCPL-RO-01	SAIDI Performance	Red	31.29	Red	21.33
JCPL-RO-02	CAIDI Performance	Red	100.15	Red	100.74
JCPL-RO-03	SAIFI Performance	Red	0.31	White	0.21
JCPL-RO-04	Transmission Outages (69 kV and above)	Green	10.0	Green	7.0
JCPL-RO-05	Transmission Outages Bulk (230 kV and above)	Red	10.0	Red	7.0
JCPL-RO-06	Transmission Outages Load Serving (69/115/138 kV)	Green	0.0	Green	0.0
JCPL-RO-07	Infrared Thermal Distribution Circuit Inspections	Green	0.0%	Green	0.0%
JCPL-RO-08	Infrared Distribution Circuit Hotspots Overdue	Red	1	Red	3
JCPL-RO-09	Substation PM Orders Age - Equipment & Controls Transmission (> or equal 100 kV)	Green	0	Green	0
JCPL-RO-10	Substation PM Orders Age - Equipment & Controls Sub-Transmission & Distribution (less than 100 kV)	Green	0	Red	1
JCPL-RO-11	Transmission Critical Repairs - Priority 1 and 2	Green	0	Green	0

Customer Satisfaction

Metric Code	Metric Name	Current Status	Current Value	Previous Status	Previous Value
JCPL-CS-01	Streetlight Outage Repairs	Red	70.6%	Red	71.6%
JCPL-CS-02	Estimated Time of Restoration	Green	94.4%	Green	94.4%
JCPL-CS-03	Meter Reading Error Rate-JCPL	Green	35	Green	32
JCPL-CS-04	Meter Read Rate	Red	77.8%	Red	76.8%

Financial Performance

Metric Code	Metric Name	Current Status	Current Value	Previous Status	Previous Value
JCPL-FP-01	Direct Capital Costs	Yellow	35.15	Yellow	25.51
JCPL-FP-02	Direct Non-Capital Costs	Yellow	46.59	White	38.88
JCPL-FP-03	Total Overtime	Red	10.23	White	8.48

Employee Workforce

Metric Code	Metric Name	Current Status	Current Value	Previous Status	Previous Value
JCPL-EW-01	Total Staffing	Green	1,391	Green	1,401
JCPL-EW-02	Average Absenteeism Hours Per Equivalent FTE	Red	36.27	Red	29.46

Green	Performance Excellence	Yellow	Performance Weakness	Gray	Not Measured
White	Performance Satisfactory	Red	Performance Improvement Needed		

Source: Information Response 142
Note: CAIDI is Customer Average Interruption Duration Index

Following the summary page are individual pages on each metric that cover detailed performance information, analysis and performance gap identification, gap closure plans, and related information. The report is reviewed monthly in a detailed (approximately six hours) video conference with the JCP&L executives and managers. It is also reviewed monthly with the FEU executives and managers. The JCP&L President also holds a weekly teleconference with management staff to address important and emerging issues.

Asset Management

Asset management at FEU/JCP&L is focused on individual assets/pieces of equipment or categories of equipment. The FEU/JCP&L asset management goal is to provide the intended level of service performance consistent with the design at the lowest lifecycle cost over the true economic life of the piece of equipment. Asset management at FEU/JCP&L incorporates a lifecycle approach that begins at equipment specification and continues through retirement. The major processes involved include capacity planning, design and construction standards and equipment specification development, inspection and testing, rehabilitation and corrective or repair maintenance, and capital management.

The goal of asset optimization implies balancing between potentially conflicting demands. For example, while most operating personnel would prefer trouble-free equipment, the cost of acquisition—if in fact such equipment could be designed and manufactured—would be prohibitive. Likewise, buying solely on the basis of initial cost considerations may result in a false economy when the lifecycle costs are considered. Equipment ratings, standards development, equipment application, and maintenance and repair techniques, however, have evolved over time and are based on the collective experience of the utility industry, including that of its equipment manufacturers. Those cumulative experiences are incorporated in the asset management strategy at FEU/JCP&L, the elements of which are outlined below.

Distribution Planning

The planning criteria include, among other things, assumptions regarding environmental conditions, loading, or duty cycle capabilities, and allowances for uncertainty in operating environment, materials, and design margins. Planning criteria are intended to consider credible in-service situations but are not used to establish operating guidelines. For example, while transformer-planning criteria provide for normal loss of life (NLOL) loading on peak or during contingencies, it is not intended that transformers be routinely run to NLOL levels before capacity relief is provided. That relief might be provided in the form of a new source or it might come from operational load transfers, phase balancing, or circuit reconfigurations to name a few. Thus, capacity addition or replacement decisions are driven by the assessment of operational data, forecasted load growth projections, equipment condition reports, and repair/rehabilitation cost history, among other considerations. The existence of peak load data, operating performance, and condition assessment is critical to ensure compliance with the limitations set by the planning guidelines, general industry practices and standards, and/or manufacturer recommendations. The ongoing analysis of this data is essential to the achievement of optimal lifecycle and lifecycle cost whether in the use of transformer or other pieces of major electrical equipment.

Capital Management

Projects typically fall into the category of new business (customer driven), capacity (resolution of potential system loading issues), mandatory (safety, regulatory, or legal entity driven), condition

replacement (equipment capability driven), and reliability (operating performance driven). Several or all of these drivers may, in fact, precipitate the initiation, planning, and implementation of projects.

The capital management process seeks to stimulate the development of alternative solutions to the identified problem(s), which are then evaluated using risk-adjusted economic evaluation tools. These tools, in turn, lead to a selection of the most economically attractive solutions to the identified problem. The development of alternatives requires input from the other processes such as planning criteria standards, operating experience, and risk assessments. Accordingly, the focus of the capital management process is to select the solution that creates the most economic value within a reasonable period of time.

The focus of this process is the selection and authorization of capital projects into the budget for the next three years. The process, however, requires that O&M costs and capital solutions receive equal consideration, and the project that creates more economic value, all else being equal, is the preferred solution. The focus of the process is the normal additions, replacements, and upgrades necessary to ensure that customer demands are met. Although FE/JCP&L use a three-year planning horizon, which can be adjusted as conditions change, hard budgets are set for only the following year. Proposed projects are reviewed annually to create a portfolio for the following year's budget. In addition, emergent projects are reviewed throughout the year if events arise that create a need for projects not defined in the previous budget cycle.

Standards

Standards cover material and major electrical equipment design parameters, design and installation requirements, operating capabilities and performance, repair or refurbishment, and replacement. Standards have evolved over the history of the industry from the collective body of experience of utilities, manufacturers, and researchers. Some are national in scope and application, while some are local. The test of a standard's relevance is the cumulative experience derived from its application. Thus, standards are rarely absolute and generally change over time as experience is gained.

The empirical nature of many of these standards has necessarily driven a conservative approach to setting them. Conservative assumptions and judgments, modified by experience and scientific inquiry, have resulted in many different approaches to setting similar standards across the industry. Different assumptions of risk are implicit in those standards. However, the effectiveness of those standards must be measured by the operating performance of the assets to which they are applied and by the costs associated with their application and the resulting performance.

Standards provide improved lead times, consistency of equipment ratings and types, repeatability in the work, and increased flexibility across geographic boundaries and time. Standards also provide for increased operational flexibility in the form of equipment margins, outside assistance in emergencies, a common support process, and work methods across the entire organization.

Operations and Maintenance

Operations and maintenance practices are designed to ensure that equipment performs as designed throughout its lifecycle and that diagnostic testing is used to drive reliable service performance. Many of these practices are designed to be diagnostic in nature to ensure that incipient problems are identified before failures occur. The varying costs of upgrades, refurbishment, or repair (that may be viable responses to the results of diagnostic testing) are inputs to the capital management process that is used to compare other viable alternatives, such as replacement or elimination.

Inspection and test reports must be analyzed on a timely basis to be useful, and operational judgment must be exercised as to remedial or corrective actions. Trended results over time give an understanding of the aging mechanisms and/or operational wear and tear and are used to determine the appropriate corrective actions. In some cases, experience and/or economic considerations dictate the necessity of replacing or eliminating the equipment instead of refurbishing it. These results are inputs into the planning and operational decision-making processes.

Performance Measures

None of the above outlined processes stands on its own or operates in isolation. Each relevant organizational unit within FEU/JCP&L has one or more roles to play in each of these processes. The integration of the people involved in these processes helps to ensure that environmental factors, operating history, and cumulative experience are factored into the decision-making process so that optimization of lifecycle and lifecycle costs can occur.

Reliability is one of the most significant performance indicators in FEU/JCP&L's set of operational performance measures. Today, virtually every person within FEU/JCP&L has significant performance-incentive goals related to the improvement of reliability at both the regional and corporate levels. This linked accountability is a key component of the asset management program because it creates and maintains the impetus for the integration of the processes described above.

Support Applications

Asset management requires that large amounts of data be processed in order to make effective decisions. Information technology tools (applications) have to be used to process that data. The primary applications FEU/JCP&L employees use for distribution, transmission, and substation asset management activities are given in *Exhibit IX-17* and *Exhibit IX-18*.

Exhibit IX-17
Information Technology Applications Used For Asset Management Activities
July 2010

ASSET MANAGEMENT									
Assets			Application	Application Description	Activities Supported				
Distribution	Transmission	Substation			Planning Criteria	Capital Management	Mat/Equip Standards	O&M Practices	Performance Management
■	■	■	**SAP**	Enterprise software used for customer service, accounting, financial, and asset tracking processes. **http://www.sap.com/solutions/business-suite/index.epx**		■	■		■
■	■	■	**CREWS (Customer Request Work Scheduling)**	An in-house-developed application used to design jobs based on standards, schedule work, and input time charges.			■		■
■	■		**CRC (Circuit Reliability Coordinator)**	Specialized version of GIS View used in the reliability improvement process. **http://www.gatekeeper.com/products.html**					■
■			**CYME**	The CYMDIST distribution analysis program is designed for planning studies and simulating the behavior of electrical distribution networks under different operating conditions and scenarios. **http://www.cyme.com/software/cymdist/**	■				
■	■		**IVMS (Internet Vegetation Management System)**	In-house-developed web-based application used to for vegetation management.					■
■	■	■	**LFDMS (Load Forecast Data Management System)**	In-house-developed application used to forecast substation and circuit loadings.	■				
■	■	■	**M5**	Application used to track the maintenance performed on the transportation fleet. **http://www.assetworks.com/fleetfocus**					■

Source: Information Response 516 and Schumaker & Company Analysis

Exhibit IX-18
Information Technology Applications Used For Asset Management Activities
July 2010

ASSET MANAGEMENT										
Assets			Application	Application Description	Activities Supported				
Distribution	Transmission	Substation			Planning Criteria	Capital Management	Mat/Equip Standards	O&M Practices	Performance Management
	■		**TARA (Transmission Adequacy and Reliability Assessment)**	Software used for identifying and analyzing transmission bottlenecks and how generating resources compete for these transmission resources. **http://power-gem.com/index_files/Page624.htm**	■				
		■	**K71**	Software utilized to determine transformer impedances for inclusion in power flow and short circuit modeling databases.	■				
	■		**K03**	Software utilized to determine the ratings of specific circuit terminal components and the overall circuit rating.	■				
	■	■	**SuperHarm**	SuperHarm enables the development of a computer model of a power system to explore variations on system loads and configurations, along with the resulting impact on system frequency response and distortion levels. **http://www.pqsoft.com/SuperHarm/index.htm**	■				
	■	■	**PSLF (Positive Sequence Load Flow)**	A suite of analytical tools that can simulate large-scale power systems up to 60,000 buses. **http://www.gepower.com/prod_serv/products/utility_software/en/ge_pslf/index.htm**	■				
	■		**VSAT (Voltage Security Assessment Tool)**	A highly automated steady-state analysis tool designed for comprehensive voltage security assessment. The software includes flexible specification of voltage security criteria and is designed to handle a large number of contingencies, power transfers, and scenarios. **http://www.dsatools.com/html/prod_vsat.php**	■				■

Source: Information Response 516 and Schumaker & Company Analysis

Planned Maintenance

The JCP&L T&D planned maintenance programs are described in the Annual System Performance Report:

- *Vegetation Management* – T&D circuit corridors are maintained with tree-trimming and brush and shrub control on a four-year cycle in compliance with the BPU's and FEU's vegetation

management standards. In 2009, 3,780 miles of distribution corridor and 120 miles of transmission corridor were inspected and trimmed, as necessary.

- *Distribution Capacitors* – There are 4,729 capacitor banks. Capacitors are used to supply reactive power and to provide voltage support to the power system. The capacitor maintenance program includes acceptance inspections of new installations, annual field inspections, and diagnostic inspections.
- *Distribution Line Reclosers* – There are 1,076 reclosers. Reclosers are self-contained devices that sense and interrupt fault current on a distribution circuit. They temporarily disconnect a section of the faulted distribution line to allow the fault to clear and then automatically reconnect that section of the line. Reclosure is set at between two and 180 seconds and from one to four repetitions for each device. Successful recloser operation prevents a substation breaker operation and protects the rest of the line from service interruption. The planned maintenance program for reclosers includes acceptance tests for new installations, biannual field inspections and counter readings, and shop inspection and maintenance of each device after a specified number of operations.
- *Distribution Circuits and Equipment* – All sub-transmission and distribution (34.5 kV and below) circuits are visually inspected to ensure compliance with the National Electric Safety Code and to identify any preventive or corrective maintenance required.
- *Transmission and Distribution Poles* – There are approximately 430,000 wood poles. All wood poles are inspected and treated as necessary on a ten-year inspection cycle. All Priority One poles are reinforced or replaced, as soon as practicable, generally within 90 days of discovery. A Priority One pole is defined as a wood pole that is determined to have internal and/or external decay or damage that considerably affects its strength.
- *Transmission Aerial Patrols* – Two aerial patrols are conducted each year on all transmission lines (115 kV and higher).
- *Substations General* – Monthly visual inspections are conducted of all 325 substations.
- *Substation Protective Relays* – There are 769 relays. Protective relays testing is typically done on a four-year cycle for PJM (100 kV and above) relays while all others are inspected on a five-year cycle.
- *Substation Transformers* – Periodic testing of substation transformers includes dissolved gas analysis, Doble power factor testing, dielectric and physical oil testing, transformer turns ratio, and combustible gas at prescribed periodicities. The planned maintenance program for transformers also includes annual infrared thermography analysis for abnormal heat generation.
- *Substation Batteries* – Batteries provide DC control power to substation equipment. Batteries are inspected and maintained 12 times per year. Annual impedance or voltage resistance tests are also performed.

- *Substation Circuit Breakers* – Testing is performed at intervals determined for the specific characteristics of each breaker. Tests include infrared testing, Doble power factor testing, dielectric oil, online timing, moisture, and high-potential and contact-resistance testing.
- *Substation Underground Duct Systems* – Testing is performed at intervals determined for the specific characteristics of each duct system. Tests include oil screen tests, dielectric tests, manhole inspections, vault inspections, and oil switch inspections.
- *Highest-Priority Circuits* – Circuits are ranked based on the average minutes of interruption per customer on each circuit. Area reliability teams analyze the worst-performing circuits and develop plans to improve their performance with better circuit design, equipment, or tree trimming. The 47 highest-priority circuits were analyzed and improved in 2009.

JCP&L reported 100% completion of all planned equipment maintenance in 2009. Corrective maintenance orders or, if necessary, replacement construction work orders are written for any maintenance problems discovered during planned maintenance that cannot be resolved immediately during the planned maintenance.

The Annual System Performance Report also discusses JCP&L's power quality program, stray voltage program, and adaptive relay strategy. The power quality program and stray voltage program respond to complaints from customers. Each complaint is assigned to the appropriate unit for response. It is then analyzed and solutions are developed.

FEU/JCP&L Storm Process

JCP&L follows the FEU standard storm process. The strategic objectives of that process are as follows.

- *Preparedness* – to ensure that all personnel having restoration responsibilities understand strategic objectives and are trained in detailed procedures using a plan that is continuously updated to reflect organizational changes and lessons learned from previous storms.
- *Anticipation* – to predict potential damage to the transmission and distribution system. Quick response to customer outages is enhanced on advance warning. Monitoring weather conditions to predict potential system damage is essential.
- *Assessment* – Every storm leaves a footprint of damage within FirstEnergy's system. The objective is to quickly and accurately assess damage within that footprint and restore customers' service in a timely and safe manner. Coincident with this objective is the early isolation of hazards from public contact.
- *Management* – to respond to and manage all electric system disturbances, restoring service as quickly and safely as possible, effectively using all available resources.
- *Communications* – to establish mechanisms for communicating the status of the restoration effort to customers, governmental bodies, the news media, and corporate management. In June 2004,

JCP&L and Board staff also entered into a memorandum of understanding in which JCP&L agreed to improve communication with Board staff during emergency events.

JCP&L uses the following aid, systems, and facilities in its restoration efforts:

- *Mutual Assistance* – JCP&L participates in the Mid-Atlantic Mutual Assistance (MAMA) organization. Operating personnel from the other FirstEnergy companies are available and willing to travel to New Jersey to assist in any emergency and storm restoration activities. RDOs throughout FirstEnergy coordinate all restoration activities, and they all use the same manual of operations. Training is provided annually to ensure compliance with the storm process. As a member of MAMA, JCP&L also has access to operating personnel from neighboring utilities when they are available. In addition, as a member of the Edison Electric Institute, JCP&L has access to operating personnel from utilities and contractors throughout the United States and Canada. JCP&L is also a member of the New York Mutual Assistance and the Great Lakes Mutual Assistance organizations.
- *PowerOn* – All FirstEnergy operating companies use the same outage management system (OMS) in concert with the same storm process. This consistency allows additional RDO dispatchers to be brought into the affected area to provide assistance. It also enables support efforts to be conducted from remote locations.
- *E-Plan* – An electronic Lotus Notes–based directory has been developed that contains information to be used during restoration activities. Information such as practices, maps, weather, and hotels, etc. are contained in this database.
- *Command Trailers* – There are two emergency command trailers available for immediate deployment. These trailers, one 40 feet and the other 48 feet, are constantly maintained and equipped to ensure 24-hour availability. They consist of conference rooms, individual workstations, and storage areas. The trailers are equipped with diesel-powered generators, satellite and cellular phones, as well as a satellite-uplink TV so that they can operate remotely. There are numerous staging sites throughout New Jersey, which are all listed in the previously mentioned E-Plan. Each trailer is also equipped with fax machines, printers, LAN connections, and corporate radios. The command trailers' intended use is for restoration activities associated with any system emergency or mutual assistance request that requires them to be placed into service.
- *Remote Storm Rooms* – In the event of a catastrophic event or an attack, JCP&L has the ability to relocate restoration activities to another area when local offices are incapacitated.
- *Customer Care Outage Website* – The customer care website has a Current System Outage Map. This technology provides timely emergency and storm restoration information to JCP&L customers. Customers can access service territory maps to view outage locations and the number of customers affected as well as area-specific messaging about restoration activities.
- *Voice-Enabled Interactive Voice Response (IVR)* – Customers who contact the call center can use FirstEnergy's voice-enabled IVR system. This technology recognizes and responds to verbal

commands. Callers can navigate to access the services they need by simply speaking their selection. This service is offered 24/7. The IVR system reduces the amount of time customer service representatives need to spend on the phone, which frees them up to provide enhanced customer service to those customers who require one-on-one assistance. This system also has reverse IVR messaging capabilities, which are used to give customers callback notification during outage events or advanced notice by way of a recorded message when specific reliability improvements (e.g., cable replacements and tree trimming) are scheduled for their neighborhood and community.

- *Internal Meteorological Support* – This decision-based support service addresses the specific weather concerns of FirstEnergy. Because information from routine intelligence streams (National Weather Service, The Weather Channel, etc.) does not address specific weather concerns, the internal meteorological support provides FirstEnergy with a value-added service to remain knowledgeable of impending weather events. The support service consists primarily of real-time monitoring, forecasting, and post-event analysis products for weather phenomena of concern to FirstEnergy. Information is conveyed to weather-sensitive FirstEnergy business units and personnel through a blend of automated and manual methods, including web, e-mail, and pager. Participation in pre-storm conference calls occurs on an as-needed basis before and during significant weather events. Occasionally, short three-minute video clips depicting expected weather threats and impacts accompany e-mail alerts. Internal weather support capitalizes on the use of a full suite of cutting-edge, freely available software and data from the meteorological community—including the ability to run a high-resolution (2.5 mile) model over the FirstEnergy domain. The services are provided by two degreed meteorologists possessing a combined 35 years of experience in operational forecasting, research, programming, data analysis, outreach, and project management for the military, private, public, domestic, and international community.

Storm Categorization

At JCP&L, storms are categorized based on their actual or estimated severity so that internal and/or external resources may be mobilized. The PowerOn OMS can be used as the source of the estimated restoration times. If conditions change, the category can be upgraded or downgraded as appropriate. The storm categories are shown in *Exhibit IX-19*.

Exhibit IX-19
JCP&L Storm Categories
July 2010

CATEGORY	ESTIMATED RESTORATION TIME	STAFFING REQUIREMENTS
Level I	Within 12 hours	Requiring local resources only (crews normally assigned to that location)
Level IIa		Requiring region wide resources Substantial hazards exist Hazard coordinator reports Hazard team is mobilized
Level IIb		Substantial damage exists (If no area specified - REGION wide) Extended Regional Dispatch Office (RDO) staff to report (engineering and clerical support) Distributed Dispatching implemented Line, Forestry, and Substation Supervisors of area affected to report
Level IIc		Major Damage All remaining Line and Substation Supervisors to report Communication liaison(s) to report All area managers to report Entire regional storm team activated
Level III	Exceeding 24 hours	Requiring System-wide resources (Internal Mutual Assistance should be activated)
Level IV	Exceeding 24 hours	Requiring resources external to the System

Source: Information Response 146

Major and Minor Storms

JCP&L is subject to both major and minor storms. A major storm event is defined as "a sustained interruption of electric service beyond the control of the electric distribution company, which may include, but is not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow, and ice storms, which affect at least 10% of the customers in an operating area." In addition, the regulation provides that "when one operating area experiences a major event, the major event shall be deemed to extend to those other operating areas which are providing assistance to the affected area." Major storm events are not included in reported reliability.

Exhibit IX-20 shows the major storm activity from 2005 through 2009.

Exhibit IX-20
Major Storm Activity
2005 to 2009
as of December 31, 2009

Year	Major Storms **	Customer Outage Minutes
2009	2	47,266,820
2008	6	169,135,261
2007	2	70,782,102
2006	3	135,379,050
2005	1	22,483,316

** A "Major Storm" is equivalent to a "Major Event" as defined under N.J.A.C. 14: 5-1.2.

Source: Information Response 770

In 2009, JCP&L experienced two major storm events.

February 11–15, 2009 Major Storm Event

Beginning on February 11, 2009, severe windstorms swept through the JCP&L service area, resulting in extensive damage to the electrical distribution system. The high winds, with gusts measuring more than 60 miles per hour, caused falling trees and branches to take down power lines in JCP&L's Northern and Central Regions. Severe winds uprooted and tore branches from trees, resulting in broken poles and cross-arms, downed conductors, and blown fuses. In many cases, forestry work, line work, and service work were needed at the same location to achieve restoration. Some customers experienced multiple outages due to additional faults from later wind-related events. Approximately 99,900 JCP&L customers were affected by this event. JCP&L restored 90% of all customers impacted by this event within 12 hours. All customers were restored as of 1:10 A.M. on Sunday February 15, 2009. This storm was classified as a major event, with 15% of the customers in JCP&L's Northern Region affected. JCP&L's Central Region provided crews to assist the Northern Region and saw 4.86% of its customers affected by the event.

July 17–August 3, 2009 Major Storm Event

Five successive waves of violent weather storms affecting over 118,000 customers struck the JCP&L service territory beginning on the evening of July 17. This continuous series of weather events maintained a pattern of severe damage and outages for customers followed by periods of infrastructure rebuilding that did not allow sufficient time between waves to fully recover and return to normal work schedules. JCP&L continued to experience volatile weather throughout a 17-day period, ending on August 3. During this period, there were numerous storms and severe weather alerts, which included a

confirmed tornado in Wantage Township, New Jersey and a National Weather Service tornado warning with a report of a funnel cloud along the Route 78 corridor in Hunterdon and Somerset counties. The severe weather included thousands of lightning strikes throughout the JCP&L service territory as well as winds in excess of 100 miles per hour during the tornado.

This weather event resulted in over 1,462 cases of trouble affecting a total of 118,369 customers throughout JCP&L. Crews were on a 16-hour work and eight-hour rest rotation for a majority of this period, and outside assistance was requested and obtained for four of the storms. The line crews to assist restoration efforts were obtained from Con-Edison and Met-Ed, and contractor support was provided by Sussex Rural Electric, JBL Electric, TRI-M, Henkel's & McCoy, Riggs Distribution, M. J. Electric, and Matrix electrical contractors. Resources were also shared between JCP&L's Northern and Central Regions for all events.

The effects of the severe winds and lightning during this prolonged event included uprooted trees, broken branches and limbs, approximately 260 damaged poles (and associated hardware such as cross-arms), 840 damaged primary conductors, and 870 damaged services. Such destruction caused approximately 700 line fuses to operate due to lightning strikes or other temporary faults. In many cases, multiple crews were required to achieve safe, prompt repairs. In these cases, forestry work, equipment replacement, line work, and service work were needed at the same location to restore service to all customers. In some instances, customers experienced multiple outages due to the number of severe weather fronts that came through JCP&L's service territory over this time period.

This storm sequence was classified as a major event, with 12.5% of the customers in JCP&L's Northern Region and 9.7% of customers in JCP&L's Central Region affected. For the period of the storms, a total of 118,396 customers were affected, which is 10.9% of all JCP&L customers.

Although a minor storm event is not defined by the BPU in its regulations as contained in the New Jersey Administrative Code, JCP&L informally classifies any day with more than 40 outages in either JCP&L region (Northern or Central) as a minor storm event. A review of the minor storm activity for JCP&L from 2005 through 2009 reveals that the number of minor storm days, the number of outages, and the customer outage minutes have declined over the four-year period. This tendency likely reflects improved overall system reliability that reduces the number of outages due to storms and therefore reduces the number of days with 40 outages or more, which are classified as minor storm days.

O&M Support Applications

Tremendous amounts of data are generated each day from the daily work that field crews perform to operate and maintain the system assets and to restore service outages. FEU/ JCP&L employs a number of information technology applications to assist its workers in processing daily work. *Exhibit IX-21*, *Exhibit IX-22*, and *Exhibit IX-23* present a list of the applications used in the daily operations and maintenance of the JCP&L electrical assets.

Exhibit IX-21
Operations and Maintenance Support Applications
July 2010

Operation & Maintenance						
Assets			Application	Application Description	Activities Supported	
Distribution	Transmission	Substation			Planned Maintenance	Storm Process (Service Restoration)
■	■	■	**SAP**	Enterprise software used for customer service, accounting, financial, and asset tracking processes. **http://www.sap.com/solutions/business-suite/index.epx**	■	
■	■	■	**CREWS (Customer Request Work Scheduling)**	An in-house-developed application used to design jobs based on standards, schedule work, and input time charges.	■	■
■	■	■	**Click**	Application to assist in preparing monthly, weekly plans and schedules. **http://www.clicksoftware.com/solutions-service-chain-optimization-shift-scheduling-software.htm**	■	
■	■	■	**Primavera**	Software used to schedule and manage large projects. **http://www.oracle.com/us/products/applications/042374.htm**	■	
■	■	■	**CT**	Application used to track large financial commitments for projects	■	
■	■	■	**EDOA**	Application used by the RDO to manage switching and tagging requests.	■	■
■	■	■	**OCRS**	Application used to track overtime.	■	■
■			**Syclo**	Application providing the ability to send work to mobile data terminal in field vehicles. **http://www.syclo.com/**		■
■			**GIS Design**	Application used by Engineers and Layout Technicians to design and layout new jobs. **http://usa.autodesk.com/adsk/servlet/pc/index?id=15174834&siteID=123112**		■
■			**MPAT**	Application used to maintain the data within the GIS system		■
■			**GIS View**	Application used to make GIS data available to authorized users. **http://www.gatekeeper.com/products.html**	■	
■			**KorTerra**	A set of robust software applications that increase office and field efficiency through automating the receipt and dispatch of locate tickets. **http://www.korterra.com/**		■

Source: Information Response 516 and Schumaker & Company Analysis

Exhibit IX-22
Operations and Maintenance Support Applications
July 2010

Operation & Maintenance						
Assets			Application	Application Description	Activities Supported	
Distribution	Transmission	Substation			Planned Maintenance	Storm Process (Service Restoration)
			Mapframe	Application making GIS Maps and data available on laptops. **http://www.gepower.com/prod_serv/products/gis_software_2010/en/mapframe_mob_solutions.htm**		
			AMFM ADMIN	Software used to interface GIS data with CYME and PowerOn applications.		
			PowerOn	Primary application used for outage management and service restoration. **http://www.gepower.com/prod_serv/products/scada_software/en/poweron.htm**		
			PowerOn Remote	Scaled-down version of PowerOn used during major events. **http://www.gepower.com/prod_serv/products/scada_software/en/poweron.htm**		
			MDSI	Application used to dispatch service restoration jobs direct to field vehicles. **http://www.ventyx.com/solutions/mobile-workforce-management.asp**		
			IVR (Interactive Voice Response)	Application used to process high volumes of customer calls during major storm events.		
			ByPass	Application providing the ability to route high volumes of customer calls directly to PowerOn Outage Management during major events.		
			IVMS (Internet Vegetation Management	In-house-developed web-based application used to for vegetation management.		
			PERT	Application used to track PCB (Polychlorinated biphenyls) events and associated equipment repairs.		

Source: Information Response 516 and Schumaker & Company Analysis

Exhibit IX-23
Operations and Maintenance Support Applications
July 2010

Operation & Maintenance						
Assets			Application	Application Description	Activities Supported	
Distribution	Transmission	Substation			Planned Maintenance	Storm Process (Service Restoration)
■	■	■	**Mapframe**	Application making GIS Maps and data available on laptops. **http://www.gepower.com/prod_serv/products/gis_software_2010/en/mapframe_mob_solutions.htm**	■	■
■	■		**AMFM ADMIN**	Software used to interface GIS data with CYME and PowerOn applications.		■
■	■	■	**Cascade Office**	Application used to track health of substation assets. **http://digitalinspections.com/**	■	
■	■	■	**Cascade Patrol & Field**	Application used to schedule substation inspections and capture resulting data. **http://digitalinspections.com/**	■	
■	■	■	**M5**	Application used to track the maintenance performed on the transportation fleet. **http://www.assetworks.com/fleetfocus**	■	

Source: Information Response 516 and Schumaker & Company Analysis

Capital Program

System Forecasting

FEU's most-probable peak forecast is developed using a monthly peak regression model with monthly class sales as the independent variables. The monthly peak forecast is developed using historical data from 2002 forward. The annual peak forecast is defined by the highest monthly peaks for each year. Historically, the uncertainty range around the peak is not a normal distribution or a bell-shaped curve. That is because of the uncertainty caused by weather sensitivity.

The JCP&L summer peak is very weather-sensitive due to the combination of relatively low industrial sales in the sales mix, high residential air-conditioning saturation, and the warm summer climate of New Jersey. In the last FirstEnergy residential appliance survey in 2005, 70% of all residential customers use central air-conditioners (estimated 706,000 units in 2010) and some add room air-conditioners (estimated 660,000 units in 2010). Residential air-conditioning load alone represents 40% of the JCP&L

peak. Add the other residential weather-sensitive loads (pool pumps, etc.) and the residential weather-sensitive load approaches 60% of the entire JCP&L peak.

Metered studies have shown that air-conditioning load during normal summer peaks has very little diversity, with each unit running on average between 50 and 55 minutes during the peak hour. As a result, most of the connected load is realized at the time of the peak. Even during conditions of record temperature and humidity, residential air-conditioning cannot add much more load. Therefore, the high side of peak uncertainty is constrained. Conversely, a significant portion of the residential air-conditioning load is discretionary, meaning it is used only during very uncomfortable weather. During mild summers, much of the residential load is not realized because of customers' resistance to using air-conditioning. That means that the low side of the uncertainty range is much greater than the high side.

The JCP&L service territory is in a slow growth period. *Exhibit IX-24* shows the trends in JCP&L customers.

Exhibit IX-24
JCP&L Service Territory Statistics
2005 to 2009

	2005	2006	2007	2008	2009
Number Residential Customers	950,622	958,986	963,484	967,653	969,897
Number Commercial Customers	117,365	118,636	119,618	120,602	121,297
Number Industrial Customers	2,640	2,592	2,587	2,551	2,529
Total Customers	1,072,632	1,082,220	1,087,696	1,092,814	1,095,732
Percent Change from Previous Year		**0.9%**	**0.5%**	**0.5%**	**0.3%**
New Business Commercial/Ind Install Counts YTD		2,489	2,345	2,425	1,713
New Business Residential Install Counts YTD		9,266	5,954	2,712	3,981
New Business Install Counts YTD	5,354	11,755	8,299	5,137	5,694
Percent Change from Previous Year		**119.6%**	**-29.4%**	**-38.1%**	**10.8%**

Source: Information Response 135 and Schumaker & Company Analysis

Total net new customers added from 2005 to 2009 were 23,100, or a simple average annual growth rate of 0.5%.

Distribution Forecasting

The Load Forecasting Data Management System (LFDMS) application is used to model future substation loading based on historical load data, expected spot loads, and overall average growth rates for a given area. Peak load data for each transformer and circuit are obtained from the monthly substation inspections and real-time system control and data acquisition (SCADA) values. Each transformer and circuit on the distribution system has defined attributes, such as transformer nameplate and heat run capacity, circuit exit conductor thermal ratings, and circuit breaker ratings. Distribution circuit forecasts are derived using the most recent circuit peak, applying known spot loads coming onto

the system and average overall growth rates. This information is then reviewed, weather adjusted, and verified using economic factors in combination with the local distribution planner's knowledge. The load forecasts are evaluated and potential equipment thermal overloads are identified. The local planning engineer will then determine if areas of concern can be alleviated through a variety of tools, including load transfers, load balancing, reconductoring, or other capital infrastructure upgrades.

Capital Program Planning and Budgeting

JCP&L spends between $150 and $200 million per year on approximately 100 to 150 T&D-related capital projects and programs. FE currently has a three-year capital planning horizon with strong emphasis on the next year. The request for project approval (RPA) is the basic capital project planning document. RPAs are tracked in a Lotus Notes database. A June executive conference with the FirstEnergy CEO and business unit heads, including those from FEU and Finance, is a key capital planning date. FEU develops a preliminary next-year capital-spend projection prior to this date and conducts two corporate challenge reviews of JCP&L's proposed capital program prior to this meeting. That way, the FEU capital needs for the coming year are reasonably well-defined.

The T&D capital planning portion of the capital budget is driven by the FEU Asset and Project Management group. This group manages the process and calendar to blend with the overall FE corporate capital planning process. The FEU T&D capital planning process, however, has been developed specifically for T&D needs. Each FEU opco, including JCP&L, develops its own T&D capital program within the FEU process. The criteria that the T&D capital budget is designed to meet are: state reliability standards; North American Electric Reliability Corporation (NERC) criteria; FEU planning criteria; relocation requirements; new business; and state meter-replacement program requirements.

FEU and JCP&L develop a bottom-up capital program. Although it may be influenced by general corporate guidance on capital spending (e.g., "the same as last year"), JCP&L does not simply work toward spending a top-down capital allocation wisely, as many other companies do. While there is top-down guidance, FEU and JCP&L prepare to defend the bottom-up developed capital budget and request capital above the guidance if necessary.

The JCP&L capital program is a mix of specific projects, each over $50,000, and blankets for programs of smaller projects, such as new business, street lighting, and storms.

One of JCP&L's T&D capital budgeting tools is to build up from available employee labor and to calculate the amount of capital work it can accomplish in the coming year. The projected productive hours of the planned workforce for the coming year are first allocated between O&M and capital. The capital productive hours are then turned into estimated capital spending based on historical and projected overhead rates and materials usage. The employee capital resource capacity is later balanced against the proposed total capital budget. FEU and JCP&L first assure all available employee capacity will be used and then program contract labor to make up any shortfall.

All proposed projects are ranked using a C (highest), B, A (lowest) ranking system. A secondary ranking within the CBA system ranks the projects as high, medium, or low within each letter. The highest ranked projects are C High and the lowest are A Low. Another project ranking system, ECAT, is available but not universally used. It is used for some specific projects but is not considered a corporate requirement. ECAT scoring is not used for blankets, bulk transmission projects, or mandatory projects. The FE corporate ranking tool, SAP's XRPM, is also not used by FEU.

There are three capital program challenge sessions at each opco. The FE/FEU corporate challenge group includes Asset and Project Management staff, Business Services representatives, and various FEU T&D staff representatives. In general, bulk power transmission and substation capital projects are developed by the centralized FEU staff but each project is included in the relevant opco's budget, including JCP&L's.

Within JCP&L, the T&D capital plan and budget development is facilitated by the Engineering Services unit. Such development begins with a JCP&L internal process prior to the first corporate challenge. Projects are proposed and are then reviewed and refined in three or four iterations prior to the first corporate challenge in the March/April timeframe. The internal review and ranking process includes all JCP&L interested parties and works to develop a consensus among them, which is usually achieved. The JCP&L President, however, can make the final decision on the proposed JCP&L capital program if necessary.

At the first two corporate challenge rounds in March/April and June, individual planning engineers present and defend their proposed projects and programs. The projects and programs are adjusted in a consensus-building process. Because the process covers several months, conditions change over time and new projects or programs may be identified that have higher priorities than prior identified projects and programs. The project and program priority list is continually adjusted to reflect current and projected conditions. By the second corporate challenge session, projects and programs are ranked according to the CBA ranking system and, for JCP&L, the ECAT system.

FEU's capital allocation tool, ECAT, is used to calculate a benefit-to-cost metric and to support the prioritization of capital projects. ECAT enables each operating company to rank proposed projects based on their benefit-to-cost ratio and to estimate the reliability impact of these proposed projects. Acknowledging that there will be some outages on an electric system due to unforeseen events, the model attempts to rank proposed projects by how cost-effectively they reduce the potential for outages by adding capacity, system flexibility, or automation, as examples. In a theoretical situation where two enhancements were proposed, the model looks at how much investment is needed in each case to improve overall performance. The project that provides the largest improvement in reliability for the dollars invested is given priority over the other project. Where a potential criteria violation has been identified, ECAT can be used to choose the most beneficial way to solve the situation. ECAT is a Microsoft Excel–based model that uses templates for consistent data input from Engineering personnel regarding project details and benefits. The financial parameters in ECAT are refreshed on an annual basis and results are validated through each operating company's capital challenge process. ECAT is

used only for specific capital projects; high-volume, repetitive capital work (i.e., blanket projects) is not modeled.

After the third corporate challenge round, JCP&L's proposed capital program is consolidated into the FEU composite proposed program and is presented to FE corporate. FE corporate makes final decisions about the total capital spend for the coming year and its allocation among business units. FEU receives a capital spending allocation that it then allocates among the opcos. The opcos, including JCP&L, make any adjustments necessary to fit the final capital plan within the capital spending allocation.

Counting the preliminary internal rounds, the three corporate challenge sessions, and the dry run prior to the third corporate challenge, the JCP&L capital program is formally reviewed at least seven times.

Smaller capital projects are implemented by the relevant work groups (e.g., lines, substations, and meters) using the day-to-day work management tools, such as CREWS. Specific projects larger than $50,000 dollars receive special treatment. These larger projects are scheduled by Engineering Services using the Primavera scheduling tool in a standard FEU scheduling format. These projects are also assigned a project manager and a field coordinator to assure that all project components (e.g., design, permitting, and construction) are completed on time and on budget.

Support Applications

The capital program is driven by defined projects and programs that address new business and the capacity and reliability of the electrical system to serve customers. A number of FEU/JCP&L applications are used to determine the need for the capital projects. *Exhibit IX-25*, *Exhibit IX-26*, *Exhibit IX-27*, and *Exhibit IX-28* provide overviews of the applications used to determine the need for projects and to assist with their timely completion.

Exhibit IX-25
Capital Program Support Applications
July 2010

Capital Program								
Assets			Application	Application Description	Activities Supported			
Distribution	Transmission	Substation			System Forecasting (Projects)	Distribution Forecasting (Projects)	Planning & Budgeting	Project Completion
■	■	■	**SAP**	Enterprise software used for customer service, accounting, financial, and asset tracking processes. **http://www.sap.com/solutions/business-suite/index.epx**			■	
■	■	■	**CREWS (Customer Request Work Scheduling)**	An in-house-developed application used to design jobs based on standards, schedule work, and input time charges.				■
■			**Click**	Application to assist in preparing monthly, weekly plans and schedules. **http://www.clicksoftware.com/solutions-service-chain-optimization-shift-scheduling-software.htm**				■
■	■	■	**Primavera**	Software used to schedule and manage large projects. **http://www.oracle.com/us/products/applications/042374.htm**			■	■
■	■	■	**CT**	Application used to track large financial commitments for projects				■
■	■	■	**EDOA**	Application used by the RDO to manage switching and tagging requests.				■

Source: Information Response 516 and Schumaker & Company Analysis

Exhibit IX-26
Capital Program Support Applications
July 2010

Capital Program								
Assets			Application	Application Description	Activities Supported			
Distribution	Transmission	Substation			System Forecasting (Projects)	Distribution Forecasting (Projects)	Planning & Budgeting	Project Completion
■			**GIS Design**	Application used by engineers and layout technicians to design and layout new jobs. **http://usa.autodesk.com/adsk/servlet/pc/index?id=15174834&siteID=123112**				■
■			**MPAT**	Application used to maintain the data within the GIS system.				■
■	■		**CRC (Circuit Reliability**	Specialized version of GIS View used in the reliability improvement process. **http://www.gatekeeper.com/products.html**		■		
■	■		**LTS2005 FALLS**	Applications used to evaluated lightning's impact on reliability. **http://www.vaisala.com/en/products/thunderstormandlightningdetectionsystems/Pages/FALLS.aspx** and **http://www.vaisala.com/en/services/servicecontracts/Pages/LTS2005maintenance.aspx**		■		
■			**CYME**	The CYMDIST Distribution Analysis program is designed for planning studies and simulating the behavior of electrical distribution networks under different operating conditions and scenarios. **http://www.cyme.com/software/cymdist/**		■		
■			**AMFM ADMIN**	Software used to interface GIS data with CYME and PowerOn applications.		■		
■		■	**LFDMS (Load Forecast Data Management System)**	In-house-developed application used to forecast substation and circuit loadings.	■	■		
		■	**FLIR**	Application to assist in analyzing results of infrared inspections of substation equipment. **http://www.flir.com/thermography/eurasia/en/content/?id=11378**	■	■		
		■	**DTA**	Application to assist in analyzing results of Doble tests of substation equipment. **http://www.doble.com/products/doble_test_assist**	■	■		
		■	**TOA4**	Application to assist in analysis of testing of oil in substation equipment. **http://www.deltaxresearch.com/toa.htm**	■	■		

Source: Information Response 516 and Schumaker & Company Analysis

Exhibit IX-27
Capital Program Support Applications
July 2010

Capital Program								
Assets			Application	Application Description	Activities Supported			
Distribution	Transmission	Substation			System Forecasting (Projects)	Distribution Forecasting (Projects)	Planning & Budgeting	Project Completion
			TARA (Transmission Adequacy and Reliability Assessment)	Software used for identifying and analyzing transmission bottlenecks and how generating resources compete for these transmission resources. **http://power-gem.com/index_files/Page624.htm**				
			K71	Software utilized to determine transformer impedances for inclusion in power flow and short circuit modeling databases.				
			K03	Software utilized to determine the ratings of specific circuit terminal components and the overall circuit rating.				
			EMTP-RV	EMTP-RV is a specialized software for the simulation and analysis of transients in power systems. **http://www.cyme.com/software/emtp/**				
			SuperHarm	SuperHarm enables the development of a computer model of a power system to explore variations on system loads and configurations, along with the resulting impact on system frequency response and distortion levels. **http://www.pqsoft.com/SuperHarm/index.htm**				
			PSLF (Positive Sequence Load Flow)	A suite of analytical tools that can simulate large-scale power systems up to 60,000 buses. **http://www.gepower.com/prod_serv/products/utility_software/en/ge_pslf/index.htm**				
			Replay Plus	Software to review events on the bulk power system.				
			Display Station	Software used to display data from digital fault recorders.				
			PTLoad	EPRI software to determine thermal characteristics of a power transformer.				
			CYMTCC	CYMTCC addresses time over-current protection for industrial, commercial and distribution power systems. **http://www.cyme.com/software/cymtcc/**				

Source: Information Response 516 and Schumaker & Company Analysis

Exhibit IX-28
Capital Program Support Applications
July 2010

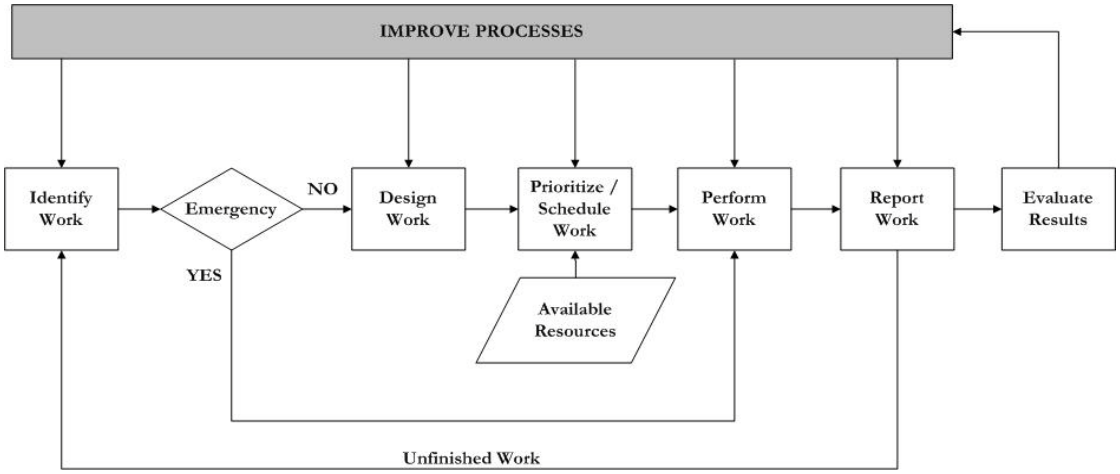
Capital Program								
Assets			Application	Application Description	Activities Supported			
Distribution	Transmission	Substation			System Forecasting (Projects)	Distribution Forecasting (Projects)	Planning & Budgeting	Project Completion
	■		**SEL (multiple)**	Suite of software to assist in analyzing system events. **http://www.selinc.com/softwaresolutions/**	■			
	■		**DFR Assistant**	DFR Assistant™ software tools perform automated analysis and classification of digital fault recorder (DFR) files. **http://www.tli-inc.com/dfra.html**	■			
	■		**CAPE (Computer-Aided Protection Engineering)**	Software used by engineers responsible for protection of high-voltage transmission systems and distribution systems within electric power utilities. **http://www.electrocon.com/capeintro.html**	■			
	■		**TR1625**	Application that communicates with digital fault recorders (DFRs).	■			
	■		**RSS**	Application to manage relay setting of protective equipment	■			
	■		**RTS**	Application to assist in management of the relay testing program	■			
	■		**VSAT (Voltage Security Assessment Tool)**	A highly automated steady-state analysis tool designed for comprehensive voltage security assessment. The software includes flexible specification of voltage security criteria and is designed to handle a large number of contingencies, power transfers, and scenarios. **http://www.dsatools.com/html/prod_vsat.php**	■			

Source: Information Response 516 and Schumaker & Company Analysis

Work Management System

In addition to overall applications integration, utilities use a combination of processes and information technology to help them complete the work needed to not only provide reliable service to their customers but also maintain their assets. This combination of processes and technology is generally referenced as a work management system. Generic tasks needed to complete work can be grouped into categories as shown in the work management process in *Exhibit IX-29*.

Exhibit IX-29
Generic Work Management System
2010

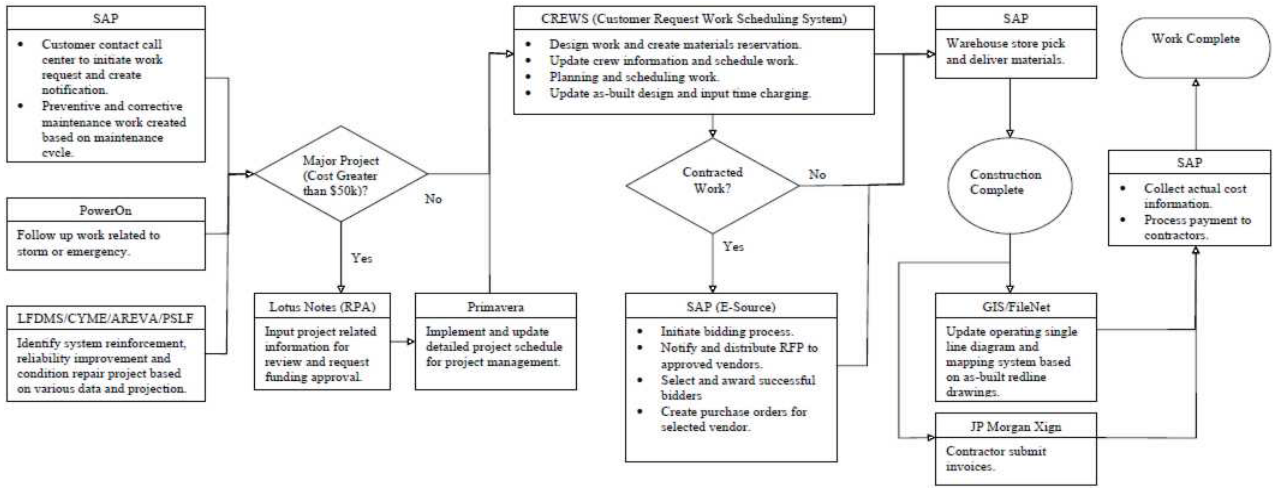


Category	Description
Identify	The acknowledgement that a specific project (job) needs to be completed. Jobs can be initiated by customers, internal as a result of analyses, external forces such as weather, etc.
Design	The translation of the work previously identified into labor, material, and equipment resources required for completion. Very simple and/or repetitive jobs generally do not need the design phase.
Prioritize / Schedule	The matching of available labor, material, and equipment resources to complete the highest-priority work as soon as possible.
Perform	The application of labor using materials and equipment to complete the work.
Report	The completion of the the documentation requirements associated with the job. Requirements can include but are not limited to: labor hours, material items, transportation, results of inspections, etc.
Evaluate	The analysis of the data collected in the report phase to determine if improvements can be make to the work management process.

Source: Schumaker & Company Analysis

The FEU/JCP&L work management system is shown in *Exhibit IX-30*.

Exhibit IX-30
JCP&L Work Management System
2010

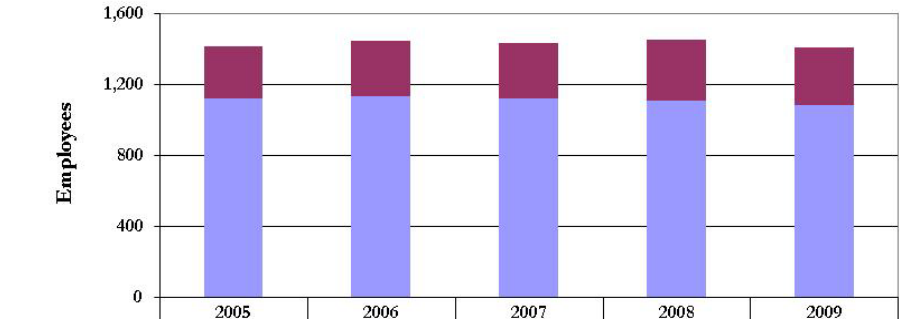


Source: Information Response 157

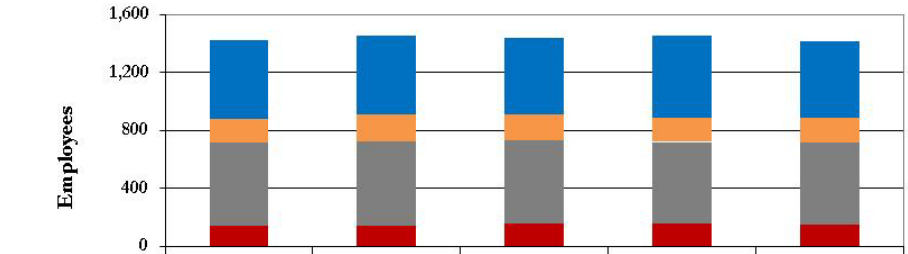
Workforce

While the total number of JCP&L employees declined from 1,418 to 1,411 over the five-year period from 2005 to 2009, the total number of T&D engineering, lines, and substations employees increased from 876 to 888. Staffing trends are shown in *Exhibit IX-31*.

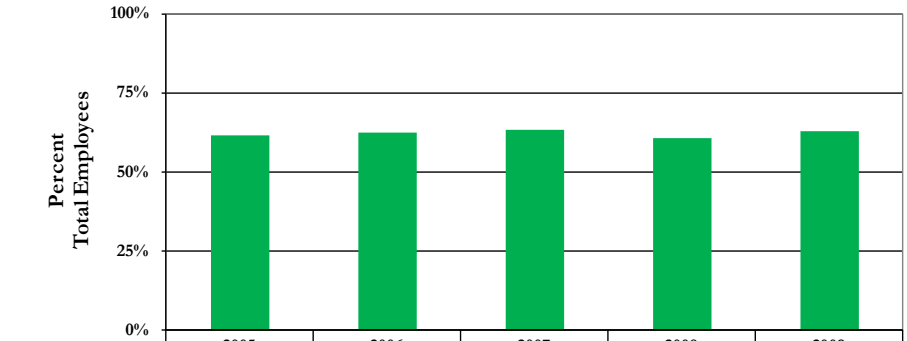
Exhibit IX-31
Jersey Central Power & Light T&D Staffing Trends
2005 to 2009



	2005	2006	2007	2008	2009
Non-Bargaining Unit	296	312	312	345	321
Bargaining Unit	1,122	1,137	1,124	1,111	1,090



	2005	2006	2007	2008	2009
Other Functions	542	543	526	568	523
Substations	161	183	178	170	172
Lines	579	588	577	565	568
Engineering	136	135	155	153	148



	2005	2006	2007	2008	2009
Engr+Lines+Sub	62%	63%	63%	61%	63%

Source: Information Responses 132 and 135

The FEU/JCP&L T&D staffing strategy prefers employees over contractors for electrical system work. Contractors are used for peak workload demands (which have not occurred during the recent economic downturn), Department of Transportation road projects, specialized work, helicopter transmission line

construction, below-grade civil (non-electric) conduit installations, one-call locate mark-outs, and some planned maintenance programs, including vegetation management and pole inspections.

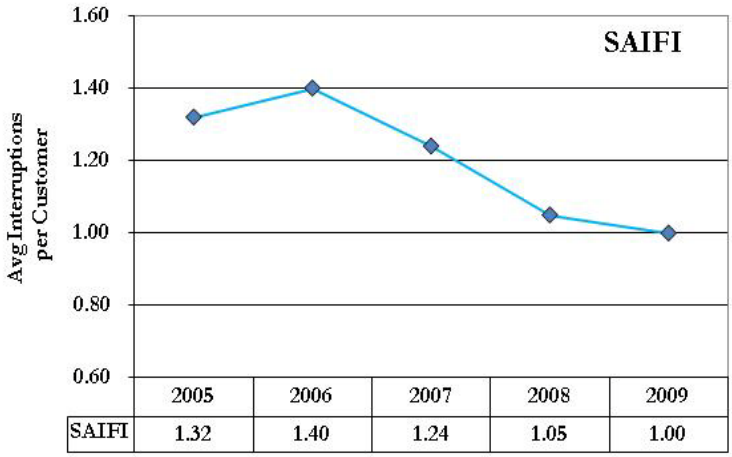
Findings & Conclusions

Service Levels

Finding IX-1 **There is a generally positive trend in the System Average Interruption Frequency Index (SAIFI) reliability metric, and power quality complaints have decreased.**

The SAIFI has improved (fewer interruptions is better) from 2006 through 2009, as shown in *Exhibit IX-32* .

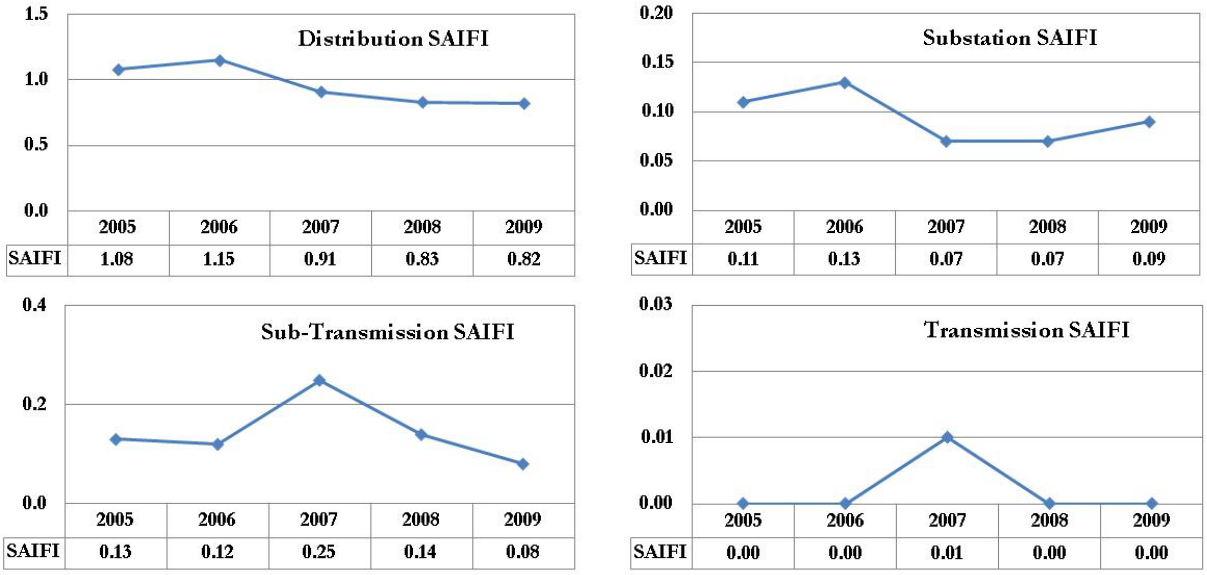
Exhibit IX-32
Jersey Central Power & Light SAIFI
2005 to 2009



Source: Information Response 132, Attachment 1

JCP&L improved SAIFI in each of the system subcategories of distribution, substations, and sub-transmission from 2005 to 2009. Transmission stayed the same for the period spanning 2005 through 2009, as shown in *Exhibit IX-33*.

Exhibit IX-33
JCP&L Distribution, Substation, Sub-Transmission, and Transmission SAIFI
2005 to 2009



	2005	2006	2007	2008	2009
SAIFI	1.08	1.15	0.91	0.83	0.82

	2005	2006	2007	2008	2009
SAIFI	0.11	0.13	0.07	0.07	0.09

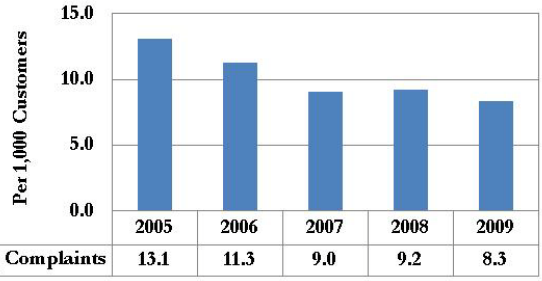
	2005	2006	2007	2008	2009
SAIFI	0.13	0.12	0.25	0.14	0.08

	2005	2006	2007	2008	2009
SAIFI	0.00	0.00	0.01	0.00	0.00

Source: Information Response 519, Attachment 1 and Schumaker & Company Analysis

In addition, *Exhibit IX-34* shows that the number of power quality complaints per 1,000 customers served has significantly decreased from 2005 to 2009.

Exhibit IX-34
JCP&L Power Quality (PQ) Complaints
2005 to 2009

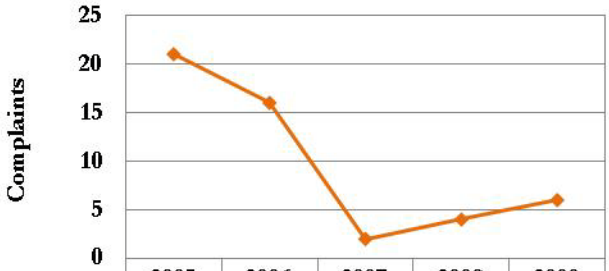


	2005	2006	2007	2008	2009
PQ Complaints	13.1	11.3	9.0	9.2	8.3

Source: Information Response 519, Attachment 8 and Schumaker & Company Analysis

Similarly, neutral-to-earth/stray-voltage complaints have decreased from 21 in 2005 to six in 2009, as displayed in *Exhibit IX-35*.

Exhibit IX-35
Jersey Central Power & Light Neutral-to-Earth/Stray-Voltage Complaints
2005 to 2009

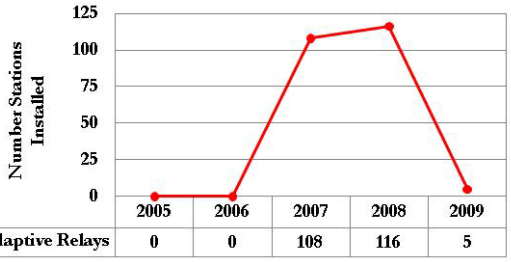


	2005	2006	2007	2008	2009
Voltage Complaints	21	16	2	4	6

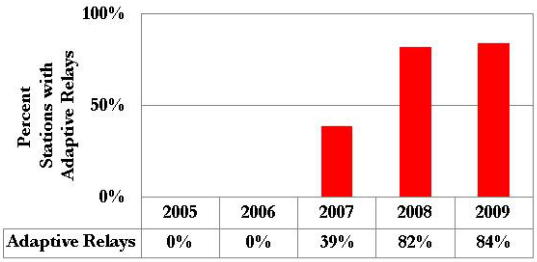
Source: Information Response 519, Attachment 9 and Schumaker & Company Analysis

One of the possible reasons for improved SAIFI numbers may be the increase in adaptive relays installed at substations. *Exhibit IX-36* shows that adaptive relays have been installed at 229 of the 274 substations since 2005.

Exhibit IX-36
JCP&L Adaptive Relaying
2005 to 2009



	2005	2006	2007	2008	2009
Adaptive Relays	0	0	108	116	5



	2005	2006	2007	2008	2009
Adaptive Relays	0%	0%	39%	82%	84%

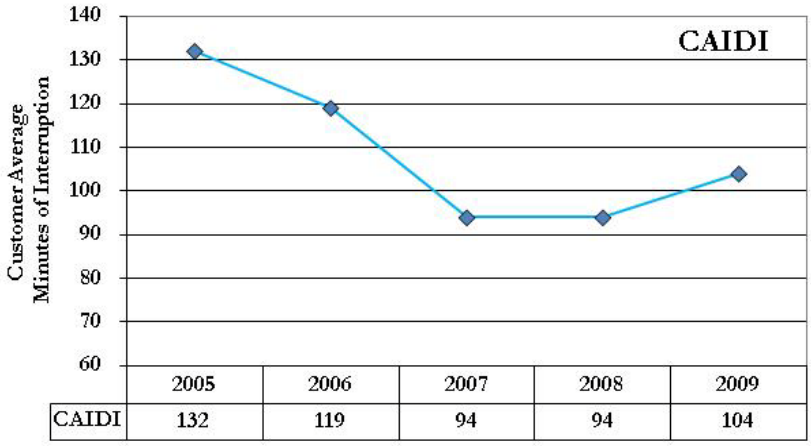
Source: Information Response 519, Attachment 10 and Schumaker & Company Analysis

The JCP&L adaptive relaying strategy allows the RDO to place adaptive relays in either the normal "fuse sacrifice" or storm condition "fuse save" mode. The normal fuse sacrifice mode allows fuses to fail and limit the number of customers to those downstream from the fuse. The fuse save mode, which is used during storm wind and lightning temporary faults, prevents larger numbers of sustained outages in favor of more frequent but momentary outages.

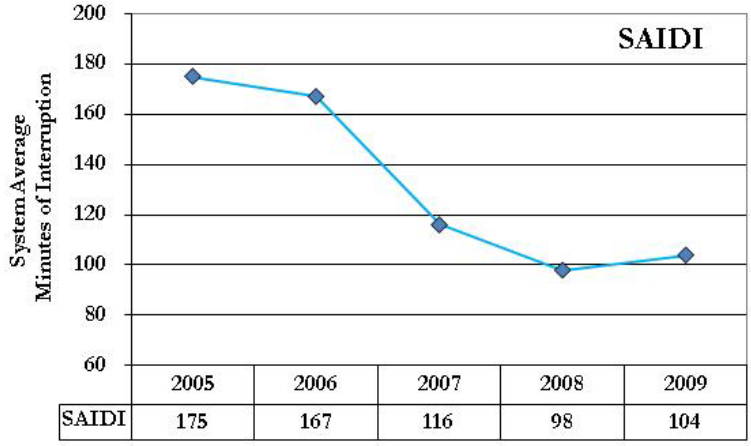
Finding IX-2 **There has been a generally positive trend in the Customer Average Interruption Duration Index (CAIDI) and SAIDI reliability metrics except for upticks in 2009.**

Exhibit IX-37 shows the trends in CAIDI and SAIDI.

Exhibit IX-37
Jersey Central Power & Light CAIDI and SAIDI
2005 to 2009



	2005	2006	2007	2008	2009
CAIDI	132	119	94	94	104



	2005	2006	2007	2008	2009
SAIDI	175	167	116	98	104

Source: Information Response 132

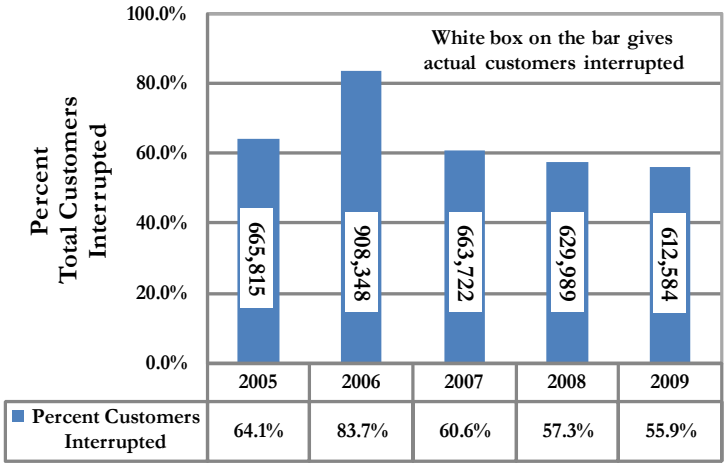
Both indexes improved (with fewer interruption minutes being better) from 2005 to 2008, but they experienced a slight degradation in 2009. SAIDI is the product of SAIFI and CAIDI. The CAIDI portion of the SAIDI metric caused the SAIDI to worsen because the SAIFI portion was better in 2009. That is, the length of time to restore customers, rather than the frequency of interruptions, caused the overall reliability metric of SAIDI to deteriorate slightly in 2009.

Finding IX-3 **JCP&L has made progress in reducing the number of customers experiencing multiple interruptions but does not include this important measurement in its monthly performance report.**

While reducing the total number of interruptions (SAIFI) increases the level of overall reliability, some customers still experience multiple outages in a system with improved reliability. Customers experiencing multiple interruptions (CEMI) is an indication of potential customer dissatisfaction. Tracking and reporting CEMI can assist utilities in identifying problems and in improving performance in this important area. The measurement is not required by BPU reliability regulations and JCP&L does not include this measurement in its current monthly performance.

Exhibit IX-38 gives the annual JCP&L customers interrupted both as the actual number of customers and as a percent of total customers for 2005–2009.

Exhibit IX-38
Customers Experiencing Interruptions
2005 to 2009

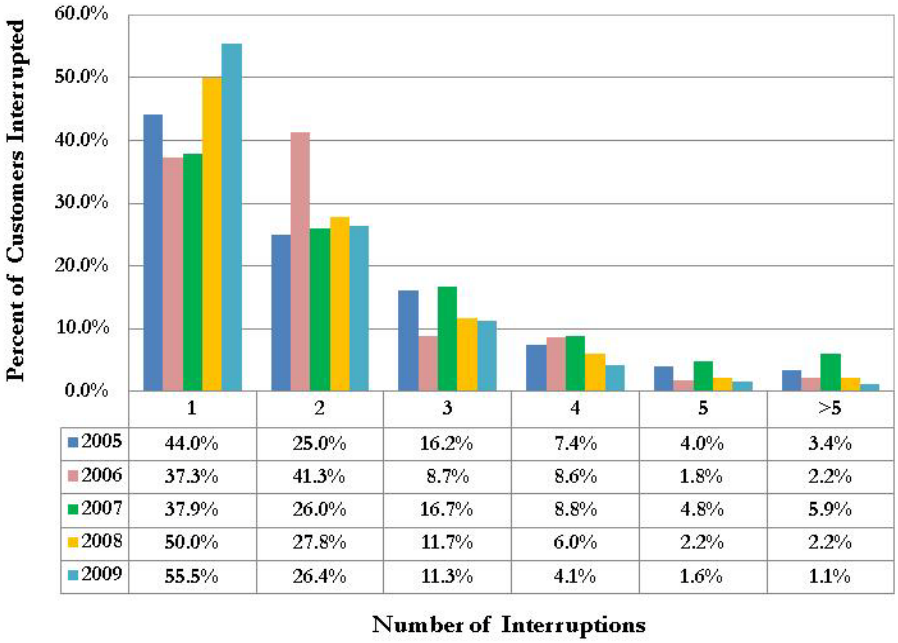


Source: Information Response 774 and Schumaker & Company Analysis

The percent of customers interrupted has decreased from 64.1% to 55.9% from 2005 to 2009. This tendency is consistent with JCP&L's generally improving reliability.

The percent of customers interrupted for one to more than five times is shown in *Exhibit IX-39*.

Exhibit IX-39
Percent of Customers Experiencing Multiple Interruptions
2005 to 2009



	1	2	3	4	5	>5
2005	44.0%	25.0%	16.2%	7.4%	4.0%	3.4%
2006	37.3%	41.3%	8.7%	8.6%	1.8%	2.2%
2007	37.9%	26.0%	16.7%	8.8%	4.8%	5.9%
2008	50.0%	27.8%	11.7%	6.0%	2.2%	2.2%
2009	55.5%	26.4%	11.3%	4.1%	1.6%	1.1%

Source: Information Response 774 and Schumaker & Company Analysis

While the number of customers experiencing one and two interruptions increased, this could be because customers experiencing three and more interruptions decreased. For example, reductions in the number of customers experiencing three interruptions may increase the number experiencing only two interruptions, even while decreasing the overall number of interruptions. Multiple interruptions, however, can be a source of high customer dissatisfaction. Therefore, it is a good practice to continue to call attention to this important area with regular monitoring CEMI metrics and the development of performance-improvement initiatives.

Finding IX-4 **JCP&L transmission reliability, as measured by transmission outage frequency, deteriorated from 2008 to 2009 overall but particularly on the 230, 345, and 500 kV circuits.**

Transmission outage frequency (TOF), shown in *Exhibit IX-40*, is the measure of the average number of transmission circuit outages per circuit. TOF for JCP&L was not available before 2008.

Exhibit IX-40
Jersey Central Power & Light Transmission Outage Frequency (TOF)
2008 to 2009

Transmission Reliability				
Orginational Unit	Index	kV	2008	2009
JCP&L	TOF	69 kV, 115 kV, 138 kV	0.022	0.022
		230 kV, 345 kV, 500 kV	0.130	0.146
		69 kV and above	0.047	0.050

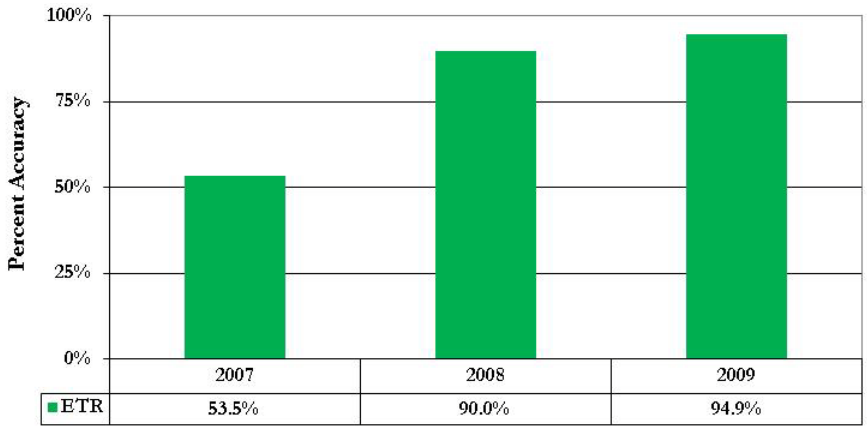
Source: Information Response 136

TOF remained the same for the lower voltages but increased for the higher, 69 kV to 500 kV, voltages. Two years of data is insufficient to establish or determine a trend and draw firm conclusions on transmission reliability.

Finding IX-5 **The accuracy of the estimated time of restoration given to customers reporting an outage has improved from 53.5% in 2007 to 94.4% in 2009.**

JCP&L provides inquiring customers who are experiencing an outage with an estimated time of restoration and then measures the accuracy of such estimates. *Exhibit IX-41* shows the JCP&L estimated time of restoration (ETR) accuracy for the years 2007–2009.

Exhibit IX-41
JCP&L Estimated Time of Restoration (ETR)
2007 to 2009



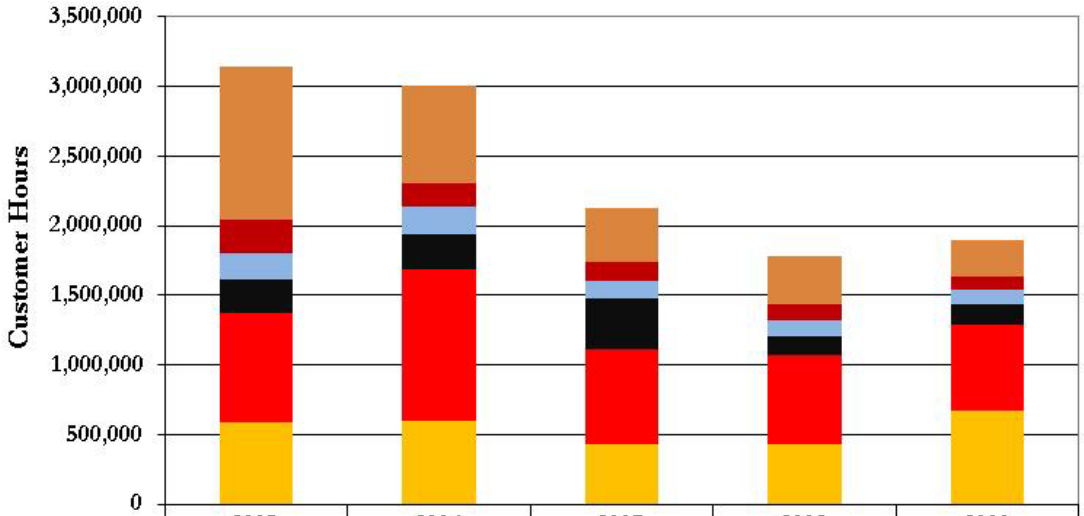
Source: Information Response 515

ETR has improved each year and is approaching 100%.

Finding IX-6 **Tree incidents are the largest cause of outages and this outage category had a large increase in 2009, possibly due to the deferral of trimming on circuits following inspection to the next standard four-year cycle.**

The trends in JCP&L outage causes for 2005–2009 are shown in *Exhibit IX-42*.

Exhibit IX-42
JCP&L Outage Causes
2005 to 2009



	2005	2006	2007	2008	2009
Unknown	1,095,749	700,973	385,403	345,223	251,536
Vehicle	237,151	171,618	133,240	121,312	101,182
Animals	187,135	201,694	126,680	117,507	97,491
Lightning	241,787	246,099	367,636	130,127	148,613
Equipment	790,893	1,089,522	673,993	636,121	625,712
Trees	585,285	601,094	436,048	436,710	667,465

Note: JCP&L classifies tree outages as "preventable" and "non-preventable." This analysis combines the two categories to include all outages caused by trees.
Source: Information Response 132

All categories of outage causes decreased from 2005 to 2009 except tree-related outages. It should be noted, however, that the category "Trees" shown in Exhibit 0-43 includes both "Preventable" and "Non-Preventable" tree-related outages. JCP&L's Annual System Performance Report ("ASPR") indicates that preventable tree-related outages have decreased significantly since 2005 while non-preventable incidents have increased. JCP&L is addressing this increase in the non-preventable outages by focusing on tree removal and corridor expansion.

As shown in *Exhibit IX-43*, in 2009, 1,153 miles of distribution circuits were trimmed later than the four-year cycle. According to JCP&L management, these circuits represented the most reliable circuits on the JCP&L distribution system for which trimming was deferred to levelize the workload across the four-year vegetation management cycle. Conversely, only 40 miles were trimmed earlier than the four-year cycle.

Exhibit IX-43
Distribution Miles Trimmed Earlier and Later Than Four-Year Cycle
2009

	Miles
2009 Substation Circuits Trimmed Later Than The Four-Year Cycle	1,152.9
2009 Substation Circuits Trimmed Earlier Than The Four-Year Cycle	39.8
Total Miles Trimmed Off Cycle	**1,192.7**

Source: Information Response 519 and Schumaker & Company Analysis

This lack of adherence to the four-year tree-trimming cycle may have contributed to the increase in tree-related outages in 2009.

Finding IX-7 **JCP&L has deferred distribution vegetation management where based on inspection, circuit conditions permitted trimming to be deferred.**

According to JCP&L management, in an effort to levelize the amount of trimming required each year in conjunction with JCP&L's program to widen the corridor, JCP&L deferred a substantial amount of distribution vegetation management mileage in 2009 and 2010. Continued deferral of scheduled distribution vegetation management will likely adversely impact system reliability.

Finding IX-8 **JCP&L is experimenting with a new approach to distribution vegetation management, with a large shift from O&M to capital spending.**

From 2005 to 2009, capital expenditures increased by almost $9 million while O&M expenditures decreased by $11 million. Total distribution vegetation management expenditures averaged $15.9 million per year over the period but ranged from $12.9 million in 2006 to $18.3 million in 2008. The proportion of capital expenditures as a percent of total expenditures increased from 2% in 2005 to 58% in 2009.

JCP&L explained the shift in strategy as follows: "The shift from O&M to Capital in 2009 is attributed to focusing tree trimming spending on expanding the horizontal and vertical width of the corridor. This focus is in response to a desire to improve reliability as well as to minimize physical damage to electrical distribution facilities from tree-caused outages. These tree-related outages (categorized as "Non-Preventable" Trees in the ASPR) were attributed to overhanging branches above and adjacent to conductors and dead or defective trees falling from outside the distribution corridor. Portions of a

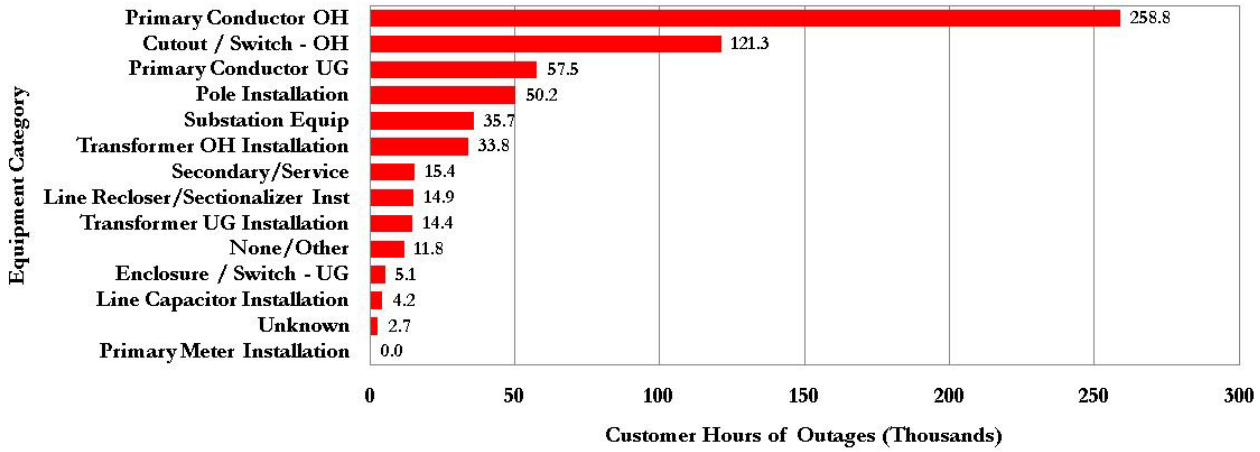
circuit that experience high customer interruption minutes due to these vegetation-caused outages are targeted to receive a visual inspection and tree trimming which includes, if necessary, the removal of certain healthy limbs, which overhang primary conductors. Additionally, off corridor trees that are dying or significantly declining were targeted for removal." JCP&L understands that capitalizing this tree work is in accordance with generally accepted accounting principles (GAAP) because the work performed exceeds the scope of the current forestry practice and provides the benefits of extending the life and improving the value of the distribution assets.

The reallocation of spending from O&M to capital in vegetation management is a result of increasing the horizontal and vertical corridors where JCP&L distribution facilities exist. Such reallocation, however, may have merit as an alternative approach to vegetation management.

Finding IX-9 Overhead primary conductor is the leading equipment cause of customer outages.

Exhibit IX-44 shows the customer hours for equipment caused outages by the type of equipment.

Exhibit IX-44
JCP&L Customer Hours of Outages by Equipment Causes
2009



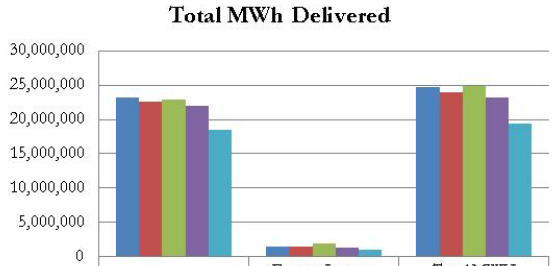
Source: Information Response 519 and Schumaker & Company Analysis

Over 40% of the customer outage hours in 2009 were attributable to overhead primary conductor. Numerous miles of small primary conductor at JCP&L, like other utilities, have been in service for a long time and may be causing outages because of age-related deterioration. For example, an old and brittle, small overhead conductor can be more susceptible to tree-related outages because it may break more easily than a larger, newer conductor.

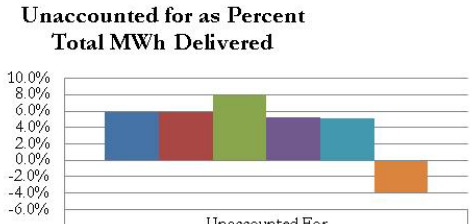
Finding IX-10 JCP&L has reduced its unaccounted-for energy losses from 2005 to 2009.

Exhibit IX-45 shows the trend in energy losses unaccounted for from 2005 to 2009.

Exhibit IX-45
Energy Losses Unaccounted For
2005 to 2009



	Total MWH Used	Energy Losses Unaccounted For	Total MWH Delivered
2005	23,203,935	1,465,445	24,669,380
2006	22,600,896	1,411,897	24,012,793
2007	22,948,672	1,959,196	24,907,868
2008	21,972,170	1,210,456	23,182,626
2009	18,482,676	987,993	19,470,669



	Unaccounted For as Percent of Total Delivered
2005	5.9%
2006	5.9%
2007	7.9%
2008	5.2%
2009	5.1%
Compound Growth/Loss 2005-2009	-3.86%

Source: Consultant Analysis of JCP&L FERC Form 1 Reports

The percentage unaccounted for has decreased from 5.9% in 2005 to 5.1% in 2009. This tendency is likely attributable to improvements in metering and actual reductions in energy losses from improved T&D infrastructure.

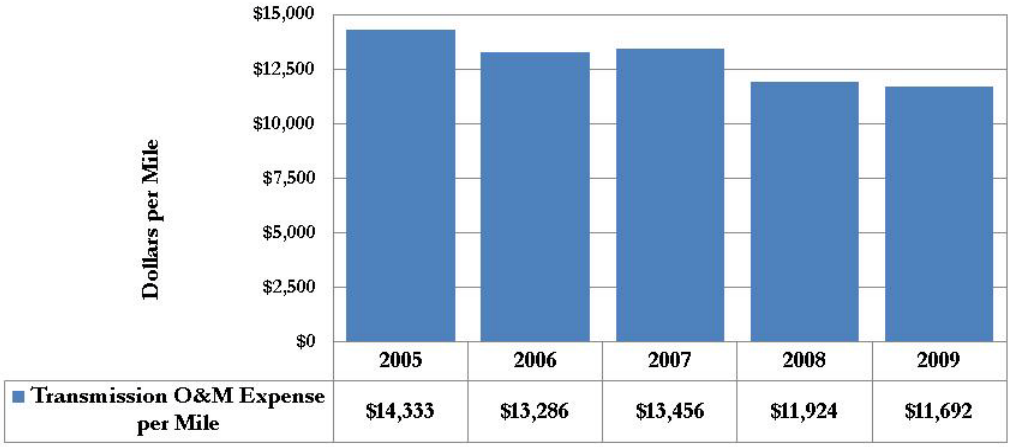
It is interesting to note that the total megawatt hours (MWh) delivered fell from 24.7 million in 2005 to 19.5 million in 2009, despite a slight increase in the number of customers during the period.

Costs

Finding IX-11 Transmission O&M expense per mile of transmission steadily decreased from 2005 to 2009.

Exhibit IX-46 shows the annual transmission O&M expense per mile for 2005 through 2009.

Exhibit IX-46
Transmission Expense per Mile of Transmission
2005 to 2009



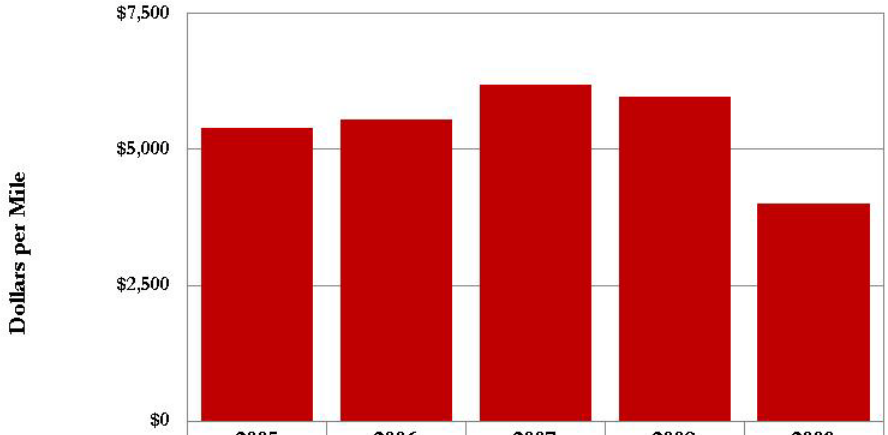
Source: Consultant Analysis of JCP&L FERC Form 1 Reports

The transmission O&M expense per mile steadily decreased from $14,333 in 2005 to $11,692 in 2009. As was the case with the Distribution vegetation program, the O&M reduction in the Transmission program is attributable to increased capital spending for expanding horizontal corridors.

Finding IX-12 **Distribution O&M expense per mile of distribution increased from 2005 to 2007 but then decreased in 2009 to a level below 2005.**

Exhibit IX-47 shows the 2005–2009 annual distribution O&M expense per circuit mile.

Exhibit IX-47
Distribution Expense per Circuit Mile of Distribution
2005 to 2009



	2005	2006	2007	2008	2009
Distribution O&M Expense per Circuit Mile	$5,387	$5,556	$6,182	$5,980	$4,006

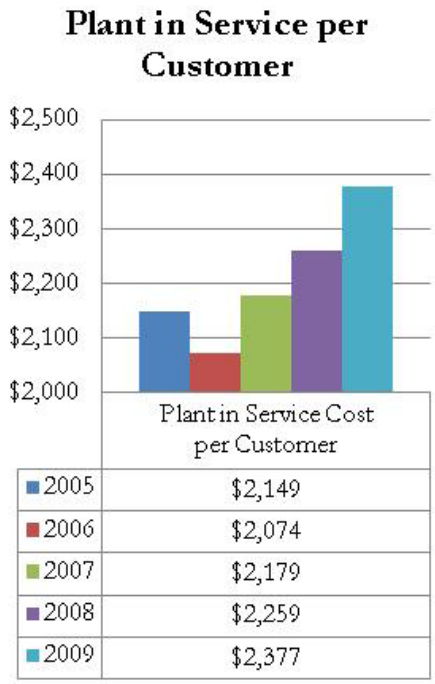
Source: Consultant Analysis of JCP&L FERC Form 1 Reports

Expense per mile increased 14.8% from 2005 ($5,387) to 2007 ($6,182). Distribution O&M expense per circuit mile, however, then dropped below the 2005 level to $4,006 in 2009. This dip represented a 35.2% decrease from the 2007 high in just two years.

Finding IX-13 Net utility plant in service per customer has been increasing.

Exhibit IX-48 presents the net utility plant per customer investment trends.

Exhibit IX-48
Net Utility Plant in Service per Customer
2005 to 2009

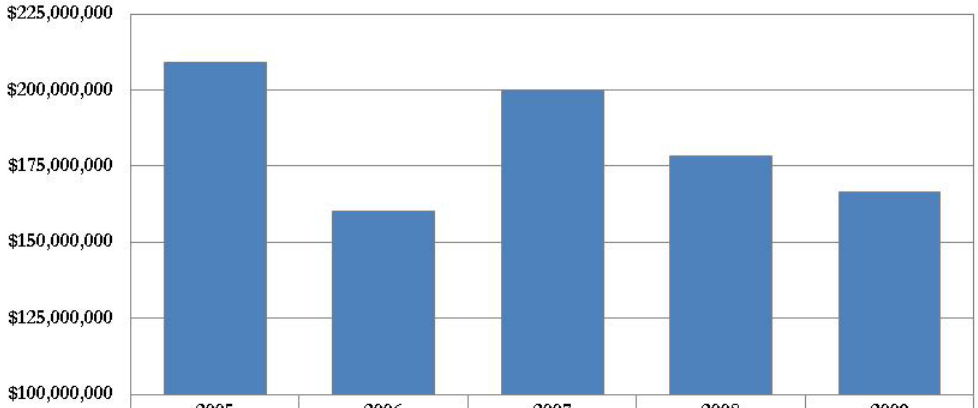


Source: Consultant Analysis of JCP&L FERC Form One Reports

After decreasing to $2,074 in 2006, the net utility plant in service per customer increased to $2,377 in 2009. This tendency indicates that JCP&L is continuing to invest in its utility plant serving New Jersey customers.

JCP&L's gross additions to utility plant (less nuclear fuel), however, declined from 2005 to 2009 as shown in *Exhibit IX-49*.

Exhibit IX-49
Gross Additions to Utility Plant (Less Nuclear Fuel)
2005 to 2009



	2005	2006	2007	2008	2009
Gross Additions	$209,118,063	$160,264,234	$199,855,634	$178,254,221	$166,409,463

Source: Consultant Analysis of JCP&L FERC Form 1 Reports

While JCP&L continued to invest in utility plant from 2005 to 2009, it did so at a slower rate. The amount per year declined from $209 million in 2005 to $166 million in 2009, possibly reflected the decline in general economic conditions over that period.

Finding IX-14 **T&D-related capital spending decreased from 2005 to 2009 and the reductions in capacity-system reinforcement and condition/reliability improvements may affect reliability in the future.**

The trends in T&D capital expenditures by category are shown in *Exhibit IX-50*.

Exhibit IX-50
JCP&L T&D Capital Expenditures
2005 to 2009

Capital Categories	2005	2006	2007	2008	2009	Pct Change 05-09
Capacity-New Load	17,968,170	20,944,258	33,224,610	22,701,386	13,546,537	**-24.6%**
Capacity-Sys Reinforcement	35,830,781	22,417,920	31,694,551	32,004,194	12,288,641	**-65.7%**
Condition/Reliability Improvements	48,099,712	35,858,062	43,029,910	27,553,069	29,453,341	**-38.8%**
Failures	28,286,671	25,279,859	19,012,162	26,219,522	30,097,149	**6.4%**
Meter	3,980,458	4,401,121	4,052,374	5,101,136	6,258,961	**57.2%**
New Business	43,733,717	32,803,156	33,568,699	29,592,087	38,360,411	**-12.3%**
Regulatory Required	7,130,890	3,236,751	7,665,731	4,292,192	1,343,750	**-81.2%**
Relocations-Highway	2,548,075	492,098	2,808,234	1,423,480	3,069,417	**20.5%**
Relocations-Other	1,113,979	1,294,511	1,214,291	1,299,043	1,351,091	**21.3%**
Storms	4,613,932	5,176,512	2,514,613	11,451,035	9,011,142	**95.3%**
Street Lighting	4,198,312	3,926,353	6,907,121	4,557,890	5,718,744	**36.2%**
Tools & Equipment	1,268,704	871,969	1,537,452	570,276	1,133,492	**-10.7%**
Forestry	1,939,092	989,365	966,457	4,342,616	17,644,954	**810.0%**
Grand Total (T&D)	**200,712,493**	**157,691,935**	**188,196,206**	**171,107,927**	**169,277,631**	**-15.7%**

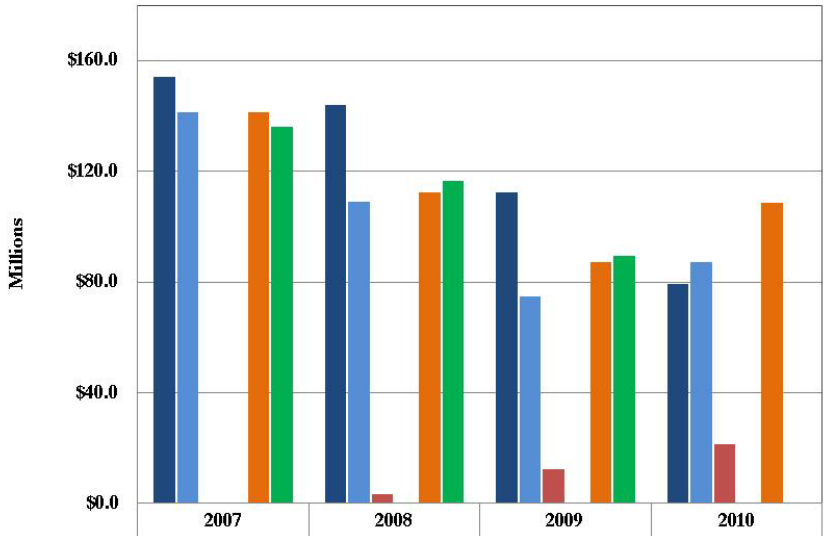
Source: Information Response 151

The reductions in capacity-system reinforcement and condition/reliability improvements could affect future reliability. The JCP&L system is continuing to age and a reduced level of infrastructure replacements and reinforcements could lead to a reduction in reliability in the future.

Finding IX-15 **For the years 2007 through 2009, JCP&L received and expended significantly less capital than requested.**

Exhibit IX-51 shows a profile of JCP&L's capital program for 2007 through 2010.

Exhibit IX-51
Jersey Central Power & Light Capital Program
2007 to 2010



	2007	2008	2009	2010
Proposed Budget	$154.0	$143.9	$112.5	$79.4
Original Approved Budget	$141.2	$109.0	$74.9	$87.3
Net Approved Budget Changes	$0.0	$3.2	$12.3	$21.3
Final Approved Budget	$141.2	$112.2	$87.2	$108.6
Actual Expenditures	$136.2	$116.5	$89.5	$0.0

Year	Primary Driver of Budget Differences	Primary Driver of Changes during the Year
2007	Available financial resources.	
2008	Deferral of IT/Communication related projects and bulk transmission build-out project funding.	Forecast increased due to increased capital storm work.
2009	Revised load forecast lead to deferral of projects and program as well as funding level for blankets.	March forecast increased due to forestry budget forecast additions and forecast for Economic Stimulus refunds
		June forecast reduced due to salary reductions, increased forecast attrition and reduced overtime forecast.
		September forecast increased due to salary restoration, additional internal labor working on Capital activities and changes to SAP activity prices (price of an hour of labor moving to Capital)
2010	Increased labor costs and additional funding of storm blankets.	March forecast increased due to Capital storm expenditures and additional internal labor working on capital activities, offset by increased attrition estimate
		April forecast increased due to increased capitalization of internal labor and additional forestry capitalization
		June forecast increased due to emergent projects offset by activity price reduction
		September forecast increased due to emergent projects, capital storm expenditures and additional internal labor working on capital activities

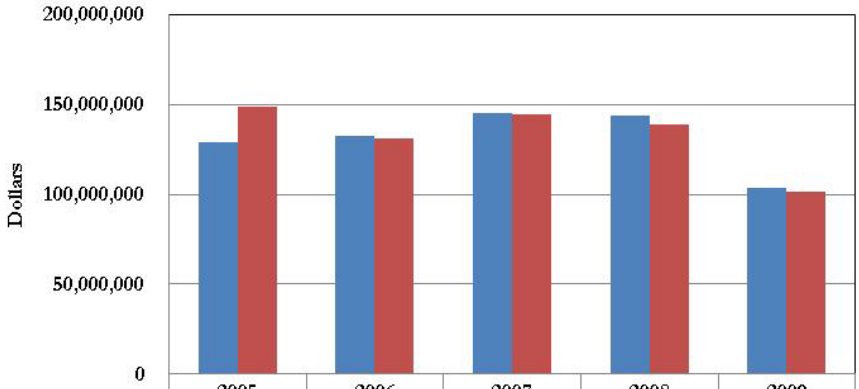
Source: Information Response 757 and Schumaker & Company Analysis

The difference between the carefully developed, bottom-up proposed capital budget and the actual capital expenditures was $18 million less, $27 million less, and $23 million less in the years 2007, 2008, and 2009, respectively. This decline amounts to 17% less actual capital spending from 2007 to 2009 than proposed; however, the final approved budget for 2010 was $29 million higher than proposed. According to JCP&L management, it would be unusal for JCP&L or any other subsidiary of FE to receive approval of 100% of the capital projects requested in its initial portfolio.

Finding IX-16 **JCP&L has significantly decreased its budgeted and actual T&D O&M expenditures in 2008 and 2009, which may adversely affect customer service and reliability in the future.**

Exhibit IX-52 shows the trends in budget and actual T&D O&M expenditures from 2005 to 2009.

Exhibit IX-52
JCP&L T&D Operations and Maintenance Expenses
2005 to 2009



	2005	2006	2007	2008	2009
Budget	128,720,889	132,527,336	145,485,502	144,030,427	103,620,087
Actual	148,691,490	131,253,888	144,293,862	138,905,533	101,280,556

Source: Information Response 137

JCP&L T&D O&M spending was $43 million, or 29.8% lower, in 2009 than 2007. Continued O&M spending at reduced levels could lead to future reductions in customer service or reliability. In four of the five years encompassing 2005 through 2009, JCP&L under-spent its O&M budget. According to JCP&L management, JCP&L looks at the combined O&M and capital spending for purposes of planned maintenance work.

Finding IX-17 Capital project estimate variances are significant.

Schumaker & Company requested the estimated and actual costs for 219 significant projects completed in 2007, 2008, and 2009. *Exhibit IX-53* gives the results of the analysis of these projects and the actual variances from estimates by number of jobs and by dollars.

Exhibit IX-53
Actual Variance from Estimated Project Costs
2007 to 2009

Source: Information Response 831 and Schumaker & Company Analysis

Less variance is better. The amount of actual to estimated variance decreased from 2005 to 2009, as demonstrated by more jobs and dollars closer to the center of the charts; that is, less variance. However, the amount of variance in both jobs and dollars in 2009 is still significant. Improving estimating accuracy and managing work to achieve reasonable estimates would continue to reduce the variance of actual costs to estimated costs.

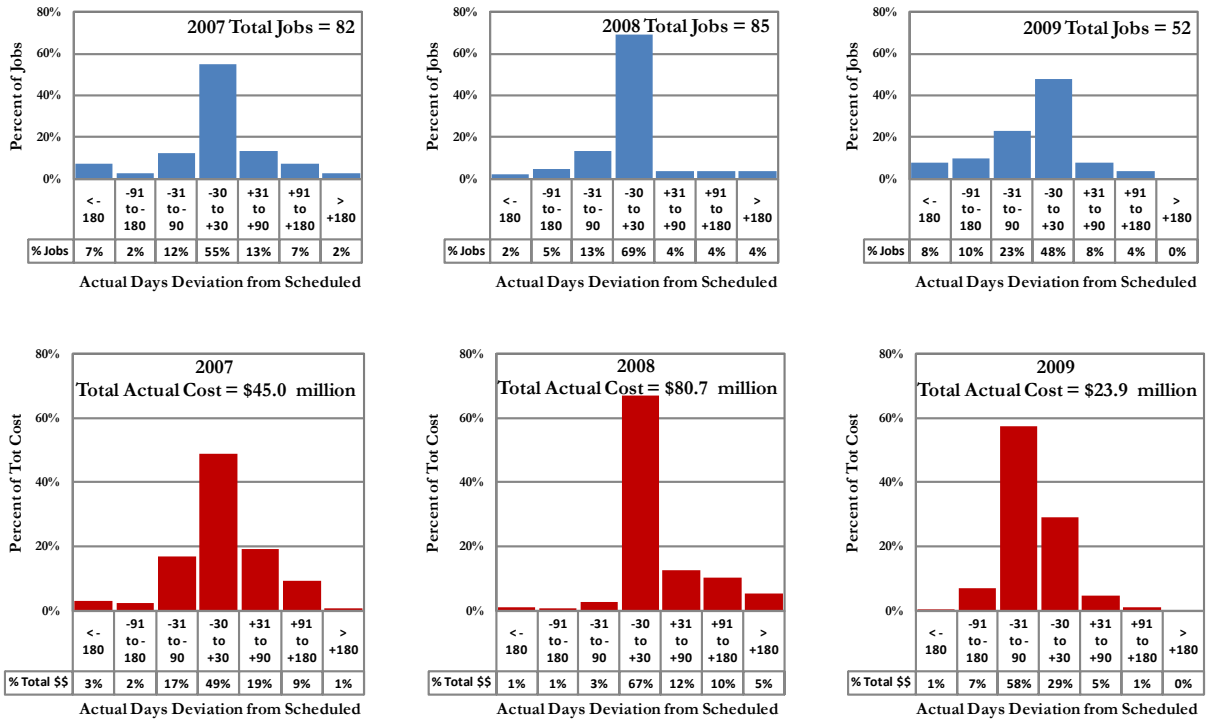
Finding IX-18 Capital project schedule performance deteriorated in 2009 from 2007 and 2008 levels.

The deviation of the number of days between scheduled completion date and actual completion date is a measure of project scheduling effectiveness and the ability of crews to meet schedules. Effective

scheduling processes result in higher percentages of projects getting completed in a range (plus or minus) of days around zero deviation.

The results of Schumaker & Company analysis of scheduled and actual completion dates for 219 projects completed between 2007 and 2009 by number of jobs and actual cost dollars are given in *Exhibit IX-54*.

Exhibit IX-54
Deviation of Actual from Scheduled Project Completion Dates
2007 to 2009



Source: Information Response 831 and Schumaker & Company Analysis

The most effective scheduling during the analysis period occurred in 2008, when 69% of the projects representing 67% of the total actual dollars were completed within plus or minus 30 days of the scheduled completion date. Scheduling performance in 2009 decreased to 48% of the projects or 29% of the total actual dollars being completed during the plus or minus 30-day range. 58% of the actual 2009 project dollars (23% of the projects) were completed 31 to 90 days prior to the scheduled completion date.

Finding IX-19 JCP&L focuses capital project management more on cash flow and current year capital budget compliance than on traditional individual project budget and schedule achievement.

JCP&L's report for project schedule and budget performance reporting is the "Redline Project Report." The report combines both schedule and budget variance information in dollar terms. That is, the expected expenditures by type per month versus the actual expenditures for the month. The report is for a calendar year rather than the full lifecycle of all projects included. While managing the capital program according to planned cash flow and budgeted expenditures in each calendar year, some projects are started and completed within a calendar year, but others start before the calendar year or are completed after the calendar year. Therefore, the report does not show the cumulative budget and schedule variances for all projects. The report's focus is primarily on dollar expenditure variances for the calendar year. It does show actual hours versus budgeted hours by month, but it does not calculate a schedule variance. JCP&L has no other regular project schedule and budget variance reports.

Finding IX-20 JCP&L does not track the number and value of change orders by project or in total, which reduces its ability to manage and control projects.

JCP&L does not track the number and/or value of change orders by project or in total. While change orders cannot be completely avoided, they can result from deficiencies in project planning or design. Frequent change orders or change orders for a high percentage of a project's cost indicate that the project was not fully scoped or properly designed prior to implementation. Tracking change order volume and value both by project and in total is a good control metric to ensure that projects are properly scoped, planned, and designed.

Finding IX-21 FirstEnergy Utilities does not always award JCP&L transmission corridor vegetation management contracts to the lowest bidder.

Exhibit IX-55 shows the 2010 transmission corridor vegetation management contract bids and awards.

Exhibit IX-55
JCP&L 2010 Transmission Vegetation Management Award Evaluation
as of December 31, 2010

Miles	Project	Aspen	Contractor #1	Contractor #2	Contractor #3	Contractor #4	Difference Award minus Low Bid
3.20	EAST FLEMINGTON TO PS TAP Q2243 I2209		$71,815.00	$77,574.15	$114,533.00	$109,282.00	$0
2.10	NEWTON TO PS TAP N2214 T2298		$49,995.00	$37,031.10	**NO BID**	$103,202.00	$12,964
9.40	Z1040 WHIPPANY TO TRAYNOR		$337,041.00	$225,278.00	**NO BID**	$307,838.00	$0
4.50	SHONGUM LAKE TO ROUTE 46 G943 E1045		$102,743.00	$136,931.20	$104,267.00	$442,323.00	$0
3.30	STONEYBROOK TO WHIPPANY B1016 G943 J1024 Q1031		$81,775.00	$75,907.10	**NO BID**	$208,850.00	$5,868
1.80	WHIPPANY TO ROSELAND A941		$54,716.00	$56,280.10	$75,244.00	$99,960.00	$1,564
7.40	SMITHBURG TO ENGLISHTOWN T5020	$134,500.00	$185,007.00	$160,105.20	$227,846.00	$338,550.00	$0
10.60	ENGLISHTOWN TO DEANS PSEG T5020		$331,218.00	$206,850.40	$427,948.00	$427,734.00	$0
4.60	ATLANTIC TO OCEAN VIEW X2024 Y2025		$191,183.00	$47,770.20	$50,426.00	$147,595.00	$0
2.60	EAST WINDSOR TO WINDSOR E2005		$39,016.00	$34,480.05	$53,747.00	$112,891.00	$0
6.10	LARRABEE TO NEW PROSPECT B1042 G1021D2004 H2008	$165,175.00	$220,280.00	$170,943.41	$243,997.00	$379,826.00	$0
5.70	NEW PROSPECT TO SMITHBURG G1021 D2004 H2008	$104,675.00	$82,241.00	$69,624.40	$165,557.00	$309,603.00	$35,051
8.90	SMITHBURG TO EAST WINDSOR E2005		$145,937.00	$121,627.20	$169,175.00	$335,446.00	$0
2.00	TAP TO FRENEAU K1025 H1022	$45,000.00	$66,540.00	$66,702.20	$35,869.00	$159,777.00	$9,131
6.00	ENGLISHTOWN TO DEEP RUN B2C3	$66,500.00	$109,420.00	$104,149.20	$114,828.00	$254,332.00	$0
78.20	All	$515,850.00	$2,068,927.00	$1,591,253.91	1,783,437.00	3,737,209.00	$64,577.40

Source: Information Response 750 and Schumaker & Company Analysis

The exhibit shows that it cost JCP&L $64,578 more for not awarding each bid corridor to the lowest bidder. FEU provides the following explanations on why it did not award each corridor to the lowest bidder:

- *NEWTON TO PS TAP N2214 T2298* – Timing restrictions associated with federal threatened and endangered species limited the amount of work that could feasibly be accomplished by one vendor, which was otherwise awarded six contracts (i.e., Asplundh).
- *STONEYBROOK TO WHIPPANY B1016 G943 J1024 Q1031* – Timing restrictions associated with federal threatened and endangered species limited the amount of work that could feasibly be accomplished by one vendor, which was otherwise awarded six contracts (i.e., Asplundh).
- *WHIPPANY TO ROSELAND A941* – Timing restrictions associated with federal threatened and endangered species limited the amount of work that could feasibly be accomplished by one vendor, which was otherwise awarded four contracts (i.e., Lewis Tree).
- *NEW PROSPECT TO SMITHBURG G1021 D2004 H2008* – The successful vendor (i.e., Aspen) is local to central New Jersey and uses specialty equipment that is necessary to complete this project. In addition, this corridor is geographically proximate to another corridor that was awarded to this vendor. The impact of timing restrictions associated with federal threatened and endangered species was considered as well.
- *TAP TO FRENEAU K1025 H1022* – The low bidder for this corridor was an out-of-state vendor (i.e., KWR) for which the undertaking of a single small project was not practical because of the startup costs. Moreover, this vendor is a relatively small company and has been awarded

a large amount of work by other FirstEnergy operating companies. These factors, coupled with concerns about the impact of timing restrictions associated with federal threatened and endangered species, made an award to this vendor impractical for this bid package.

Management Processes

Finding IX-22 FEU and JCP&L have an appropriate blend of centralization and decentralization in the Transmission and Distribution organization.

All T&D line, substation, and meter physical workers are assigned to JCP&L. In addition, the types of Distribution Planning and Engineering functions that require local knowledge, such as distribution capacity planning and line extensions, are deployed to New Jersey and the JCP&L organization.

The FEU-centralized T&D functions take advantage of concentration of expertise and seem to provide good service to JCP&L. The centralized FEU Planning and Engineering functions are ones that are not as dependent upon local knowledge, such as transmission and substation planning and engineering. These are functions that can benefit from the economy of scale that FirstEnergy enjoys across three states and multiple operating companies.

The centralized staff support for JCP&L-provided T&D functions also appears to take advantage of cross-pollination opportunities across the FEU territories. FEU T&D policies, standards, processes, programs, and systems employed by JCP&L are generally current or leading-industry practices.

Finding IX-23 FirstEnergy, FirstEnergy Utilities, and JCP&L have a highly developed performance management program.

FirstEnergy performance management cascades appropriately from the corporate level through the business units, including FEU, to the operating companies, including JCP&L, to the individual work groups. FE, FEU, and JCP&L have developed appropriate KPIs for each organizational level and perform accurate and timely performance reporting. The planning process sets appropriate KPI targets and charters initiatives to achieve the targeted performance. Performance is regularly reviewed at all levels and action plans to address performance gaps or emerging issues are developed and implemented.

Finding IX-24 FEU and JCP&L have a rigorous capital program planning and budgeting process.

The capital program planning and budgeting process was covered in the Background section of this chapter. Some of the highlights of the process include:

- Bottom-up process with programs and projects developed and championed by experts close to the work
- Rigorous reviews with multiple iterations at successive organizational levels

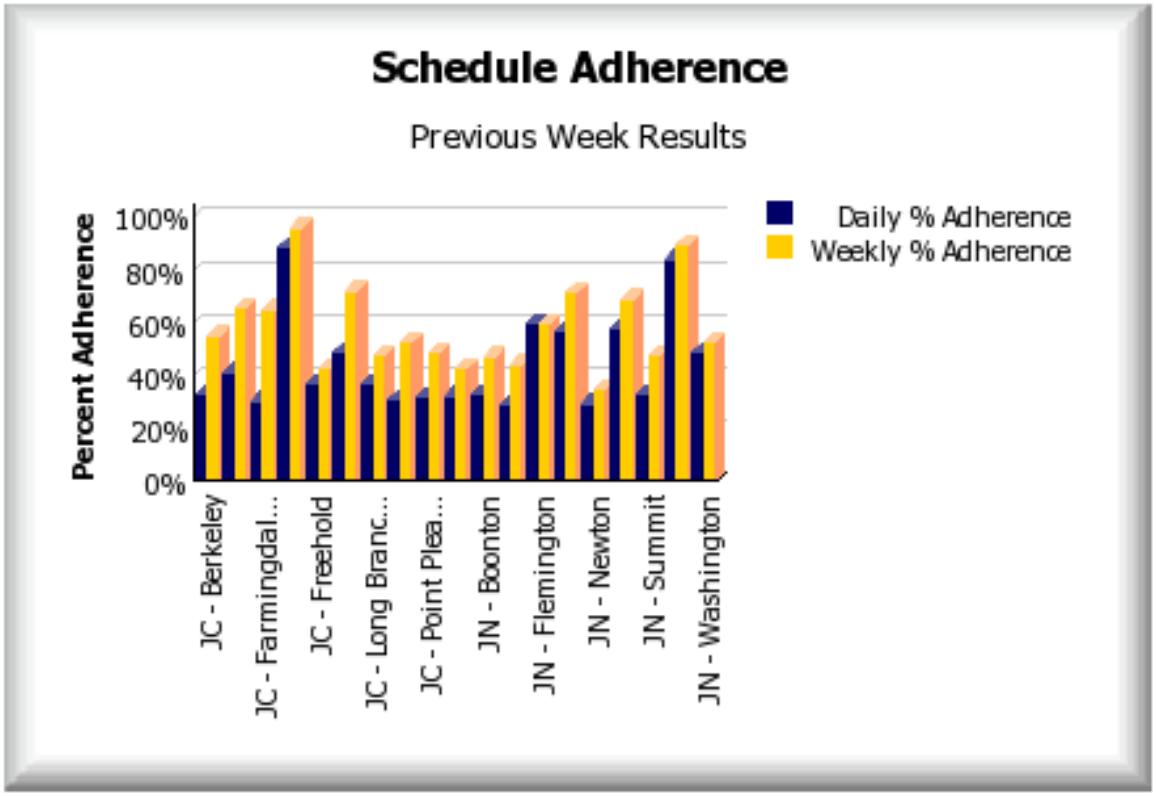
- Use of CBA priority codes and ECAT scoring to more objectively rank and prioritize programs and projects
- Cross-pollination of successful programs and projects from other opcos
- Executive leadership and involvement in the capital program planning
- Strong link to achieving performance management reliability and customer service targets

Finding IX-25 JCP&L measures schedule adherence rather than actual vs. estimated hours of crew productivity.

FEU and JCP&L do measure schedule adherence, absenteeism, and overtime but not productivity. Productivity is usually expressed as a ratio of actual hours taken on a work order versus the estimated work hours. Schedule adherence is a good substitute for productivity measurement and is generally more acceptable to craft workers. With schedules set according to good estimates of hours required and the available workforce, adhering to the schedule will result in acceptable productivity.

FEU /JCP&L did not track schedule adherence prior to 2010 and developed the Work Management Schedule Adherence Dashboard in 2010 to address this deficiency. An example of the Schedule Adherence Dashboard is given in *Exhibit IX-56*.

Exhibit IX-56
Example JCP&L Schedule Adherence Report
2010



Source: Information Response 881

It is a preferred practice, however, to regularly measure and report actual hours spent on each capital or O&M work order and to compare the actual hours to the estimated hours in a productivity report. Variances in productivity for individual projects will help identify problem areas or estimating inaccuracies.

Finding IX-26 FirstEnergy Utilities does not measure and report causes of crew downtime well.

The CREWS work management system for line and substation workers has a delay code for vehicle and fleet problems. It does not have a delay code for problems caused by material shortages. The FieldNet work management system used by meter technicians does not have any delay reporting capability. A good practice with a work management system, particularly one based on schedule adherence, is to have delay codes capture causes of schedule delays that can be analyzed and improved over time.

Finding IX-27 Asset management at FEU and JCP&L is well-developed and has achieved reductions in equipment-related failures.

FEU and JCP&L have developed asset management programs for all major T&D equipment categories and they are working to achieve the proper balance of design specifications, planned maintenance, and replacements, as discussed in the Background section of this chapter. Some of the strong points of the asset management program are:

- Planned maintenance and replacement programs for all major equipment types
- Analysis of equipment failure trends at both the FEU and JCP&L levels
- Design, construction, and material standards that are based, in part, on past experience
- Equipment performance measurement and reporting
- Good asset management information technology support

Finding IX-28 JCP&L generally stays current with planned equipment maintenance.

JCP&L reported 100% compliance with its planned equipment maintenance schedules in its Annual System Performance Report. Data for several planned maintenance programs is presented below. *Exhibit IX-57* shows the results of distribution circuit and pole inspections for 2005–2009. Transmission aerial and ground-line inspections are presented in *Exhibit IX-58*. *Exhibit IX-59* provides substation inspections.

Exhibit IX-57
JCP&L Distribution Circuit and Pole Inspections
2005 to 2009

DISTRIBUTION CIRCUITS					
	2005	2006	2007	2008	2009
Total Number of Circuits	1,116	1,127	1,151	1,163	1,165
Number of Circuits Inspected	183	198	198	231	231
Number of CM Work Orders[1]	104	145	181	270	305

NOTE: There are a number of circuits that either serve single customers or are normally fed underground that are not included for inspection under the Overhead Circuit Inspection Program

[1] Emergency condition items are not included in these orders since they are called in and/or are taken care of immediately

DISTRIBUTION POLES					
	2005	2006	2007	2008	2009
Total Number of Poles	314,042	316,283	318,524	320,765	323,007
Number of Poles Inspected	40,087	42,310	40,656	53,156	19,388
Number of CM Work Orders	25	439	137	60	134

NOTE: Additionally, there are a number of poles, which are normally reinforced by the inspecting contractor on an annual basis that will not require the creation of a CM work order.

Source: Information Response 519 and Schumaker & Company Analysis

Exhibit IX-58
JCP&L Transmission Aerial and Ground-Line Inspections
2005 to 2009

	JCP&L Transmission Aerial Inspections			JCP&L Groundline Inspections		
	Total Number of Miles	Total Number Of Miles Inspected[1]	Condition Items Found	Total Number Of Poles	Total Number Of Poles Inspected	Condition Items Found
2009	757	1514	611[3]	1930	0[2]	0
2008	746	1492	58	1930	0[2]	0
2007	746	2238	57	1912	0[2]	0
2006	746	1492	18	1912	843	21
2005	733	1466	136	1912	1021	80

[1] Aerial patrols completed twice per year
[2] Pole inspections on 10 year cycle. Next inspection dates 2015 & 2016
[3] Fall aerial inspection on the 230kv lines was a comprehensive inspection in lieu of routine inspection

Source: Information Response 519 and Schumaker & Company Analysis

Exhibit IX-59
JCP&L Substation Inspections
2005 to 2009

JCP&L			
	Equipment	**Inspection Year**	**Number of Corrective Work Orders Generated from Inspections**
Substation	General	2005	2,896
		2006	2,437
		2007	3,028
		2008	3,104
		2009	2,599
	Critical (PJM / RFC) Relay Schemes	2005	42
		2006	49
		2007	76
		2008	52
		2009	19
	Infra-red Inspections	2005	219
		2006	247
		2007	225
		2008	208
		2009	133
	Battery	2005	114
		2006	62
		2007	136
		2008	148
		2009	135

*Notes:

1) Notifications with no associated order have been included in these counts to accommodate the fact that if a notification was entered work was intended to be done regardless of there being an associated order.

2) There is a possiblity of duplicate notifications for the same work as there is no way to determine if a notification associated with a piece of equipment has been entered multiple times.

3) M2 notifications can be generated from more than just a preventative maintenance order. For example, these notifications can be generated by a person working in the field during storm restoration.

4) Items above counted as "infrared" are based on regional personnel placing the appropriate coding on the M2 notification to indicate that the noticed condition was, indeed, found during infrared testing.

Source: Information Response 519 and Schumaker & Company Analysis
Note: RFC is Reliability First Corporation

Finding IX-29 **Some high-priority circuits repeat as high-priority circuits in subsequent years after improvement programs have been completed.**

Another JCP&L reliability program is to address high-priority circuits each year. While improvements are made to each identified high-priority circuit, some circuits repeat as high-priority within a short time. Twenty-two high-priority circuits repeated as high-priority twice in the five years spanning 2005–2009, as shown in *Exhibit IX-60*. In addition, seven repeated three times and two repeated four times.

Exhibit IX-60
JCP&L High-Priority Repeating Circuits
2005 to 2009

HIGH PRIORITY CIRCUITS - Repeating Circuits		
Substation	Circuit	Years
Holiday Lakes	17302	2006, 2009
Mt. Arlington	17605	2008, 2009
Branchville	17630	2007, 2008
Blairstown	17655	2005, 2006, 2008
Blairstown	17656	2005, 2006, 2008, 2009
Sparta	17696	2005, 2006, 2009
Cozy Lake	17736	2005, 2006, 2009
Cozy Lake	17737	2007, 2009
Landing	17740	2005, 2009
Sparta	17751	2008, 2009
Newburgh	17777	2008, 2009
Hurdtown	17785	2006, 2007
Lebanon	27410	2008, 2009
Glen Gardner	27592	2007, 2008
Pequest River	27666	2008, 2009
Hawks	27683	2005, 2007, 2008
Port Murray	27731	2006, 2007, 2008
Haskell	37823	2005, 2007, 2009
Twin Rivers	47102	2006, 2008
Howell	47087	2006, 2009
Woodland	57070	2008, 2009
Stone Church	57352	2006, 2009
Glendola	57739	2007, 2008
New Lisbon	67312	2006, 2008
Manitou	67503	2005, 2008
Leisure Village	67533	2007, 2009
Whitings	69287	2008, 2009
Whitings	69288	2005, 2006, 2008, 2009
Manitou	69505	2005, 2007, 2008
Manitou	69506	2007, 2008
Manitou	69509	2007, 2008

Source: Information Response 519

Finding IX-30 Although tree incidents are a leading cause of outages, vegetation management is not organizationally grouped with the Engineering section and reports to a separate Director.

All other reliability programs (transformers, poles, capacitors, etc.) are managed by specialists in JCP&L Engineering Services. Resources are allocated and reallocated among capital and maintenance programs to achieve the highest reliability possible. The management of the vegetation management program, however, does not report to the unit managing the other reliability programs. However according to JCP&L management, the Engineering and Forestry Sections do collaborate and work closely on reliability issues related to vegetation. They jointly discuss and develop scheduled and non-scheduled maintenance work plans, and direct the priority of the work to be performed. Vegetation management is organized in a support services organization along with fleet, stores, and facilities management. Vegetation management is a key reliability program and is related to equipment management programs more than it is to support services. For example, reliability tradeoffs should be made between hardening older, small conductor and increasing the vegetation management around such vulnerable conductor. Also, high-priority circuits may need more frequent or more aggressive vegetation management to prevent them from repeating as high-priority circuits.

Finding IX-31 JCP&L has a sound storm preparation and restoration process.

The storm preparation and restoration process was described in the Background section of this chapter. Some of the strong points of the process are:

- Detailed plans
- Regular training
- Well-developed internal communications
- Utilization of ancillary personnel to assist in storm restoration
- Good information technology support
- Strong customer communication

Finding IX-32 JCP&L uses industry-standard crew sizes.

JCP&L uses the following industry-typical crew sizes:

- *Meter Services* – Meter testers typically work by themselves as a one-person crew.
- Substations
  - Utility Construction & Maintenance (UC&M) substation crews typically work in two-person crews.
  - Test technicians typically work by themselves as a crew.
  - Relay technician seniors and the relay technicians typically work by themselves, unless work is required on transmission class voltages.

- Relay technician juniors will typically work as a part of a two-man relay crew.
- A cable crew typically works as a two-person crew.
- UC&M inspector typically works by him- or herself as a one-person crew.
- UC&M apprentice typically works as a member of a two-person crew.
- UC&M second class typically works as a member of a two-person crew.
- UC&M tool repair technician typically works as a two-person crew.
- Utility technician typically works as a one-person crew.

- Overhead Line
  - Typical overhead line crews are two- or three-person crews depending on the job requirements.
  - Line Construction & Maintenance (LC&M) troubleshooters work independently.
- *Under Ground (UG) Line* – Typical UG crews are two- to four-person crews depending upon the job requirements.

Finding IX-33 FirstEnergy Utilities has current engineering and construction standards manuals.

The engineering and construction standards manuals used by FEU centralized services and JCP&L are current. The FEU T&D construction standards provide various drawings, tables, and technical information to design and build the most common overhead and underground facilities that will support the safe and reliable distribution of electricity. The construction standard drawings provide necessary dimensional detail as well as identification of approved material/ equipment.

The engineering practices are FEU documents that describe various FEU engineering policies, procedures, and practices in-depth so that regional Engineering Services personnel can complete technical studies/activities and appropriate forms, documentation, or contracts; determine/secure appropriate cost contributions; provide appropriate design considerations; or identify information or considerations that need to be reviewed with FEU customers.

Finding IX-34 T&D staffing levels at JCP&L are being maintained through the replacement of retiring workers but the economics of employee versus contractors have not been re-evaluated recently.

Exhibit IX-61 shows the trends in JCP&L staffing.

Exhibit IX-61
JCP&L Staffing Trends
2005–2009

Category	2005	2006	2007	2008	2009
Bargaining Unit Employees	1,122	1,137	1,124	1,111	1,090
Non-Bargaining Unit Employees	296	312	312	345	321
Total Employees (Calculation)	1,418	1,449	1,436	1,456	1,411
Engineering	136	135	155	153	148
Lines	579	588	577	565	568
Substations	161	183	178	170	172
Total Engineering, Lines and Substations	876	906	910	888	888
Percentage Engineering, Lines, and Substations of Total Employees	**62%**	**63%**	**63%**	**61%**	**63%**

Source: Information Response 132 and 135

The total number of engineering, lines, and substations personnel have increased from 876 to 888 from 2005–2009. FEU and JCP&L have implemented an innovative Power Systems Institute (PSI) program to train high-quality replacements for retiring line and substation workers. The PSI program is described in the Human Resources chapter. Engineering has also recruited and hired more employees than it has lost over the four-year period.

FEU and JCP&L are essentially maintaining the T&D employee workforce at status quo levels, and most T&D electrical work is done by employees. Only limited, specialized work is contracted, such as tree trimming, transmission-line construction, or maintenance using helicopters, pole inspections, and Department of Transportation road-move projects. FEU and JCP&L, however, have not re-evaluated the in-house versus contractor costs and benefits in recent years. It is possible that the economics of employees versus contractors have changed over time to the point that readjustment of the in-house and contractor labor mix may be justified.

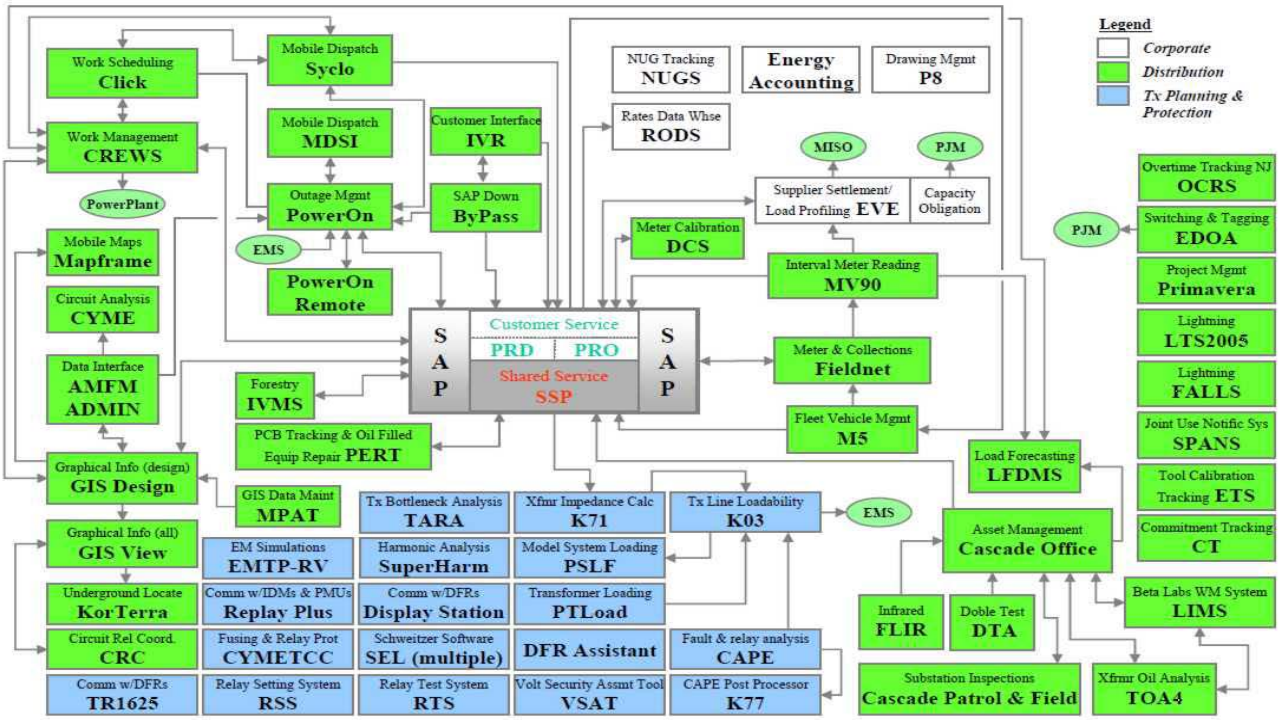
Support Applications

Finding IX-35 **FEU and JCP&L use an integrated suite of operations applications to fully support the T&D work process.**

The support applications listed in *Exhibit IX-17*, *Exhibit IX-18*, *Exhibit IX-21*, *Exhibit IX-22*, *Exhibit IX-25*, *Exhibit IX-26*, *Exhibit IX-27*, and *Exhibit IX-28* are not used in isolation. Most, if not all, use data from other applications or sources. This dependence between applications for data demands that all the applications that support distribution, transmission, and substation operations communicate with each other. *Exhibit IX-62* indicates how FEU/JCP&L have integrated all the support applications.

Exhibit IX-17, *Exhibit IX-18*, *Exhibit IX-21*, *Exhibit IX-22*, *Exhibit IX-25*, *Exhibit IX-26*, *Exhibit IX-27*, and *Exhibit IX-28* provided descriptions of the applications, including websites for third-party vendors.

Exhibit IX-62
Jersey Central Power & Light T&D Applications
July 2010



Source: Information Response 516

Finding IX-36 **JCP&L will have a more modern work management process after the completion of the Radio Upgrade Initiative in Quarter 4, 2011 and the implementation of the FEU/JCP&L Work Management Initiative between November 2011 and October 2012.**

Current radio coverage is weak in portions of JCP&L's territory, due, at least in part, to geographic and topographical constraints and obstacles, making it difficult to communicate with field personnel. The upgraded radio system will enhance JCP&L's ability to respond to customer requests and restore service during outages. *Exhibit IX-63* provides details about the upgrade.

Exhibit IX-63
JCP&L Radio Upgrade Initiative
2010

JCP&L will be replacing its aging Motorola two-way radio system with the Sprint radio system during the fourth quarter of 2011. Sprint is in the process of building 48 additional radio tower sites, which are a combination of co-location and raw land sites. These site builds are scheduled to be completed during the third quarter of 2011.

JCP&L plans to install vehicle kits in all vehicles that currently have radios and Telex consoles in the dispatch offices. Sprint will provide user training in the fourth quarter of 2011 with go-live scheduled for the end of the fourth quarter as well.

Source: Interview 62 and Information Response 517

Exhibit IX-30 presents JCP&L's current work management process. The existing process, while usable, does not use global position system (GPS) technology and only partially uses mobile data terminal technology. The planning and scheduling process being used does not include state-of-the-art technology tools. The FEU / JCP&L Work Management Initiative (WMI) addresses these deficiencies. The project scope and goals of the WMI are given in *Exhibit IX-64*.

Exhibit IX-64
Work Management Initiative Scope
2010

The Work Management Initiative will allow for implementation of a Scheduling/Dispatching application that utilizes Mobile Data Terminals for troubleshooters, line and substation construction and supervision for Outage and Planned work.

Outage Management Mobile Enablement:

- Enable the electronic dispatch and data capture of emergency work orders from PowerOn to mobility-enabled vehicles.
- Implement GPS technology to capture vehicle location for enhanced dispatching visibility and tracking.
- Mobile data terminals not only display and capture work information but also provide valuable map based asset information to the crews. Supervisors gain visibility to crew locations and statuses from a mobile laptop.

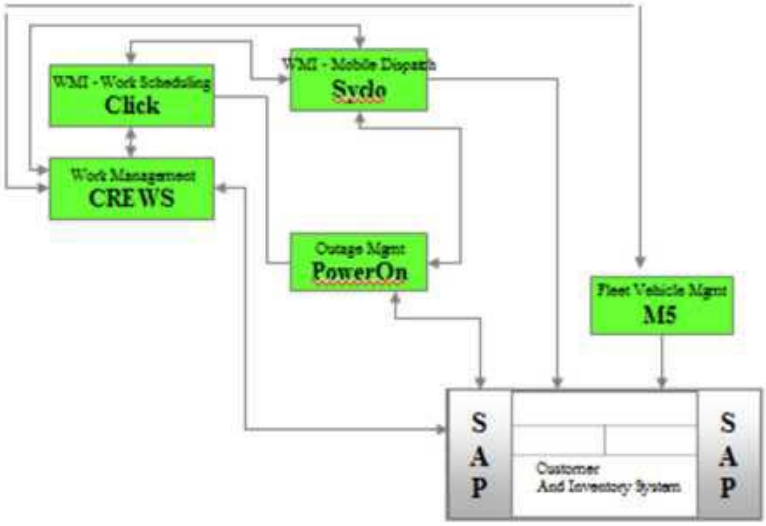
Scheduling & Field Enablement:

- Update scheduling and dispatch processes based on technology-enabled opportunities.
- Implementation tool to support advanced scheduling and monitoring.
- Enhance mobile technologies to support the electronic dispatch of maintenance and construction work, and the electronic data capture of advanced work completion information.
- Redefine the work dispatch through closeout processes to leverage new technology and speed work through the lifecycle process.

Source: Interview 176 and Information Response 518

The operations support applications affected by the WMI are shown in *Exhibit IX-65*.

Exhibit IX-65
Applications Integration Diagram for the Work Management Initiative
2010



Source: Interview 176 and Information Response 518

The forecast payback period for JCP&L for the Work Management Initiative is 2.89 years, as presented in *Exhibit IX-66*.

Exhibit IX-66
Projected JCP&L Payback Period for the Work Management Initiative
2010

JCP&L		(in millions)						
		2011	2012	2013	2014	2015	2016	2017
Cost	Capital	2.22	4.13	0.17	0.18	0.19	0.20	0.20
	O&M	0.46	0.98	0.54	0.55	0.55	0.56	0.56
Benefits	Capital	0.00	0.26	2.98	3.07	3.15	3.25	3.34
	O&M	0.00	0.44	5.11	5.26	5.41	5.57	5.73
Net Cash Position		(2.36)	(3.82)	5.89	6.06	6.23	6.42	6.61
NPV			(5.88)	(0.88)	3.87	8.37	12.64	16.70
IRR				-3%	42%	60%	88%	72%
Payback Years				2.89				

Source: Interview 176 and Information Response 688
Note: NPV is net present value and IRR is internal rate of return

The net present value (NPV) of the project becomes positive in the fourth year and the internal rate of return (IRR) is 60% or more from 2015 through 2017.

Finding IX-37 JCP&L has made progress in implementing distribution automation to improve reliability, but it should consider doing more.

During our onsite interviews, Schumaker & Company questioned the extent to which JCP&L had implemented distribution automation—in particular load switching between circuits to minimize the impact of outages. We were given the impression that some automation had been done in response to the PJ Downes Associates' report but that JCP&L has not had a systematic program to review its entire system in such a manner.

This impression was further confirmed in our review of JCP&L's response to prior reviews in *Chapter V – Recommendations and Review of Previous Analysis*. JCP&L provided periodic reports to the BPU staff who reported on the actions and status of actions taken to respond to items agreed to in the PJ Downes Associates' report. Schumaker & Company consultants reviewed this material and requested further backup documentation for selected items. JCP&L had already agreed to implement everything in the PJ Downes Associates' report. All of the recommendations in the PJ Downes' report have been implemented. Furthermore, the Booth Associates' reports also contained several recommendations dealing with system sectionalizing and/or auto load transfer schemes, although these items were not necessarily contained in the memorandum of understanding or stipulation of settlement.

The PJ Downes Associates' report, however, recommended a study to determine if proactive relaying could be reasonably and effectively installed to allow the automatic sectionalizing of network operations during faults at various substations along the New Jersey shore on 34.5 kV lines. JCP&L performed these studies and did make changes at certain substations along the New Jersey shore that had been affected by outages covered in the PJ Downes' report. The rest of the JCP&L system, however, might benefit from such a review. This is addressed in *Recommendation V-1* in *Chapter V – Review of Previous Audits*.

Recommendations

Recommendation IX-1 Monitor recent capital and/or O&M expenditure reductions to ensure that customer service and reliability levels do not significantly deteriorate and maintain established statewide standards. (Refer to Finding IX-2, Finding IX-4, Finding IX-11, Finding IX-12, Finding IX-14, Finding IX-15, and Finding IX-16)

While still good, JCP&L's T&D reliability and customer service levels deteriorated in 2009. This deterioration paralleled reduced T&D capital and O&M spending. The spending reductions were in response to a downturn in the economy and the growth rate; however, most of the T&D expenditures are related to maintaining and replacing aging infrastructure rather than growth. FEU and JCP&L have developed good linkage between asset management programs and reliability and customer service.

JCP&L's levels of capital and O&M spending should be determined by taking into account the established statewide standards as well as internal reliability improvement targets.

Recommendation IX-2 **Complete deferred trimming of the distribution corridors in 2011 consistent with the four-year vegetation management cycle. (Refer to Finding IX-6 and Finding IX-7)**

A specific area of emphasis for JCP&L's potential increased T&D spending should be to catch up all deferred corridors in the next budget year consistent with the four-year vegetation management cycle. Tree-related incidents are the largest single cause of customer service interruptions. Deviation from planned maintenance cycles likely contributed to the high number of tree-related outage incidents.

Recommendation IX-3 **In conjunction with the FE/Allegheny Energy merger integration process, identify and implement the most efficient organizational design to effectively perform distribution vegetation managemen including considering reorganize distribution vegetation management under the JCP&L Engineering Services group. (Refer to Finding IX-30)**

Vegetation management works hand in hand with other reliability programs to produce the overall reliability result for JCP&L. There are tradeoffs between tree trimming and overhead plant hardening. Vegetation management is a high-impact and high-cost facet of reliability management. The vegetation management program should be integrated with the equipment reliability program, and the total program should be optimized for the best reliability possible for the dollars expended. Vegetation management should be included in JCP&L's analysis and determination of the best allocation of available resources among all reliability programs to produce the best reliability result.

Recommendation IX-4 **Upon completionof the first full program cycle, evaluate the experimental corridor widening program (which has resulted in an increased portion of the expenditures for distribution tree trimming being allocated to capital) and adjust as appropriate. (Refer to Finding IX-8)**

Continued deferral of scheduled distribution vegetation management will likely adversely impact system reliability. JCP&L should establish evaluative criteria for the corridor widening program and, following a complete cycle of the corridor widening program, should conduct a thorough review of the corridor widening program against the evaluative criteria. Adjustments to the corridor widening program should be made based on the results of the evaluation.

Recommendation IX-5 Award transmission vegetation management contracts to the lowest qualified bidder, and adequately document cases where exceptions are made. (Refer to Finding IX-21)

Past performance of vegetation management contractors should be used as a factor in determining such contractors' qualification to bid on future transmission vegetation management corridors. Once qualified contractors bid, however, the lowest bidder should be awarded each corridor. If that bidder refuses the work, it should be assigned to the next lowest bidder. FEU should not reassign work to higher bidders based on subjective evaluations after the fact. If the current process is allowing unqualified bidders to submit bids, the bidder qualification process should be revised to ensure that only qualified bidders submit bids on each corridor.

Recommendation IX-6 Revise capital program and project management to include a focus on managing individual projects according to their schedules and budgets. (Refer to Finding IX-17, Finding IX-18, and Finding IX-19)

While managing the capital program according to planned cash flow and budgeted expenditures in each calendar year is a good business practice, diminishing the importance of individual project schedule and budget performance is not. JCP&L should refocus its attention on achieving schedules and budgets on each individual project as well and implement changes as appropriate.

Recommendation IX-7 Begin tracking and reporting the aggregate volume and value of change orders by project and by time period. (Refer to Finding IX-20)

Change order rates are a good indicator of the quality and thoroughness of the scoping, design, estimating, and project management of each project. The number and relative value of change orders can be used as an evaluative criterion for a single project. The aggregate number and value of change orders, by cause, on completed projects over a month, quarter, or year is a good evaluative criterion of the performance of the design, estimating, and project management units. JCP&L should evaluate new mechanisms that track and report aggregate volume and value of change orders and implement them if cost effective.

Recommendation IX-8 Begin tracking and reporting actual versus estimated hours by work order and by time period. (Refer to Finding IX-25)

Managing to schedule adherence can be an effective work management technique; however, the ongoing analysis of actual work hours versus estimated hours by project and in the aggregate for projects completed in a month, quarter, or year is a good practice. Actual versus estimated work-hour analyses can provide insight into estimating problems as well as productivity problems. Significant variances should be analyzed and the root causes discovered and resolved. JCP&L should evaluate new

mechanisms that track and report actual versus estimated hours by project and implement them if cost effective.

Recommendation IX-9 Improve the delay reporting to reduce crew downtime and improve schedule adherence. (Refer to Finding IX-26)

Each work management system should include time-reporting codes for typical work delays, such as vehicle and equipment breakdowns, material shortages, and traffic management. Tracking crew downtime by cause can identify the recurring problems that reduce productivity and affect schedule adherence. Feedback can then be provided to the support services that will assist in redesigning processes to minimize crew delays.

Recommendation IX-10 Modify the high-priority circuit program to include a focus on the number of repeat high-priority circuits. (Refer to Finding IX-29)

The actions taken to resolve each identified high-priority circuit should be adequate to remove that circuit from the high-priority circuit program for at least five years. While there are unforeseen circumstances that may cause an occasional circuit to repeat more often, the program should be thorough enough that this tendency occurs much less in the future.

Recommendation IX-11 Re-evaluate the T&D employee and contractor labor allocation. (Refer to Finding IX-34)

JCP&L has practices in place to fully use employee resources before turning to contractors; however, the work load and employee/contractor economics are constantly evolving. Because FEU and JCP&L have not re-evaluated the employee/contractor balance in recent years, there may be opportunities to reduce total costs while maintaining core competencies. FEU and JCP&L should re-evaluate the employee/contractor labor allocation for each major work group. Particular attention should be paid to lower-skilled, routine work that can be easily contracted.

Recommendation IX-12 Include as a component of the analysis of the highest priority circuits the age, size, and type of overhead conductor to determine if these factors are the key contributors to the unreliability of a particular circuit and if conductor replacement would be cost-effective to address customer hours of outages on such circuits. (Refer to Finding IX-9)

The replacement of old, deteriorated overhead conductor will not normally be driven by capacity overload. Therefore, the age, size, and type of overhead conductor should be considered in JCP&L's review of the highest priority circuits. If a determination is made that one of these factors is a key contributor to the unreliability of a particular circuit, then consideration should be given to replace the deteriorated conductor if it is cost beneficial. JCP&L does not have a formal overhead conductor

replacement program in its listing of proposed 2011 capital projects. If this study was performed in the past, a report on the results should be presented to the BPU staff.

Recommendation IX-13 **In conjunction with the high priority circuit program, consider adding CEMI measurements and targets to the internal reliability performance measures to enhance customer satisfaction and further improve reliability. (Refer to Finding IX-3)**

JCP&L should consider the establishment of CEMI measurements and targets, along with remediation programs and communication of plans with affected customers, creates a proactive approach to potential customer dissatisfaction caused by multiple interruptions. While the number of customers affected may be small compared to the total customer population, multiple interruptions can be a source of high dissatisfaction.

Recommendation IX-14 **JCP&L should provide documentation that its distribution planning criteria includes requirements consistent with the PJ Downes' reports for tie and recloser schemes for new and substantially reconfigured circuits, which, over time, will allow for increasing levels of automation with respect to the Company's response to outages. (Refer to Finding IX-37)**

Automatic service restoration to portions of circuits is well-suited for urban and suburban and, in some cases, rural circuits. The customer density and mix of urban, suburban, and rural circuits in its territory makes JCP&L a candidate for the potential application of increased distribution automation to enhance reliability. This recommendation was also made in our review of recommendation from prior audits in *Chapter V – Recommendations and Review of Previous Analysis*.

Some other utilities have extended the distribution load switching to a larger part of their distribution system. For instance, in the early 2000s, one utility took a serious look at the design of its distribution network with respect to the implementation of more network distribution automation. The primary distribution voltages that were candidates for the automation used were 13 kV and 34 kV. The current design criteria for these circuits are shown in *Exhibit IX-67*.

Exhibit IX-67
Distribution Circuit Design Criteria

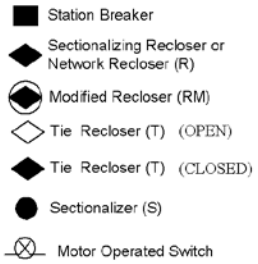
	Normal Operating Condition	Emergency Operating Condition
13 kV	7 MVA	11 MVA
34 kV	21 MVA	29 MVA

MVA = Mega Volt Ampere
Source: Schumaker & Company 2007 Stratified Management Audit of PECO Energy

This utility has designed all of its distribution circuits such that they can be backfed from an adjacent distribution circuit in an emergency condition—defined as in the event of an outage. Before distribution automation, this design allowed the utility to restore service to all customers on an out-of-service 13 kV circuit by manually switching to two adjacent circuits. It also enabled the utility to restore service to all customers on an out-of-service 34 kV circuit by manually switching to three adjacent circuits, even during peak load conditions. Today, the utility's distribution automation scheme provides automated switching and reduces the number of customers affected by an outage. This scheme is illustrated in *Exhibit IX-69* and *Exhibit IX-70*, with *Exhibit IX-68* providing a definition of the symbols that are used.

- 13 kV circuits are usually connected to an adjacent circuit from a different substation, through a normally open-tie recloser, as shown in *Exhibit IX-69*. The switching on the circuit in the event of a fault is such that, although a momentary circuit outage would be experienced, within approximately one minute the two distribution circuits would get automatically reconfigured to minimize the number of customers impacted by the sustained outage.
- 34 kV circuits are usually connected to more than one adjacent circuit through multiple, normally open-tie reclosers, as shown *Exhibit IX-70*. The switching on the circuit in the event of a fault is such that, although a momentary circuit outage would be experienced, within approximately one minute its multiple distribution circuits would get automatically reconfigured to minimize the number of customers impacted by the sustained outage.

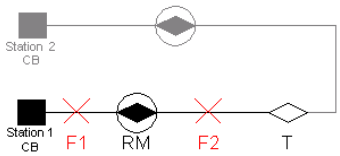
Exhibit IX-68
Circuit Diagram Legend



Source: Schumaker & Company 2007 Stratified Management Audit of PECO Energy

Exhibit IX-69
13 kV Distribution Circuit

Typical 13kV recloser scheme

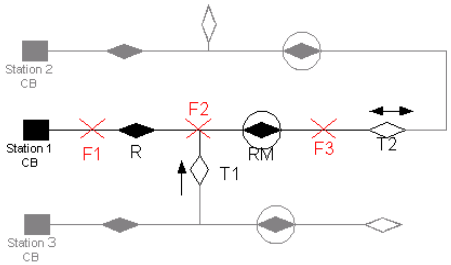


FAULT LOCATION	TIME (SEC.)	MOMENTARY FAULT	SUSTAINED FAULT
F1	0+	Station1 CB trips	Station 1 CB trips
	15	Station 1 CB closes	Station 1 CB closes, trips, & locks out
	30		RM opens & locks out
	60		Tie closes
F2	0+	RM trips	RM trips
	15	RM closes	RM closes, trips, & locks out
	60		Tie closes, trips & locks out

Note CB – Circuit Breaker
Source: Schumaker & Company 2007 Stratified Management Audit of PECO Energy

Exhibit IX-70
34 kV Distribution Circuit

Typical 34kV recloser scheme



FAULT LOCATION	TIME (SEC.)	MOMENTARY FAULT	SUSTAINED FAULT
F1	0+	Station1 CB trips	Station 1 CB trips
	30	Station 1 CB closes & holds	Station 1 CB closes & trips
	45		R changes settings to coordinate with T1 RM opens & locks out
	60		T1 & T2 close R trips & locks out
F2	0+	R trips	R trips
	30	R closes & holds	R closes & trips.
	45		RM opens & lock out
	60		T1 closes, trips & locks out. T2 closes.
F3	0+	RM trips	RM trips
	30	RM closes	RM closes, trips, & locks out
	60		T2 closes, trips & locks out

Source: Schumaker & Company 2007 Stratified Management Audit of PECO Energy

Using the circuit's emergency rating, the load shifted to the adjacent circuit is carried for a period of time following the sustained outage. Once the fault is remedied, the circuits are reconfigured back to their normal operating conditions.

This distribution automation scheme is referred to as an automated loop scheme. The customers in the local area served by the automated loop see an improvement in reliability, while the widespread use of reclosers is an attractive investment to supplement other initiatives to improve system-wide reliability.

The entire JCP&L distribution system should be studied to identify areas where additional distribution automations along the above lines could be implemented. While this technology might not prove cost effective in some areas of the JCP&L distribution system, such a study would ensure that all cost effective areas are identified and scheduled for potential improvement.

B. Extensions and Upgrades

Background

On January 20, 2004, the New Jersey Board of Public Utilities (BPU) proposed rules to reflect the smart growth policy goals of the state, as shown in *Exhibit IX-71*. After extensive hearings and input from stakeholders, the Board of Public Utilities adopted the new rules on November 16, 2004. *Exhibit IX-72* shows an image of the rules from the New Jersey Register. The effective date of the new rules was December 20, 2004, with March 20, 2005 being set as the operative date for utilities to begin using them. Jersey Central Power & Light (JCP&L) implemented the new rules on March 20, 2005.

On March 24, 2010, the BPU issued a Secretary's Letter to instruct utilities to process all extensions as if they were in designated growth areas. The board set forth this directive pending the initiation of a rule-making process in response to a December 30, 2009 court ruling. *Exhibit IX-73* provides a copy of the Secretary's Letter. JCP&L began processing all jobs as if they were in designated growth areas on March 24, 2010.

Exhibit IX-71
BPU Proposed Rules Governing Smart Growth Policy
2004

On January 20, 2004 at 36 N.J.R. 276(a), the Board of Public Utilities (Board) proposed amendments, repeals and new rules to ensure that its programs reflect the smart growth policy goals of the State. The amendments and new rules will govern the responsibility borne by regulated entities for the costs of certain investments in infrastructure, based on whether the development served by the infrastructure is in an area designated for growth under the State Development and Redevelopment Plan (State Plan).

These rules replace various existing rules governing extensions of service with one consolidated, comprehensive set of new extension rules that reflect the State's smart growth policies for addressing the problems of sprawl development. The existing extension rules make no distinction between extensions serving smart growth development in areas designed for growth under the State Plan, andextensions serving sprawl development. This has resulted in subsidies to development in outlying areas, and has perpetuated barriers to development and redevelopment in areas designated for growth under the State Plan. These new rules replace this outdated regulatory scheme with one that ensures that the cost of all extensions of infrastructure will reflect State smart growth policy. In addition, the rules include an innovative pilot program for encouraging development in certain targeted areas, called the targeted revitalization incentive program (TRIP), set forth at N.J.A.C. 14:3-10.

Source: Information Response 160, Extract from 36_N_J_R__5928_a_.pdf, page 2

Exhibit IX-72
BPU-Adopted Rules Governing Smart Growth Policy
2004

NEW JERSEY REGISTER
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VOLUME 36, NUMBER 24

ISSUE DATE: MONDAY, DECEMBER 20, 2004

RULE ADOPTION

PUBLIC UTILITIES
BOARD OF PUBLIC UTILITIES

36 N.J.R. 5928(a)

Adopted Amendments: N.J.A.C. 14:3-1.1 and 6.2

Adopted New Rules: N.J.A.C. 14:3-10

Adopted Repeals and New Rules: N.J.A.C. 14:3-8, 14:5-4 and 14:10-3

Adopted Repeals: N.J.A.C. 14:10-1.1 and 4

EXTENSIONS OF SERVICE

Proposed: January 20, 2004 at 36 N.J.R. 276(a).

Adopted: November 16, 2004 by the New Jersey Board of Public Utilities, Jeanne M. Fox, President, and Frederick F. Butler, Connie O. Hughes and Jack Alter, Commissioners.

Filed: November 17, 2004, as R.2004 d.462, with substantive and technical changes not requiring additional public notice and comment (see N.J.A.C. 1:30-6.3) and with the proposed amendments to N.J.A.C. 14:18-3.2, 6.2, and 11.2 and proposed new rule N.J.A.C. 14:3-8.4 not adopted.

Authority: N.J.S.A. 48:2-13, 48:2-16, N.J.S.A. 48:2-27, and 48:2-23.

Board Docket Number: AX03110973 (companion to AX04101148).

Effective Date: December 20, 2004

EFF2 Operative Dates:. . .March 20, 2005 (repeal and new rules at

Source: Information Response 160, Extract from 36_N_J_R__5928_a_.pdf, page 1

Exhibit IX-73
BPU Secretary's Letter Addressing Court Case Concerning Growth Policy
as of March 24, 2010

STATE OF NEW JERSEY
Board of Public Utilities
Two Gateway Center
Newark, NJ 07102
www.nj.gov/bpu/

Chris Christie
Governor

Kim Guadagno
Lt. Governor

Kristi Izzo
Secretary of the Board
Tel. # (973) 648-3426

March 24, 2010

To: Parties on the attached service list

Re: Appellate Ruling, December 30, 2009
I/M/O Centex Homes, LLC Petition for Extension of Service and/or for Exemption from Main Extension Rules N.J.A.C. 14:3-8.1 et seq. Pursuant to N.J.S.A. 48:2-27 and N.J.A.C. 14:3-8.8(a)(4) or (a)(6).

Please be advised that on December 30, 2009 the Appellate Division ruled on an appeal by Centex Homes, LLC in the aforementioned proceeding. On January 20, 2010, the Board issued a secretary's letter advising utilities to process extension applications under the current rules, "under protest" and subject to possible refund. Attached is a copy of the Board's January 20, 2010 letter. At its March 15, 2010 Agenda Meeting, the Board determined not to pursue an appeal of this matter.

In the near future, the Board will undertake a rulemaking process to amend its Main Extension Rules at N.J.A.C. 14:3-8.1 et seq. Until such time as the Board amends its rules, utilities should process an application for an extension as if it is in a Designated Growth Area under N.J.A.C. 14:3-8.1 et seq.

Utilities are advised that the Board will analyze all applications pursuant to N.J.S.A. 48:2-27 by applying the applicable suggested formulae at N.J.A.C. 14:3-8.9 through 8.11, if all other statutory criteria are met. N.J.A.C. 14:3-8.1 et seq. This is applicable to all applications and deposits received on or after December 30, 2009, including those deposits received under protest pursuant to the Board's January 20, 2010 letter.

Sincerely,

Kristi Izzo
Secretary of the Board

/ac
c: Jerry May, Director, Division of Energy
Maria L. Moran, Director, Division of Water

Source: http://www.nj.gov/dca/divisions/osg/docs/bpuletter032410.pdf

Findings & Conclusions

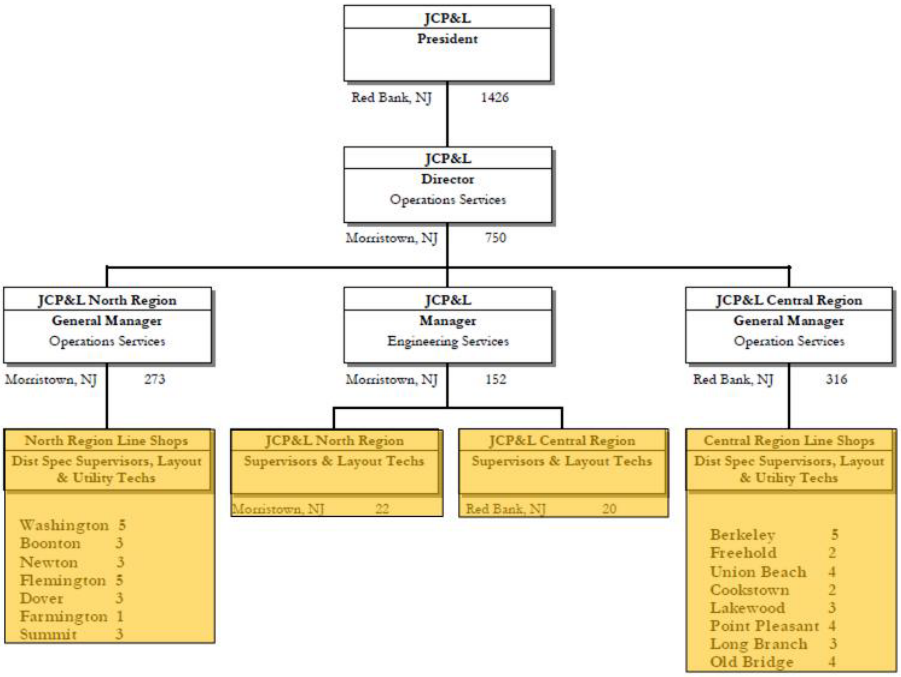
Business Processes

Finding IX-38 **Jersey Central Power & Light has incorporated smart growth policies into its day-to-day business processes.**

Schumaker & Company requested copies of policies and procedures concerning the smart growth classification of extension and upgrade jobs processed by Jersey Central Power & Life. Schumaekr & Company consultants conducted interviews and viewed a demonstration of JCP&L's design procedure within the organization's work management system.

Customer service design engineers and layout technicians (design engineers) in the Engineering and Line Shop organizations, as shown in *Exhibit IX-74*, determine the facilities that need to be installed. They also dictate the smart growth classification of extension and upgrade jobs requested by customers.

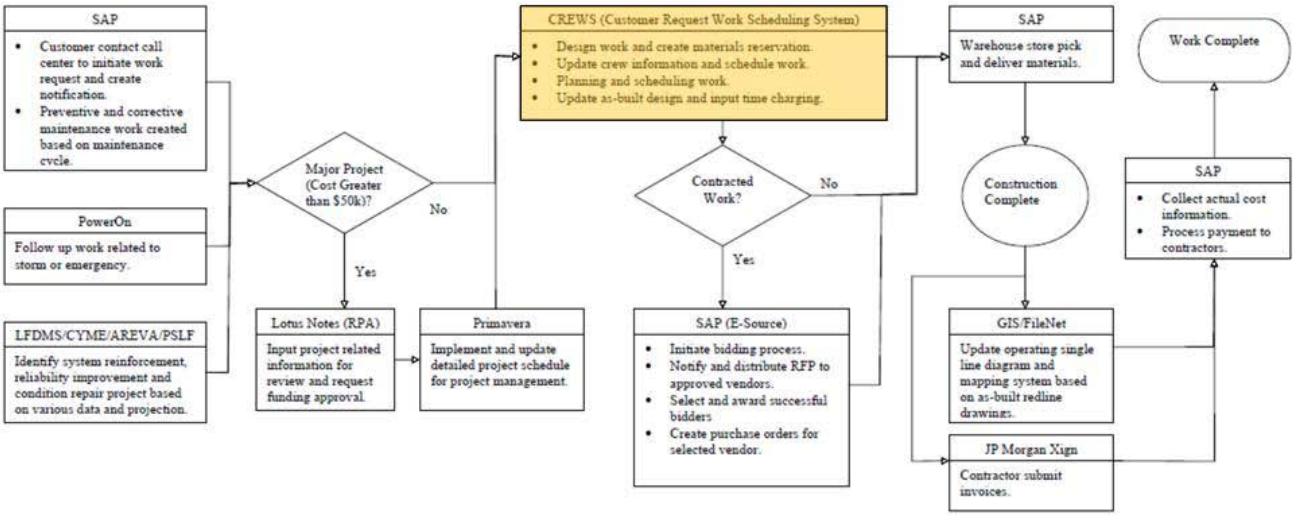
Exhibit IX-74
JCP&L Employees Responsible for Application of the Smart Growth Rules
as of July 2010



Source: Information Responses 54 and 160 and Interview 33

The main tool used by JCP&L design engineers is the Customer Request Work Scheduling System (CREWS) within the organization's overall work management process, as shown in *Exhibit IX-75*.

Exhibit IX-75
Jersey Central Power & Light Work Management Process
July 2010



Source: Information Response 157

JCP&L made changes to the CREWS software tool, created CREWS procedures, and trained design engineers to comply with the smart growth rules.

Exhibit IX-76 displays the CREWS' smart growth requirements. The procedure used by design engineers to determine whether a job is in a designated growth or non-growth area is given in *Exhibit IX-77*. Smart growth billing procedures for Jersey Central Power & Light are shown in *Exhibit IX-78* and *Exhibit IX-79* respectively.

Design engineers use an in-house–developed Lotus Notes application named "CREWSDOC" to create contracts that must be signed by customers before work can be started. The procedure for using CREWSDOC is given in *Exhibit IX-80*.

Exhibit IX-81 provides the procedure used by design engineers to determine whether customer billing is to be based on fixed charges or time and material.

Exhibit IX-76
CREWS Smart Growth Requirements
July 2010

1.0 CREWS SMART GROWTH REQUIREMENTS

1.1. A new set of rules took effect in New Jersey on March 20, 2005, known as NJ SMART GROWTH. These rules classify land areas throughout the state into two basic categories: **GROWTH** or **NON-GROWTH**, and impact how JCP&L bills customers for the extension of facilities.

1.2. As a result of NJ SMART GROWTH, all appropriate work requests created on or after March 20, 2005 will have two new requirements inserted in CREWS. (Jobs created prior to this date will be "grandfathered" under the terms of the former Tariff. The creation date shall be taken as the "Date Entered" on the CREWS Work Request Detail screen.) The requirements will be inserted for work requests associated with any extension of facilities to serve a new customer, or a service upgrade for an existing customer. These requirements will apply to Accelerated, as well as Design work requests.

1.3. The first new requirement is #76 - Investigate New Jersey Smart Growth, which will show up in the responsible party's work queue. Follow the steps listed under 2.0 "SMART GROWTH DETERMINATION", to determine if a parcel of land is located in a **GROWTH** or **NON-GROWTH** area.

1.4 After making a determination regarding the location of a parcel of land, open the Requirements List window in CREWS, and enter a "SMART" permit from the drop-down list under the Permit tab. You must then enter "**GROWTH**" or "**NONGROWTH**" in the NJ Smart Growth field. Enter the current date in the "Permit Received Date" field, then click on Save and OK. This action will complete both SMART GROWTH permit requirements #76 & #131.

Source: Information Response 160, Attachment 1, page 1

Exhibit IX-77
CREWS Smart Growth Determination
as of July 2010

2.0 SMART GROWTH DETERMINATION

2.1 To determine if a parcel of land is located in a **GROWTH** area, use the Smart Growth Locator available from the HMFA web site at http://sgl.state.nj.us. (When you launch this application, you may want to save it as a favorite.)

2.2 The Smart Growth Locator will allow the entry of a street address, but not a lot and block number. Once the location is found, a statement will appear labeled as an "Eligibility Message", indicating whether or not the parcel of land is in a Smart Growth area. A map will also be displayed showing the location. Selecting "print preview" will enable you to print a copy of the message along with the map, which must be kept in the job folder.

2.3 Occasionally, an address will not come up in the Smart Growth Locator. These problems usually involve place name issues or zip code discrepancies. To help with such issues, use the United States Postal Services web site at http://zip4.usps.com/zip4/citytown_zip.htm, or use the Localities tool on http://www.state.nj.us/infobank/locality.htm.

2.4 If a street does not yet exist, locate nearby cross roads to help guide you to the actual location of the property. You can tell from the surrounding area if a parcel of land is located in a Smart Growth area, which are shown with a grid pattern.

2.5 If a parcel of land is located in both a **GROWTH** and **NON-GROWTH** area, it should be classified based on where the majority of the parcel is located.

2.6 If an approved alternate method is used to determine applicability of the Smart Growth Rules (i.e. Municipal or County Planning Board, Office of Smart Growth, etc.) then you must have a written copy of that determination to be kept permanently in the project file as documentation.

2.7 Buildings to be used only for agricultural purposes are exempt from the Smart Growth rules, including the farm family's residence and farm worker housing. However, the exemption is not automatic, and must be obtained by the applicant from the NJBPU Smart Growth Policy Advisor. Once a copy of the exemption has been faxed to you for your file, the extension is then treated as if it is located in a Smart Growth area. When an applicant obtains an Agricultural Exemption it does not mean that the resulting line extension will be made free of charge.

2.8 Smart Growth exemptions can also be obtained for projects that "will provide a significant public good". However, such exemptions can only be granted through a hearing before the NJBPU; the Smart Growth Policy Advisor is not empowered to grant this type of Smart Growth exemption.

Source: Information Response 160, Attachment 1, pages 1 and 2

Exhibit IX-78
CREWS' Smart Growth Billing for Designated Growth Areas
as of July 2010

3.0 SMART GROWTH BILLING

3.1 Charges for "Temporary Service, Disconnect/Reconnect, Service Change, and Labor Only" are exempt from the new Smart Growth rules. Therefore, billing practices for these activities remain the same as those in effect prior to March 20, 2005. "Upgrades" for service to existing structures that do not exceed ten times the existing load, are also exempt from the new rules. However, the rules require that "Upgrades" must be classified as **GROWTH** or **NON-GROWTH** for tracking purposes.

3.2 All extensions to serve new structures built, or rebuilt after an existing structure was demolished, and occupied after March 20, 2005, will be subject to the Smart Growth billing rules.

3.3 Designated Growth Areas

3.3.1 Pay Now (Refundable) and Pay Later (Minimum Demand) contracts are still applicable for extension of electric service to nonresidential customers in a Designated Growth Area. Calculation of the refund for a Pay Now contract will be accelerated to a rate of ten times the annual distribution revenue, as defined in the new Smart Growth Rules.

3.3.2 Refundable deposits shall be collected, when appropriate, for extension of electric service to the boundary of a subdivision (both residential and nonresidential).

3.3.3 The Appendix A underground differential charges are still applicable for URD subdivisions in Designated Growth Areas. The refundable deposit can be waived if the builder has sold 20% or more of the lots in a given section, at the discretion of a Regional Engineering Supervisor. When a refundable deposit is collected, it must be returned at an accelerated rate, as defined in the Smart Growth Rules.

3.3.4 There is no charge for a single phase primary extension of electric service along public rights-of-way in a Designated Growth Area, to serve an individual residential customer. The first 1,062 feet of single phase primary extension on private property is also without charge; beyond that distance a refundable deposit may be collected.

3.3.5 Refundable deposits shall be applicable for the extension of electric service to provide three phase service to a residential customer in a Designated Growth Area.

Source: Information Response 160, Attachment 1, pages 2 and 3

Exhibit IX-79
CREWS Smart Growth Billing for Designated Non-Growth Areas
as of July 2010

3.3 Non-Growth Areas

3.3.1 Any extension to serve a new structure that was built, or rebuilt after an existing structure was demolished, and occupied after March 20, 2005, that is located outside of a Designated Growth Area, will require full cost billing, including charges for the service lateral (when installed by JCP&L) and metering. Pay Now and Pay Later contracts are not applicable for any extensions in Non-Growth Areas.

3.3.2 The Appendix A underground differential charges shall still be applicable for URD subdivisions in Non-Growth Areas. However, the refundable deposit must also be collected and treated as a nonrefundable contribution. Charges must also be collected for the meters.

3.3.3 Existing customers in Non-Growth Areas are no longer exempt from application of the Smart Growth rules. Requests for additional service extensions onto a customer's property, to serve a new structure that is located in a Non-Growth Area, will require full cost billing. For example, setting a second meter for a customer in a Non-Growth Area shall be billable, as well as construction of a primary extension to serve a new building located behind the customer's existing building on the same property.

Source: Information Response 160, Attachment 1, pages 2 and 3

Exhibit IX-80
CREWSDOC Smart Growth Contract Creation Procedures
as of July 2010

3.4 Creating Contracts and Fixed Bills from CREWSDOC

3.4.1 The Main Form input screen in the Lotus Notes database "CREWSDOC" has been modified to follow the new Smart Growth billing rules. The first prompt will ask if the job is for a line extension requested by a customer/applicant. If you answer "yes", a second prompt will appear asking if the job involves service to a new structure or an upgrade for an existing structure. After entering job specific data, another prompt will ask you to indicate if the job is located in a Smart Growth or Non-Smart Growth area.

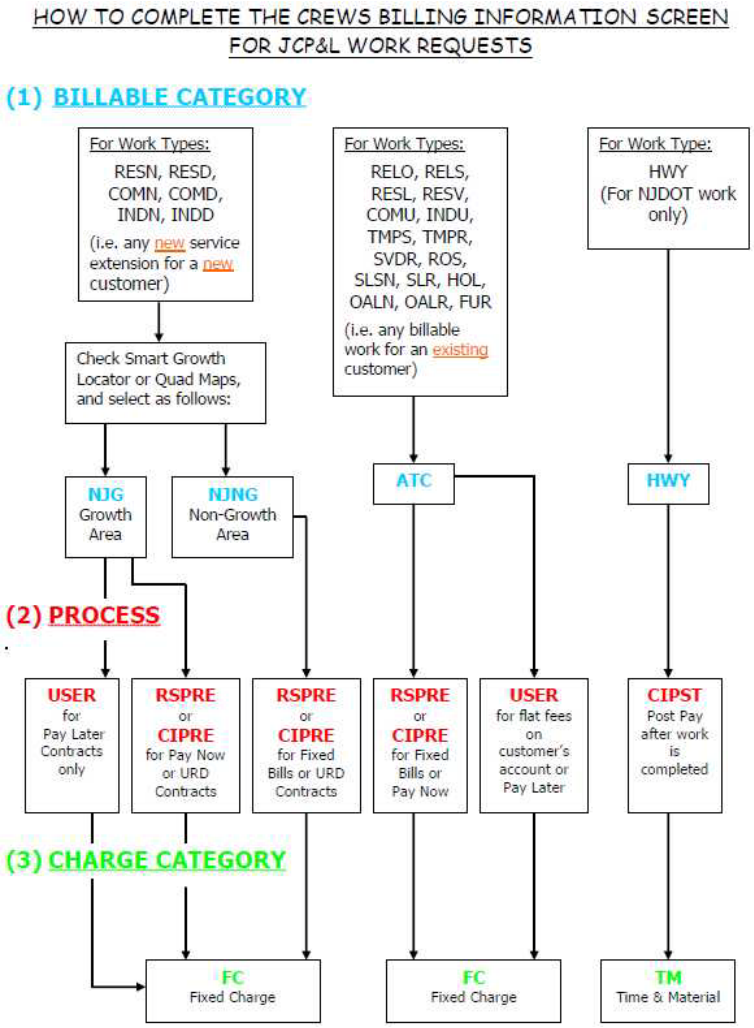
3.4.2 If you indicate that the job is located in a Smart Growth area, you can then enter the capital and expense base cost data from the CREWS invoice calculation screen, under the Standard Design option. Entering data in this category will allow for the creation of Pay Now or Pay Later contracts. You can also enter data in both the Standard Design and Customer Alternate categories to capture the cost of facilities that exceed JCP&L's standard design as a nonrefundable contribution, along with the Pay Now/Pay Later contract.

3.4.3 If you indicate that the job is located in a Non-Smart Growth area, the only allowable option in "CREWSDOC" is to enter the capital and expense base cost data under Customer Alternate Design, which will produce a Fixed Cost Agreement.

3.4.4 When you select the URD category in "CREWSDOC", you will be presented with similar prompts regarding the notification creation date, and the location of the job, which will bring up the appropriate screens to create a contract.

Source: Information Response 160, Attachment 1, pages 3 and 4

Exhibit IX-81
CREWS Smart Growth Charge Category
July 2010



Source: Information Response 160, Attachment 2

Performance Management

Schumaekr & Company consultants requested seven (7) years of smart growth data for the extension of new facilities and for the upgrade of existing facilities to serve customers. Very few jobs processed prior to March 20, 2005 were coded as growth (G) or non-growth (NG). Data for 2005 was assumed to be non-typical because of a work stoppage at Jersey Central Power and Light during the first quarter of the year and was deemed an adjustment period for customers to become accustomed to the new rules.

Schumaker & Company's analysis of the data is presented below in separate "New Extensions" and "Upgrades" categories.

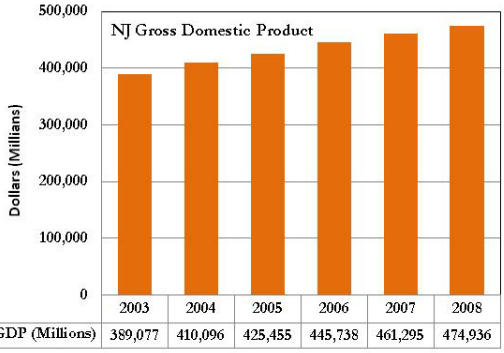
New Extensions

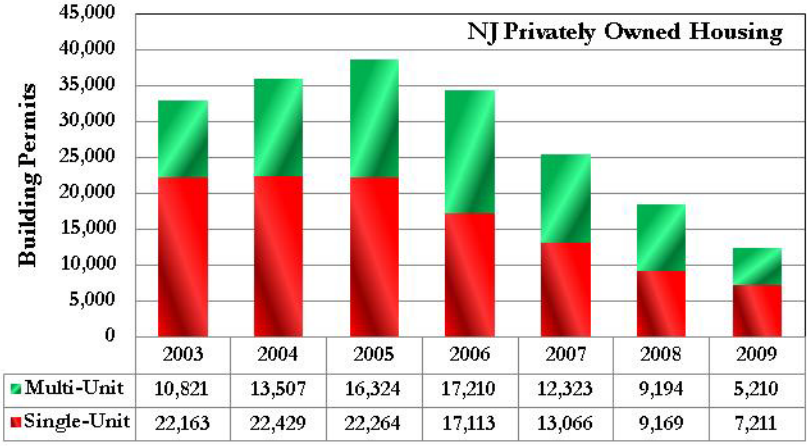
Finding IX-39 **The implementation of smart growth policies in 2005 decreased the average monthly level of new extension work activity within Jersey Central Power & Light by 31.3% or $400,476.**

New extensions, particularly for new housing, are dependent on general economic conditions. *Exhibit IX-82* indicates that the gross domestic product (GDP)[5] for the state of New Jersey has steadily increased from 2003 through 2008 while building permits for privately owned housing have decreased annually from 2006 through 2009. The mortgage crisis explains the levels in 2009, 2008, and a portion of 2007. After the implementation of the smart growth rules in 2005, single-unit building permits in the state decreased by 5,151 in 2006 and another 4,047 in 2007. While multi-unit permits increased by 886 in 2006, they decreased by 4,886 between 2006 and 2007. The state trends can be assumed to apply to JCP&L's service territory.

[5] / A state's gross domestic product is the total value of all the state's goods and services that are produced in a year.

Exhibit IX-82
State of New Jersey Economic Indicators
2003 to 2009



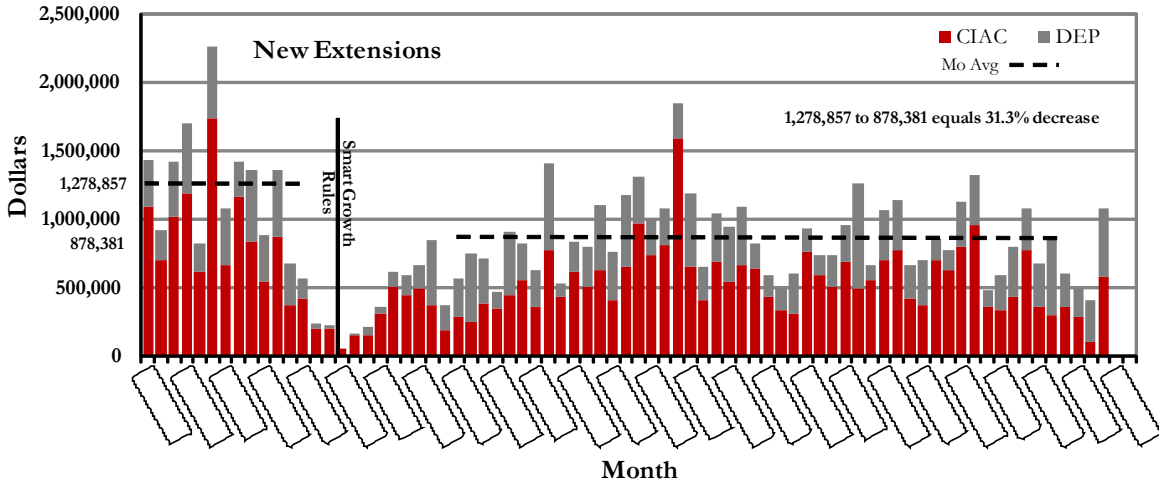


Source: http://www.bea.gov/regional/gsp/action.cfm and http://www.census.gov/const/www/permitsindex.html

Prior to March 2005, Jersey Central Power & Light customers paid a combination of non-refundable contribution in aid to construction (CIAC) and/or refundable deposit (DEP) for new extensions based on tariffs filed and approved by the BPU. Comparing total CIAC plus DEP dollars collected for new extensions prior to and after the implementation of the smart growth rules provides an indication of the impact these new rules had on customer extensions.

Exhibit IX-83 provides a profile of monthly CIAC plus DEP dollars collected for new extensions. Monthly average CIAC plus DEP dollars collected by JCP&L for new extensions decreased by 31.3% after smart growth rules went into effect. The monthly average for 2004 was $1,278,857 compared to the 2006–2009 monthly average of $878,381.

Exhibit IX-83
Monthly CIAC + DEP Dollars Collected for New Extensions
January 2004 to March 2010



Source: Information Response 162 and Schumaker & Company Analysis

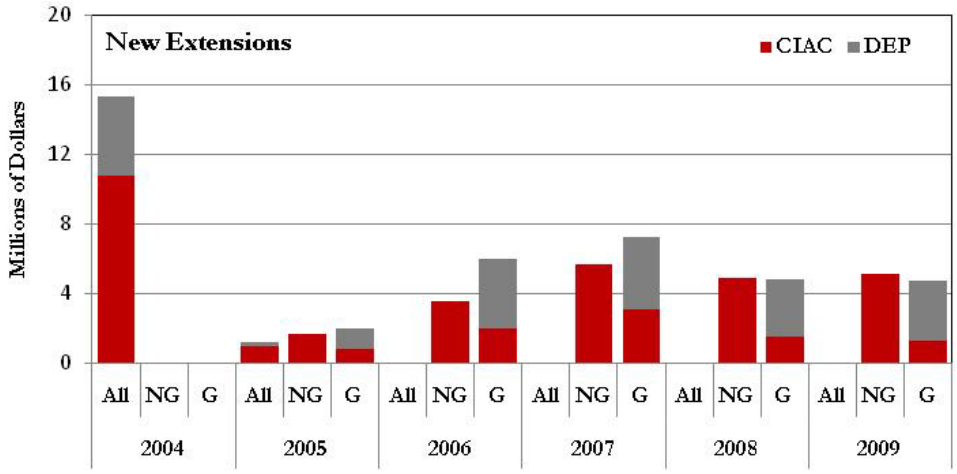
Finding IX-40 **JCP&L complied with smart growth rules by collecting CIAC for the total cost of new extensions in designated non-growth areas.**

The smart growth rules mandated that New Jersey utilities collect the full cost of installing new extensions (CIAC) in designated non-growth areas from customers requesting such extensions. This rule was suspended on March 24, 2010 pending further BPU rule-making as shown in Exhibit IX-73.

The rules further mandated that utilities process new extensions in growth-designated areas in accordance with tariffs approved by the BPU. These tariffs, depending on the scope of the job, may allow JCP&L to collect a non-refundable reimbursement (CIAC) and/or a refundable reimbursement (DEP) for the job.

Exhibit IX-84 provides the annual level of CIAC and DEP collected for new extensions by JCP&L both before and after the implementation of the smart growth rule. Prior to March 20, 2005 new extension reimbursements were not coded as being in either a non-growth area (NG) or a growth area (G) and are combined together (ALL) on the chart. All of the reimbursements in NG areas after the implementation of the smart growth rules in 2005 were collected as CIAC.

Exhibit IX-84
Annual CIAC + DEP Dollars Collected for Non-Growth and Growth New Extension Jobs
January 2004 to March 2010

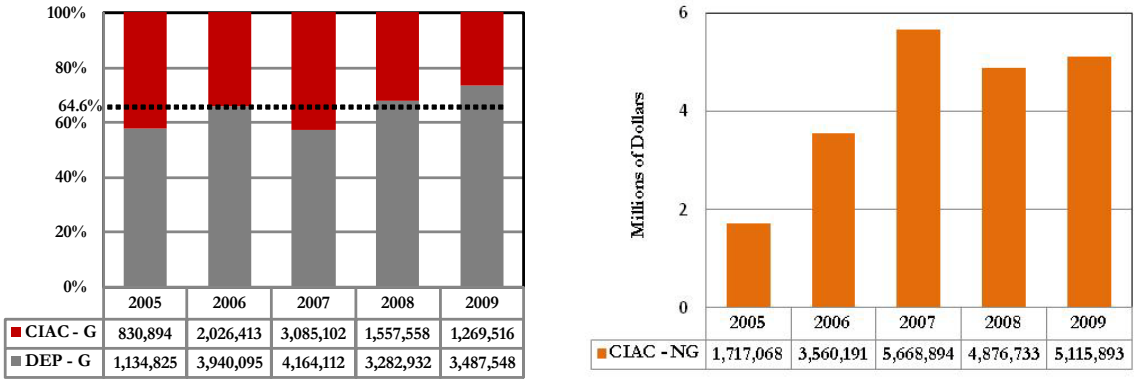


Source: Information Response 162 and Schumaker & Company Analysis

Finding IX-41 **Up to $13.5 million of the $20.9 million collected as CIAC for new extensions in non-growth areas between 2005 and 2009 might have been collected as refundable DEP if the jobs had been processed as though they were in growth areas.**

Exhibit IX-85 presents the annual levels of CIAC and DEP collections for new extensions in growth areas and the annual CIAC collections in non-growth areas for 2005–2009. 64.6% of the reimbursements collected in growth-designated areas from 2005 through 2009 were for DEP. Applying that 64.6% to the total CIAC collected $20,938,779 in non-growth areas yields $13,526,451. Naturally, $13.5 million is an approximation and the actual level would be dependent on the tariffs that would apply to each job.

Exhibit IX-85
Annual Refundable Deposit Dollars Collected for New Extensions
2004 to 2009



	2005	2006	2007	2008	2009
CIAC - G	830,894	2,026,413	3,085,102	1,557,558	1,269,516
DEP - G	1,134,825	3,940,095	4,164,112	3,282,932	3,487,548

	2005	2006	2007	2008	2009
CIAC - NG	1,717,068	3,560,191	5,668,894	4,876,733	5,115,893

Source: Information Response 162 and Schumaker & Company Analysis

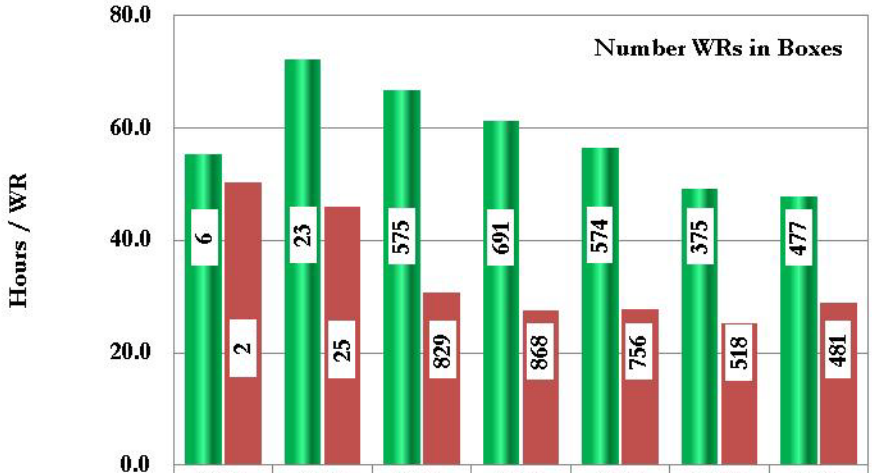
Finding IX-42 **The average annual scope of work for new extension jobs in growth areas has decreased 11.8% (7.5 Hrs/WR) and in non-growth areas 41.9% (20.2 Hrs/WR) since the implementation of smart growth rules.**

JCP&L uses compatible units to design new extension jobs. Compatible units pre-define materials required, labor hours needed to install the materials, and the accounting treatment (capitalized or expensed) of the materials and labor associated with the job. The evaluation of the estimated labor hours per job or work request (WR) is an indication of the scope of work performed.

Schumaker & Company requested and analyzed estimated new extension labor hours for billable growth (G) and non-growth (NG) jobs. Schumaekr & Company consultants also confirmed through an interview that JCP&L designers are trained in and strive to use the most efficient design for all jobs, regardless of the location. *Exhibit IX-86* presents the results of this analysis. The numbers in white boxes on the chart's bars provide the number of jobs (work requests) included in the calculation of average estimated hours per job.

Very few jobs were classified as growth or non-growth prior to March 2005. Clearly, the scope of work (materials plus labor) decreased after the implementation of the smart growth rules in 2005.

Exhibit IX-86
Job Scope for New Extension Jobs
2003 to 2009



	2003	2004	2005	2006	2007	2008	2009
G - Est Hrs / WR	55.3	72.1	66.6	61.2	56.4	49.2	47.8
NG - Est Hrs / WR	50.4	45.9	30.7	27.5	27.7	25.2	28.9

	Average Annual Est Hrs / WR			
	(1)	(2)	(1)-(2)	(1)-(2)/(1))
	2003-2004	2005-2009	Change from (1)	% Change from (1)
Growth	63.7	56.2	-7.5	-11.8%
Non-Growth	48.2	28	-20.2	-41.9%

Source: Information Response 162 2nd Supplement, Attachments 1 and 2, and Schumaker & Company Analysis

Upgrades

Finding IX-43 **The smart growth policy increased the level of upgrade activity within JCP&L after its implementation.**

Again, comparing total CIAC plus DEP dollars collected for upgrades prior to and after the implementation of the smart growth rules provides an indication of the impact the new rules had on customer decisions concerning upgrade jobs.

A view of monthly CIAC plus DEP dollars collected by month for upgrades is presented in *Exhibit IX-87*. Monthly average CIAC plus DEP dollars collected by JCP&L for new extensions decreased by 31.3% after smart growth rules went into effect. The monthly average for 2004 was $134,367 compared to $240,523 for 2006–2009, indicating an approximate increase of 79.0% in activity.

One (1) job in a designated growth area in September 2007 accounted for $685,133 in CIAC of the $1,111,611 shown on the chart.

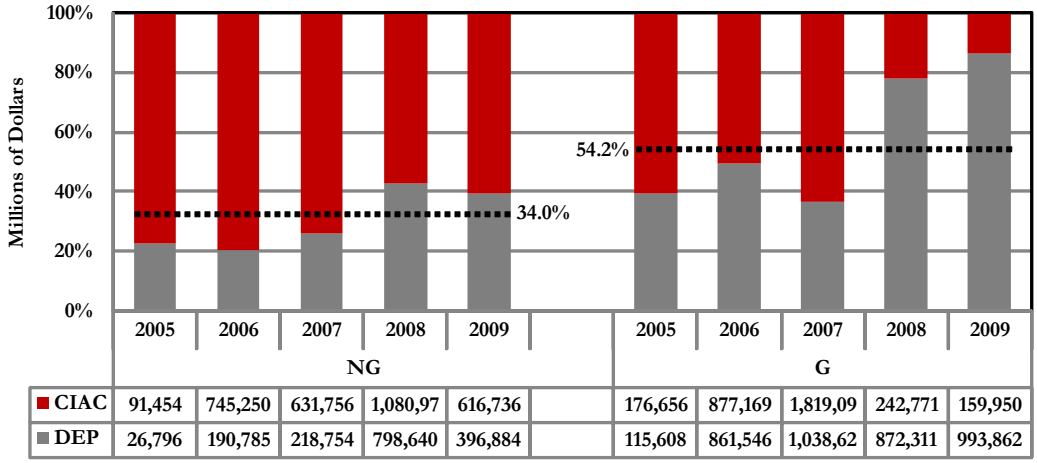
Exhibit IX-87
Monthly CIAC + DEP Dollars Collected for JCP&L Upgrade Jobs
January 2004 to March 2010

Source: Information Response 162 and Schumaker & Company Analysis

Finding IX-44 Jersey Central Power & Light complied with smart growth rules for upgrades requested by customers.

Smart growth rules mandate the collection of certain expenses as CIAC in non-growth areas that might be collected as reimbursable deposits in growth areas. *Exhibit IX-88* provides the annual percentage comparisons between DEP and CIAC collected after the implementation of these rules. DEP as a percentage of DEP plus CIAC reimbursements for 2005–2009 was 20.2% higher in growth areas compared to non-growth areas. The higher percentage of CIAC collected for non-growth jobs indicates that JCP&L applied the rules appropriately. Because of the reduced level of upgrade activity in non-growth areas, the 20.2% in DEP percentages would equate to only a $155,356 shift from CIAC to DEP if the jobs in non-growth areas had been processed in the same way as growth area jobs.

Exhibit IX-88
DEP as Percent of DEP + CIAC for Upgrade Jobs in Non-Growth and Growth Areas
2005 to 2009



	NG 2005	NG 2006	NG 2007	NG 2008	NG 2009	G 2005	G 2006	G 2007	G 2008	G 2009
CIAC	91,454	745,250	631,756	1,080,97	616,736	176,656	877,169	1,819,09	242,771	159,950
DEP	26,796	190,785	218,754	798,640	396,884	115,608	861,546	1,038,62	872,311	993,862

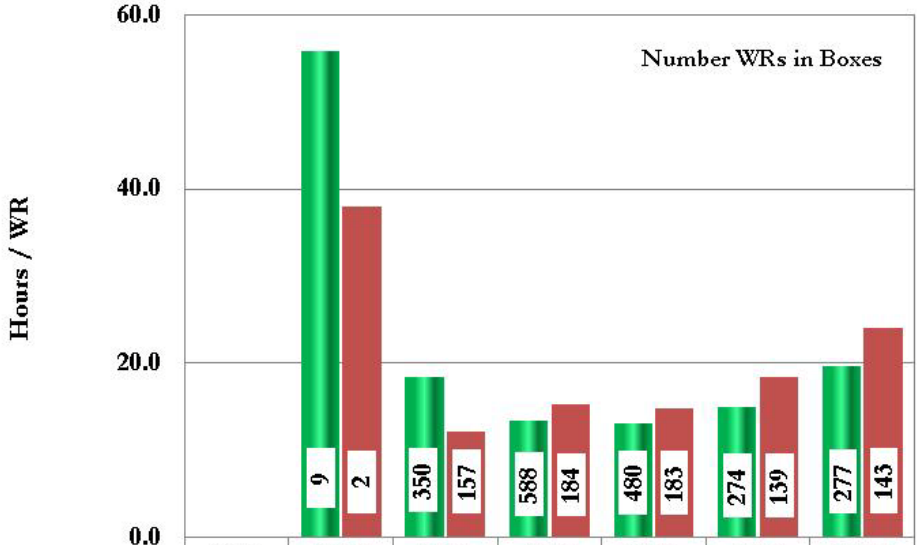
Source: Information Response 162 and Schumaker & Company Analysis

Finding IX-45 **The scope of work for jobs completed by JCP&L to upgrade facilities to customers was similar between growth and non-growth areas and demonstrated comparable trends.**

As discussed above, estimated hours per job (work request) is a good indication of the facilities installed on a job. Schumaker & Company analyzed the estimated hours per work request for all upgrade billable jobs coded as growth (G) or non-growth (NG) between 2003 and 2009. The results of this analysis are presented in *Exhibit IX-89*. Again, the number of work requests (jobs) for each calculation is shown in the white box on each bar.

There were no jobs coded with G or NG in 2003 and very few in 2004. The data for 2005 through 2009 demonstrate similar trends and characteristics for both growth and non-growth jobs, indicating there was very little difference in the scope of facilities installed.

Exhibit IX-89
Upgrade Job Scope for Growth and Non-Growth Areas
2005 to 2009



	2003	2004	2005	2006	2007	2008	2009
G - Est Hrs / WR		55.8	18.4	13.4	13.2	14.9	19.7
NG - Est Hrs / WR		38.0	12.1	15.2	14.8	18.5	24.0

Source: Information Response 162 2nd Supplement, Attachments 1 and 2, and Schumaker & Company Analysis

Recommendations

None

C. Contractor Performance

Underground Locate Services

Background

In 1974, Garden State Underground Plant Location Service (GSUPLS) was created by New Jersey Utilities as a voluntary organization of underground facility operators. In October 1994, the Underground Facility Protection Act was signed into law and the NJ Board of Public Utilities (BPU) was designated as the agency charged with overseeing and enforcing compliance with the "One Call Law." As of November 1999, The BPU designated One Call Systems, Inc. as the operator of the One-Call Damage Prevention System. One Call Concepts became the operator in February 2010. *Exhibit IX-71* provides the Table of Contents page from the BPU document that implements the Underground Facility Protection Act.

Jersey Central Power & Light (JCP&L), as an operator of underground facilities in the State of New Jersey, is required by law to participate in and comply with the requirements of the One-Call Damage Prevention System.

Exhibit IX-90
Table of Contents from BPU One-Call Damage Prevention System
as of July 2010

Note: This is a courtesy copy of the Underground Facility Protection Act. The official version is found in the New Jersey Statutes Annotated at N.J.S.A. 48:2-73 et seq. Should there be any discrepancies between this courtesy copy and the official version, the official version will govern.

NEW JERSEY BOARD OF PUBLIC UTILITIES

Underground Facilities: One-Call Damage Prevention System

N.J.S.A. 48:2-73 et seq. and enabling rules – N.J.A.C. 14:2

TITLE 48. PUBLIC UTILITIES
CHAPTER 2. DEPARTMENT OF PUBLIC UTILITIES; BOARD OF COMMISSIONERS
ARTICLE 9. EMERGENCIES AND DAMAGE PREVENTION

§ 48:2-73. Short title 1
§ 48:2-74. Findings, declarations, determinations 1
§ 48:2-75. Definitions 2
§ 48:2-76. One-Call Damage Prevention System, established; rules, regulations 3
§ 48:2-77. Operation of One-Call Damage Prevention System 4
§ 48:2-78. Appropriate waiver conditions 4
§ 48:2-79. System operator, responsibilities 4
§ 48:2-80. Underground facility operator, responsibilities; underground facility markings ... 5
§ 48:2-81. Marking of facilities; nonapplicability; excavation, permitting process on State property 6
§ 48:2-82. Notification of the One-Call Damage Prevention System; excavator's duties 7
§ 48:2-83. Proof of notification required for permission to excavate 8
§ 48:2-84. Nonapplicability to emergencies 8
§ 48:2-85. Map of pipeline; filing 9
§ 48:2-86. Violation of act; injunction; civil penalties 9
§ 48:2-87. Illegal excavation; disorderly persons offense, third degree crime 10
§ 48:2-88. Penalty for operator violations 10
§ 48:2-89. Notice failure, prima facie evidence of negligence 11
§ 48:2-90. Civil penalties to the State 11
§ 48:2-91. Board's jurisdiction not affected 11

Source: http://www.nj1-call.org/docs/UndergroundFacilitiesAct-LAW.pdf and Information Response 303

Findings & Conclusions

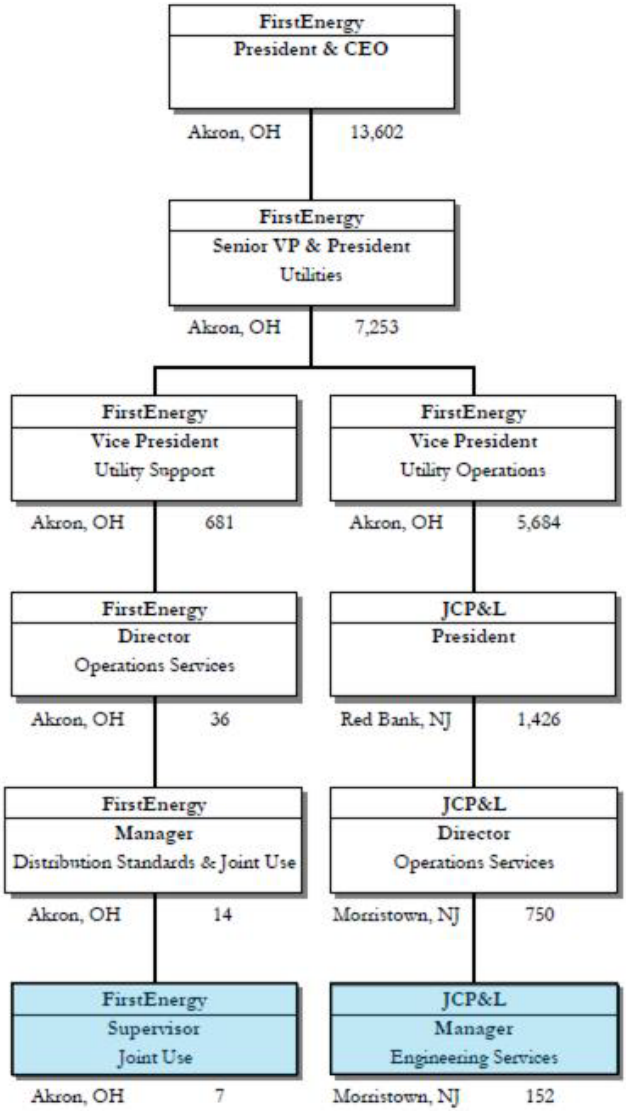
Organization

Finding IX-46 **FirstEnergy, including Jersey Central Power & Light, has centralized the responsibility for processing requests from excavators to mark underground facilities in all the service territories of its subsidiaries.**

Schumaekr & Company consultants requested organizational charts for department(s) responsible for the oversight of contractors that locate and mark underground facilities in accordance with New Jersey's One Call law. Responsibilities were confirmed through interviews.

FirstEnergy (FE) has subsidiary utilities that operate in New Jersey, Pennsylvania, and Ohio. All of these states require the subsidiaries to participate in marking the location of their underground facilities at the request of potential excavators. The FirstEnergy Joint Use organization, in collaboration with JCP&L Engineering, has the responsibility for processing requests for markings in Jersey Central Power & Light's territory. *Exhibit IX-72* provides the organizational relationship between FirstEnergy and JCP&L for underground locating services.

Exhibit IX-91
JCP&L Underground Locates Organization
as of July 2010



Source: Information Response 302 and Interviews 72 and 134

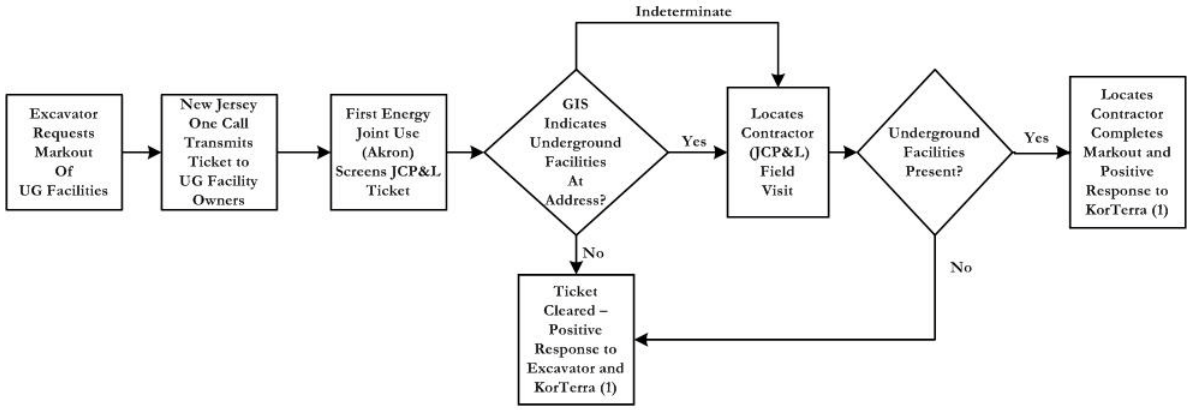
Process

Finding IX-47 **Jersey Central Power & Light/FirstEnergy has a defined process for completing requests from excavators to mark the location of underground electrical facilities.**

Schumaker & Company interviewed Jersey Central Power & Light and FirstEnergy personnel to evaluate the process that FE organizations use to respond to requests from New Jersey One Call to mark its underground facilities.

FirstEnergy performs a preliminary screen of all calls requesting that the location of JCP&L underground electrical facilities be marked. The 92% of tickets that require field marking after screening are sent to the "Locates" contractor in New Jersey for field completion. *Exhibit IX-74* presents the process used to locate and mark Jersey Central Power & Light underground facilities when requested through New Jersey One Call.

Exhibit IX-92
JCP&L Underground Locates Process
as of July 2010



(1) KorTerra is FirstEnergy's ticket-screening software application

Source: Interviews 72 and 134

Finding IX-48 **Jersey Central Power & Light has written contract specifications for vendors providing FirstEnergy with underground locating services.**

Schumaekr & Company consultants requested and reviewed a copy of the current contract for underground locating services to verify the tasks performed by the locates contractor. The contract has ten sections covering all aspects of the activities performed by the contractor. *Exhibit IX-76* presents the "General Conditions" section of the contract.

Exhibit IX-93
General Conditions Section from JCP&L Specifications for Contract Locating as of December 31, 2008

1.00 GENERAL CONDITIONS

1.01 These Specifications set forth requirements to which the Contractor must adhere for the locating and temporary marking of Jersey Central Power & Light Company's (JCP&L or the Company) underground facilities to prevent excavation damage. Failure to adhere to these requirements, absent written authorization from JCP&L, shall be considered a material breach of contract.

1.02 The geographical area of coverage, depending on bid acceptance includes JCP&L facilities located within two Regions, Northern NJ and Central NJ. These Regions include the following counties, in whole or in part:

A. Northern NJ - Morris, Sussex, Warren, Hunterdon, Somerset, Essex, Union, Mercer, and Passiac.

B. Central NJ -- Middlesex, Monmouth, Ocean, Mercer, Burlington

1.03 These Specifications are written to require the Contractor to receive locate requests from JCP&L, determine if JCP&L facilities are involved, locate and mark out underground facilities at the excavation sites, notify the excavators and maintain various records as required by JCP&L, the New Jersey Underground Facility Protection Act and the New Jersey Board of Public Utilities (NJBPU).

1.04 The "screening process" as written in these Specifications is to be performed by the Contractor; however, Contractor should consider and respond to the possibility that JCP&L may perform this screening process.

1.05 Other Contractor responsibilities may include, but shall not be limited to, public liaison as may relate to facility protection, and protection of facilities during major excavation activities at the direction of JCP&L.

Contractor performance and overall activity shall be monitored by the Company with the full cooperation of the Contractor.

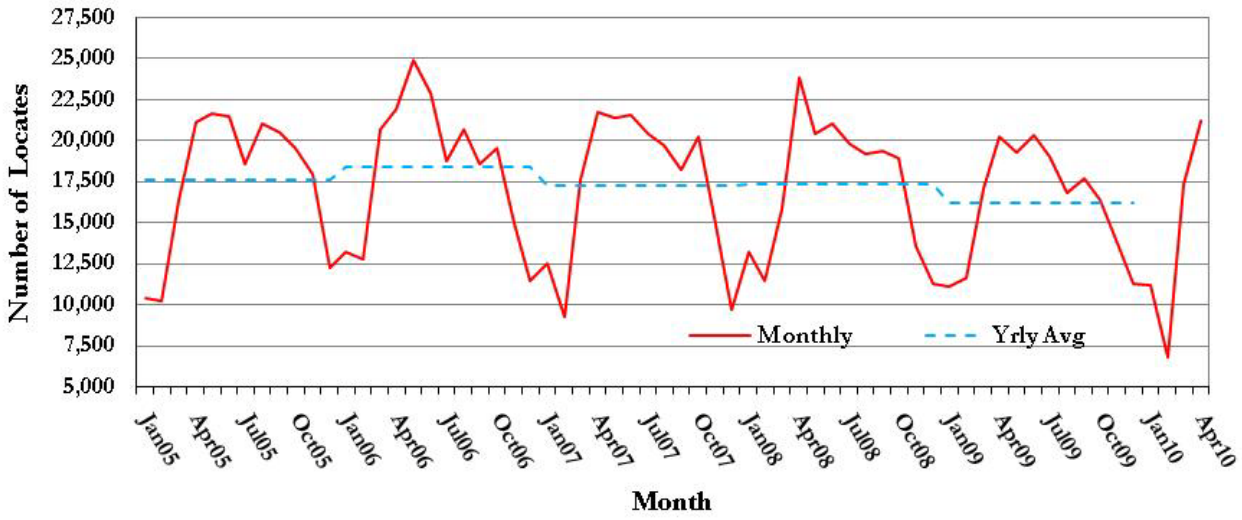
Source: Information Response 316

Performance Management

Finding IX-49 The locates activity from New Jersey One Call for Jersey Central Power & Light peaked during 2006.

Schumaekr & Company consultants requested and analyzed the number of monthly underground locates completed for the past five years. The yearly monthly average of locates that were completed peaked in 2006 at 18,375 per month. The average for 2009 was 16,235 per month, down 11.6% from the peak. *Exhibit IX-77* shows the five (5) years of data provided by month.

Exhibit IX-94
JCP&L Underground Locates Activity
January 2005 to April 2010

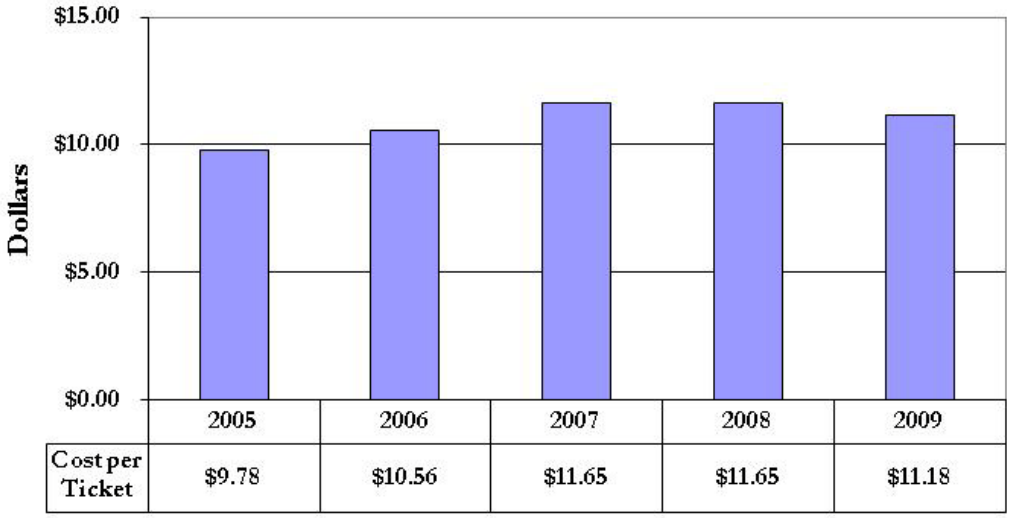


Source: Information Response 304

Finding IX-50 **Jersey Central Power & Light's annual contract locate costs ranged from $9.78 to $11.65 per ticket over the last five years.**

Schumaker & Company requested and analyzed the annual contract expenses for Jersey Central Power & Light's underground locates services for the last five years. The annual unit cost peaked at $11.65 per ticket in 2007 and 2008. Unit cost increased at a 3.5% annual rate from 2005 through 2009. The 2009 unit cost was 4.0% lower than the 2007 - 2008 peak cost. There was a $0.47 difference between the 2008 and 2009 unit cost. *Exhibit IX-78* gives a comparison of the cost per ticket over the last five years.

Exhibit IX-95
Jersey Central Power & Light Contract Cost per Underground Locate Ticket
2005 to 2009

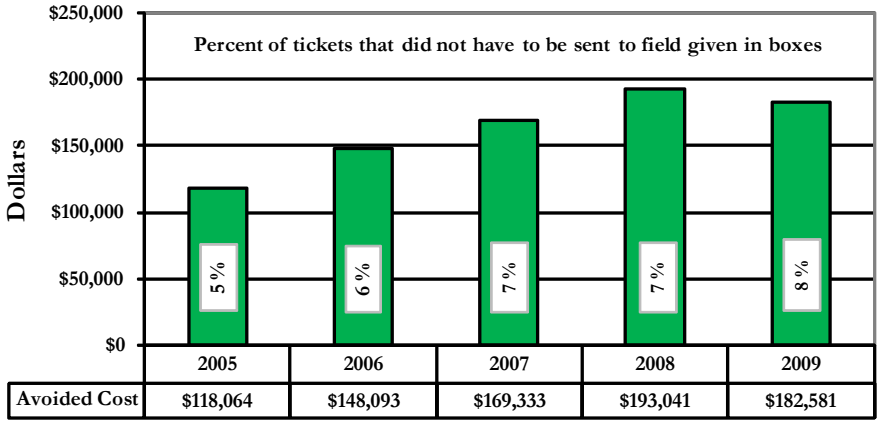


Source: Information Responses 304 and 668

Finding IX-51 **The FirstEnergy / Jersey Central Power and Light ticket screening process has resulted in approximately $811,112 of avoided cost from 2005 through 2009.**

Interviews indicated that approximately eight percent (8%) of the tickets received from New Jersey One Call in 2009 did not have to be sent to the field for locating because the screening process in *Exhibit IX-74* above indicates there are no company underground facilities near the address of the proposed excavation. The eight percent (8%) level in 2009 was a 60% improvement from the five percent (5%) level experienced in 2005. Annual avoided cost ranged from $118,065 in 2005 to $193,041 in 2008. *Exhibit IX-96* shows the annual avoided cost for each year and the percentage of tickets that did not have to be sent to the field.

Exhibit IX-96
Jersey Central Power and Light Avoided Cost of Screened Locate Ticket
2005 to 2009



Source: Information Responses 304 and 668 and Interviews 63 and 72

Finding IX-52 Jersey Central Power & Light/FirstEnergy monitors the performance of the locates contractor on both a daily and monthly basis.

Schumaekr & Company consultants requested and reviewed a copy of the metrics used to monitor the performance of the underground locates contractor. FirstEnergy / Jersey Central Power & Light implemented a monthly scorecard in January 2009 to monitor performance of its underground locates contractors. *Exhibit IX-80* provides an example of the report used to monitor daily production by the locates contractor. The monthly scorecard metrics used to monitor the performance of the locates contractor is shown in *Exhibit IX-98*.

Exhibit IX-97
Example Daily Performance Metrics Used for JCP&L Locates Contractor
as of July 2010

Date	New Since Yesterday	Tickets marked Yesterday	Ongoing past 3 Days
Thursday, April 15, 2010			
	915	1156	143
Totals	915	1156	143

Date	New Since Yesterday	Tickets marked Yesterday	Ongoing past 3 Days
Friday, April 16, 2010			
	1140	1227	57
Totals	1140	1227	57

Source: Information Response 307

Exhibit IX-98
Monthly Performance Metrics Used for JCP&L Locates Contractor
as of October 2010

FirstEnergy Scorecard
Jersey Central Power Light
2010
First Energy Metrics

Metric Description
Total Tickets Received from FE TSOC
Total Tickets Manually Generated
FTTP Locates
Total Tickets Invoiced
Total Tickets Located

Total Damage Notifications
Total Damage Reports Submitted to FE
Total At Fault Damages (AFD)
Estimated Cost of At Fault Damages
Actual Damage Ratio = TTL/AFD
Per 1K Damage Ratio

Total Claims Outstanding as of end of the month
Total $ in Claims Outstanding as of end of month
Average Days Claims Outstanding as of end of month

Total # of Repeat Tickets (TRT) - Did Not meet MO deadline
% Compliance = TRT/TTL

Missed/Late Locates
% Missed/Late Locates = TML/TTL

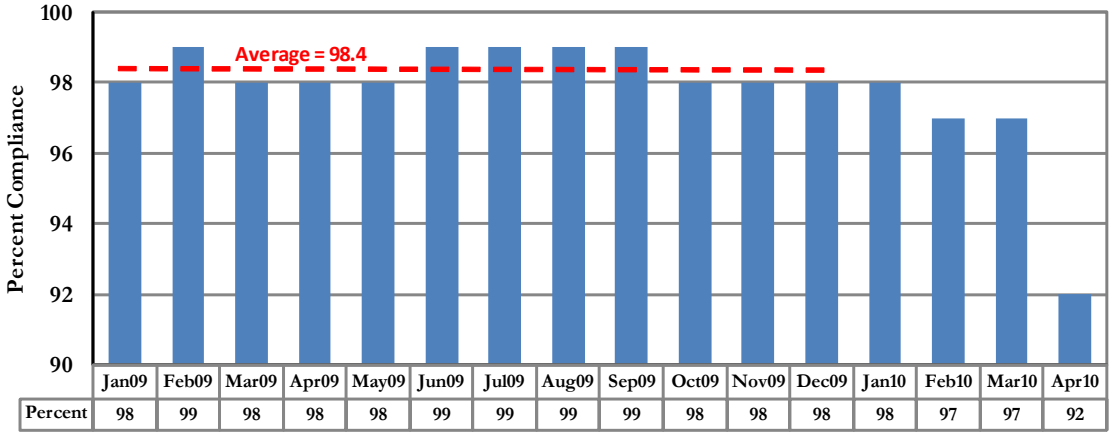
Source: Information Response 307

Finding IX-53 Jersey Central Power & Light completed 98.4% of 2009 location requests within three business days.

A provision of the New Jersey One Call law is that underground facility operators should complete requests to mark their facilities within three (3) business days after the request is received by the operator. Schumaker & Company requested and reviewed data that JCP&L uses to monitor compliance with the BPU requirements.

Monthly compliance during 2009 was 98% for seven (7) months and 99% for five (5) months, for a monthly average of 98.4%. Compliance ranged from 92% to 98% in the first four months of 2010. The lower than expected level of 92% in April 2010 can be partially attributed to precipitation occurring on 19 of the 30 days during the month. *Exhibit IX-84* summarizes the monthly compliance performance.

Exhibit IX-99
Percent of Total Locates Completed on Time
January 2009 – April 2010



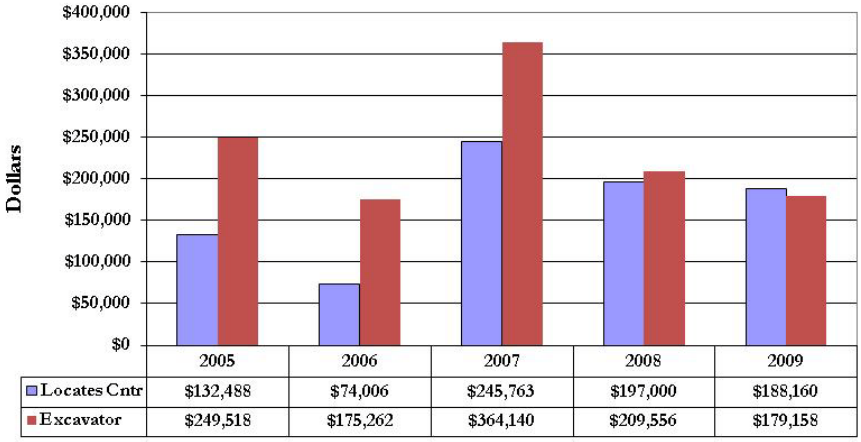
	Jan09	Feb09	Mar09	Apr09	May09	Jun09	Jul09	Aug09	Sep09	Oct09	Nov09	Dec09	Jan10	Feb10	Mar10	Apr10
Percent	98	99	98	98	98	99	99	99	99	98	98	98	98	97	97	92

Source: Information Response 307

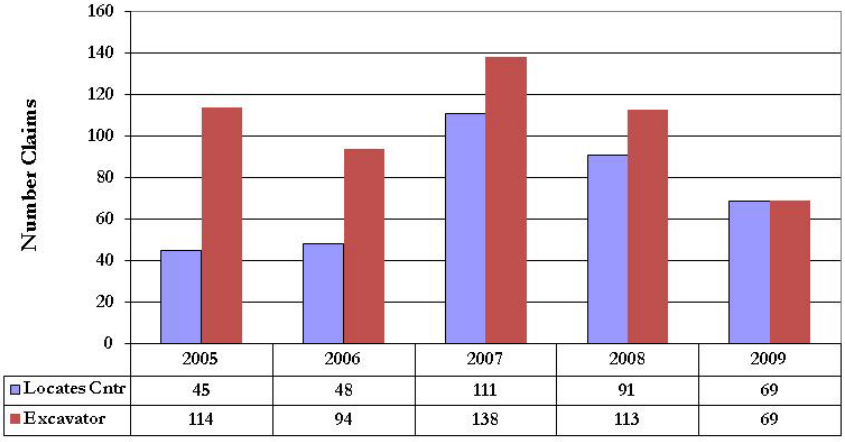
Finding IX-54 **Jersey Central Power and Light has invoiced its underground locates contractor $630,923 for 271 dig-in claims during 2007, 2008 and 2009.**

Schumaekr & Company consultants requested and analyzed five (5) years of dig-in claims data. *Exhibit IX-100* provides the dollar value and number of dig-in claims invoiced to Jersey Central Power and Light's underground locates contractor (Locates Cntr) and other excavators (Excavator) deemed to be liable for the repairs. Claims invoiced to the locates contractor peaked in 2007 at $364,140, the first year of the current locates contractor. Contractor claims for 2008 and 2009 continued to be at higher levels than the previous locates contractor.

Exhibit IX-100
Jersey Central Power and Light Dig-in Claims
2004 to 2008



	2005	2006	2007	2008	2009
Locates Cntr	$132,488	$74,006	$245,763	$197,000	$188,160
Excavator	$249,518	$175,262	$364,140	$209,556	$179,158



	2005	2006	2007	2008	2009
Locates Cntr	45	48	111	91	69
Excavator	114	94	138	113	69

Source: Information Response 304

Finding IX-55 **Jersey Central Power & Light/FirstEnergy has not performed an audit of its locates contractor since 2006.**

Schumaekr & Company consultants requested a copy of all audits of underground locates contractors performed in the last five years. Only one audit that was performed in 2006 was provided. *Exhibit IX-101* provides the header from the title page of that audit.

Exhibit IX-101
Header from 2006 Audit of JCP&L Locates Contractor
as of July 2010

FirstEnergy

INTERNAL AUDIT REPORT
July 27, 2006

Audit of Central Locating Service Ltd. Performance for Jersey Central Power & Light Company as of May 31, 2006

Source: Information Response 306

Recommendation

Recommendation IX-15 **Determine the root cause(s) of the claims against JCP&L's underground locates contractor and develop a plan to minimize the causes. (Refer to Finding IX-54)**

Determination of the root causes should reduce the contractors per unit charge for locates. A total elimination of contractor claims would have reduced the 2009 per unit ticket cost by $0.96 to $10.66 per locate. Reduction of the locates contractor's claims would also improve customer reliability and free up labor resources for other types of work.

Recommendation IX-16 **Perform periodic audits of the contractor(s) that are providing JCP&L with underground locates services. (Refer to Finding IX-55)**

The last audit of the locates contractor was performed in 2006. During the interim, Jersey Central Power & Light awarded the contract services to a different contractor. Even though contractor performance is monitored on a monthly basis, periodic audits would ensure that the contractor continues to perform in accordance with all Jersey Central / FirstEnergy specifications.

Installation of New and Replacement Lines and Services

Background

During 2007, FirstEnergy (FE) detected a need to create a field coordinator role. The responsibility of this role was to oversee contractors working in the field to install transmission, substation, and distribution facilities. FE also determined the need for a Field Coordinator Reference Guide. A team was formed to develop the guide. Team members were representatives from:

- FirstEnergy

- The Illuminating Company
- Jersey Central Power & Light

Exhibit IX-102 provides the deliverables expected from the team charged with developing the Field Coordinator Reference Guide.

Exhibit IX-102
Deliverables from FirstEnergy Team Formed to Develop Field Coordinator Reference Guide as of July 2010

Deliverable:

The team's primary deliverable is a "Field Coordinator Reference Guide" which will describe the skills required of a Field Coordinator (FC), identify associated training, describe the procedures to follow and contain the forms and other references the FC will use during the course of his job.

Source: Information Response 309

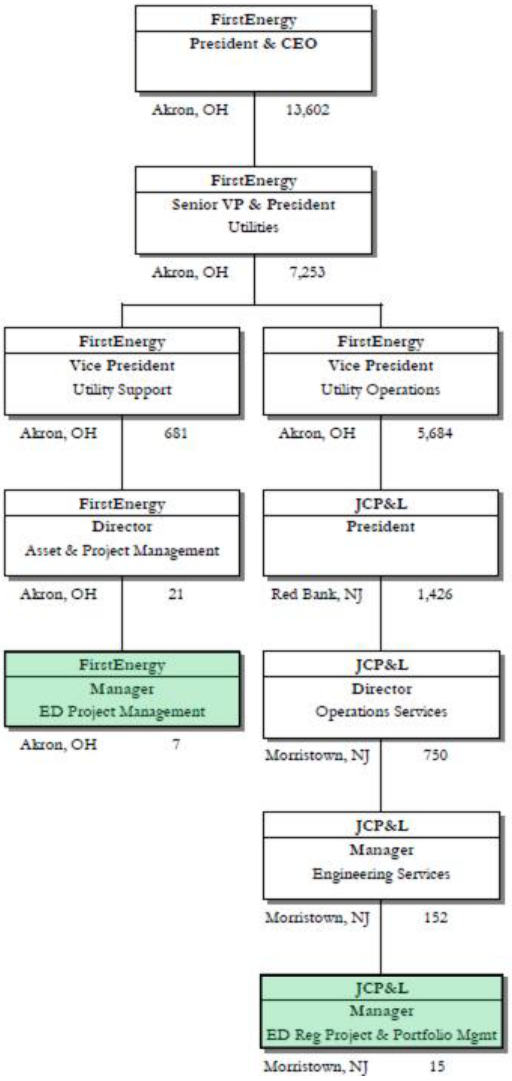
Findings & Conclusions

Organization

Finding IX-56 **Jersey Central Power & Light/FirstEnergy have specific organizations that are responsible for the oversight of contractor performance regarding the installation of transmission, substation, and distribution facilities.**

Organizational charts for department(s) responsible for the oversight of transmission, substation, and distribution contractors were requested by Schumaekr & Company consultants and subsequently confirmed in interviews. The FirstEnergy ED (Energy Delivery) Project Management organization is responsible for establishing policies, standards, and software tools for monitoring contractor performance. The Jersey Central Power & Light organization that is responsible for daily monitoring of substation, distribution, and transmission contractor performance is the Region Project and Portfolio Management team. *Exhibit IX-103* shows the organizations that are responsible for monitoring contractor performance.

Exhibit IX-103
Organizations Responsible for Monitoring of JCP&L Contractor Performance
as of July 2010



Source: Information Response 308 and Interviews 88, 134, 184, and 193

Process

Finding IX-57 **Jersey Central Power & Light has a formalized process for determining whether a project is to be completed in-house or via contract labor.**

Schumaekr & Company consultants requested and reviewed the criteria used to determine whether a project is to be performed in-house or contracted out. *Exhibit IX-104* provides the criteria applied when deciding whether a project is to be performed in-house or via contract forces.

Exhibit IX-104
Criteria Used to Determine Whether Project Performed In-House or Via Contract as of July 2010

In 2007, JCP&L adopted standardized policies, procedures, processes, and assessment mechanisms to address this on a consistent basis. The annual budget review process and the individual Project Plan incorporate these tools into the selection process. JCP&L depends upon the process mainly for a large-scale capital project lasting several months or years and relies on a less formal process for smaller scale short-term projects.

The Operations Services and Operations Support Organizations prepare a Resource Allocation Analysis on a regular basis. On an annual basis, after a budget is approved, Portfolio Management meets with the Operations Groups to determine whether internal or contract labor will be used based upon the Resource Allocation Analysis. In addition, on a weekly basis Operations Managers (Service Center managers) submit a Contractor Request to the Director for approval to use a contractor such as Cable Links (to replace underground Lines) or AWP (for Flagging).

Operations management also addresses Emergent Projects and decides if the work should be performed by company employees or contractors based upon available resources, cost/benefits, and scheduling or other critical factors. As a recent example, a contractor was selected to work on the Northern New Jersey Priority Pole Replacement project in which seven transmission line poles needed to be replaced. The contractor was chosen because of their ability to access these locations via helicopter instead of by motor vehicle.

Source: Information Response 315

Finding IX-58 **Jersey Central Power & Light / FirstEnergy has a defined process for the oversight of transmission, substation, and distribution construction contractors.**

Schumaker & Company reviewed the written policies and procedures related to the oversight of contractors installing transmission, distribution, and substation facilities. In addition, we interviewed FirstEnergy and Jersey Central Power & Light personnel about the process. *Exhibit IX-105* provides the table of contents of the reference guide used by field coordinators. A summary of the specific activities performed by the field coordinators is given in *Exhibit IX-106*.

Exhibit IX-105
Table of Contents from FirstEnergy Field Coordinator Reference Guide
as of July 2010

Field Coordinator Reference Guide

Table of Contents

Section I – Overview

Section II – Roles & Responsibilities

Section III – Training Requirements

Section IV – Procedures

Section V –Forms

Section VI – References

Source: Information Response 309

Exhibit IX-106
Summary of Roles and Responsibilities of JCP&L / FE Field Coordinators
as of July 2010

Roles & Responsibilities (R&R's):

The R&R's can be summarized as follows:

- Assist the PL's and Contract Services (CS) in the bidding process
- Oversee contractor – safety, schedules, standards, daily logs, meetings, punch lists, payments, change orders, as-builts, testing
- Oversee material
- Liaison between FE and Contractor
- Coordinate outages and inspect equipment prior to energizing
- Contractor evaluation

Source: Information Response 309

Finding IX-59 **Jersey Central Power & Light supervisors are expected to use the field coordinator process for transmission, distribution, and substation projects completed by in-house crews.**

The expectations for in-house projects are provided in *Exhibit IX-107*.

Exhibit IX-107
Application of Field Coordinator Methods to In-House Projects
as of July 2010

It must be noted that for projects constructed by Operating Company (or Region) resources, the Field Coordinator is most often the Supervisor of the crew performing the work. This Supervisor is expected to follow these same procedures as a Field Coordinator overseeing contracted construction.

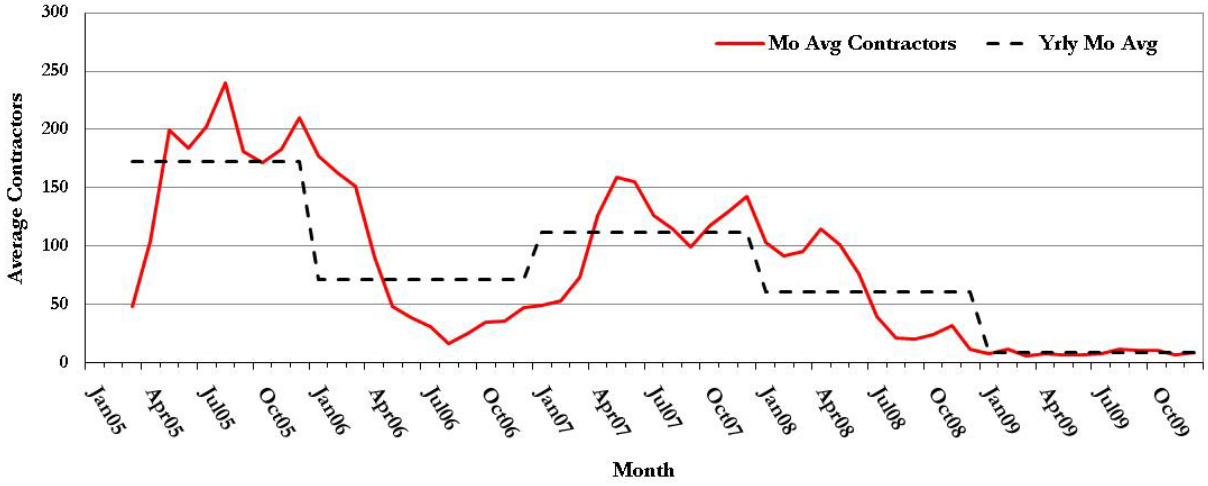
Source: Information Response 304

Performance Management

Finding IX-60 **Jersey Central Power and Light has reduced its distribution, transmission and substation contract labor work force, excluding tree trimming, from a yearly monthly average peak of 172 FTEs in 2005 to 9 FTEs in 2009.**

Schumaekr & Company consultants requested and analyzed five (5) years of contract work force data. Interviews revealed that Jersey Central Power and Light made a decision to do as much work with internal company labor as possible by improving planning, scheduling and processes. *Exhibit IX-108* shows the monthly average count of contract FTEs for 2005 through 2009. The number of contract FTEs peaked at 240 in August, 2005 and the lowest number of 6 occurred in March, 2009. The data demonstrates a continuous trend of reducing the reliance on contract labor with minimum reliance occurring during 2009 with a yearly monthly average of 9 FTEs per month.

Exhibit IX-108
Distribution, Transmission and Substation Contract Labor
March, 2005 to December, 2009



Source: Information Response 314

Finding IX-61 **Jersey Central Power & Light has a formalized process to monitor the performance of contractors and in-house crews that are installing transmission, substation, and distribution facilities.**

Schumaekr & Company consultants requested and reviewed documentation of the methods used to monitor the quality and performance of work performed by contractors that are installing electrical facilities. Interviews indicted that because of the precision and complexity involved, the "Earned Value" method is used only on large Jersey Central projects. Primavera software is used for scheduling and monitoring of FirstEnergy / Jersey Central Power & Light projects. Frequent meetings are held with contractors and each contractor is formally evaluated at the end of the project.

Exhibit IX-109 provides an overview of the various methods used. An example of an "Earned Value" schedule is presented in *Exhibit IX-110*. An extract from a typical Primavera schedule is shown in *Exhibit IX-111*. *Exhibit IX-112* provides select portions from the contractor evaluation form. The rating criteria used in the contractor evaluation are given in *Exhibit IX-113*.

Exhibit IX-109
Overview of JCP&L Project Monitoring
as of July 2010

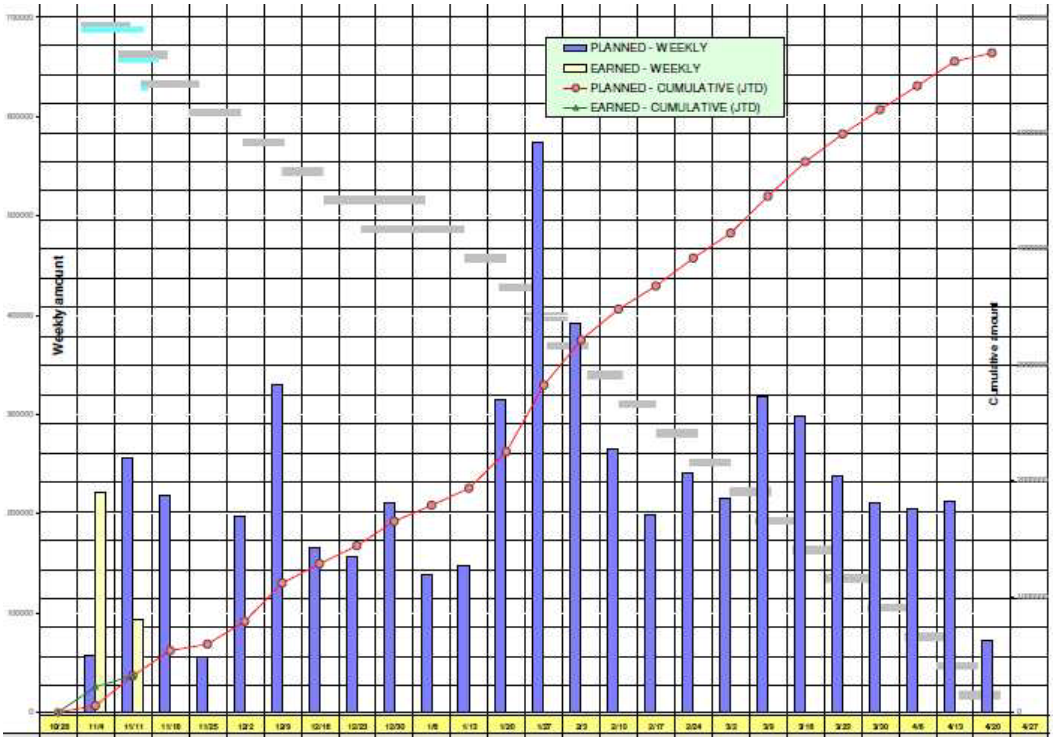
JCP&L has established project management and operational reports that fulfill reporting requirements. Specific reports are also used on a per project basis (i.e. for "earned value") for capital projects greater than $500,000. The Company meets monthly to review the reports and to resolve operational issues as they arise. Financial forecasts are constantly reviewed, refined, and updated to meet FE's financial targets.

Large Capital Projects are monitored on a regular basis by project managers and construction managers to correct deficiencies immediately.

Smaller projects are monitored by Service Center Supervisors that inspect the work performed by Company employees.

Source: Information Response 310

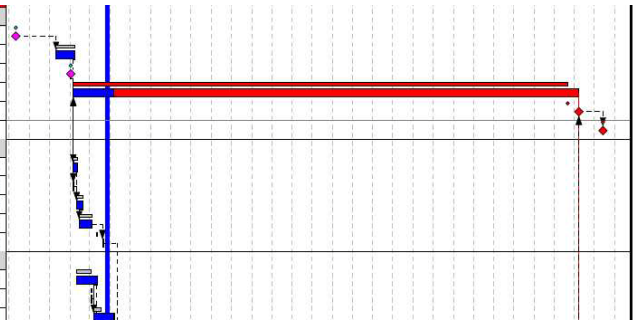
Exhibit IX-110
Portion of Typical "Earned Value" Schedule
as of July 2010



Source: Information Response 310

Exhibit IX-111
Portion of Typical Primavera Schedule
as of July 2010

General				
G000	Award of Contract		10OCT07	100
G005	Mobilization	24OCT07	30OCT07	100
G500	Receive Outage from First Energy	29OCT07		100
G010	Project Management / Construction Period	30OCT07	22APR08	9
G095	Substantial Completion - Forecast		22APR08	0
G099	Substantial Completion - Contract		30APR08	0
Pull 1 - Greystone Subs (3 Spans) - 201-199				
P01-05	Set-up	30OCT07	31OCT07	100
P01-10	Unclip	30OCT07	30OCT07	100
P01-15	Pull Conductor (201-199)	31OCT07	02NOV07	100
P01-20	Dead End	01NOV07	05NOV07	100
P01-25	Clip	09NOV07	09NOV07	100
Pull 5 - (10 Spans) - 163-153				
P05-10	Unclip	31OCT07	07NOV07	100
P05-05	Set-up	05NOV07	05NOV07	100
P05-15	Pull Conductor	06NOV07	13NOV07	80



Source: Information Response 310

Exhibit IX-112
Select Extract from Contractor Evaluation Form
July 2010

Instructions:
Rate this contractor's performance in the areas listed below, 0 being the lowest score and 4 being the highest. Enter the selected score into the yellow box. A percentage out of 100 will automatically be calculated. **Upon completion of this evaluation, send to your Contract Specialist.**

Weighting Scale:
Pre-Con – 5%
Safety – 25%
Quality – 20%
Schedule – 20%
Budget – 15%
Communication – 10%
Post-Con – 5%

Construction

Safety

Rate this contractor's safety procedures. Did the contractor hold daily job briefings and abide by FirstEnergy's safety policy?		0
Comments:		

Quality

Rate the quality of this contractor's workmanship. Were there any quality-related issues on this project? If so, please specify.		0
Comments:		

Source: Information Response 310

Exhibit IX-113
Rating Criteria Used for Contractor Evaluation Form
as of July 2010

Grade		SAFETY CRITERIA	PM CRITERIA	SCHEDULE CRITERIA	COST CRITERIA	QUALITY
4	Top Tier	No near misses, accidents or deviations from FE safety guidelines.	Uses PMI model for project activities. Exemplary communication and use of EV, CPI and SPI criteria.	SPI on track and communicates well. Project delivered on schedule w/o FE guidance.	CPI on track. Project delivered on budget w/o FE guidance.	Project delivered IAW FE guidelines & scope w/o FE guidance.
3	Above Average	Safety omissions observed. Corrected and not repeated.	Good use of PM with minor issues with PM execution, communication and project progress.	SPI on track and communicates well. Project delivered on schedule w/FE guidance.	CPI on track and communicates well. Project delivered on budget w/FE guidance.	Project delivered IAW FE guidelines & scope w/FE guidance.
2	Average	Multiple safety omissions observed.	Unsure of PM execution, communication and project progress.	SPI consistently behind. Project ultimately delivered on schedule but not without add'l cost and FE guidance and intervention.	CPI consistently behind. Project ultimately delivered on budget but not without add'l cost and FE guidance and intervention.	Project delivered IAW FE guidelines & scope w/FE guidance and had subsequent minor rework.
1	Below Average	Consistent safety issues not addressed by contractor.	Total lack of PM execution expertise. Project consistently behind schedule, cost and quality issues.	Project delivered behind schedule, 20% of proposed schedule duration.	Project delivered over budget <10% of proposed budget .	Project not delivered IAW FE guidelines & scope w/FE guidance with multiple rework items.
0	Failed - Not Desired	OSHA recordable. MVA recorded. Flash or outage caused by contractor.	Unacceptable	Project delivered behind schedule >20% of proposed schedule duration.	Project delivered overbudget >10% of proposed bduget.	Project not delivered IAW FE guidelines & scope w/FE guidance with unsatisfactory results.

Source: Information Response 310

No separate evaluation of contractor schedule or budget performance was completed because Jersey Central Power and Light made a conscious decision in 2008 to construct their transmission, substation and distribution facilities with its in-house personnel supplemented when needed. *Exhibit IX-108* indicates the downward trend in the use of contract personnel. The evaluation of project schedule and budget performance included in the Transmission and Distribution chapter includes any contract personnel used.

Recommendations

None

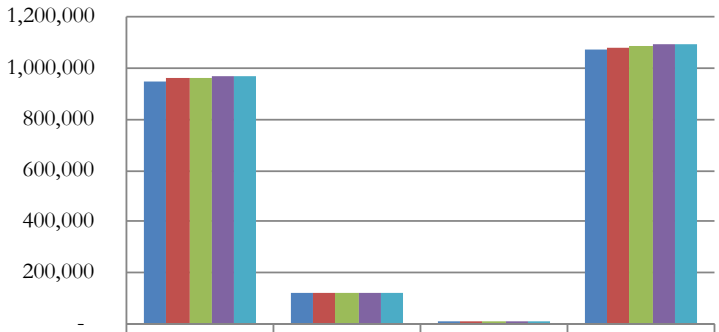
X. Customer Service

This chapter addresses the Customer Service function. The Customer Service function includes customer contact centers, meter reading, billing, collections, and revenue protection. The remittance processing function is covered in the Finance chapter.

A. Background & Perspective

Jersey Central Power & Light (JCP&L) transmits and distributes electricity to about 1.1 million residential, commercial, and industrial customers in 13 counties in central and northern New Jersey. The number of customers by type over the 2005 to 2009 period is shown in *Exhibit X-1*.

Exhibit X-1
Customer Numbers
2005 to 2009



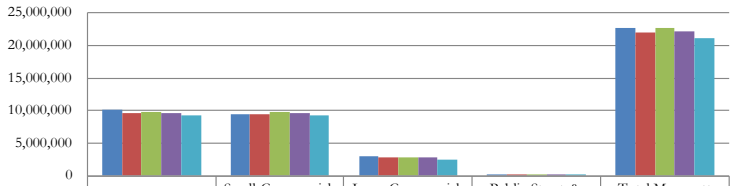
	Residential	Commercial	Industrial	Total
2005	950,622	117,365	2,640	1,070,627
2006	958,986	118,636	2,592	1,080,214
2007	963,484	119,618	2,587	1,085,689
2008	967,563	120,602	2,551	1,090,716
2009	969,897	121,297	2,529	1,093,723

Source: Information Response 135

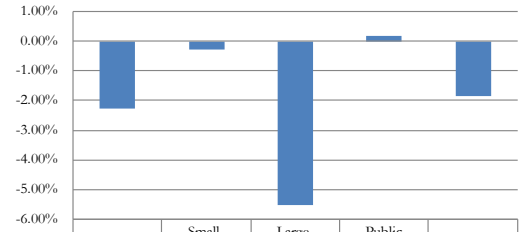
JCP&L's customer mix as of 2009 is 88.7% residential, 11.1% commercial, and just 0.2% industrial. The total number of customers grew by 2.2% from 2005 to 2009 (*Exhibit X-1*), a period of relatively slow growth.

While the customer base grew slightly from 2005 to 2009, the number of megawatt hours (MWH) of electricity sold decreased in total and for all customer classes except for Public Street and Highway Lighting, as shown in *Exhibit X-2*.

Exhibit X-2
Sales by Volume by Customer Class
2005 to 2009



	Residential	Small Commercial and Industrial	Large Commercial and Industrial	Public Street & Highway Lighting	Total Megawatt Hours Sold
2005	10,106,918	9,431,766	3,073,951	86,779	22,699,414
2006	9,547,790	9,450,490	2,831,040	86,180	21,915,500
2007	9,838,800	9,867,446	2,884,540	88,265	22,679,051
2008	9,667,364	9,706,944	2,773,128	88,385	22,235,821
2009	9,213,827	9,323,204	2,447,113	87,453	21,071,597



	Residential	Small Commercial and Industrial	Large Commercial and Industrial	Public Street & Highway Lighting	Total Megawatt Hours Sold
Compound Growth/Loss 2005-2009	-2.29%	-0.29%	-5.54%	0.19%	-1.84%

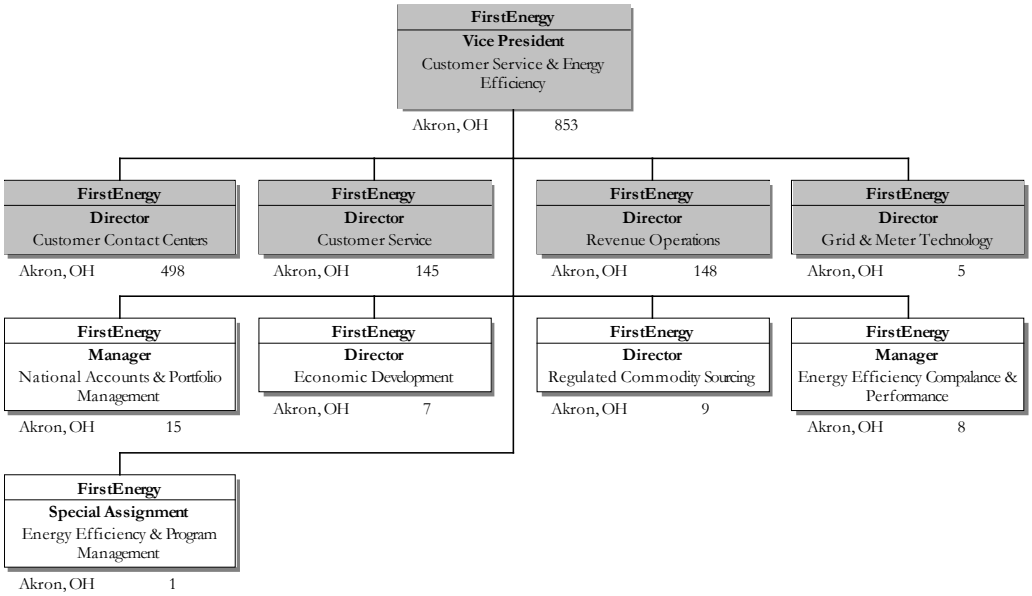
Source: FERC Form 1, pp. 304 and Schumaker & Company Analysis of Information Response 135

Organization

Customer Service is primarily a centralized organization within the FirstEnergy Utilities (FEU) business unit and JCP&L. The contact centers, collections, revenue protection, and remittance processing functions are centralized as part of the FEU Customer Services group. Only the Revenue Operations function of meter reading is decentralized and reports to the JCP&L organization. Like most JCP&L functions, however, meter reading receives staff support from the FEU Customer Services organization. For the purposes of this report, remittance processing is covered in the Finance chapter.

The FEU Customer Services function is organized under the FirstEnergy (FE) Senior Vice President, who is also the President of the FEU business unit. The FEU President reports to the FirstEnergy CEO. The Vice President of Customer Service and Energy Efficiency reports to the President of FEU. The Customer Service Departments reporting to the Vice President of Customer Service and Energy Efficiency are highlighted in *Exhibit X-3*.

Exhibit X-3
Customer Service & Energy Efficiency Organization
as of June 30, 2010



Source: Information Response 54

Until recently, there was a Customer Service function within JCP&L that fell under the JCP&L Vice President of External Affairs. The JCP&L Director of Customer Service oversaw meter reading and revenue operations (field collections and revenue protection) for both the North and Central regions. In all other states, the field collections and revenue protection functions reported to the centralized FEU Revenue Operations organization. On August 29, 2010, FEU and JCP&L reorganized to bring the New Jersey organization into alignment with the rest of FEU. The Revenue Operations field collection and revenue protection functions were centralized under FEU Revenue Operations. The field collectors and revenue protection personnel, however, are still deployed throughout JCP&L's service territory. The meter readers now report to a JCP&L Operations Support group along with the Fleet, Stores, Facilities, Meters and Forestry groups. The former JCP&L Customer Service group was eliminated when its functions were transferred elsewhere on August 29, 2010. In addition, a Customer Support group serving major accounts, which was centralized under FEU Customer Services, was transferred to JCP&L and now reports to the Vice President of External Affairs. *Exhibit X-4* summarizes these recent organizational changes.

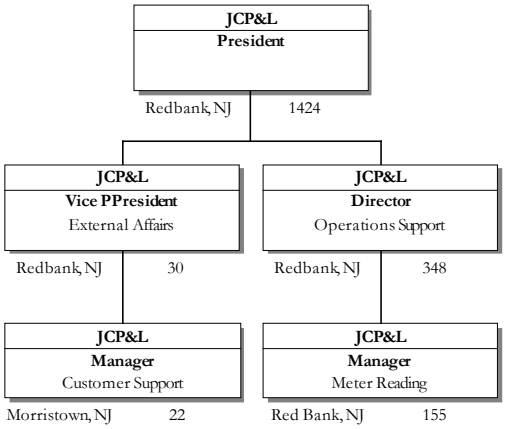
Exhibit X-4
JCP&L Recent Customer Service Organizational Changes
August 29, 2010

Unit	Prior to Reorganization	After Reorganization
Meter Reading	Reported to a JCP&L Customer Service group	Reports to JCP&L Operations Support group with Fleet, Stores Facilities, Meters, and Forestry groups – the former Customer Service group was eliminated.
Revenue Operations Collectors and Revenue Protection Personnel	Reported to a JCP&L Customer Service group with the meter readers	Reports to the FEU Revenue Operations group in Akron like all other FEU operating companies (opcos)
Customer Support Major Account Specialists	JCP&L Customer Support reported to the FEU Customer Services organization	Reports to the JCP&L Vice President of External Affairs – the function reports to the local opco in all other FEU opcos as well.

Source: Interview 130

Exhibit X-5 shows the current JCP&L Customer Service organization.

Exhibit X-5
JCP&L Customer Service Organization
as of August 30, 2010



Source: Information Response 54 and Interview 130

These changes bring the JCP&L customer service function organization into general alignment with the other FE operating companies (opcos).

Performance Management

The FEU Customer Services group uses a "CustomerFirst" scorecard with the following metrics:

- Contact Center Survey Index (customer satisfaction survey results)
- Contact Center Average Speed of Answer
- Street Lighting Percentage of Orders Closed in Three Days
- Justified Complaints
- Blue Sky Estimated Time of Restoration Accuracy
- First Call Resolution Percentage
- Meter Reading Accuracy

For each metric, there is a target for the year, with year-to-date results reported monthly. See *Exhibit X-6* for an example of a monthly report.

Exhibit X-6
Sample CustomerFirst Scorecard
as of April 30, 2010

2010 CustomerFirst Index Measures	Annual	Month - April			YTD - April		
	Target	Target	Results	Points	Target	Results	Points
Contact Center Survey Index	78	78	76.5	0.00	78	75.8	0.00
Contact Center Average Speed of Answer	60 sec	60 sec	33 sec	1.50	60 sec	65 sec	0.00
Street Lighting % of orders closed in 3 days (Power-On)	85%	85%	85.4%	1.04	85%	87.7%	1.27
Justified Complaints	300	27	18	1.50	106	49	1.50
Blue Sky Estimated Time of Restoration (ETR)	90%	90%	95.9%	1.50	90%	95.5%	1.50
First Call Resolution %	70%	70%	68.7%	0.00	70%	69.8%	0.00
Meter Reading Accuracy (errors/100,000 reads)	40	40	32.2	1.50	40	29.5	1.50
2010 Goals (points)	**6**	**6**		**7.04**	**6**		**5.77**

Results for each of the seven metrics in the index will be based on overall FirstEnergy scores, not local or individual operating company results.

Seven measures weighted equally.

Each measure earns points based on the level of performance.

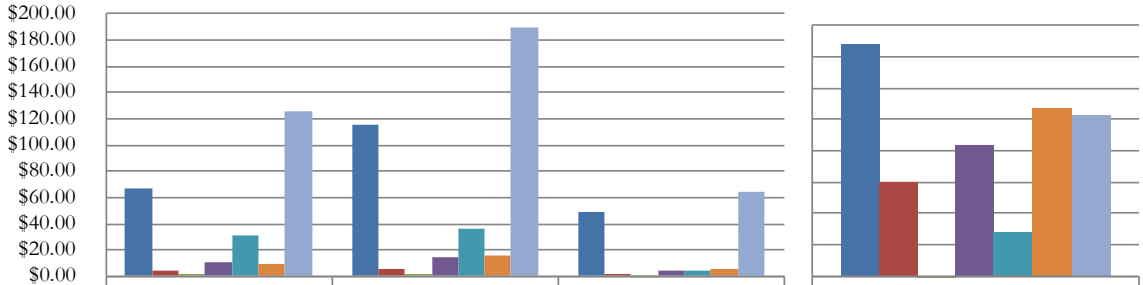
Point totals are based on results in relation to goals. In some cases, goals vary by month and/or quarter.

Source: Information Response 187

Residential Bill Changes

Exhibit X-7 shows the changes in a typical residential summer monthly bill from 2005 to 2009. The Rider NGC is the non-utility generation charge applicable to all kWh usage of all full and delivery service customers. The Transitional Energy Facility Assessment (TEFA) rider is a temporary fee established by the energy tax reform statute.

Exhibit X-7
Typical Residential Service (RS Rate) Summer Bill Changes
Non-Shopper at 952 kWh per Month 2005 to 2009



	2005	2009	2005 to 2009 Dollar Difference	2005 to 2009 Percent Difference
Generation	$66.38	$115.56	$49.18	74.09%
Transmission	$4.41	$5.74	$1.33	30.16%
Customer Charge	$2.06	$2.06	$0.00	0.00%
Rider NGC	$10.61	$15.09	$4.48	42.22%
Delivery	$31.65	$36.14	$4.49	14.19%
Sales+TEFA Tax	$9.91	$15.25	$5.34	53.88%
Total Bill	$125.02	$189.84	$64.82	51.85%

Source: Information Response 424

Overall, the typical summer residential monthly bill increased by $64.82 per month, or 52% for the period. Of this increase, 78% was attributable to basic generation service cost increases. All of the largest dollar increases were also the largest percentage increases, except delivery.

The customer bill includes several riders and other charge components. Explanations of the riders and charges acronyms included in the customer's bill are:

- The Basic Generation Service – Fixed Pricing (BGS-FP) rider is for kilowatt hour (kWh) usage for non-shopping (default service) customers. It reflects charges for energy, generation capacity, ancillary services, and related costs as determined in the BGS[6] auctions.

[6] PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

- The Transitional Energy Facility Assessment (TEFA) rider is a temporary fee established by the energy tax reform statute.
- The Societal Benefits Charge (SBC) rider includes the Nuclear Plant Decommissioning Costs (NDC) rider, the Demand Side Management (DSF) rider, the Manufactured Gas Plant Remediation Costs (RAC) rider, the Uncollectible Accounts Charge (UNC) rider, the Consumer Education Program Costs (CED) rider, and the Universal Service Fund (USF) Costs rider.
- The System Control Charge (SCC) rider is for Basic Generation Service (BGS) system control costs.

A new rider charge has since been added, Rider RGGI Recovery Charge (RRC), to recover costs associated with the Integrated Distributed Energy Resource (IDER) program.

Five-year trends through 2009 of the bill's line item components (customer charge, commodity, delivery, each tax, etc.) for the median customer are provided in table format in *Exhibit X-8*. They show that the largest bill increases in dollar terms have been in:

- Rider BGS – $50.51 per month. The BGS rider is the generation charge for non-shopping customers using the BGS auction results for basic generation service.
- Rider non-utility generation charge (NGC) – $4.48 per month. The NGC rider is the non-utility generation charge applicable to all kWh usage of all full and delivery service customers.
- Distribution – $3.57 per month. A Phase II 2004 rate case, which followed a 2003 rate reduction in Phase I, resulted in distribution charge increases in 2005 and 2006.
- New Jersey Sales and Use Tax – $5.34 per month. Both the tax rate and the amount taxed went up.

Exhibit X-8
Typical Residential Service (RS Rate) Summer Bill Changes
RS Summary 2005 to 2009

RS Summary	Calculation	2005	2006	2007	2008	2009	2005 to 2009 Dollar Difference	2005 to 2009 Percent Difference
Generation	Rider BGS	$ 66.38	$ 74.19	$ 86.63	$ 105.34	$ 116.89	$ 50.51	76.09%
	- BGS Tax	$ -	$ 0.42	$ 0.90	$ 0.10	$ 1.33	$ 1.33	-
	Total Generation	**$ 66.38**	**$ 73.77**	**$ 85.73**	**$ 105.24**	**$ 115.56**	**$ 49.18**	**74.09%**
Transmission	BGS Tax	$ -	$ 0.42	$ 0.90	$ 0.10	$ 1.33	$ 1.33	-
	+ Transmission Charge	$ 4.41	$ 4.41	$ 4.41	$ 4.41	$ 4.41	$ -	0.00%
	Total Transmission	**$ 4.41**	**$ 4.83**	**$ 5.31**	**$ 4.51**	**$ 5.74**	**$ 1.33**	**30.16%**
Customer Charge		**$ 2.06**	**$ 2.06**	**$ 2.06**	**$ 2.06**	**$ 2.06**	**$ -**	**0.00%**
Rider NGC		**$ 10.61**	**$ 10.22**	**$ 15.09**	**$ 15.09**	**$ 15.09**	**$ 4.48**	**42.22%**
Delivery	Distribution	$ 26.77	$ 30.34	$ 30.34	$ 30.34	$ 30.34	$ 3.57	13.34%
	+ Rider SBC	$ 4.81	$ 4.81	$ 4.50	$ 5.08	$ 5.73	$ 0.92	19.13%
	+ Rider SCC	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ -	0.00%
	Total Delivery	**$ 31.65**	**$ 35.22**	**$ 34.91**	**$ 35.49**	**$ 36.14**	**$ 4.49**	**14.19%**
Sales+TEFA Tax	TEFA Charge	$ 2.83	$ 2.83	$ 2.83	$ 2.83	$ 2.83	$ -	0.00%
	+ NJ Sales Tax	$ 7.08	$ 73.74	$ 10.22	$ 11.57	$ 12.42	$ 5.34	75.42%
	Total Taxes	**$ 9.91**	**$ 76.57**	**$ 13.05**	**$ 14.40**	**$ 15.25**	**$ 5.34**	**53.88%**
Total Bill		**$ 125.02**	**$ 202.67**	**$ 156.15**	**$ 176.79**	**$ 189.84**	**$ 64.82**	**51.85%**

Source: Information Response 424

The total Rider NGC, customer, and delivery charges, or the portion of the bill going to JCP&L as rates and cost offsets, increased from $44.32 to $53.29, or $8.97 from 2005 to 2009. This was a 20% increase that accounted for 14% of the total bill increase of $64.82. The Consumer Price Index published by the U.S. Department of Labor Bureau of Labor Statistics had average year-to-year increases of 3.2%, 2.8%, 3.8%, and –0.4% from 2006 through 2009. The compound cumulative increase in the Consumer Price Index (CPI) was 10% from 2005 to 2009, or a simple average of 2.5% per year.

FEU Customer Services

The FEU Customer Services organization reports to the FEU Vice President of Customer Service and Energy Efficiency. It encompasses a number of functions provided to JCP&L as affiliate services. They include:

- Human Services – administration of several human service social programs
- Compliance – administration and response to regulatory complaints; FEU Customer Services has two employees deployed in New Jersey who manage FirstEnergy's response to complaints filed with the Board of Public Utilities (BPU).
- Customer information system support and internal controls

- Large customer billing and contracts – primarily for customers using the MV90 interval billing system (time-of-use pricing using frequently reported interval consumption data); also administers contracts with large customers, such as Fort Dix in New Jersey
- Remittance processing – covered in the Finance chapter in this report

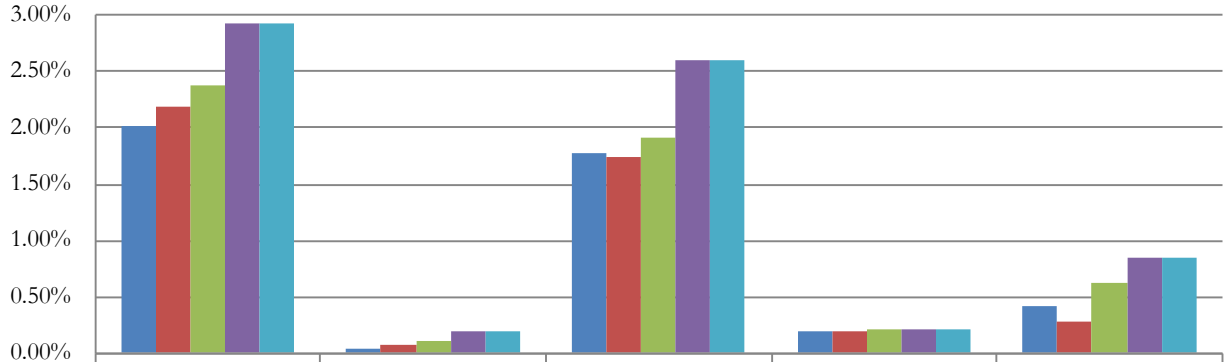
Human Services Programs

FEU Customer Services administers several human services social programs for JCP&L. They include:

- *Universal Service Fund* (USF) – JCP&L collects funds for application at the direction of the state.
- *New Jersey Shares* – FirstEnergy shareholders match customer contributions.
- *Lifeline* – funded by the USF charge; assistance for disability as directed by the state
- *Comfort Partners* – funded by Clean Energy Rider; a weatherization program
- *Low Income Home Energy Assistance Program* (LIHEAP) – low-income assistance as directed by the state

Exhibit X-9 shows the participation trends for each of these programs.

Exhibit X-9
Low-Income Assistance Program and Participation Rates
2005 to 2009



	Percent Participants USF	Percent Participants NJ SHARES	Percent Participants Lifeline	Percent Participants Comfort Partners	Percent Participants LIHEAP
2005	2.02%	0.05%	1.78%	0.19%	0.41%
2006	2.19%	0.08%	1.74%	0.20%	0.29%
2007	2.37%	0.10%	1.92%	0.20%	0.63%
2008	2.93%	0.19%	2.59%	0.22%	0.84%
2009	2.93%	0.19%	2.59%	0.22%	0.84%

Source: Information Response 165

The increasing use of the human services social programs likely reflects the deterioration in the economy and the increases in power bills in the JCP&L territory.

Regulatory Complaint Handling Process

The FEU Customer Services organization handles regulatory complaints for all FEU opcos. While this is an FEU-centralized program, two employees are deployed to New Jersey to handle customer complaints from the Board of Public Utilities (BPU). They report to the Manager of Compliance and Human Services in the Customer Service organization.

There is a separate organization and process for handling non-BPU complaints that are addressed directly to JCP&L or FE headquarters. These are called "executive" or "escalated" complaints, which are handled by a separate JCP&L organization as described below. There is one FEU-wide complaint database, however, that tracks all complaints. This approach is necessary because some complainants address their complaints to multiple parties: the BPU, the FE CEO, their legislative representatives, etc. Until 2004, all complaints were handled by the FEU BPU complaint staff.

The FEU complaint database is an internal web database that can be accessed by multiple parties with appropriate security clearances. This database is used to track each complaint from receipt to resolution.

Complaints from the BPU originate from two sources. First, the BPU Customer Service group receives complaints on non-engineering matters, such as billing and collections. The BPU Customer Service group enters the complaint into an electronic data interchange (EDI) application on the web, which is used by the BPU and all New Jersey utilities. The second source of complaints is from the BPU Engineering organization. These complaints, which reflect topics such as reliability or power quality, are faxed to the FEU complaint personnel in NJ.

The FEU BPU complaint staff in New Jersey checks the EDI regularly and normally picks up new complaints within an hour of entry. They then enter them into the FEU complaint system. They also enter faxed complaints as received. The database is checked regularly for duplicate complaints, such as BPU and executive, and duplicates are identified and consolidated.

The FEU BPU complaint staff has established a network of subject matter experts (SMEs) throughout FEU and JCP&L to address BPU complaints in their areas of expertise. For example, there is always a senior customer service representative at the Contact Center who is assigned to address BPU complaints as they are received. The BPU complaint staff assigns each complaint to the appropriate SME as it comes in via e-mail or fax. Complex complaints requiring the involvement of multiple SMEs are coordinated by the complaint staff. Complaint response has been established as a well-known priority at FEU and JCP&L, and complaints are generally addressed in a timely fashion. The FirstEnergy BPU complaint staff, however, does monitor the time line on all complaints and assures timely resolution.

For collection complaints, which represent over half of the cases, the BPU complaint staff first calls the customer and tries to confirm that the prescribed process has been followed and that the customer understands the options available, including assistance that might be available from the human services social programs. In general, the customer has been informed of the optional payment terms and social services but is appealing to the BPU as a court of last resort.

The FEU BPU complaint staff reviews the complaint response provided by the field SMEs and communicates the result to the BPU via the EDI. Normally, the SME has communicated with the customer, but the staff assures that the customer is well-informed. If the field SME response is somehow unsatisfactory, the FEU BPU complaint staff has an escalation procedure available, but leveraging it is seldom required. The BPU staff may agree or disagree with FirstEnergy's proposed resolution. If it disagrees, the case is kept open until resolution with the BPU is achieved.

Except for meter errors, FirstEnergy does not forgive any money owed to resolve complaints. Its position is that it would be unfair to paying customers to forgive amounts owed by non-paying customers. FirstEnergy Utilities does have a variety of payment plans available and the FEU BPU complaint staff has ample discretion to work out creative payment plans with both the BPU and customers.

Should the customer not be satisfied with the response to the complaint, he/she can request a formal hearing on the complaint for a $25 filing fee. Such a request sets in motion a litigation process that can take six months to a year and results in an Administrative Law Judge (ALJ) recommendation to the

commissioners on how to resolve the complaint. The commissioners can either accept the recommendation or issue an alternative order. The customer can dispute all charges related to the bill in a formal hearing and FirstEnergy cannot interrupt power until the formal hearing is resolved. *Exhibit X-10* shows the formal BPU complaint trends from 2005 to 2009.

Exhibit X-10
Formal BPU Complaint Trends
2005 to 2009

Year	Formal Complaints Docketed	Resolved to Date	Hearings Held
2005	4	4	2
2006	7	6	2
2007	4	4	2
2008	8	8	4
2009	14	9	4

Source: Information Response 747

It is likely that the increasing trend in formal BPU complaints is related to the deteriorating economic conditions during this period and the increasing power bills.

Customer Support

The JCP&L Customer Support group reports to the JCP&L Vice President of External Affairs. This group is primarily composed of customer account representatives. Approximately 20 customer service specialists support the largest 100 accounts. There is also an FEU National Accounts group reporting to the FEU Vice President of Customer Service and Energy Efficiency. The National Accounts group represents all FEU operating companies to the headquarters of organizations with multiple company owned stores across the FEU territory, such as, Wal-Mart and McDonalds. There is little overlap between the national accounts and the New Jersey large accounts.

Non-Regulatory Complaint Handling Process

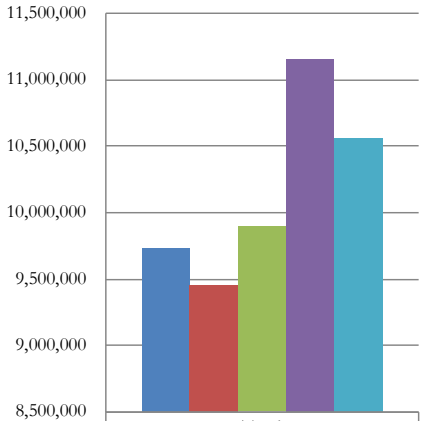
Two members of the JCP&L Customer Support group handle non-BPU executive complaints. This group utilizes the FEU complaint database for complaint tracking and has a parallel process. Complaints are assigned to appropriate field SMEs for resolution. If the response is inadequate, there is a rarely used internal escalation process. The JCP&L complaint staff tracks the complaints to resolution. If the customer is not satisfied with the resolution offered, the customer still can complain to the BPU.

Customer Contact Centers

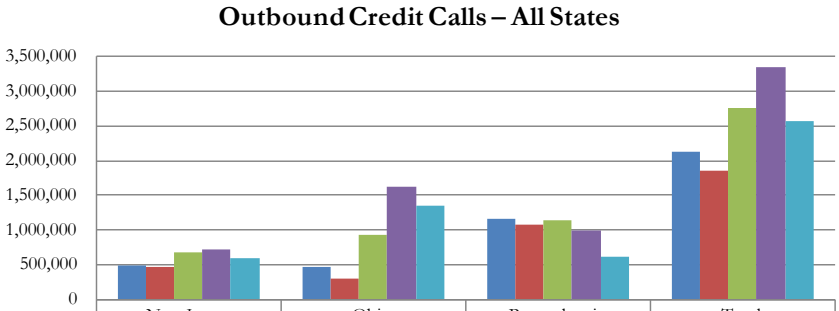
The Customer Contact function is divided between a contracted contact center for credit matters and an FEU employee-staffed contact center for all other matters. The FEU employee contact center that primarily serves New Jersey and Pennsylvania FirstEnergy customers is located in Reading, Pennsylvania. It is being integrated with the Akron contact center serving Ohio customers, and many customer matters from any FEU state can be resolved by either contact center. The credit contract contact center is located in Pennsylvania and is discussed in the Credit and Collections section below.

Exhibit X-11 shows the FEU inbound and outbound call volumes from 2005 through 2009.

Exhibit X-11
Inbound and Outbound Call Volume
2005 to 2009



	Total
2005	9,729,564
2006	9,459,079
2007	9,893,189
2008	11,160,522
2009	10,562,224



	New Jersey	Ohio	Pennsylvania	Total
2005	498,694	464,808	1,164,565	2,128,067
2006	479,230	294,954	1,079,756	1,853,940
2007	679,632	931,621	1,150,748	2,762,001
2008	728,608	1,618,236	1,003,643	3,350,487
2009	595,620	1,342,023	624,415	2,562,058

Source: Information Responses 195 and 199. Note: The higher than forecasted call volume experienced in 2008 is attributed to the outage calls from Hurricane Ike.

Inbound and outbound calls both peaked in 2008. FEU contact centers also field web, e-mail, mail, and faxed inquiries.

FEU employee contact centers use a four-tier system for customer service representatives (CSRs). Tier-one CSRs answer the simplest calls, such as move in or out and outages. Tier-one calls represent approximately 40% of the total calls. Tier-two CSRs can take tier-one calls plus billing and 911. (The 911 dispatcher calls for electric-related emergencies.) Tier-two calls also represent about 40% of the call

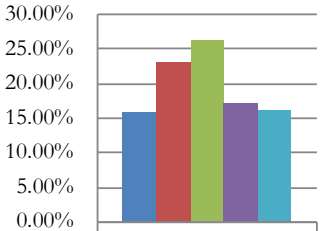
volume. Tier-three CSRs can answer tier-one and -two calls plus new services and commercial and industrial requests. Tier-four CSRs can answer all types of calls and add the capability to do complicated out-of-the-ordinary move-in and -out calls.

Training is incremental and appropriate for each tier. The FEU contact center training program for each tier is highly developed and structured. It involves classroom time, practice, quality reviews, and shadowing working CSRs. New CSRs are first trained for tier one. Based upon projected needs, additional CSRs are selected for training at higher levels. Trainees for each subsequent tier are selected from candidates in the prior tier based upon performance and potential. CSR movement through the tiers is part of the career progression path.

Exhibit X-12 shows the staffing statistics for the Reading contact center.

Exhibit X-12
Staffing – Contact Center/CSR Turnover Rates
2005 to 2009

	January Staff	December Staff	Employees Hired	Employees Leaving
2005	412	463	112	66
2006	461	447	93	107
2007	444	466	142	117
2008	462	446	63	79
2009	438	408	42	71



	Turnover
2005	16.02%
2006	23.21%
2007	26.35%
2008	17.10%
2009	16.21%

Source: Information Response 197

Like most call centers, the FEU contact centers experience turnover of approximately 20% per year. The FEU employee contact centers have developed a temporary-contract employee strategy to handle peak load volumes and to replenish employee ranks that have thinned by attrition. Each year, temporary contract employees are hired in the March/April timeframe to ramp up capacity to the August/September peak work months. The temporaries are hired and trained in subsequent groups until the staffing level range meets the forecasted call volume. After the peak work months, in October/November, the temporaries are evaluated and some, approximately 30 to 40, are offered full-time positions and kept on. The rest are phased out as the workload declines into the fall and winter.

This strategy allows FEU to meet its peak workloads economically and to audition a large number of candidates to fill full-time regular employee positions.

The FEU employee contact centers employ the following technology:

- The FEU customer information system is the SAP Core Customer System (CCS) – version ECC 6.0. Current customer modules used include Customer Service, Contract Billing, Invoicing, SD Billing, Contract Accounts Receivable and Payable, Credit Management, and Collection Management. It was last upgraded in April 2010.
- There are two switches for phone calls, one at each contact center. The Reading switch is a Nortel Symposium.
- There is one interactive voice response (IVR) system, Intervoice, which was upgraded in 2009.
- Genesis is the computer/telephony interface. It distributes calls intelligently to the four tiers of CSRs according to the IVR information. If the hold time is over two minutes, the caller is offered virtual hold to be called back or he/she can stay on the line. Virtual hold is a separate technology product that was implemented in 2008.
- Reporting out of Genesis is done through a Cognos front-end that converges all statistics for reporting.
- A contract with Experion is used at the contact centers on service requests to validate the applicant's name and social security number. Invalid results are routed to a higher-level CSR for further review.
- Web self-service is available, which basically duplicates the IVR self-service options.
- All tier-one calls are now virtual between contact centers, and all tier-one CSRs are trained for all states. Also, 32 CSRs in Ohio can perform New Jersey billing calls.

FEU contact center technology is modern and there are plans for further improvement:

- There are current projects to install the Genesis work force management (WFM) tool and the Genesis intelligent workload distribution (IWD) tool. WFM performs forecasting, planning, scheduling, and reporting. IWD assembles and distributes all CSR work, including faxes, e-mails, and letters as well as calls. CSRs will receive electronic assignment of batch work when they are not expecting calls. IWD will also route outage calls to the back-office workstations so staff will not have to relocate to the contact center.
- FEU is working toward proactive customer messaging, such as texts to customers to notify them of outages.
- FEU will add Internet chat capabilities (between customers and CSRs in the contact center) for web service.

FEU contact centers also have a highly developed, centralized quality assurance program. They use NICE as a quality monitoring system. NICE records audio on all calls and video of screens seen on a random sample basis. There are 13 quality monitor personnel. Four are in Reading but all 13 are virtual. Each quality monitor can review any customer service representative. The quality monitors are mostly experienced CSRs. Calls are evaluated by the quality monitoring staff and contact center supervisors. The evaluation form used for monitoring is determined by the call type (i.e., outage, high bill, new service, etc.). Coaching packages are created by the contact center supervisor. They include evaluations and any other pertinent information for discussion with the CSRs. Coaching packages are sent electronically to the CSRs for review prior to the scheduled coaching sessions. Coaching sessions are held weekly between the supervisor and customer service representatives. Quality scores are included in the CSRs' performance reviews.

The contact centers use a risk-based quality monitoring program. CSRs must achieve a minimum quality score of 87 on each call monitored. Lower scores result in the CSR being quality-reviewed more often, and higher scores less often. Calls selected as samples favor video calls, if available, for better monitoring. All customer survey responses on calls are quality scored as are all regulatory complaints involving calls.

Meter Reading

Meter reading is a JCP&L function. There are approximately 120 meter readers, earning approximately $24 per hour or more, who are deployed among the six business offices. JCP&L has not implemented automated meter reading (AMR) or advanced metering infrastructure (AMI) and has no plans to do so. JCP&L does use handheld meter-reading devices, with the route and high/low-read edit data programmed in. These devices also have global position system (GPS) tracking but no wireless communications. As a result, the movements of the meter reader can be viewed after the fact but not in real time. JCP&L has a number of inside meters that require the meter reader to gain access to the premises. Lack of access causes estimated meter reads.

FirstEnergy's official position on AMI is, "With full and timely cost recovery, FE supports the phased and targeted deployment of AMI as a mechanism to empower customers to manage power costs, facilitate demand response, and to improve customer service and operational performance." However, FirstEnergy Utilities' approach to AMI, to date, is to implement it only under regulatory order. For example, it is under an order in Pennsylvania to install AMI over the next 15 years to comply with Pennsylvania Act 129, which was passed in 2008. FEU maintains that its AMI studies have never shown an economic benefit to the customer. It has not studied AMI in conjunction with time-of-use pricing, however. Time-of-use pricing enabled by AMI may allow some customers to reduce their bills by switching some power use from higher on-peak prices to lower off-peak prices.

Credit and Collections

Most credit and collections work is outsourced by FEU. The exceptions are the field collection/revenue protection function and business offices. The field collectors and revenue protection personnel are physically deployed to the several opcos but report to a central Revenue Operations unit. There is a $20 field collection fee by tariff in New Jersey. FirstEnergy Utilities would prefer not to collect money in the field because doing so allows customers who can pay to wait until the last minute before service termination to pay. Moreover, it adds a risk of theft and harm to the collector in the field. New Jersey law, however, requires field acceptance of payments in lieu of disconnection, so field collectors accept payments in New Jersey. There are also four revenue protection employees in the JCP&L territory.

JCP&L maintains six business offices, which are deployed throughout its service territory. They are:

- *Morristown* – 90 Ridgedale Avenue, Morristown, NJ 07960
- *Hopatcong* – 175 Center Street, Landing, NJ 07850
- *Phillipsburg* – 400 Lincoln Street, Phillipsburg, NJ 08865
- *Allenhurst* – 300 Main Street, Allenhurst, NJ 07711
- *Toms River* – 25 Adafre Avenue, Toms River, NJ 08753
- *Old Bridge* – 999 Englishtown Road, Old Bridge, NJ 08857

Business office functions include taking bill payments and reviewing proper identification for service applications. Back-office work includes canceling misreads and issuing letters to customers for access, scheduling, and work that is related directly to meter reading.

Customers with collection concerns (payment arrangements and disconnections for non-payments) may call FirstEnergy's collection agency via a direct-link telephone in each business office lobby. Customers with service concerns (high bills, service requests, and disputes) may also call FirstEnergy's contact center via a direct-link telephone. Business office hours of operation are 8:15 A.M. to 4:00 P.M., Monday through Friday.

New Jersey law requires JCP&L to have at least one business office. The BPU order in the FirstEnergy/General Public Utilities (GPU) merger required that JCP&L retain the existing six New Jersey business offices for a period of at least five years. It also mandated that JCP&L must seek approval to change the business-office structure.

The credit call center function is contracted out to NCO Group, Inc. (NCO). Credit calls were formerly handled by the regular employee contact centers. Credit calls were contracted out when both the FE and GPU call centers were centralized in Akron and Reading respectively, prior to the merger. Both companies were concerned that not enough CSRs would transfer in the centralization to be able to handle the total workload. In both cases, credit calls were selected to be outsourced, at least for a transition period, and the credit calls were not brought back in-house.

The credit call center contractor is paid by the hour for FEU-dedicated credit CSRs. FirstEnergy Utilities prescribes the training and performance reporting for the contract CSRs and the NCO uses FEU systems and procedures. FirstEnergy Utilities has prepared a 15-page policy on credit that is available to credit CSRs on CNET, FEU's online policy and procedures manual. FirstEnergy Utilities reports that NCO customer service representative performance is as good as or better than employee contact center CSRs'.

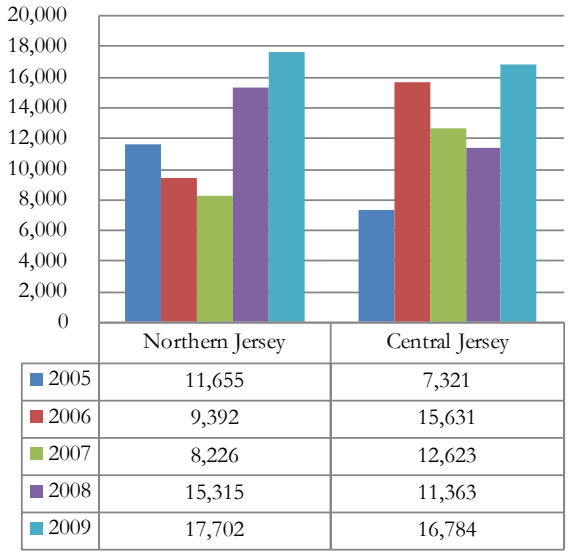
For a period of belt tightening from 2009 through 2010, the FEU employee contact centers began to take some credit calls in an effort to reduce outsource staff rather than employees. (Some senior CSRs still had credit call skills.) FEU, however, expects to return to all outsourced credit calls by the end of 2010.

New Jersey final bills are due in 15 days. At day 51, the bills are referred to outside collection agencies. FirstEnergy Utilities uses three tiers of collection agencies. The first tier is called Final Bill and works the overdue bills for up to 60 days. At day 113, unpaid bills are referred to the second tier, called Primary. At day 478, they are referred to the third tier, called Secondary. The bills stay with the third-tier collection agencies until the statute of limitations runs out. There are at least two contractors at each tier and the work assigned is adjusted over time based on each contractor's performance. FirstEnergy Utilities does no credit reporting, but the collection agencies do.

Meter Replacement Program

JCP&L has a meter replacement program that is designed to comply with BPU requirements. *Exhibit X-13* shows the number of meter replacements for the years 2005 to 2009.

Exhibit X-13
Meter Replacement
2005 to 2009



Source: Information Response 173

IDER Direct Load Control Program

JCP&L has an Integrated Distributed Energy Resource (IDER) program in New Jersey. It is led by the Advanced Grid and Meter Technology group in the FEU Energy Efficiency organization. IDER is implemented and operated by a turnkey contractor that recruits the customers and installs the hardware. JCP&L selects the substations and feeders and monitors the program from the regional dispatch office (RDO). IDER is a direct load control program that is designed to reduce high-priced peak loads or to respond to generation shortfalls. The program was started in 2008 with eight megawatts of controllable air-conditioning load. It does not use advanced metering infrastructure. In the first iteration, subscribers to this Easy Green program had a wireless switch and temperature sensor installed. A current transformer (CT) monitors the air-conditioning load. When called upon, the system can cycle the air conditioner on and off, allowing no more than a six-degree increase in temperature at the sensor. The eight megawatts of direct-load control was achieved on three feeders out of a single substation with approximately 3,000 customer volunteers. The participating customers receive $25 for signing up and $25 annually for participating. In addition, their electric consumption may be reduced somewhat.

The first iteration of IDER, (the 8MW BPU-approved pilot program) was deemed successful. A second iteration of IDER, a 15MW expansion of the pilot program, was approved by the BPU in 2009. A third iteration, funded with a Department of Energy grant, will add an additional 15 megawatts of controllable load (bringing the total size of the program to 38MW) and will expand the controls to pool pumps and

water heaters. Approximately 10,000 customers will be involved. The IDER system has been called upon several times in 2010 for load reductions of up to 11 megawatts.

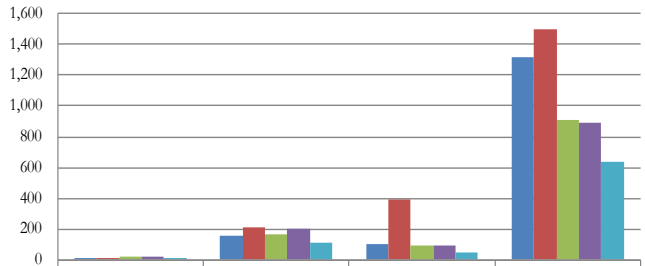
Economic Development

The FirstEnergy Utilities' economic development function reports to the FEU Vice President of Customer Service and Energy Efficiency. It is led by a director of economic development and has eight additional positions. One economic development professional is deployed to New Jersey. FEU Economic Development develops and implements business attraction, retention, and expansion programs. FirstEnergy Utilities' economic development activities include trade show participation, software systems to assist development agencies, an economic development website featuring available buildings, and U.S. Department of Commerce economic development program participation.

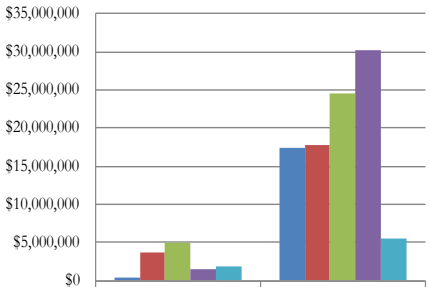
The single New Jersey economic development professional is headquartered in the state capitol, Trenton, and the function has offices in Red Bank and Morristown. New Jersey Economic Development once had a staff of six. New Jersey economic development activities focus on working with governmental development agencies, such as the New Jersey Economic Development Authority, counties and municipalities, large developers, and relocation consultants. The focus of New Jersey economic development is on the pharma, biotech, and defense industries, all of which have strong presences in New Jersey. The New Jersey economic development professional works closely with the JCP&L area managers, new business engineers, and large customer support representatives.

New Jersey projects announced and influenced and net present value (NPV) peaked in 2007 and have since decreased. *Exhibit X-14* shows the New Jersey economic development performance metrics tracked for the period spanning 2005 through 2009.

Exhibit X-14
Economic Development
2005 to 2009



	NJ Projects Announced & Influenced	Total (PA/NJ/OH) Projects Announced & Influenced	NJ New Qualified Leads	Total (PA/NJ/OH) New Qualified Leads
2005	6	154	103	1,318
2006	9	213	388	1,500
2007	20	168	91	905
2008	18	200	91	889
2009	7	115	50	636



	NJ NPV	Total (PA/NJ/OH) NPV
2005	$501,404	$17,324,239
2006	$3,639,731	$17,693,824
2007	$5,049,188	$24,570,571
2008	$1,479,591	$30,223,547
2009	$1,854,497	$5,501,834

Source: Information Response 528

The number of new qualified leads peaked in 2006 and has since decreased. The reduction in economic development activity is likely related to the overall decline in economic conditions and may be related to the increase in power bills.

B. Findings & Conclusions

Finding X-1 **Total customer service costs per customer have increased at a rate that is slightly below the inflation rate.**

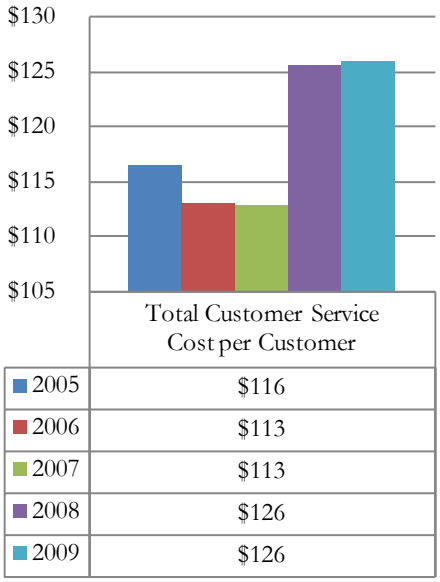
Exhibit X-15 shows the total JCP&L customer service costs and costs per customer for 2005 through 2009.

Exhibit X-15
Customer Service Costs per Customer
2005 to 2009

	2005	2006	2007	2008	2009	Compound Growth/Loss 2005-2009
Total Customer Accounts Expenses[1]	$ 34,479,059	$ 35,665,278	$ 37,309,332	$ 38,592,092	$ 32,957,459	-1.12%
Total Customer Service & Information Expenses[2]	$ 89,771,676	$ 86,181,162	$ 85,130,769	$ 98,281,349	$ 104,874,573	3.96%
Average Number of Customers per Month	1,067,246	1,077,948	1,085,244	1,089,980	1,093,885	0.62%
Total Customer Service Cost per Customer	**$ 116**	**$ 113**	**$ 113**	**$ 126**	**$ 126**	**2.00%**

[1]Includes: supervision, meter reading expenses, customer records and collection expenses, uncollectible accounts, misc. customer accounts expenses

[2]**Includes: supervision, customer assistance expenses, informational and instructional expenses, misc. customer service and information expenses**



Source: Consultant Analysis of FERC Form 1, pp. 304, 322, and 323

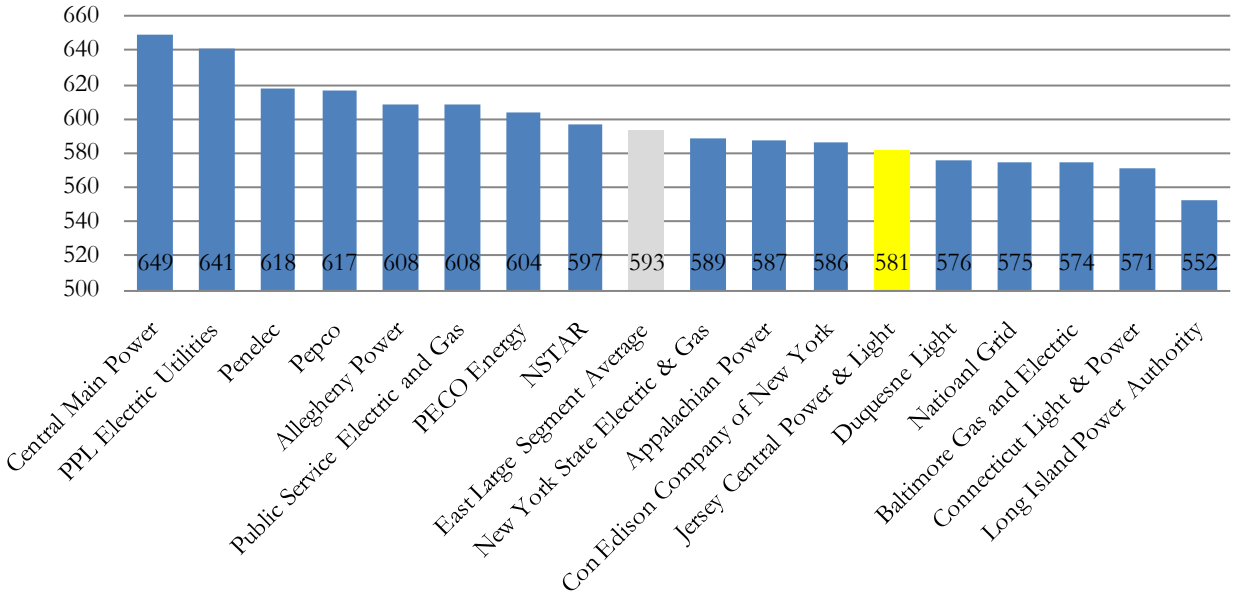
The total cost per customer increased by $10, from $116 to $126 per year, from 2005 to 2009, a 9% increase. Inflation increased approximately 10% during the same period.

Customer Satisfaction

Finding X-2 **According to the J. D. Power and Associates 2009 survey, the JCP&L Customer Satisfaction Index ranking is slightly below the average of other large eastern utilities.**

Exhibit X-16 shows that JCP&L's 2009 overall Customer Satisfaction Index ranking of 581 is below the large segment eastern average of 593, and it is well below the leading company's 649 index.

Exhibit X-16
J.D. Power and Associates
2009 Electric Utility Residential Customer Satisfaction Study℠
Customer Satisfaction Index Ranking – East Region: Large Segment

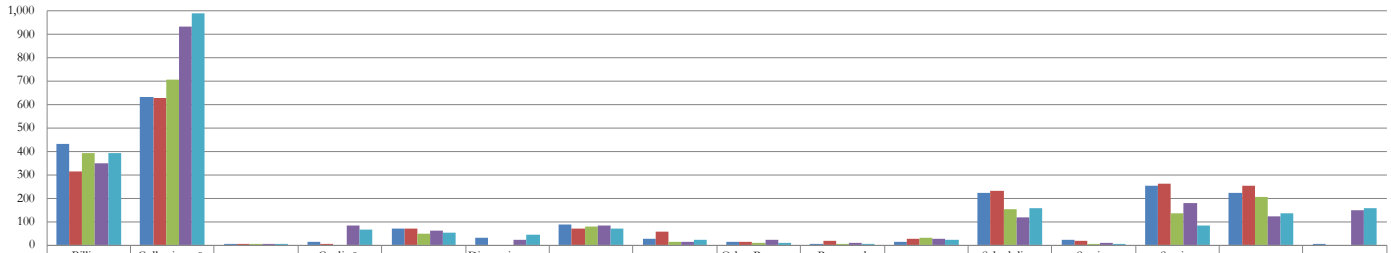


Source: Information Response 189-8; J.D. Power and Associates 2009 Electric Utility Residential Customer Satisfaction Study℠

Finding X-3 **After decreasing from 2005 to 2007, the number of annual complaints has increased by 23% since 2007.**

Billing disputes followed the same pattern. The BPU Consumer Report Card overall issue resolution results, however, showed an improvement from 2007 to 2009. *Exhibit X-17* shows the number of BPU and region (to FirstEnergy) complaints as a total, by year, from 2005 to 2009.

Exhibit X-17
Complaints
2005 to 2009



	Billing Disputes	Collections & Payment Plans	Competition	Credit & Deposits	Damages	Discontinuance / Transfer	Metering	Other	Other Payment Issues	Personnel Problems	Rates	Scheduling Delays	Service Extensions	Service Interruptions	Service Quality	Termination
2005	434	633	2	15	72	30	89	28	13	6	14	225	23	255	223	4
2006	314	628	1	2	69	0	71	57	15	18	26	234	18	261	253	0
2007	395	708	5	0	51	0	82	16	9	7	33	156	7	136	204	0
2008	349	935	6	86	61	22	83	13	22	8	27	118	9	179	122	148
2009	393	989	5	68	53	46	72	22	8	2	24	158	4	84	138	159

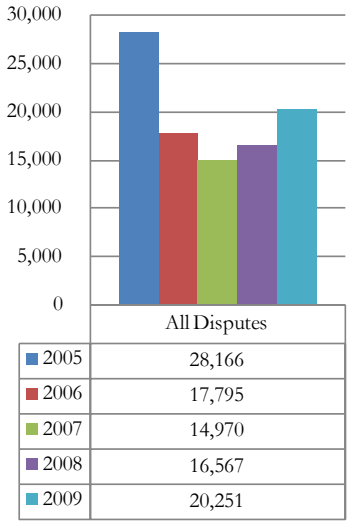
Source: Information Response 167

Total complaints went from 2,066 in 2005 to 2,225 in 2009.

The two types of complaints accounting for the majority of the increases in complaints are collection and payment plans (complaints about collection efforts or deferred payment plans) and termination of service (complaints about collections resulting in field termination). This tendency likely reflects the economic condition changes from 2007 through 2009 and the increases in bills.

Exhibit X-18 shows the number of billing disputes from 2005 to 2009.

Exhibit X-18
Billing Disputes
2005 to 2009



Source: Information Response 169

The number of billing disputes rose from 14,970 in 2007 to 20,251 in 2009, a 35% increase.

Finding X-4 Three different units handle complaints relevant to JCP&L.

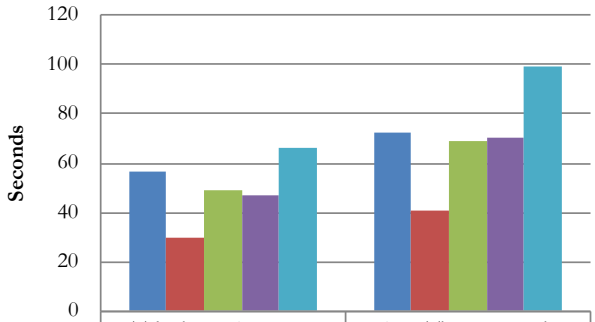
The FEU Customer Service Compliance unit handles BPU complaints. The JCP&L Customer Support unit handles non-BPU complaints made to JCP&L executives. The Technology and Quality unit in the Contact Center handles coordinates responses to non-regulatory complaints made to FE executives. The three units use the same tracking system and some complaints overlap (i.e., the same complaint is made to the BPU and FE executives). Until 2004, one unit handled all types of complaints.

Contact Center and Field Service

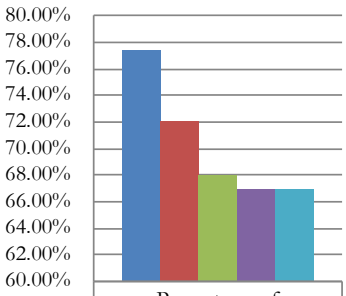
Finding X-5 The regulatory customer service standards reported to the BPU—average speed of answer, average time to reach a CSR, and percentage of calls handled by a CSR—have all deteriorated in recent years.

Exhibit X-19 shows the three regulatory service standard results reported to the BPU for the years 2005 through 2009.

Exhibit X-19
New Jersey Regulatory Customer Service Standards Reported
2005 to 2009



	Telephone Access – Average Speed of Answer (ASA)	Avg. Time to Reach a Customer Service Rep. (CSR)
2005	57	73
2006	30	41
2007	49	69
2008	47	70
2009	66	99



	Percentage of Calls Handled by a CSR
2005	77.42%
2006	72.00%
2007	68.00%
2008	67.00%
2009	67.00%

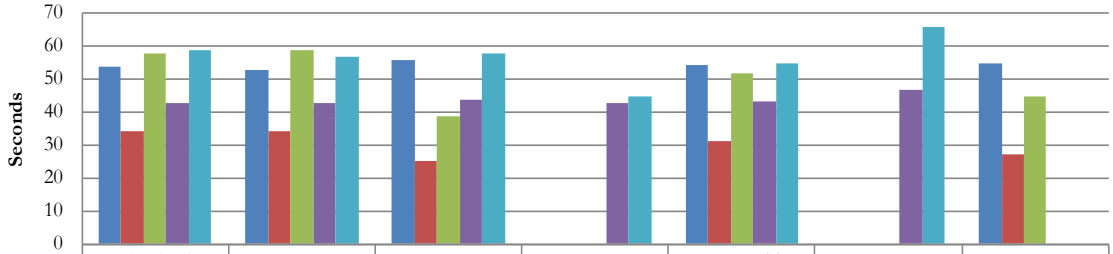
Source: Information Response 200

Average speed of answer has increased steadily from 30 seconds in 2006 to 66 seconds in 2009. Average time to reach a CSR has increased from 41 seconds in 2006 to 99 seconds in 2009. The percentage of calls handled by a CSR has decreased from 72% in 2006 to 67% in 2009.

Finding X-6 **The FEU average speed of answer is slower and the average hold time is longer for NJ customers than the average experienced by Ohio and Pennsylvania customers.**

Exhibit X-20 shows the average speed of answer for the three Ohio companies, the three Pennsylvania companies, and JCP&L/NJ.

Exhibit X-20
Call Trends by Operating Company – ASA
2005 to 2009



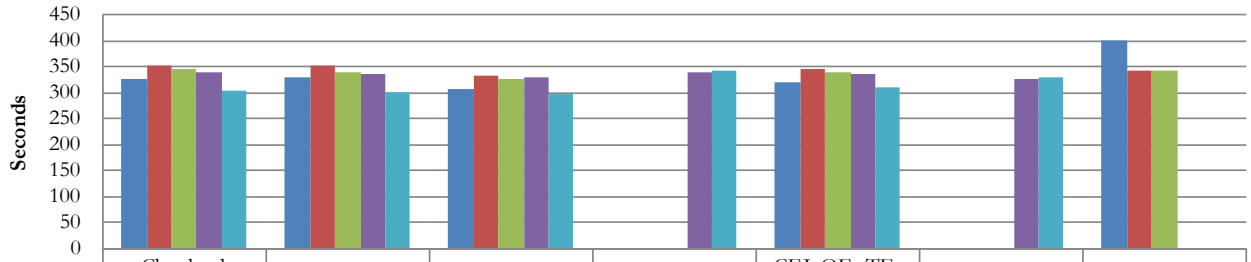
	Cleveland Electric Illuminating (CEI)	Ohio Edison (OE)	Toledo Edison (TE)	Pennsylvania (PA)	CEI, OE, TE, and PA Combined Average	New Jersey (NJ)	PA/NJ
2005	54	53	56		54		55
2006	34	34	25		31		27
2007	58	59	39		52		45
2008	43	43	44	43	43	47	
2009	59	57	58	45	55	66	

Source: Information Response 202

In 2009, the JCP&L/NJ average speed of answer of 66 seconds was 20% higher than the Ohio and Pennsylvania companies' average of 55 seconds.

Exhibit X-21 shows the average handle time (AHT) for the three Ohio companies, the three Pennsylvania companies, and JCP&L/NJ.

Exhibit X-21
Call Trends by Operating Company – AHT
2005 to 2009



	Cleveland Electric Illuminating (CEI)	Ohio Edison (OE)	Toledo Edison (TE)	Pennsylvania (PA)	CEI, OE, TE, and PA Combined Average	New Jersey (NJ)	PA/NJ
2005	327	329	306		321		399
2006	353	351	334		346		341
2007	347	339	328		338		341
2008	338	337	330	340	336	328	
2009	303	302	299	343	312	329	

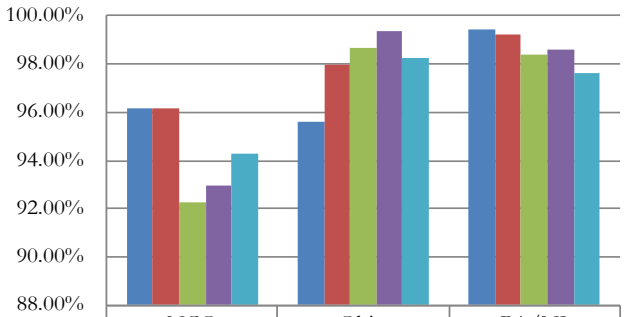
Source: Information Response 202

The 2009, JCP&L/NJ average handle time of 329 seconds was 5% higher than the other companies' average.

Finding X-7 **The percentage of calls answered by the Reading contact center and the contract contact center that serve JCP&L customers has declined and falls below that of the Ohio call center.**

Exhibit X-22 shows the percent of calls answered trend for the Reading contact center, which primarily serves Pennsylvania and New Jersey customers, the NCO contract contact center, which serves all FEU customers, and the Ohio contact center, which primarily serves Ohio customers.

Exhibit X-22
Percent Calls Answered Trend
2005 to 2009



	NCO	Ohio	PA/NJ
2005	96.17%	95.60%	99.45%
2006	96.12%	97.99%	99.20%
2007	92.25%	98.68%	98.37%
2008	92.98%	99.38%	98.61%
2009	94.26%	98.22%	97.64%

Source: Information Response 538

The percentage of calls answered for the PA/NJ contact center has declined from 99.45% in 2005 to 97.64% in 2009. The percentage of calls answered by the contracted credit contract contact center has declined from 96.17% in 2005 to 94.26% in 2009. Both of these contact centers that serve New Jersey trail the Ohio contact center percentage of calls answered, which improved from 95.60% in 2005 to 98.22% in 2009.

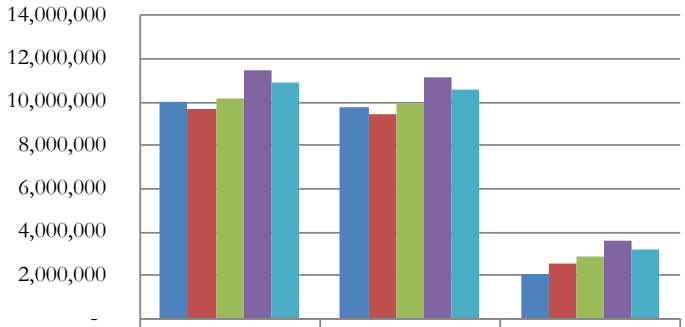
Finding X-8 **It appears that the NCO contract contact center may be a higher cost than the Reading contact center.**Error! Reference source not found.

A confidential information response from FE shows the expense (cost) per call is lower for the Reading Contact Center than the NCO Contact Center for 2009. FirstEnergy Utilities does not track the cost per call minute for its in-house and contract contact centers. Because the Reading center and the contract center handle different types of calls, the cost per call number may be misleading if NCO calls are typically longer. The higher cost per call for credit, however, calls into question whether in-house or contract call centers are, in fact, lower cost.

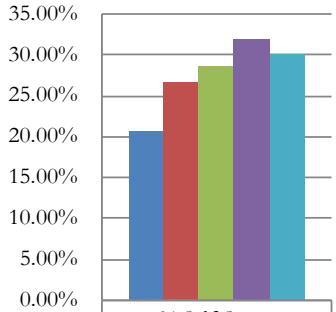
Finding X-9 **FirstEnergy Utilities has steadily improved the percentage of calls handled by the integrated voice response system.**

Exhibit X-23 shows the percentage of incoming calls that were IVR self-serve.

Exhibit X-23
Call Volume/Self-Service Trends
2005 to 2009



	Calls Offered	Calls Handled	IVR Self-Serve
2005	10,024,051	9,729,564	2,020,400
2006	9,638,660	9,459,079	2,529,923
2007	10,175,236	9,893,189	2,833,516
2008	11,451,358	11,160,522	3,563,138
2009	10,869,866	10,562,224	3,186,046



	% Self-Serve
2005	20.77%
2006	26.75%
2007	28.64%
2008	31.93%
2009	30.16%

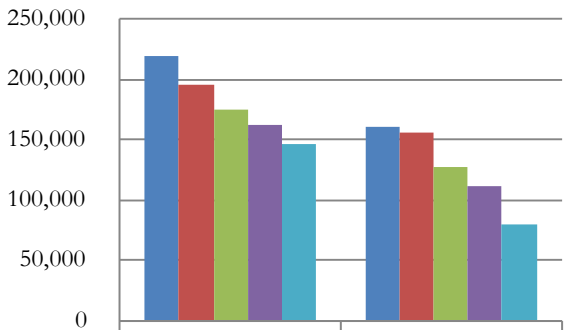
Source: Information Response 644

The percentage of calls handled by the IVR system has increased from 20.8% in 2005 to 30.2% in 2009. It is generally much cheaper to resolve calls with self-service through the IVR system than to answer them with a live CSR.

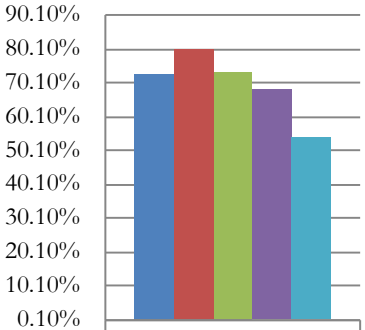
Finding X-10 **The percentage of service calls completed on the day requested has declined over the last five years, and it dropped precipitously after the field service customer satisfaction survey was suspended.**

Exhibit X-24 shows the five-year trend in service calls completed on the day requested.

Exhibit X-24
Service Call Trends
2005 to 2009



	Service Calls Scheduled	Completed on Day Requested
2005	219,814	160,196
2006	194,876	156,429
2007	174,282	127,426
2008	162,665	110,800
2009	146,044	79,156



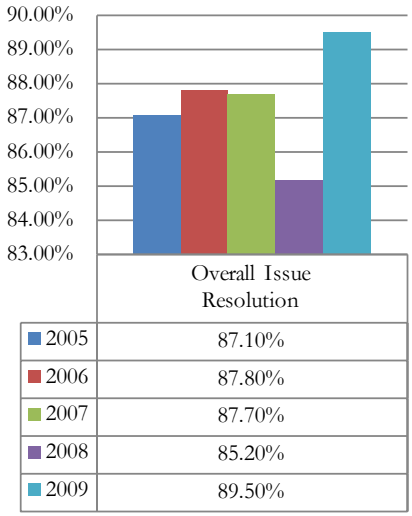
	Completion Percentage
2005	72.88%
2006	80.27%
2007	73.11%
2008	68.12%
2009	54.20%

Source: Information Response 190

The annual percentage declined from 72.88% in 2005 to 54.20% in 2009.

From 2005 through June 2009, a New Jersey field service tracking study surveyed customers who had in-person contact with field service personnel. *Exhibit X-25* shows the trend in overall issue resolution. (JCP&L addressed your issue or request.)

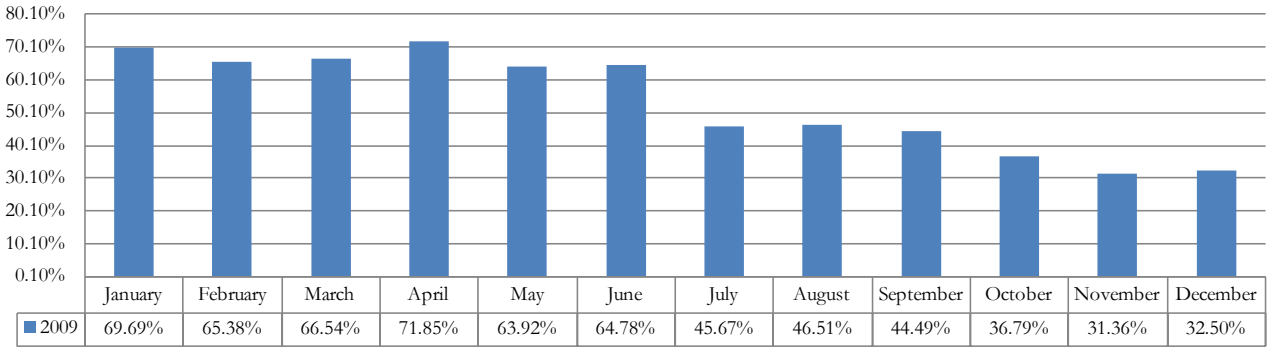
Exhibit X-25
Customer First Field Service Tracking Report – Overall Issue Resolution
2005 to 2009



Source: Information Response 189

The percentage (higher is better) increased from 87.1% in 2005 to 89.5% in the second quarter of 2009. FirstEnergy Utilities suspended the survey after the second quarter of 2009 when the BPU no longer required it. *Exhibit X-26* shows the monthly service calls completed rate for 2009.

Exhibit X-26
2009 Monthly Service Calls Completed
as of December 31, 2009



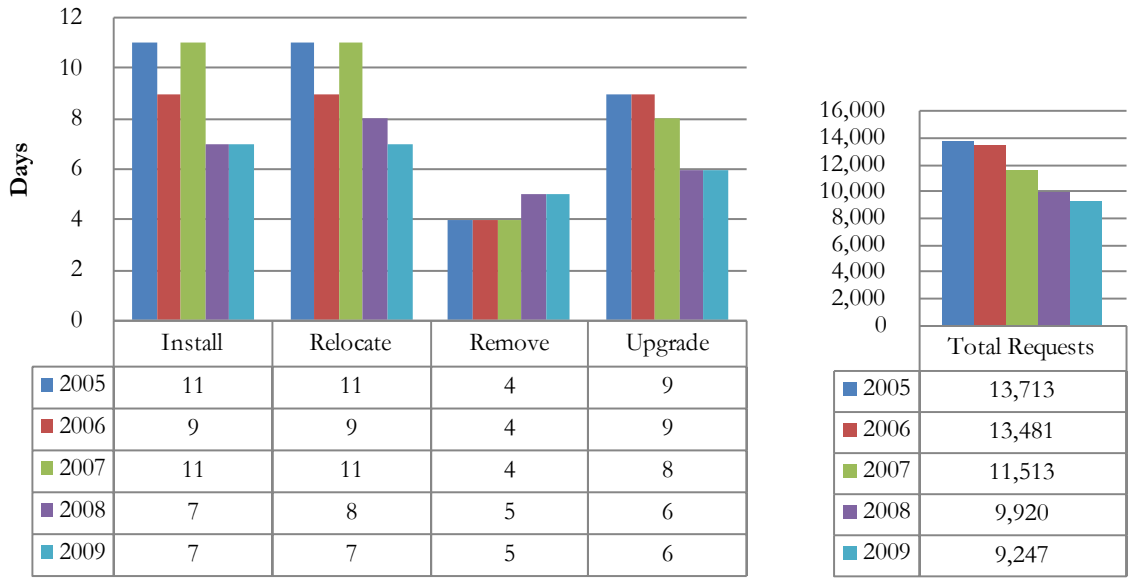
Source: Information Response 190

The completion percentage dropped precipitously from 64.78% in June, the last month for the field service tracking study, to 32.5% in December.

Finding X-11 **Field service order response time has improved from 2005 to 2009.**

Exhibit X-27 shows the 2005 to 2009 trend in elapsed time, in days, to fulfill a service request by type.

Exhibit X-27
Average Response Time by Service Request in Days & Total Requests
2005 to 2009



	Install	Relocate	Remove	Upgrade
2005	11	11	4	9
2006	9	9	4	9
2007	11	11	4	8
2008	7	8	5	6
2009	7	7	5	6

	Total Requests
2005	13,713
2006	13,481
2007	11,513
2008	9,920
2009	9,247

Source: Information Response 193

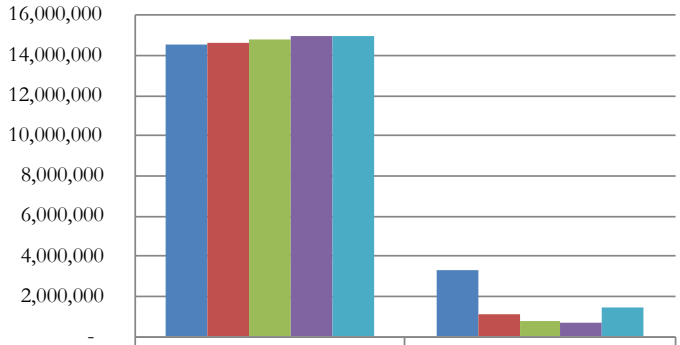
The install response time has improved from 11 days in 2005 to seven days in 2009. This improvement may have been aided by the reduction in service requests from 13,713 in 2005 to 9,247 in 2009.

Revenue Operations

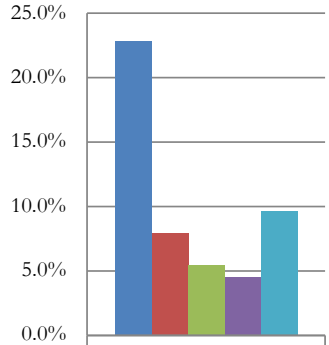
Finding X-12 **The rate of meters not read improved from 2005 through 2008, but reversed to a relatively high 9.7% in 2009.**

Exhibit X-28 shows the percentage of meters not read from 2005 through 2009.

Exhibit X-28
Meters Not Read
2005 to 2009



	Registers Total	Not Read or Estimated
2005*	14,551,004	3,328,337
2006	14,649,017	1,151,536
2007	14,818,615	798,534
2008	14,930,861	677,404
2009	14,954,796	1,451,687



	No Read Rate
2005*	22.9%
2006	7.9%
2007	5.4%
2008	4.5%
2009	9.7%

*Work Stoppage January 2005 to March 15, 2005
Source: Information Response 164

The percentage of meters not read got as low as 4.5% in 2008, but it more than doubled to 9.7% in 2009.

Finding X-13 FirstEnergy Utility's last examination of AMI in 2007 did not consider societal and customer benefits.

FirstEnergy Utilities last examined AMI in 2007. FEU prepared an AMI case-study presentation for the Public Utilities Commission of Ohio's Smart Metering Workshop. The business case looked at only hard costs and cost savings and did not consider societal and customer benefits, such as reduced consumption and power bills. Hard costs included deployment and operations and maintenance of the hardware and network. Cost savings included lower meter-reading costs, quicker outage restoration, reduced theft of service, and some avoided meter-reading capital costs. The case study concluded that installing AMI throughout the FEU Ohio territories would result in a negative net present value over 20 years. The case study did not consider customer and societal benefits, such as:

- Enabling time-of-use pricing
- Enabling participation in load management programs
- Improving consumption information that could assist customers in lowering power bills
- Eliminating monthly meter-reading intrusion
- Decreasing the number of estimated bills

Considering societal and customer benefits in future AMI business cases may change the conclusions regarding the feasibility of AMI.

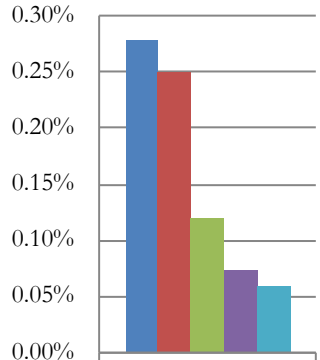
FirstEnergy did commission the Electric Power Research Institute (EPRI) in 2008 to "provide background on various methodologies relating to societal benefits in the context of Smart Metering initiatives". The study contains guidelines and considerations relating to the means by which to quantify the societal benefits associated with Smart Metering.

Finding X-14 The meter-reading error rate has improved steadily since 2005.

Exhibit X-29 shows the meter reading error rate from 2005 through 2009.

Exhibit X-29
Meter-Reading Error Rate
2005 to 2009

	Registers Total	Registers Read	Total Errors
2005*	14,551,004	11,222,667	31,123
2006	14,649,017	13,497,481	33,668
2007	14,818,615	13,971,431	16,840
2008	14,930,861	14,253,457	10,367
2009	14,954,796	13,503,109	8,055



	Error Rate
2005*	0.28%
2006	0.25%
2007	0.12%
2008	0.07%
2009	0.06%

Source: Information Response 164

The number of errors per year has declined from 31,123 in 2005 to 8,055 in 2009, a reduction of 74%. This tendency has resulted in an error rate reduction from 0.28% in 2005 to 0.06% in 2009.

Finding X-15 FirstEnergy Utilities and JCP&L have not completed a meter reading reroute since 1994.

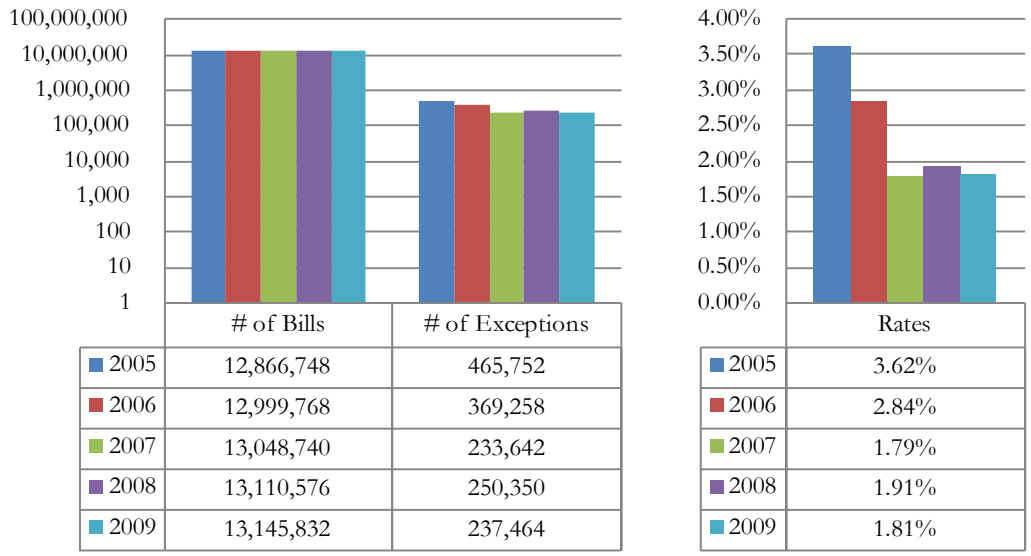
The last major meter reading reroute was in 1994, with adjustments since then for new or deleted meters. A reroute for all of JCP&L meter reading was begun in the fourth quarter of 2009 using the

Field Net system's automated route control system feature. However, there is no definitive end date for the completion of this process. While JCP&L typically does not have dramatic changes in meter reading demands from year to year, not performing a complete reroute since 1994 has resulted in too long of a period between complete reroutes and it is likely that there are meter reading route inefficiencies that can be corrected by a complete meter reading rerouting.

Finding X-16 FirstEnergy Utilities has significantly reduced the billing exception rate.

Exhibit X-30 shows the reduction in total billing exceptions from 2005 to 2009.

Exhibit X-30
Billing Exception Rates Trend
2005 to 2009



	# of Bills	# of Exceptions
2005	12,866,748	465,752
2006	12,999,768	369,258
2007	13,048,740	233,642
2008	13,110,576	250,350
2009	13,145,832	237,464

	Rates
2005	3.62%
2006	2.84%
2007	1.79%
2008	1.91%
2009	1.81%

Note: Work stoppage December 2004 – March 2005
Source: Information Response 166

The number of billing exceptions was reduced from 465,752 to 237,464 from 2005 to 2009, a 49% reduction. This tendency has resulted in a billing error rate reduction from 3.62% to 1.81%.

Finding X-17 The Rates Department has a strong influence on customer service and JCP&L's financial success but it does not report to JCP&L.

Having the Rate Department report to FirstEnergy Corporate rather than the FE Utilities business unit may cause a conflict of interest. In general, employees who are physically deployed in New Jersey are JCP&L employees who report up to the JCP&L President. This is true for most of the customer service–related employees, with the exception of the revenue operations collectors and revenue protection personnel, who report to FEU Revenue Operations in Akron. A significant Rates

Department contingent is deployed to New Jersey that is primarily responsible for FE's relationship with the BPU and for FE's rate case strategy. This New Jersey Rate Department, however, reports to the FE Rate Department and has neither a dotted- nor solid-line relationship with the JCP&L President's organization. This arrangement runs counter to the Business Services New Jersey financial unit, which has a strong dotted-line relationship to the JCP&L President and is an integral part of his leadership team. The JCP&L organization does not participate in rate case strategy; it supports the Rate Department's initiatives only as needed. Therefore, the JCP&L organization does not control the revenue side of the business. JCP&L profit and loss responsibility comes together only at the FE CEO level.

FirstEnergy Solutions (FES) sells power in New Jersey, both through the BGS auctions and to individual shopping customers. Some potential JCP&L initiatives that might reduce power consumption, such as smart grid and AMI with time-of-use rates, may be in conflict with FE's corporate interest to sell as much power at the highest possible prices in New Jersey.

Finding X-18 Theft-of-service activity has been increasing.

Exhibit X-31 shows the level of theft-of-service activity from 2005 to 2009.

Exhibit X-31
Theft of Service
2005 to 2009

	2005	2006	2007	2008	2009
Number of Leads	476	682	864	1249	1339
Cases Opened	150	209	455	697	617
Cases Closed	113	277	463	691	609
Ongoing	478	629	196	227	153
Lost Revenue Billed	$ 286,492	$ 56,252	$ 687,776	$ 397,862	$ 399,452
Lost Revenue Collected	$ 118,516	$ 260,583	$ 674,497	$ 536,842	$ 532,490

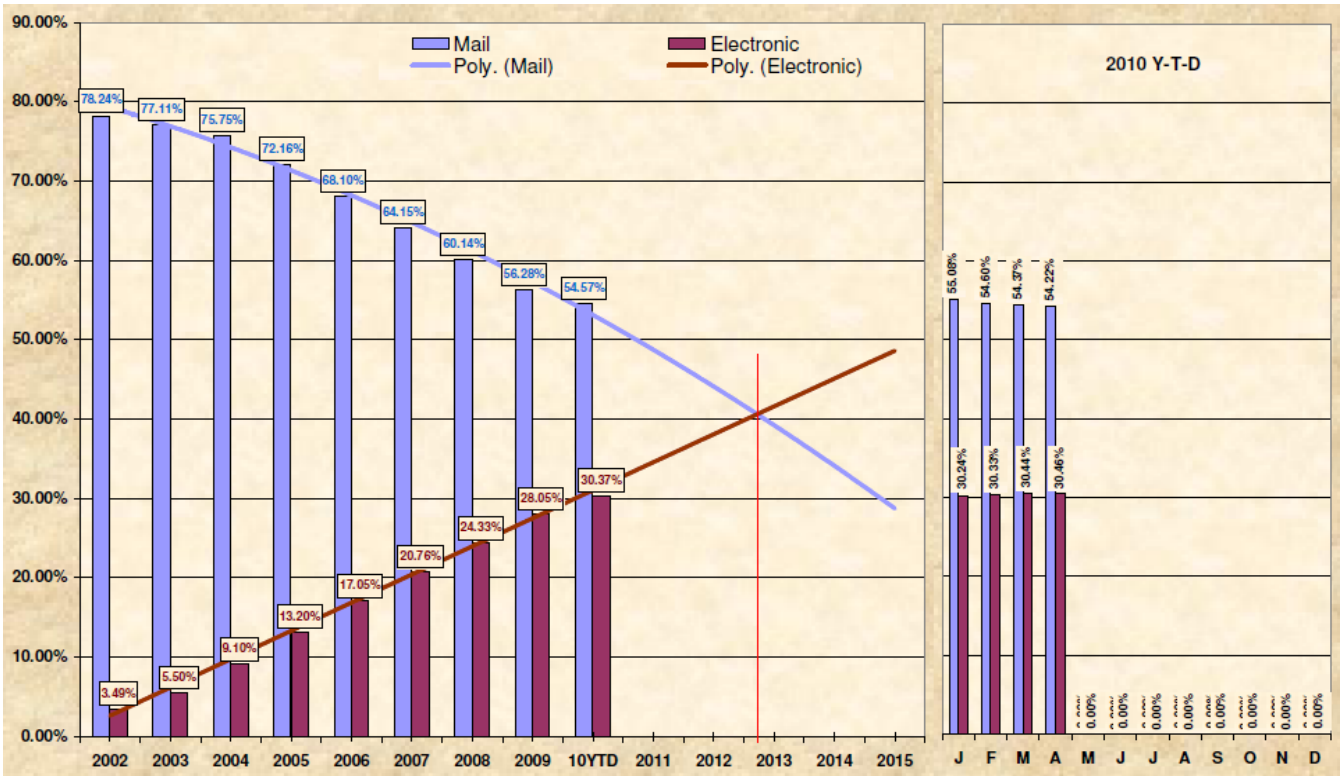
Source: Information Response 780 and Schumaker & Company Analysis

The number of leads increased from 476 to 1339 from 2005 to 2009. Lost revenue collected, however, peaked in 2007. The increase in theft-of-service activity and the decrease in lost revenue collected are likely attributable to the deteriorating economic conditions and the increasing power bills during this time period.

Finding X-19 **FirstEnergy Utilities has made steady progress in increasing the percentage of electronic payments.**

Electronic payments are much cheaper to receive and process than payments received by mail or at business offices. *Exhibit X-32* shows the trends in payments received by mail and electronically from 2005 through 2009.

Exhibit X-32
Mail vs. Electronic Volumes History
2005 to 2015
as of April 2010



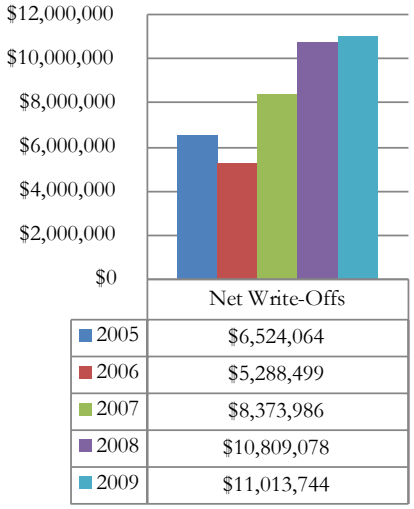
Source: Information Response 179, p. 4

From 2005 to 2009, electronic payment volume increased from 13.2% to 28.05% while mail payment volume decreased from 72.16% to 56.28%. At these rates of change, electronic payments would exceed mail payments in 2013.

Finding X-20 **Net write-offs for uncollectible accounts have steadily increased since 2006, and accounts receivable aging has deteriorated as well.**

Exhibit X-33 shows the net write-offs for 2005 to 2009.

Exhibit X-33
Net Write-Offs
2005 to 2009

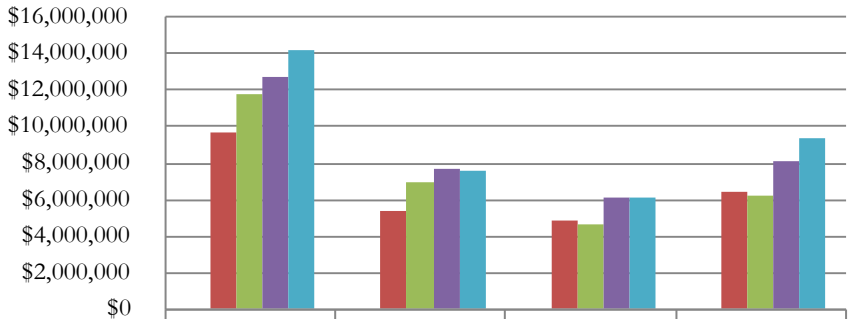


Source: Information Response 182

Write-offs more than doubled from 2006 to 2009 to over $11 million per year.

The write-off experience was paralleled by a deterioration in accounts receivable aging as well. *Exhibit X-34* shows the year-end aging experience from 2006 through 2009. 2005 numbers were not available.

Exhibit X-34
Accounts Receivable Aging
2005 to 2009



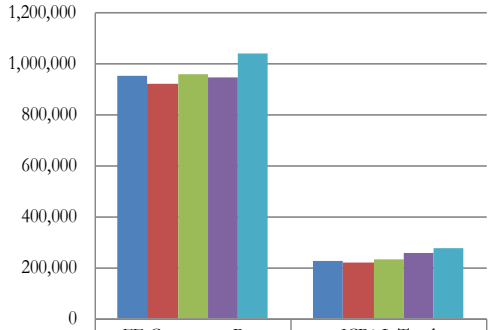
	31-60 Days	61-90 Days	90-120 Days	> 120 Days
2005	$-	$-	$-	$-
2006	$9,682,211	$5,371,219	$4,849,526	$6,449,408
2007	$11,816,829	$6,963,732	$4,604,119	$6,215,115
2008	$12,724,345	$7,691,277	$6,142,936	$8,064,922
2009	$14,173,695	$7,531,023	$6,110,101	$9,347,472

Note: 2005 data not available
Source: Information Response 182

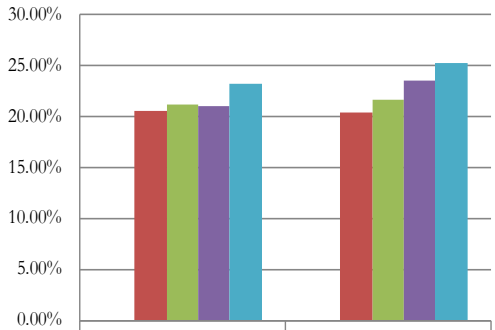
This deterioration in write-offs and accounts receivable aging likely reflects the economic condition changes during this period and the increases in power bills.

Exhibit X-35 shows the number and percentage of FEU and JCP&L customers in arrears, another way of looking at the deteriorating collections.

Exhibit X-35
Customers in Arrears
2005 to 2009



	FE Customers Past Due	JCP&L Total Customers Past Due
2005	954,619	230,343
2006	921,933	220,781
2007	961,477	235,113
2008	945,080	257,397
2009	1,040,759	277,457



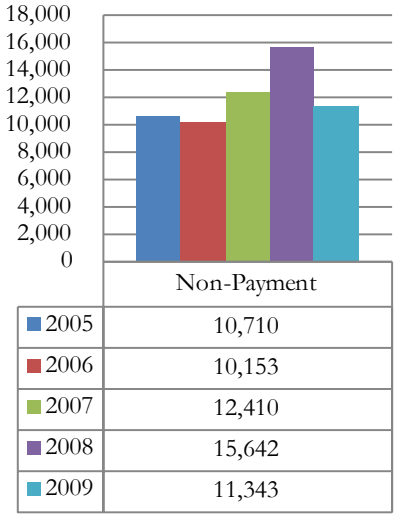
	FE % Customers in Arrears	JCP&L Total % Customers in Arrears
2005	0.00%	0.00%
2006	20.53%	20.41%
2007	21.14%	21.62%
2008	21.01%	23.56%
2009	23.14%	25.33%

Source: Information Response 536

Finding X-21 **As write-offs and slow payment have increased, the number of terminations for non-payment have also increased.**

Exhibit X-36 shows the number of customers terminated for non-payment from 2005 to 2009.

Exhibit X-36
Customers Terminated for Non-Payment
2005 to 2009



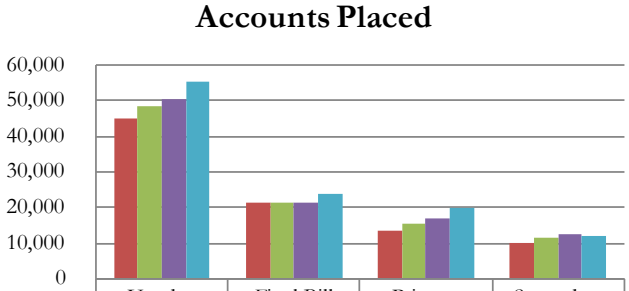
Source: Information Response 185

The terminations increased from 2006 through 2008, with a decrease in 2009. The 2009 terminations, however, were still higher than the number in 2005.

Finding X-22 **The accounts and amounts submitted to collection agencies have increased over the last five years, but the percentage collected has decreased.**

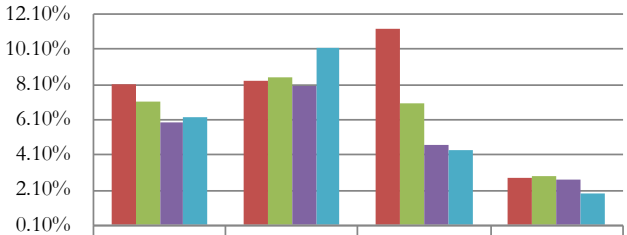
Exhibit X-37 shows the number of accounts and the dollars submitted to the three tiers of collection agencies as well as the percentage of dollars collected from 2005 through 2009.

Exhibit X-37
Collection Agencies – Collected Year-to-Date
2006 to 2009



	Vendor Totals	Final Bill Total	Primary Total	Secondary Total
2006	44,916	21,348	13,338	10,210
2007	48,443	21,501	15,588	11,337
2008	50,511	21,372	16,843	12,274
2009	55,592	23,699	19,852	12,035

	Vendor Totals	Final Bill Total	Primary Total	Secondary Total
2006	$1,546,278	$728,057	$644,412	$123,677
2007	$1,705,970	$846,608	$511,696	$181,027
2008	$1,749,174	$984,142	$465,077	$176,361
2009	$2,098,966	$1,417,794	$527,422	$141,479



	Vendor Totals	Final Bill Total	Primary Total	Secondary Total
2006	8.08%	8.32%	11.30%	2.76%
2007	7.14%	8.51%	7.04%	2.89%
2008	5.99%	7.98%	4.64%	2.73%
2009	6.28%	10.21%	4.41%	1.89%

Source: Information Response 184

Across the board, the numbers have deteriorated over the last five years with the exception of a slight uptick in the percentage collected in 2009.

Economic Development

Finding X-23 **The New Jersey economic development function is more closely aligned with JCP&L functions than the FEU corporate-level functions.**

The New Jersey economic development function is focused on the JCP&L territories, and the day-to-day work is with New Jersey–based development agencies, developers, local governments, and the JCP&L area managers, new business engineers, and large customer support representatives. There is little FEU-level economic development that impacts New Jersey.

C. Recommendations

Recommendation X-1 **Maintain or achieve customer service performance levels that result in overall customer satisfaction, making improvements where cost-effective. (Refer to Finding X-3, Finding X-5, Finding X-6, Finding X-7, and Finding X-10)**

Several measures of customer service quality and responsiveness have deteriorated in recent years. FirstEnergy Utilities should develop a series of cost effective action plans to return customer service performance to former levels. Targets that have been achieved previously are summarized in *Exhibit X-38*.

Exhibit X-38
Customer Service Performance Levels Achieved Previously
as of December 31, 2009

Measurement	Level Achieved Previously	Year	2009 Performance	Improvement Gap
Total Complaints	1,809	2007	2,225	23%
Average Speed of Answer	30 seconds	2006	66 seconds	120%
Average Time to Reach a CSR	41 seconds	2006	99 seconds	141%
Average Handle Time	312 seconds	2009 OH and PA Company Average	329	5%
Percent Calls Answered	99.45%	2005	97.64%	–2%
Meters Not Read	4.5%	2008	9.7%	116%

Source: Information Requests 167, 200, 202, 538, 164

Recommendation X-2 **In conjunction with the FE/ Allegheny Energy merger integration process, identify and implement the most efficient organizational design to effectively perform customer complaint management processes. (Refer to Finding X-4)**

Responsibilities for complaint response are currently split among three organizations, the FEU Customer Service Compliance unit, the FEU Contact Center Technology and Quality unit, and the JCP&L Customer Support unit. All three units use the same complaint-tracking system. For the complaints that are JCP&L-specific made by JCP&L customers, JCP&L should have primary responsibility for their resolution. FEU-wide customer complaint reporting should continue to be done by the FEU Customer Service Compliance unit.

Recommendation X-3 **In conjunction with the FE/Allegheny Energy merger integration process and then periodically thereafter, review and evaluate the use of call center resources, both internal and through contractors, in which these periodic reviews consider cost-effectiveness, as well as other relevant factors, including quality, experience, labor pool diversification, and disaster recovery. (Refer to Finding X-8)**

FirstEnergy Utilities believes the contractor and employee call centers deliver comparable performance. However, it has not conducted a detailed cost comparison. FirstEnergy Utilities should conduct a detailed cost comparison with the involvement of Business Services and Supply Chain and it should project which alternative, contract or in-house, will be more cost-effective over the long term. Once the more cost-effective option has been determined, FEU should develop a thorough implementation plan and schedule to move the work to the lower-cost option from the higher-cost option within a reasonable timeframe.

Recommendation X-4 **Re-evaluate AMR, AMI, and communication devices for inside meters to reduce estimated meter reads and to lower meter-reading costs. (Refer to Finding X-12 and Finding X-13)**

Meter-reading costs are fairly high at JCP&L, with low-density customers and relatively high meter-reader wages. Unread meters were at a high of 9.7% in 2009, twice the rate in 2008. JCP&L should re-evaluate AMR and AMI technologies in light of these circumstances and should include societal and customer benefits in its re-evaluation. At a minimum, JCP&L should consider the costs and benefits of installing communication devices for inaccessible or hard-to-read meters and the associated upgrade to meter-reader handheld devices on those routes to receive the wirelessly reported reads.

Recommendation X-5 **Complete the JCP&L meter reading rerouting process within six months. (Refer to Finding X-15)**

The meter reading rerouting process has been ongoing for over one year with no scheduled completion date. FEU and JCP&L should devote adequate resources to the process to complete the rerouting within six months.

Recommendation X-6 **In conjuction with the FE/Allegheny Energy reorganization merger integration process, identify and implement the most efficient organizational design to effectively perform the economic development function, including New Jersey. (Refer to Finding X-23)**

The FEU-level economic development function can continue to provide staff support and represent FEU economic development on a national and regional basis. It can also continue to provide economic development programs for use in New Jersey and professional development assistance. The New Jersey–level economic development activities, however, are very state-specific and the economic development professional should be reorganized under JCP&L External Affairs with the area managers. Alternatively, the economic development function can be completely phased out and the function can be handled by the area managers. New Jersey economic development has already been reduced from six positions to one. The economic development activity has been declining since the 2006-2007 time period.

Therefore, FE should identify and implement the most effective organizational design.

XI. Clean Energy

Schumaker & Company will assess Jersey Central Power & Light's (JCP&L's) accounting controls relative to the New Jersey Clean Energy Program, which was established as part of the Electric Discount and Energy Competition Act (EDECA). Among the areas or issues to be addressed in this review are:

- Initiatives to reduce peak demand, conserve finite resources, and promote new technologies
- The utility's participation in various programs like the Core Rebate Program, the Solar Renewable Energy Certificates, the New Jersey CleanPower Choice Program, Clean Energy Financing, and the SREC-only Pilot Program

No single solution can meet future energy needs. Instead, we need to consider multiple diverse energy technologies that don't deplete our natural resources or destroy our environment. Renewable energy technologies like the movement of wind and water, the heat and light of the sun, heat in the ground, and the carbohydrates in plants are all natural energy sources that can supply our needs in a sustainable way. And because they are homegrown, they can also increase energy security and create jobs.

A. Background

On February 9, 1999, the Electric Discount and Energy Competition Act was signed into law. EDECA established requirements to advance energy efficiency and renewable energy in New Jersey through a societal benefits charge. EDECA further empowered the New Jersey Board of Public Utilities (NJBPU) to initiate a proceeding and cause to be undertaken. This comprehensive resource analysis (CRA) of energy programs is currently referred to as the comprehensive energy efficiency (EE) and renewable energy (RE) resource analysis. After notice, opportunity for public comment, public hearing, and consultation with the New Jersey Department of Environmental Protection (DEP), within eight months of initiating the proceeding and every four years thereafter, the NJBPU determines the appropriate level of funding for EE and Class I RE programs that provide environmental benefits above and beyond those provided by standard offer or similar programs in effect as of February 9, 1999. These programs are now called New Jersey's Clean Energy Program (the NJCEP).

Initially, the programs developed at each New Jersey utility were administered by that particular utility. In 2007, however, the management and administration of these programs was transferred to the New Jersey Clean Energy Office. The exception was the Renewable Program, which had been transitioned in 2003. As a result, JCP&L's management of the Clean Energy Programs, other than the Comfort Partners Program and limited promotional support for the CleanPower Choice Program, is the responsibility of the Office of Clean Energy (OCE). Therefore, with the exception of the Comfort Partners and CleanPower Choice Programs, JCP&L acts primarily as a conduit for the collection of the monies that are used in the execution of the NJCEP. Such funds are passed on to the NJCEP for the accumulation and application of the various programs managed and administered by the Clean Energy Program. With respect to the Comfort Partners and CleanPower Choice Programs, JCP&L manages

and administers them, although their actual execution is contracted to outside firms. JCP&L and the other New Jersey utilities submit written descriptions of these programs and continue to manage the program filings and budgets collectively, which are presented to the Board for approval.

Program Funding

By order dated April 27, 2007, Docket No. EO07030203, the Board directed the Office of Clean Energy to initiate a third comprehensive EE and RE resource analysis proceeding. It also mandated the scheduling of public hearings on program funding and funding allocations for the years 2009 through 2012. By order dated September 30, 2008, Docket No. EO07030203, the Board set funding levels of $245 million for 2009, $269 million for 2010, $320 million for 2011, and $379 million for 2012. The Board's action to approve the 2009 programs and budgets was memorialized in an order dated January 8, 2009, Docket No. EO07030203. By order dated December 17, 2009, Docket No. EO07030203, the Board approved 2010 programs and budgets for the NJCEP as well as the compliance filings of Honeywell, TRC, the OCE, and six utilities.

In the 2010 budget order, as in previous orders, the Board made its approval contingent on appropriations. The Board stated that "[a]ny adjustments to the 2010 budget as a result of State appropriations, if necessary, will be considered by the Board and memorialized in a separate order." On February 10, 2010, Governor Christie issued Executive Order 14 in which he declared a fiscal emergency in the State of New Jersey. Pursuant to NJSA 52:27B-26, the Governor ordered the Director of the Division of Budget and Accounting within Treasury to identify and place into reserve funds sufficient to ensure that the state budget would remain in balance. On that authority, Treasury identified and placed $158 million of funding from the societal benefits charge, located in the Clean Energy Trust Fund within Treasury, into reserve.

As a result of these actions and because those funds were previously a part of the NJCEP 2010 budget, the 2010 budgets had to be modified in order to implement Executive Order 14. In this order, the Board will consider proposed modifications to the 2010 programs and budgets that were previously approved by the Board. The Board's action is consistent with its authority under NJSA 48:3-60(a)(3) as well as with the 2010 Budget Order.

The OCE prepared a straw proposal with revisions to the 2010 programs and budgets that was circulated for written comment. The Board also held a public hearing on this matter. Upon review of the comments and once additional information on actual expenses was received, the OCE prepared recommendations to the Board that modified the straw proposal. In light of the state's fiscal emergency, the comments submitted, and the Board's authority under EDECA, the Board found the OCE's recommendations to be reasonable and ordered the implementation of the program changes as recommended by the OCE (Board of Public (BPU) Utilities Docket No. EO07030203).

Utility Managed and Administered Programs

The two remaining programs that continue to be administered by the utilities are:

New Jersey Comfort Partners Program

The Residential Low-Income Program, known as New Jersey Comfort Partners, is managed by Atlantic City Electric, JCP&L, New Jersey Natural Gas, Elizabethtown Gas, Public Service Electric & Gas, and South Jersey Gas. It is designed to improve energy affordability for low-income households through energy conservation. To achieve this objective, several market barriers must be overcome. They include:

- Lack of information on either how to improve efficiency or the benefits of efficiency
- Low-income customers' lack of necessary capital to upgrade efficiency or even, in many cases, keep up with regular bills
- Low-income customers being the least likely target of market-based residential service providers owing to perceptions of less capital, credit risk, and/or high transaction costs
- Split incentives between renters and landlords

The program addresses these barriers through:

- The direct installation of all cost-effective energy efficiency measures
- Comprehensive, personalized customer energy education and counseling
- The installation of health and safety measures, as appropriate

The program is targeted toward participants in the Universal Service Fund. This target population is characterized by high-energy burdens based on their income. Program participation is prioritized by energy use, with the highest energy users being served first.

Electric and gas utilities with overlapping service territories jointly deliver efficiency, health and safety, and educational services so that customers receive both gas and electric efficiency measures simultaneously. The selection of program delivery contractors and program delivery costs is shared among the participating gas and electric utilities. The implementation vendor contracts were finalized in August 2009, with three (3) existing and two (2) new implementation contractors hired.

The utilities use the JCP&L web-based Comfort Partners System as the statewide platform to track all program participants, measures, and energy savings. This system is used by all utilities, BPU Clean Energy staff, multiple program delivery vendors, inspection vendors, and state WAP agencies.

A minimum of 15% of randomly selected treated homes are subject to verification and inspection by an independent contractor(s) hired by the utilities. Third-party quality-assurance process enhancements may also take place.

In order to achieve the reductions in the revised reduced budget for 2010, the utilities agreed that the Comfort Partners Program needed to make changes in the 2010 Program Plan. They also agreed to delay program evaluation until 2011, to possibly reduce the number of customers to be served, or at a minimum to reduce the number of homes receiving pilot measures, or higher-cost efficiency measures that could produce deeper energy savings. It is further noted that program spending allowance guidelines were increased in 2009 for the Comfort Partners Program to be consistent with other low-income state-weatherization programs using federal stimulus funds. In addition, the Comfort Partners' contractor infrastructure was increased by two additional contractors in 2009.

To be consistent with other low-income state-weatherization programs using federal stimulus funds, deep energy savings reductions were pursued. Therefore, the goal of the Comfort Partners Program was a range from 5,442 to 7,800 participants, depending on average spending per home and contractor capability. The electric service customer goal was a range from 5,442 to 7,800. The gas service customer goal was a range from 5,249 to 7,225.

CleanPower Choice Program

Utilities support the Clean Energy Campaign for the CleanPower Choice Program. The CleanPower Choice program offers retail electric customers the option of selecting an energy product or products with higher levels of renewable energy than is required by the renewable portfolio standards.

The program is delivered through a collaborative utility and CleanPower marketer program that is hosted by the four investor-owned electric utilities. The utilities provide a delivery platform to enable enrollment and billing, with oversight by the Office of Clean Energy. The program is offered as an add-on subscription of CleanPower and is supplied by a qualified third-party CleanPower Marketer without interruption to customers' basic electric service. The Office of Clean Energy plays a lead role in marketing the program to customers in cooperation with electric and gas utilities and CleanPower marketers.

The utilities have implemented the requirements of the August 19, 2008 Board Order in Docket No. EA07110885, "In the Matter of Account Look-up for the Third-Party Suppliers (TPSs) and CleanPower Marketers (CPMs)." Program tasks include:

- Implement the pilot of a Customer Account Look-up procedure allowing the provision of Electric Distribution Company (EDC) account numbers to requesting TPSs and CPMs for which a valid release form has been obtained.
- Track the cost of providing the Customer Account Look-up service during the first year of implementation and file that information with the Board.

- File required monthly, quarterly, and annual program information with the Board.

The 2010 budget for this program, as shown in Appendix B, is intended to reimburse utilities for expenses necessary to:

- Make or maintain the Information Technology changes required to support a line item on customer bills
- Develop and maintain systems to support electronic data interchange transactions with CleanPower Marketers
- Facilitate customer signup

B. Findings & Conclusions

Finding XI-1 JCP&L is responsible for only a limited segment of the Clean Energy programs.

There are several other Energy Efficiency and Renewable Energy programs associated with Clean Energy (**see** www.njcleanenergy.com), including the Core Rebate Program, the Solar Renewable Energy Certificates, the New Jersey CleanPower Choice Program, Clean Energy Financing, and the SREC–only Pilot Program. Each of these programs, with the exception of the New Jersey CleanPower Choice Program and Comfort Partners Program, is administered by the Office of Clean Energy. In 2009, the BPU required JCP&L to prepare a New Jersey CleanPower Choice Program brochure to be inserted into customers' bills in the months of April and May 2009. In 2010, JCP&L was not required to prepare a bill stuffer for CleanPower.

As discussed above, JCP&L is responsible for only the Comfort Partners Program and the CleanPower Choice Program.

Finding XI-2 The Comfort Partners Program and the CleanPower Choice Program were reduced as a result of the Governor's issuance of Executive Order 14, although additional funding was later found.

The BPU's Order in Docket No. EO07030203, dated April 21, 2010, approved the reduction in spending on the Comfort Partners Program by $1.9 million for the statewide Comfort Partners Program and by $0.3 million for JCP&L, as shown in *Exhibit XI-1*.

Exhibit XI-1
Comfort Partners Program Spending Levels
as of April 21, 2010

	Statewide	JCP&L
Revised Budget Approved 4/21/2010	$29,218,313.45	$3,343,256.68
Original Budget Approved 12/16/2009	31,123,620.38	$3,636,672.14
Reduction in Comfort Partners Program	**($1,905,306.93)**	**($293,415.46)**

Source: Information Response 914 REVISED

In July 2010, the utilities reported to the OCE that a combination of increases in the number of measures installed in each home treated, which were implemented to increase the level of savings per home, and a ramp-up in the number of contractors and homes treated had caused several utilities to approach their budget limits. The utilities indicated that the increase in expenses was unprecedented and occurred in a very short time period. As a result, not enough time was allowed for all of the utilities to modify the program so that they remained within their budget throughout the remainder of the year without suspending the program to new applicants. The utilities indicated to staff that approximately $3 million in additional funding would be required to keep the program operating through the end of the year. Such funding would also mitigate layoffs by the contractors that deliver the program and install the measures in low-income homes.

Subsequently, the OCE identified approximately $3 million in funds that were made available for reallocation to the Comfort Partners Program, with Board approval. The BPU provided that approval in its order dated August 18, 2010 in Docket No. EO07030203. The effect of the BPU's decision was an increase in spending from the original budget by $1.1 million for the statewide Comfort Partners Program and by $0.7 million for JCP&L, as shown in *Exhibit XI-2*.

Exhibit XI-2
Comfort Partners Program Spending Levels
as of August 18, 2010

	Statewide	JCP&L
Revised Budget Approved 8/18/2010	$32,206,497.01	$4,313,256.68
Original Budget Approved 12/16/2009	31,123,620.38	3,636,672.14
Increase in Comfort Partners Program	**$1,082,876.63**	**$676,584.54**

Source: Information Response 914 REVISED

The BPU's decision increased spending even more when compared to its April 21, 2010 decision to cut Comfort Partners spending. As shown *Exhibit XI-3*, the BPU's August 18, 2010 decision increased the

statewide Comfort Partners Program by almost $3 million and JCP&L's allocated share of that spending by almost $1 million.

Exhibit XI-3
Comfort Partners Program Spending Levels
Compared to Original
as of December 31, 2010

	Statewide	JCP&L
Revised Budget Approved 8/18/2010	$32,206,497.01	$4,313,256.68
Revised Budget Approved 4/21/2010	$29,218,313.45	$3,343,256.68
Increase in Comfort Partners Program	**$2,988,183.56**	**$970,000.00**

Source: Information Response 914 REVISED

In short, the Comfort Partners Program was less affected by the Executive Order than perhaps other programs.

Finding XI-3 **JCP&L is appropriately managing its remaining responsibilities involving the Clean Energy programs.**

JCP&L's responsibilities for support of the Comfort Partners Program and the CleanPower Choice Program are identified in the program description and budget document, which is submitted to the BPU on an annual basis. In addition to specifying budgets levels and targeted customer goals, the program includes a requirement to perform quality-assurance (QA) inspections on the work of the contractors used in the Comfort Partners Program.

The final 2010 JCP&L Comfort Partners production report shows that total JCP&L production for 2010 was 2,395 jobs. A total of 618 QA inspections were performed in 2010, which is over a 25% inspection rate (618 jobs/2,395 jobs) compared to a minimum of 15% or approximately 359 (15% × 2,395 jobs) that would be required per procedure for 2010.

C. Recommendations

None

XII. Support Services

This chapter provides discussions regarding the following Jersey Central Power & Light (JCP&L) support services, which are generally performed by FirstEnergy Service Company (SERVECO) staff:

- Risk management
- Legal services
- Facilities and property management
- Supply chain
- Fleet management
- Information technology
- Records management

A. Risk Management

This section addresses FirstEnergy's (FE) and Jersey Central Power & Light Company's (JCP&L) risk management activities. These activities include corporate risk management, insurance, and claims.

Background & Perspective

FirstEnergy has stated that managing the various risks inherent in the utility industry is critical. To that end, goals for all risk management groups are geared toward creating an environment whereby risks are quickly identified, properly understood, and effectively managed. This approach includes identifying events, issues, and circumstances that could harm FirstEnergy and prevent it from fully achieving its business objectives.

Enterprise Risk Management – Integrated Framework

In 2001, the Committee of Sponsoring Organizations (COSO) of the Treadway Commission (a private-sector organization dedicated to providing guidance to executive management on various governance issues) engaged PricewaterhouseCoopers (PwC) to develop a framework for management. The aim of this framework was to improve organizational enterprise risk management. The resulting report, Enterprise Risk Management – Integrated Framework (published in 2004), provides a more robust and extensive focus (beyond internal controls) on the broader subject of corporate risk management. This report lays out eight broad framework components to a comprehensive risk management program. They are:

- Internal environment – the tone the organizations set for how risk is viewed and addressed by managers and employees, including risk management philosophy and risk appetite, integrity and ethical values, and the environment in which they operate

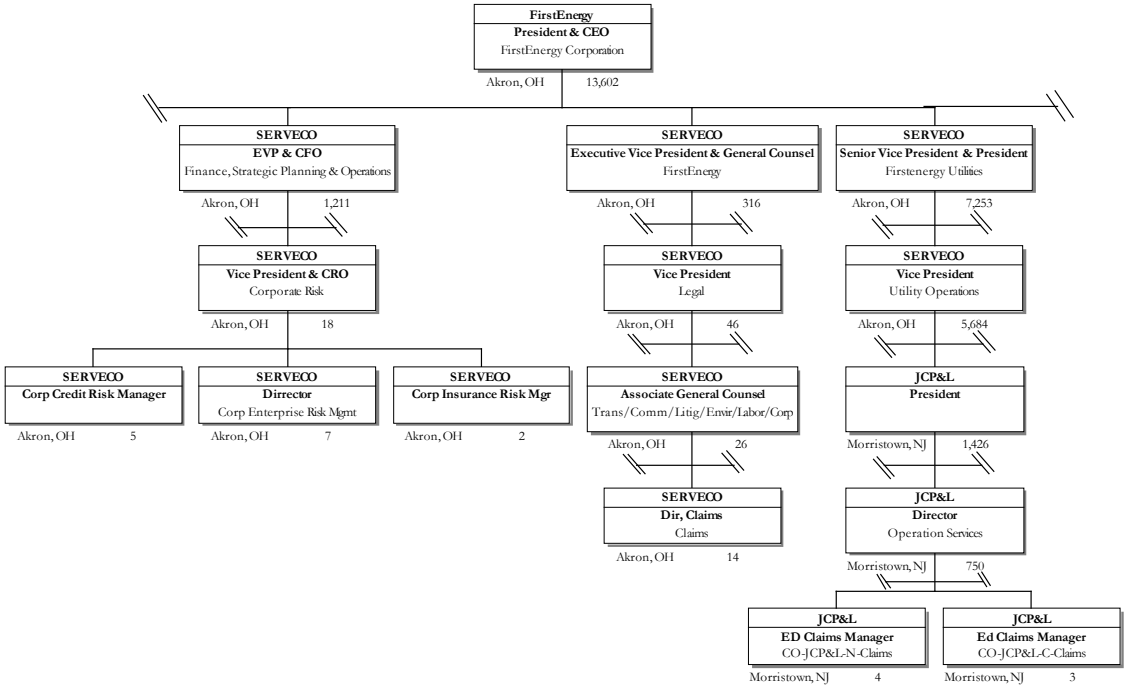
- Objective setting – a process to set specific objectives and ensure that the chosen objectives support and align with the organization's mission and appetite for risk
- Event identification – a process for identifying external and internal events affecting the achievement of an organization's objectives, distinguishing between risks and opportunities; opportunities are channeled back to management's strategy or objective-setting process.
- Risk assessment – a process for analyzing risks, considering likelihood and impact as a basis for how they should be managed; risks are assessed on an inherent (underlying/built-in) and residual basis.
- Risk response – developing a set of actions (e.g., avoiding, accepting, reducing, and sharing) to align risks with the organization's risk tolerances/appetites
- Control activities – policies and procedures established and implemented to ensure that responses are effectively carried out
- Information and communication – relevant information is identified, captured, and communicated in a form and timeframe (up, down, and across an organization) that enable people to carry out their responsibilities
- Monitoring – ongoing management activities and/or separate evaluations that monitor risk and ensure that modifications are made as necessary

A company's enterprise risk management can and should be tailored to its specific environment and needs.

Organization and Staffing

The Corporate Risk Management/Insurance and Claims functions are shown in *Exhibit XII-1*.

Exhibit XII-1
Risk Management and Claims Organization



Source: Information response 209 & 54.

The Risk Management and Insurance functions report directly to the Vice President Corporate Risk and Chief Risk Officer (CRO), who in turn reports directly to the Executive Vice President and Chief Financial Officer (CFO). The position of Chief Risk Officer and the implementation of an enterprise risk management approach have been in place at FE since November 2000. The Chief Risk Officer also has reporting responsibilities to the Chairman of the FE Board of Directors Audit Committee (see chapter on Executive Management and Corporate Governance). Reporting directly to the CRO are managers for Credit Risk and Insurance and a director for enterprise risk management.

The JCP&L Claims function is divided between North and Central districts, with each district's claims staffed by a manager and five (total) claim representatives. The FE Claims group reports up through the legal organization to the Executive Vice President (EVP) and General Counsel. FE Claims consists of a manager and 13 employees, which include eight employees (located in Reading, PA) who process claims and three claim representatives/adjusters who manage claims and work with external counsel to resolve personal injury and property damage claims.

Expenses for the Risk Management/Insurance organization have been steady over the past five years as shown in *Exhibit XII-2*.

Exhibit XII-2
Risk Management Expenses – Five Year

	2005	2006	2007	2008	2009
Budget	1,949,656 [16]	2,040,067 [17]	2,222,415 [19]	2,227,369 [20]	1,994,607 19]
Actual	1,690,006 [16]	1,856,380 [16]	1,998,647 [19]	2,190,964 [20]	1,868,014 [17]
Variance	(259,650)	(183,687)	(223,768)	(36,405)	(126,593)

Source: Information Request 209 and 210
Total Head count shown in b**rackets**

Labor accounts for most of the expenses and has remained fairly stable over the past five years.

FirstEnergy's stated risk management goal is to manage its overall exposure to uncertainty to an acceptable level. This aim is accomplished by systematically identifying sources and types of risk exposures, measuring the level of risk, and designing control processes to manage these risks. Control processes can seek to avoid all or part of the risk, accept the risk with active management participation, or transfer the risk (e.g., insurance).

Corporate Risk

Corporate risk is addressed through two departments: Corporate Enterprise Risk and Corporate Credit Risk.

The Enterprise Risk Management (ERM) group works with business units to provide risk management consultation. It also develops and implements risk management analytical tools and models and conducts integrated business planning risk workshops. In addition, the ERM group develops risk tolerances and associated policies and provides risk reporting to both the Risk Policy Committee and the Audit Committee of the Board of Directors.

The Credit Risk Management (CRM) group works with business units on credit issues and managing associated risks. This task includes minimizing the impacts of credit defaults by wholesale power counterparties, customers, vendors, and other business partners. This group is specifically responsible for securing credit for FE to purchase wholesale power from other utilities/generating companies and for assisting other departments in understanding the credit quality of their vendors.

FirstEnergy has a documented corporate risk management policy that encompasses:

- Purpose and background, including key obligations of FE and how those obligations pertain to the risk profile
- Definition of types of risks and the corporate risk philosophy
- Specific roles and responsibilities for risk management within the FE organization, including the Risk Policy Committee and specific senior management and director levels

FirstEnergy has several documented policies for managing financial risk, including:

- *Short-term investment* – specific guidelines to maintain capital and liquidity while retaining relationships with financial institutions (e.g., banks). This policy defines appropriate short-term investment instruments, exposure limits in order to spread risk, appropriate custodial arrangements, and reporting and performance guidelines.
- *Commodities* – control requirements and framework around which the Regulated Commodity Sourcing groups assess, manage, and report risks associated with bulk power supply. The ERM and CRM groups are involved with defining and monitoring these processes. Details include hedging/derivative strategies and guidelines, ethical guidelines, and required level of approvals.
- *Treasury interest rate* – framework for protecting FE from interest rate fluctuations undertaken only in the context of hedging or protecting underlying financial exposures. Speculation (e.g., trading in interest rates, writing options, or taking active positions involving financial derivative instruments) is forbidden.

Insurance

The Insurance Risk Management (IRM) group is responsible for transferring property, liability, and some other financial exposures to insurance companies (via insurance policies). IRM supports operations by providing the certificates of insurance and surety bonds needed to meet contractual obligations. IRM also provides fire protection consulting on FE properties.

Insurance premium expenses charged to JCP&L are summarized in *Exhibit XII-3*.

Exhibit XII-3
Insurance Premium Expenses
2005 to 2009

Insurance Type	2005	*2006*	2007	2008	2009
Excess Liability	$787,603	$807,007	$814,229	$769,219	$591,490
Excess Worker's Comp	$33,603	$34,584	$43,156	$38,030	$37,338
General Liability	$32,558	$60,185	$50,094	$35,159	$54,679
Property	$298,999	$301,447	$311,265	$280,166	$420,793
Boiler & Machinery	$7,091	$7,277	$14,469	$13,898	$14,954
Surety Bonds	$16,026	$29,201	$119,620	$104,318	$73,352
Total	$1,175,880	$1,239,701	$1,352,833	$1,240,790	$1,192,606

Source: Information Response: 213 & 214
Note: Figures do not include one-time Nuclear Liability Refund (Oyster Creek) in 2008.

Overall premium costs have remained steady over the past five years. Individually, property insurance rates have shown the greatest increases with JCP&L attempting to hold down premium cost by

increasing deductible amounts. This escalation was offset by decreases in excess liability premium costs (also by increasing the deductible amount).

FirstEnergy conducts periodic benchmarking on insurance terms, deductibles, costs, etc. and uses this data as levels for various insurance policies and costs. FE's informal goal is to place within the norm of the utility benchmark group, although other industry benchmarking numbers are analyzed and considered. Insurance broker contracts are bid out every three years and FirstEnergy makes considerable use of industry-owned mutual insurance funds (e.g., Nuclear Electric Insurance Limited, Aegis, and Energy Industry Mutual).

FirstEnergy has not conducted any formal insurance studies in the past five years. Instead, it has annually reviewed the Edison Electric Institute (EEI) benchmarking data on insurance as a guide for establishing insurance limits and deductibles and as a basis for evaluating carrier bids. The IRM group also conducts annual payback calculations and cost benefit analysis to determine optimal deductible and coverage limits. Annual presentations on insurance coverage and expenses are made to the Audit Committee of the FE Board of Directors for its review and approval.

Types of insurance (other than health insurance) directly charged to JCP&L include boiler and machinery, excess liability, excess worker's compensation, property, general liability, and surety bonds. Excess liability and property insurance are layered and spread throughout multiple insurance companies, with no one company accounting for more than 25% exposure. Policy limits range from $35 million to $200 million. Excess worker's compensation, boiler and machinery, and the first levels of excess liability and property insurance have deductibles. Policy limits, deductibles, and premiums have remained stable over the past five years.

Insurance coverage allocated to JCP&L includes directors' and officers' (D&O) liability, fiduciary liability, and commercial crime. These policies are all layered, with policy limits ranging from $10 million to $50 million. Deductibles apply to the first layer of each line of insurance. Policy limits and deductibles have remained constant over the past five years, with total premiums declining during that period.

JCP&L's insurance-related loss control and prevention and its controls program and activities consist of onsite surveys by insurance company representatives who tour JCP&L facilities and provide recommendations to mitigate fire hazards. These documented surveys include assessing building changes since the last survey, reviewing the implementation of recommendations from previous surveys, undertaking a walkthrough with local management, and conducting an exit interview to discuss findings and future recommendations for improvement. Loss control surveys are periodically conducted at Northern and Central New Jersey headquarters and at Central New Jersey stores.

FirstEnergy is qualified to maintain self-insurance for motor vehicles and worker's compensation in New Jersey. Annual applications are submitted and approved by the respective state (e.g., New Jersey). Insurance related to employees and benefits (e.g. Health Insurance) is handled by the Human Resources Department.

Claims against JCP&L are forwarded to the JCP&L Claims group where they are entered into a payable system. An investigation is then initiated by a claims representative. Based on the results of this investigation, the claim will either be paid of denied.

Claims against JCP&L have declined over the past five years as shown in *Exhibit XII-4*.

Exhibit XII-4
Total Claims for JCP&L
2005 to 2009

Year	Received	Closed/Denied	Settled	$ Paid
2005	2732	2400	541	366,130
2006	3156	2223	824	426,119
2007	2146	1856	269	423,646
2008	2333	1950	318	320,299
2009	1854	1599	245	287,129

Source: Information Response 215

When JCP&L equipment, facilities, or property are damaged by the negligence of third parties, the claim is identified and entered into the system. The FE Corporate Claims group is then responsible for billing and collecting these claims against outside parties.

Claims by JCP&L against other parties are shown in *Exhibit XII-5*.

Exhibit XII-5
JCP&L Claims against Other Parties
2005 to 2009

Year	Received	Amount Invoiced	Amount Paid	Balance Due
2009	1574	$5,272,930	$4,379,449	$755,507
2008	1543	$4,797,940	$4,102,806	$552,135
2007	1633	$5,353,731	$4,653,760	$503,961
2006	1540	$4,680,458	$4,121,681	$385,440
2005	1455	$4,578,905	$3,794,161	$641,046
Total	7745	$24,683,964	$21,051,857	$2,838,089

Source: Information Response 837

Claims received and amounts invoiced and paid have remained fairly steady over the past five years.

Findings & Conclusions

Finding XII-1 FirstEnergy/JCP&L has a robust risk management program, although the program can be better summarized and documented.

Quarterly risk assessment matrixes are maintained for the Financial group, fossil fleet, and major projects (e.g., Sammis Air Quality Control and DOE Smart Grid). These templates include information describing the specific risk, likelihood of occurrence (percent), consequences of occurrence, cost/schedule impacts, risk owners, and mitigation strategies.

There is an actively established Risk Policy Committee (RPC) with senior managers from all parts of the FE organization. In addition, there is an Investment Committee made up of senior managers in the Finance group that also addresses financial risks.

As mentioned earlier, the CRO makes quarterly presentations to the FE Board on enterprise risk management. These presentations include details on major risks and their implications to FirstEnergy, various exposures, and attendant corporate positions. They also include suggested strategies for mitigating identified top risks.

The RPC meets quarterly and is documented via agendas and meeting minutes. A wide range of topics are discussed and any member is encouraged to bring up additional matters for committee consideration. Topics include updates on major projects, financial risk activities (e.g., hedging), regulatory requirements (e.g., Ohio energy efficiency programs), policy update changes, commodity operations, and a variety of other topics. Draft business unit plans are reviewed by the committee and associated risks are identified and discussed. The RPC also ensures that all major risks are identified in these draft plans, including risks associated with workforce issues (e.g., demographics, talent development, and retention). Annually emerging risks the company may have to address are discussed. They include emerging legislation involving changes in environmental, human resources, state and federal regulatory, and nuclear security requirements. Presentations are also heard from other management committees (e.g., Investment Committee) to further identify potential risks. The RPC, through the Chief Risk Officer, reports quarterly to the FE Board Audit Committee.

In 2009, Internal Auditing, at the request of the CRO, performed two audits: one of key enterprise risk management reports and one to ensure that treasury and commodity contracts were properly loaded and retrievable from Filenet – FE's standard system for records and document retention. Both audits found that controls were complete, accurate, and effective and that improvement recommendations had been made.

Although there is a considerable amount of effort devoted to risk management activities, there are no periodic reports or studies to pull all of these activities together.

Finding XII-2 The status and reporting relationship of CRO is appropriate.

The Chief Risk Officer is specifically identified in the FE organization and is a member of the senior management team (Vice President) that reports directly to the Executive Vice President & Chief Financial Officer (only two reporting levels down from the FE Chief Executive Officer). Furthermore, the Chief Risk Officer functionally reports to the Chairman of the FE Board Audit Committee. The CRO attends all Audit Committee meetings and most full Board meetings and cannot be removed from his position without the consent of the Chairman of the Audit Committee.

Finding XII-3 Insurance processes and coverage are appropriate, although analyses should be periodically documented.

The Insurance Department annually reviews benchmark statistics compiled by EEI on a number of insurance parameters, including departmental responsibilities, insurance placement (e.g., use of outside brokers/consultants), limits/deductibles, terms (e.g., multiyear, annual adjustments, and valuation basis), key markets (insurers), premium allocation, and breakdown features on specific types of insurance. The five most critical risk management issues and challenges are also summarized. Analysis is conducted annually on limits and deductibles, and major insurance coverage is competitively bid. These processes and analyses are not periodically documented in an insurance study.

As mentioned earlier, FE/JCP&L's insurance coverage and costs have remained steady over the past several years and have fallen well within industry norms.

The Manager of Insurance makes an annual presentation of insurance coverage and cost to the FE Board of Directors.

Recommendations

Recommendation XII-1 Conduct periodic, formal risk management studies. (Refer to Finding XII-1)

Summarize and document, in written narrative format, all key assumptions, analyses, options considered, programs and actions taken, routine feedback mechanisms, and actual experience for all risks identified in FE's Enterprise Risk Management Program. This report can follow the same major topic outline found in the COSO study (see the Background and Perspective section of this chapter). These studies can provide a historical basis for ensuring that FirstEnergy/JCP&L continue to maintain a strong risk management function.

Recommendation XII-2 Conduct periodic, formal insurance studies. (Refer to Finding XII-3)

Summarize and document, in written narrative format, all key assumptions, analyses, options considered, bid evaluations, and decisions concerning FirstEnergy/JCP&L insurance needs. Include discussions on

actual exposure experience and any changes from the last report. These studies can provide a historical basis for ensuring that all insurance needs are being properly met.

B. Legal Services

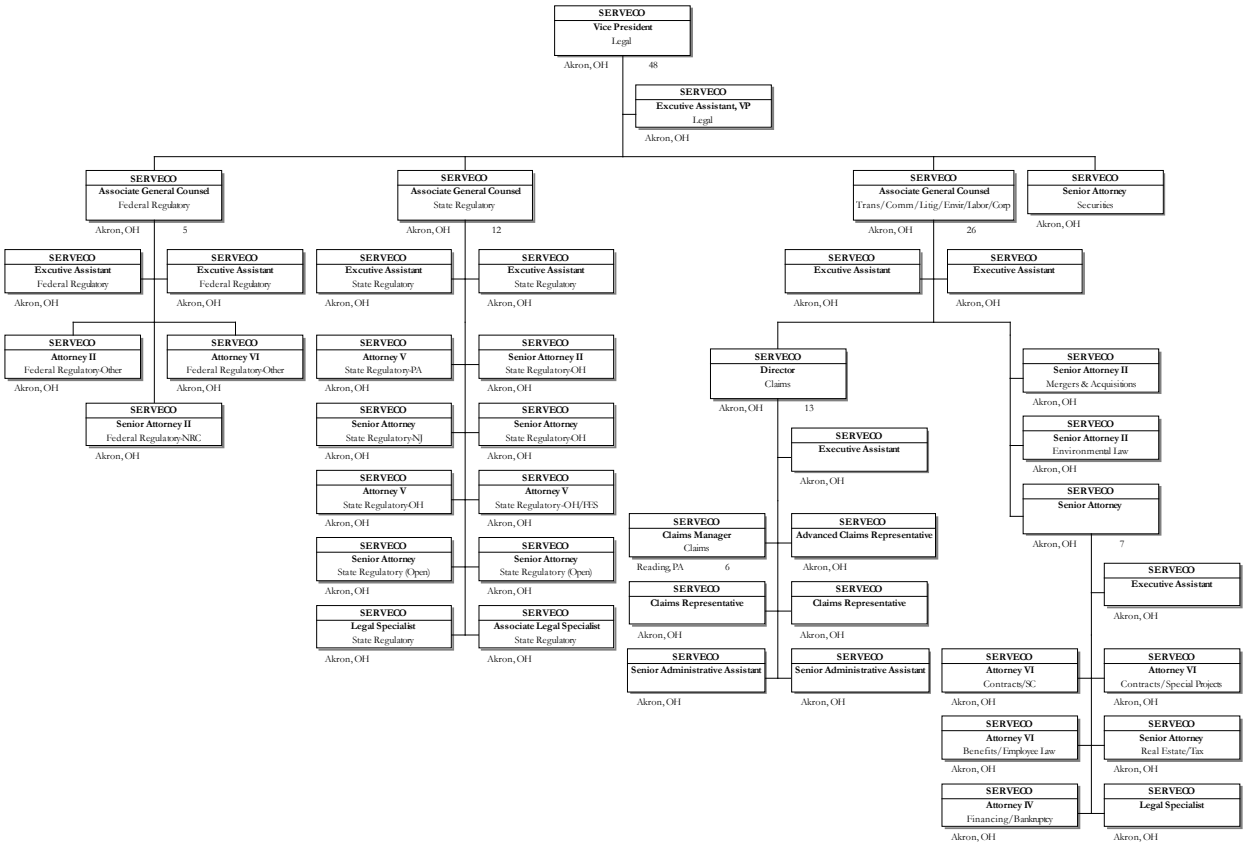
This section discusses Jersey Central Power & Light's (JCP&L's) legal function program, which is provided by the FirstEnergy (FE) Legal Department within the FE Service Company (SERVECO) organization.

Background & Perspective

Organization and Staffing

Exhibit XII-6 illustrates the FE SERVECO Legal organization.

Exhibit XII-6
SERVECO Legal Organization
as of June 30, 2010



Source: Information Response 54

Included in the Legal organization are both law and claims functions, as follows:

- AGC-Federal Regulatory group (Federal Energy Regulatory Commission (FERC)/North American Electric Reliability Corporation (NERC))
- AGC-State Regulatory group (New Jersey Board of Public Utilities (NJBPU), Pennsylvania Public Utilities Commission (PaPUC), and Public Utilities Commission of Ohio (PUCO))
- AGC-Transactions/Commercial Litigation/Environment/Labor group, which includes contracts, real estate/tax assessments, employment/benefits law, financing/bankruptcy lawyers, plus the Claims group
- Senior Attorney (securities)

Time is reported on weekly timesheets by Legal employees. Time is either directly charged or allocated based on SERVECO allocations (as further discussed in *Chapter III – Affiliate Relationships and Cost Allocation Methodologies)*.

Law

Within the Law Department, attorneys are classified based on their experience and their ability to function independently and strategically. These classes (from lowest to highest) are:

- Attorney I through VI
- Senior Attorney I and II
- Associate General Counsel (AGC)

The Legal Department's philosophy is that FE attorneys lead and are in charge of all legal activities, even if that activity is conducted by external counsel firms. FE approaches projects with in-house counsel directing activities, whereby attorneys are the substantive lead of any engagement conducted with these firms. Although external attorneys may be performing many of the activities, management indicates that there is a considerable amount of communication to provide these firms with direction.

FE has two reasons for using external counsel firms:

- The need for specialty skills
- The benefit of supplemental resources to existing staff when workload is high

JCP&L typically uses external counsel firms for claims, employment/labor law, real estate (easements, zoning, tree trimming, etc.), and environmental legal work. Firms used by JCP&L are displayed in *Exhibit XII-7*.

Exhibit XII-7
Use of External Counsel Firms by JCP&L
as of June 30, 2010

Firm	Typical Areas of Counsel
Akin Gump Strauss Hauer & Feld LLP	Federal Regulatory
Alston & Bird LLP	Federal Regulatory
Caruso Pope Edell Picini	Claims
Chiumento McNally LLC	Claims
Dalcortivo Law Offices	Bankruptcy
Daniel F. Sahin PC	Claims
Davis Wright Tremaine LLP	Federal Regulatory
Donald S. Mazzotta PC	Claims
Duane Morris LLP	Commercial Litigation
Evans, Osborne & Kreizman	Claims
Genova Burns	Labor/Employment
Harvey, Pennington, Cabot	Claims
Hepler Broom	Claims
Hoagland Longo Moran Dunst	Claims
Hogan & Hartson LLP	Federal Regulatory
Hunton & Williams	Federal Regulatory
Keller and Heckman LLP	Tax
Law Firm of Russell R. Johnson III	Bankruptcy
Law Offices of John S. Brady	Claims
Levitan & Frieland PC	Claims
Lowenstein Sandler	Claims
McElroy Deutsch Mulvaney	ClaimsReal Estate
Mitchell Mitchell Gallagher	Claims
Morgan, Lewis & Bockius LLP	Federal Regulatory/State Regulatory
Newman Williams Mishkin	Claims
Ogletree Deakins Nash Smoak	Labor/Employment
Peters & Wasilefski	Claims
Picillo Caruso PC	Claims
Riker Danzig Scherer Hyland	State Regulatory
Roland & Schlegel LLC	Claims
Rudolph & Kayal	Claims
Ruprecht, Hart & Weeks LLP	Claims
Schenck Price Smith & King	Environmental
Skadden, Arps, Slate, Meagher	Federal Regulatory
Squire Sanders and Dempsey	Financing
Weiner Lesniak	Claims/Labor/Employment
Wiley Malehorn & Sirota	Claims
Winston & Strawn	Federal Regulatory

Source: Information Response 324

JCP&L has 10 to 12 external counsel firms that are routinely used, approximately 80% of which are leveraged mostly for claims work.

FE management asks external counsel firms to control costs and to be innovative in how they provide services. As a result, payments to external counsel are made in multiple ways, including:

- Project budgets
- Retainer/alternative billing
- Conventional hourly rates
- Fixed fees

Approximately 20% of external firms use a retainer/alternative billing methodology, although firms are required to provide hourly support so FirstEnergy can review over/under budget situations. Action is taken by FE management if charges are more than 20% over/under budget, a provision which FE refers to as the 20% rule. The organization also asks all external counsel firms to provide a discount from their published rates.

Systems used by all Legal Department groups include:

- Hummingbird DM (eDocs) (document management)
- TeamConnect (matter management)
- Concordance (litigation document management), plus Lotus Notes (e-mail system) for litigation holds as part of the e-Discovery process

Within the Legal Department there are also two regulatory groups, one focusing on state regulatory issues and the other focusing on federal regulatory issues.

Law – Federal Regulatory

The Federal Regulatory group includes an AGC, three other attorneys (a senior attorney focusing on Nuclear Regulatory Commission (NRC) issues and two other attorneys handling FERC/wholesale issues and supporting state regulatory issues, as necessary), and two executive assistants. Among the issues handled by the Federal Regulatory group are:

- PJM Interconnection (PJM)/Midwest Independent System Operator (MISO) legal matters
- FERC filings, such as market-based filings, transmission filings, and merger filings, like the one recently made
- Generation interconnection load issues
- Unregulated FE Solutions generation issues
- Federal compliance audits and issues
- Affiliates
- NRC mandatory reliability interactions

- Licensing filings and issues in which this group provides regulatory support to the FirstEnergy Nuclear Operating Company (FENOC), the primary FE contact with NRC on issues such as extending licenses with the NRC, NRC investigations, nuclear decommissioning trust (NDT) issues, etc.

Because FERC and NRC are located in Washington, D.C., most external counsel firms providing FE groups with federal regulatory expertise are also located in that geographic area. They include:

- Akin Gump Strauss Hauer & Feld, LLP (MISO)
- Alston & Bird, LLP (PJM)
- Morgan, Lewis & Bockius (nuclear)
- Skadden, Arps, Slate, Meagher & Flom (big transactions, such as mergers, RTO consolidations, etc.)
- Winston & Strawn, LLP (hydroelectric licensing/Part 1 Federal Power Act (FPA) requirements)

When looking for new firms to address non-routine issues, discussions occur between legal and business unit (BU) management. If the issues are significant enough, the Executive Vice President (EVP) & General Counsel and Vice President, Legal may also get involved. Routine filings are typically given to firms having existing relationships with the FE Legal groups. One of the growth areas is the mandatory FERC reliability standards. Because these standards are fairly new requirements, this group has been evaluating new external counsel firms and has been making its selections by performing the following informal steps:

- Having external firms make presentations
- Checking references with other utility organizations
- Evaluating fee arrangements
- Reviewing benchmarks

Systems used specifically by this group include:

- LegalEase (tracking of FERC filings)
- FERC Subscription eService (sending electronic copies of FERC issuances and decisions to a proceeding's parties)
- MISO/PJM "exploder" lists

Formal communications with operational groups include:

- Quarterly meetings and ad hoc calls with FENOC management
- Regulated Commodity Sourcing and FirstEnergy Solutions (FES) management meetings
- Vice President Rates & Regulatory Affairs management meetings
- AGC attendance at Executive Reliability Committee and Financial Disclosure Committee meetings

Law – State Regulatory

The State Regulatory group is primarily responsible for any legal work involving rate filings (OH, PA, NJ), customer complaints, and compliance (energy efficiency, others) for regulated operating companies. It also holds responsibility for FES' compliance filings (renewable energy, retail offerings, etc.) in PA and OH. This group has nine attorneys (two positions currently open), two legal specialists, and two executive assistants. All employees are located in Akron, OH, except for an attorney, a legal specialist, and an executive assistant who are located in Reading, PA, and are focused on Pennsylvania activities. Every two weeks, staff meetings are held were various topics are discussed. During these meetings, when work exceeds what attorneys in the State Regulatory area can handle, the group may discuss workload as input to the decision by the AGC and/or Vice President, Legal as to whether inside counsel elsewhere in the Legal Department or outside counsel is to be used handle the overload. Regarding NJ work, FE/JCP&L has a relationship with Morgan, Lewis & Bockius (ML&B), who has longstanding background and experience with JCP&L and with how FE works. In fact, this relationship began even before JCP&L was part of the FE organization. Annually, the Legal Department has meetings with relationship partners from outside counsel firms to discuss issues such as fee increases and succession planning.

As part of its training and development efforts, the State Regulatory group leverages expertise from external counsel organizations to provide training and law change summaries, as requested by FE management, because these firms are often involved in proposed legislation changes.

Formal communications with other FE groups also exist.

- Attorneys work closely with the Rates and Regulatory Affairs groups, including the holding of regular meetings with these groups.
- Attorneys also work closely with the General Counsel, who came up through the State Regulatory group.
- Attorneys have frequent communications with Energy Delivery groups.

Claims

The SERVECO Claims group is in the Transactions/Commercial Litigation/Environmental/Labor group within the Legal Department organization. This group is led by a manager and 13 employees, including five employees in Akron (OH) and eight employees in Reading (PA). Three claims representatives (some organizations refer to these employees as claims adjusters) in Akron (OH) manage the claims and work with external counsel to resolve personal injury (PI) and property damage (PD) claims (although they are not responsible for collections of claims payments.) The Akron (OH) group primarily handles OH and Western PA claims, while the Reading (PA) group primarily handles NJ claims, although it is really a team approach where the groups can help each other, if necessary. The two groups in OH and PA somewhat mirror each other, with the PA group having three individuals

responsible for investigating and processing receivable claims and two individuals responsible for processing payable/litigation claims.

This group handles only corporate claims. It does not handle regional claims, which are primarily PD claims under $20,000. For NJ, such claims are handled by JCP&L staff in Morristown (NJ) and Red Bank (NJ). The corporate claims are PD claims over $20,000 and any other litigated PI claims. They do not include environmental or regulatory claims, which are handled by others. Specifically, NJ environmental claims mainly relate to manufactured gas plant site remediation issues and are handled by Schenck, Price, Smith & King, LLP, a NJ law firm. State regulatory claims before the NJ BPU are handled by Morgan, Lewis & Bockius LLP, with office in NJ. Both of these outside firms are under active management by the Legal organization. NJ employees handling regional claims do not report to this group. Rather, they report to JCP&L's Director of Operations Services. Two Energy Delivery (ED) Claims Managers (one in northern NJ and one in central NJ) oversee claims representatives who are responsible for investigating and resolving claims.

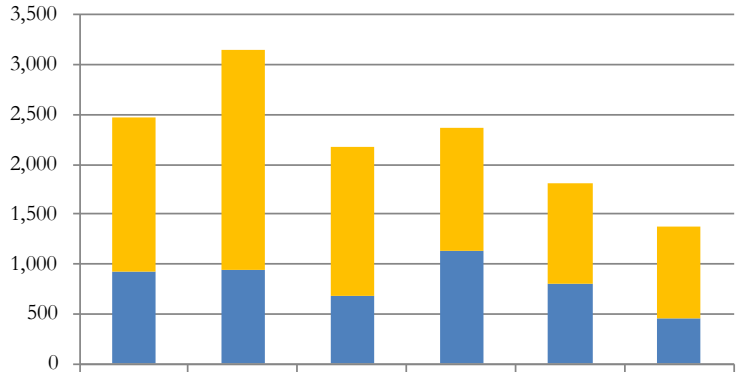
The receivables claims (those claims where payments are due to an FE group by an outside party) are primarily related to collections on damage to JCP&L's equipment, whereas payable claims (those claims where payments are due to an outside party by an FE group) are primarily related to over/under voltage. Although lawsuits may come directly to the corporate claims group, most claims start through the SERVECO customer service organization, which turns them over to the NJ-based claims group(s) within the JCP&L operations function. If the claim is a personal injury or large property damage one, the customer service organization creates a notification in C-Net to go directly to the corporate claims group. Currently, the most frequent type of "hot-button" claim is street lighting (trends are up), although previously "hot-button" claim types included stray voltage and temporomandibular joint (TMJ) claims. SERVECO management also indicates that the number of claims is often influenced by the occurrence of bad storms.

The number of invoiced receivables claims (including litigated matters) for JCP&L for the period spanning 1/1/05 through 7/06/10 totaled 8,414, with a total collection, to date (as of 7/06/10), of $22,961,032. The number of payable claims for JCP&L for the period spanning 1/1/05 through 7/06/10 totaled 13,338. Of that amount: (1) payable claims (non-lawsuit) for JCP&L amounted to 12,993, with a total payout of $1,930,475; and (2) 345 of the 13,388 payable claims turned into lawsuits, with a total payout of $5,220,730. Of the 345 lawsuits, 55 remained open (as of 7/06/10).

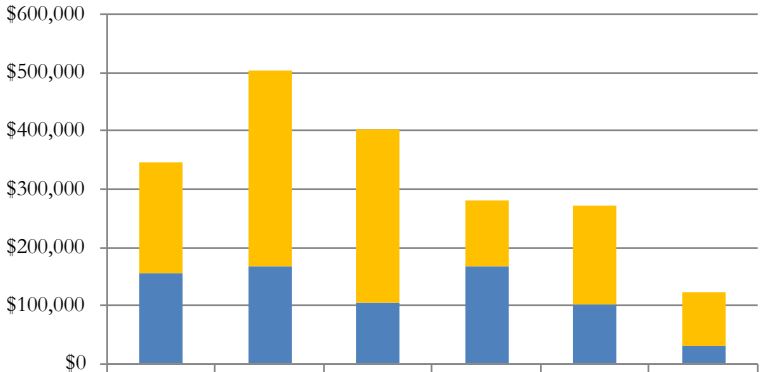
A report for the last five years detailed by year showing the number of JCP&L claims and the associated dollars paid or collected is illustrated in *Exhibit XII-8* and *Exhibit XII-9*.

Exhibit XII-8
JCP&L Legal Cases
2005 to 2010 (Through July 6, 2010)

Payable Claims



	2005	2006	2007	2008	2009	2010
Central JCP&L Payable Claims (#)	1,550	2,215	1,485	1,224	1,012	910
Northern JCP&L Payable Claims (#)	922	937	682	1,138	804	459



	2005	2006	2007	2008	2009	2010
Central JCP&L Payable Claims ($)	$190,311	$334,874	$298,818	$114,399	$169,342	$92,970
Northern JCP&L Payable Claims ($)	$156,588	$167,610	$105,215	$167,394	$102,058	$30,896

Source: Information Responses 332 and 520

Of these 13,338 payable claims with $1,930,475 paid, approximately 345 went to lawsuit, resulting in $5,220,730 paid, including litigation and settlement costs for those going to lawsuit.

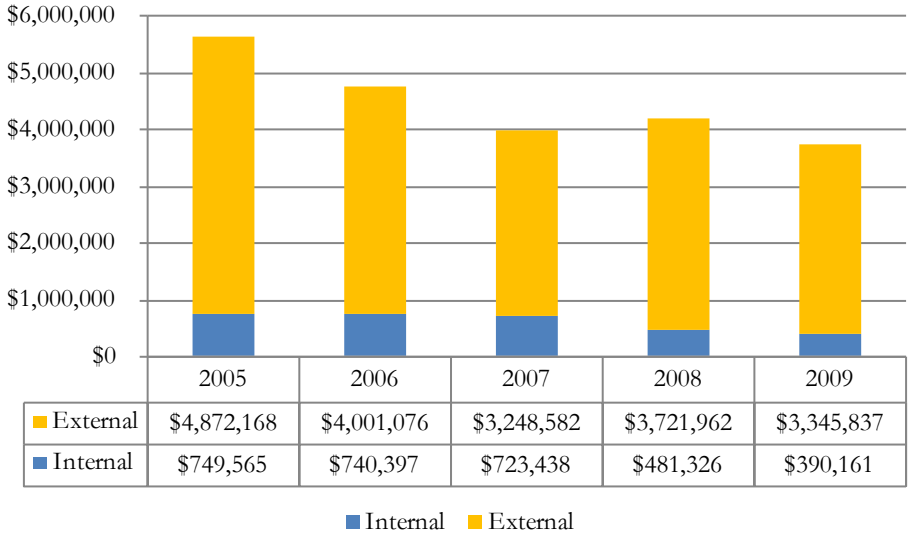
Exhibit XII-9
JCP&L Receivable Claims
2005 to 2010 (Through July 6, 2010)

Source: Information Responses 332 and 520

Operating Expenses

The Legal Department's budget, while taking into consideration all anticipated activities by the various business units, including those for JCP&L, is not specifically crafted by business unit (i.e., operating company). Therefore, budgeted external and internal legal costs for JCP&L were not available. Instead, *Exhibit XII-10* illustrates actual costs that have been either directly charged to JCP&L or allocated by SERVECO.

Exhibit XII-10
JCP&L Legal Expenses
2005 to 2009

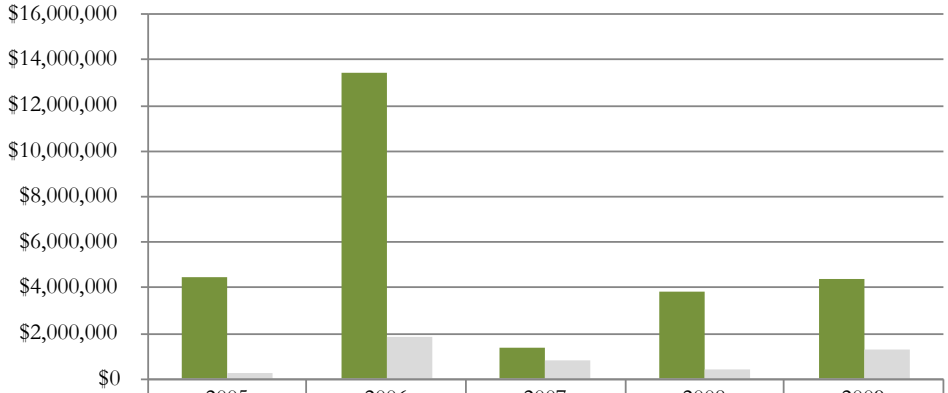


	2005	2006	2007	2008	2009
External	$4,872,168	$4,001,076	$3,248,582	$3,721,962	$3,345,837
Internal	$749,565	$740,397	$723,438	$481,326	$390,161

Source: Information Response 222

Exhibit XII-11 illustrates JCP&L's off-budget legal expenses relative to FE's. Legal expenses that are paid out of another departments' budget and/or are included in the expenses of a financing transaction are considered off-budget legal expenses. They are not included in legal expenses shown previously in *Exhibit XII-10*.

Exhibit XII-11
JCP&L Off-Budget Legal Expenses
2005 to 2009



	2005	2006	2007	2008	2009
FE Off-Budget Legal Costs	$4,491,979	$13,425,514	$1,341,976	$3,860,949	$4,381,840
JCP&L Portion of Off-Budget Legal Costs	$303,382	$1,852,453	$816,924	$395,701	$1,261,385

Source: Information Response 328

Findings & Conclusions

Law

Finding XII-4 **The Legal Department's performance objectives are vague and its key performance indicators (KPIs) in support of the Legal Department's mission and objectives have not been fully developed.**

The mission statement of the Legal Department is:

> "The Legal Department will provide exceptional counsel that assures legal compliance and enables FirstEnergy to optimize business outcomes in all legal, regulatory, and commercial contexts."

In support of this mission, the Legal Department's 2010 performance objectives include:

- Providing exceptional counsel to the operating companies, FENOC, and FES in the accomplishment of regulatory, commercial, and compliance goals in partnership with other shared services departments
- Supporting HR and the business units in implementing the workforce plan, including providing legal support for reorganization and hiring activities, retention strategies, and benefit plan design and administration
- Providing timely and effective SEC compliance support
- Managing the Legal function to enhance capabilities and service value, to control costs (including outside counsel fees) especially in light of budget constraints, and to increase department employee engagement
- Being an effective partner and counselor to the BUs and other shared services departments in the accomplishment of their goals and objectives through exceptional advice delivered timely and efficiently

These performance objectives are somewhat vague as they do not include specific measurable objectives regarding what is to be accomplished, nor do they specify how long it will take to complete these objectives. With regard to associated KPIs, according to Legal Department management, the question is always: "How do you measure success?" In past years, management used "bad," "ok," and "great" categories. In 2008, management evaluated all cases; however, in 2009, they evaluated approximately only 10 to 12 cases. In 2010, they are not formally performing any case evaluations, but they are evaluating individual lawyer performance, during which Legal management is focusing on:

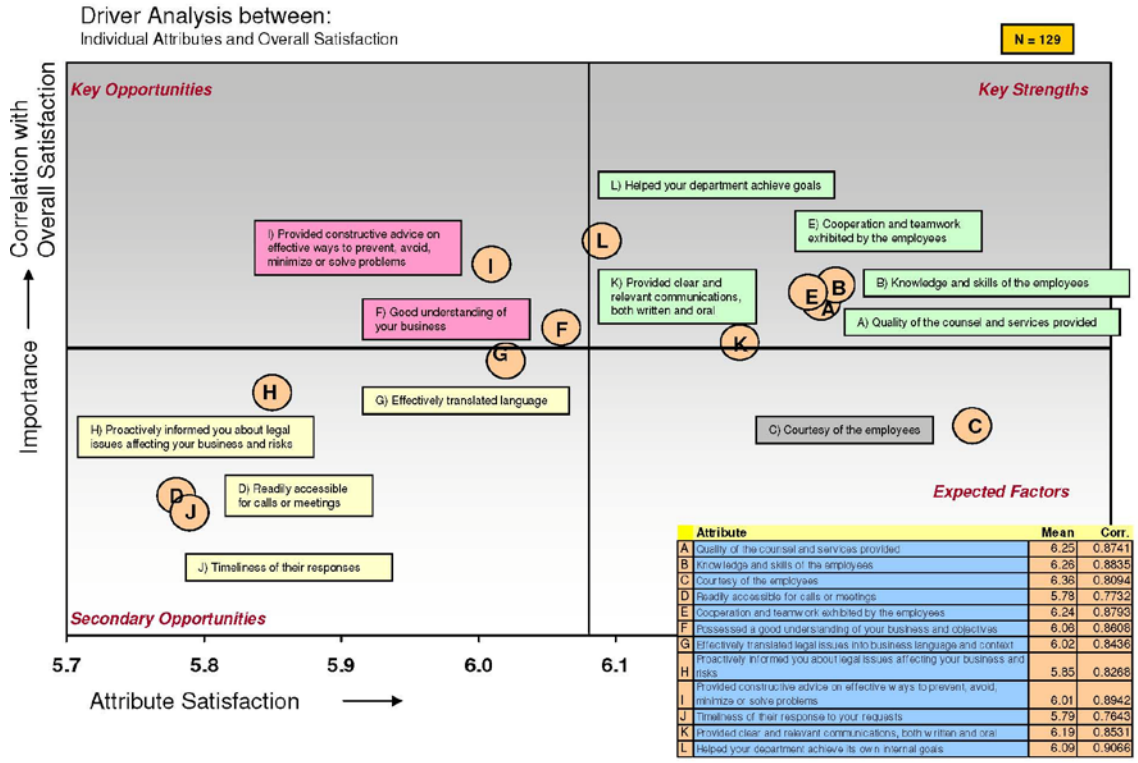
- Key activities
- Client satisfaction
- Employee engagement
- Productivity

Among the tools that Legal Department management has used to measure success are the following:

- Annually, the Legal Department conducts client and outside law firm satisfaction surveys, including correlation analyses.
- Every other year, the Legal Department also conducts employee engagement studies as part of FE-wide efforts.
- Ongoing monthly actual-to-budget analyses are also performed.

Exhibit XII-12 displays FE's 2009 client satisfaction survey regarding Legal's performance, where FE in-house department clients evaluate the Legal Department's performance.

Exhibit XII-12
2009 Legal Client Satisfaction Survey



	Attribute	Mean	Corr.
A	Quality of the counsel and services provided	6.25	0.8741
B	Knowledge and skills of the employees	6.26	0.8835
C	Courtesy of the employees	6.36	0.8094
D	Readily accessible for calls or meetings	5.78	0.7732
E	Cooperation and teamwork exhibited by the employees	6.24	0.8793
F	Possessed a good understanding of your business and objectives	6.06	0.8608
G	Effectively translated legal issues into business language and context	6.02	0.8436
H	Proactively informed you about legal issues affecting your business and risks	5.85	0.8268
I	Provided constructive advice on effective ways to prevent, avoid, minimize or solve problems	6.01	0.8942
J	Timeliness of their response to your requests	5.79	0.7643
K	Provided clear and relevant communications, both written and oral	6.19	0.8531
L	Helped your department achieve its own internal goals	6.09	0.9066

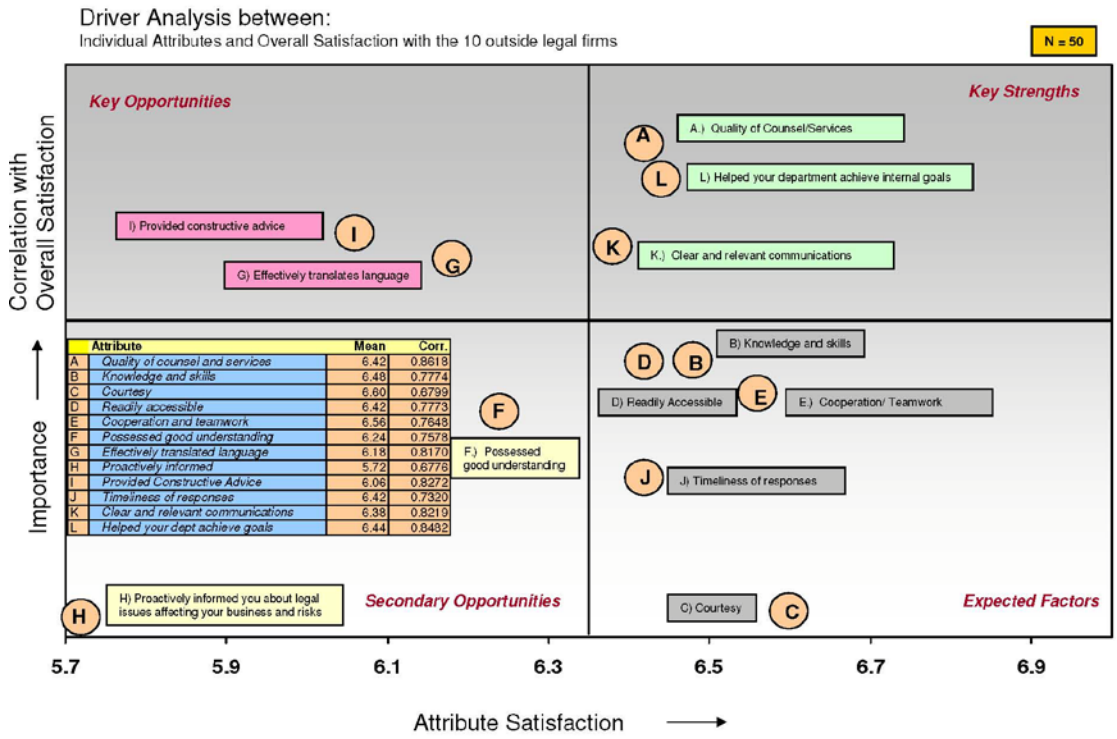
Source: Information Response 326

When asked about those items on the left side of the graph, especially timeliness of response, readily accessible for calls or meetings, or proactively informed you about legal issues affecting your business and risk, the EVP & General Counsel indicated these areas always tend to score low. That is, according to SERVECO management, because attorneys can only do so much to prioritize their work and they do not specifically attempt to provide legal education to clients. The EVP & General Counsel also

indicated that she believes that the Legal Department has a good enough and robust dialogue with its clients, especially with Energy Delivery (ED) groups.

Exhibit XII-13 displays FE's 2009 outside legal firm survey results, where Legal Department attorneys evaluate the outside counsel firms they use.

Exhibit XII-13
2009 Outside Legal Firm Survey



	Attribute	Mean	Corr.
A	Quality of counsel and services	6.42	0.8618
B	Knowledge and skills	6.48	0.7774
C	Courtesy	6.60	0.6799
D	Readily accessible	6.42	0.7773
E	Cooperation and teamwork	6.56	0.7648
F	Possessed good understanding	6.24	0.7578
G	Effectively translated language	6.18	0.8170
H	Proactively informed	5.72	0.6776
I	Provided Constructive Advice	6.06	0.8272
J	Timeliness of responses	6.42	0.7320
K	Clear and relevant communications	6.38	0.8219
L	Helped your dept achieve goals	6.44	0.8482

Source: Information Response 326

When asked about those items on the left side of the graph, especially proactively informed FirstEnergy attorneys about legal issues affecting FE's business and risks, the EVP & General Counsel indicated that outside legal firms generally do not provide wide-ranging legal briefings. That is, according to SERVECO management, because they generally provide only information regarding the facts of specific cases, although some do provide blast e-mail messages too.

Finding XII-5 **Unlike other FE states, JCP&L has relied extensively, for a long period of time, on one external counsel firm for its state regulatory work in New Jersey and pays significantly for that firm's activities.**

FE has not typically used requests for proposal (RFPs) to obtain external counsel legal work, but it has a listing of firms it typically uses. FE management indicates that they are continually reviewing JCP&L's

need for legal work against the need for use of external counsel firms. For example, NJ has different restrictions than OH and PA, in that its state bar is more stringent and requires local counsel in some situations. In other states, this type of legal work is performed primarily by internal staff; however, unlike these FE states, JCP&L primarily uses outside counsel (Morgan, Lewis & Bockius LLP) for its state regulatory activities. This firm's involvement with JCP&L predates both ML&B employment of key attorneys supporting JCP&L and FE's acquisition of JCP&L. At this time, one of these key ML&B attorneys working in the state regulatory area is nearing retirement age, so JCP&L has started discussions with ML&B to develop potential succession plans for NJ's state regulatory activities.

A fixed fee billing arrangement with Morgan, Lewis & Bockius for state regulatory work has been in place since November 2008. FE pays a monthly retainer, which covers all state regulatory work by ML&B's New Jersey lawyers primarily for JCP&L, but it also includes some regulatory work for JCP&L's affiliates in Pennsylvania and Ohio. The concept of state regulatory work is broadly defined, so that, for example, in addition to routine JCP&L regulatory matters, such concerns as work on Pennsylvania rate cases and work on Ohio re-regulation issues would be covered by the retainer. ML&B tracks accrued time at the discounted hourly rates. If, and to the extent that, ML&B's time charges a specified amount in a year, ML&B would bill the excess time at its discounted hourly rates. Additionally, extraordinary matters, such as a full-scale JCP&L base rate case or merger proceedings, would fall outside the scope of the arrangement and would be billed separately on an hourly rate basis at FE's discounted rates. In the last two years (2009 and 2010), JCP&L paid between $600,000 and $1 million annually. Although, in the past few years, JCP&L received more work than it paid for under this retainer mechanism, it is still paying a significant amount for legal assistance that might more efficiently be performed by internal attorneys. With key representatives from ML&B nearing retirement age, it is the ideal time for JCP&L to determine whether it should continue relying so heavily on external counsel for its NJ state regulatory work.

Claims

Finding XII-6 No formal written policies or procedures documentation exists for the Claims groups in OH, PA, or NJ.

The Claims function, although operating in OH, PA, or NJ, has no formal written policies or procedures in place. This lack of documentation makes it difficult for employees in all states to operate in a consistent manner to process claims.

Finding XII-7 The in-house system supporting the Claims function could not provide all the information requested by Schumaker & Company during this audit.

The system supporting the Claims function is an in-house–developed claims system that was instituted in the late 1980s. This application system captures, tracks, and reports FE claims and related lawsuit information, as provided by three subsystem modules:

- Receivable claims

- Payable claims
- Lawsuit and administrative maintenance

The receivable claims subsystem allows the Claims function to perform the following activities:

- Capture, verify, and send costs to the General Ledger (G/L)
- Generate claimant invoices
- Accept claimant payment and send payment/invoice information to G/L
- Work with outside counsel to obtain delinquent payments
- Establish payment contracts and schedules with claimant and receive claimant payments
- Generate reporting for Claims and Treasury departments and outside counsel and capture attorney collection fees and expenses

The payable claims subsystem allows the Claims function to perform the following activities:

- Capture, investigate, negotiate, and issue payment to parties where FirstEnergy has damaged property or caused injury. Depending on the damage incurred, payments may be generated from Claims and/or Accounts Payable.
- Generate reporting for Claims and Treasury departments

The lawsuit and administrative maintenance subsystem allows the Claims function to perform the following activities:

- Capture, assist with the investigation and negotiation processes, assist legal counsel/court, track payments for incurred injury (payments issued by Damage Claims System (DCS) and/or Accounts Payable module in SAP)
- Track payments of invoices paid to the legal counsel
- Monitor case statute of time limitations
- Generate reporting for Claims and Legal departments

The SERVECO organization has not formally explored a more sophisticated system, although when asked about providing data by type of claim or having claim payments assigned to the year in which the claims were incurred, the Claims Director indicated that the system could not provide that data.

Finding XII-8 No formal reporting to JCP&L's senior management regarding claims is currently being provided.

Although SERVECO's Claims management indicates that it has extensive discussions with JCP&L management and staff, the service company provides no formal reporting to JCP&L's senior management regarding the number or type of claims.

Recommendations

Recommendation XII-3 Strengthen Legal Department objectives and associated KPIs, including responding to survey results. (Refer to Finding XII-4)

The objectives in support of a group's mission, such as that of the Legal Department, should support FE goals and objectives. They must also be specific and measurable with a timeframe for completion of these objectives, thereby allowing FE management to determine if Legal Department management is accountable in achieving its mission. The Legal Department should strengthen its objectives in future years to meet these criteria. In addition, specific KPIs should be developed that identify how the Legal Department is doing in regard to meeting its mission and objectives. As part of this response, Legal Department management should incorporate activities that address low scores in its survey results.

Recommendation XII-4 Perform a cost/benefit analysis to determine whether state regulatory work should be performed primarily internally or externally in the future, and incorporate the development of RFPs into this decision-making process. (Refer to Finding XII-5)

With key representatives from ML&B nearing retirement, it is the ideal time for JCP&L to determine whether it should continue relying so heavily on external counsel for its NJ state regulatory work. In other states, this type of legal work is performed primarily by internal staff. A cost/benefit analysis, including both quantitative and qualitative factors, should be performed to determine if it is the appropriate time to move in-house JCP&L's legal work involving state regulatory issues and then provided to the BPU Audit Division. Although the AGC for state regulatory matters works closely with NJ external counsel, thereby developing an understanding of the NJ issues, considerable institutional knowledge will be leaving as ML&B attorneys retire and, given the amount of funds spent each month with ML&B attorneys, it may be more cost-effective to handle JCP&L's work in-house and begin establishing FE's own institutional knowledge of JCP&L's issues.

As part of this effort, a request for qualifications (RFQ) (or RFQs) should also be used to identify potential new external sources for whatever legal work continues to be performed by external staff. Within utility legal organizations, the best practices for identifying external legal firms typically result from the periodic issuance of an RFQ. Such a strategy helps uncover potential candidates for inclusion in a prequalified list of external legal firms. A legal organization should periodically (at least every five years) develop such a prequalified list, which could vary in length by type of legal work. By implementing such a process, a legal organization not only formally identifies alternative legal firms it may not have considered in the past, but it also helps to ensure that it receives quality legal services at a reasonable cost by encouraging containment of costs by the firms used.

Such a process would not necessarily be limited to only JCP&L state regulatory work. Rather, the list might be a corporate-wide one to allow JCP&L, FE, and other subsidiaries the opportunity to take advantage of listed firms. If the process were limited to simply JCP&L state regulatory legal work, then

external legal firms would not necessarily put their most advantageous cost forward as a result of JCP&L's relatively smaller size. Putting together a corporate-wide list that could be used by entities throughout the FE organization, however, it could benefit not only JCP&L but other entities as well. While FE believes that it has identified highly qualified counsel firms who are willing to represent JCP&L at extremely attractive rates, the use of a formal prequalified list would allow FE to open up the process to those whom it has not previously identified. Schumaker & Company also strongly believes that the use of such a list may make participants complacent. That is because inclusion on the list does not ensure continued work.

Recommendation XII-5 Establish formal written Claims function documentation for all FE groups managing claims. (Refer to Finding XII-6)

Formal written documentation should be developed for all FE groups managing claims to ensure that standardization of processing and managing claims activities is done.

Recommendation XII-6 Perform an investigation and resulting cost/benefit analysis to see if FE's claims system should be replaced. (Refer to Finding XII-7)

Because the SERVECO organization has not formally explored replacement of its claims application system since that system's implementation in the 1980s, a formal investigation and cost/benefit analysis should be performed. Assignment of claims payments to the year in which they were incurred is a very basic capability the system does not provide. Given its age, there are likely other capabilities it does not afford. A formal investigation and resulting cost/benefit analysis should be conducted to determine if replacement is warranted.

Recommendation XII-7 Begin providing formal reports to JCP&L senior management regarding claims and legal cases activities. (Refer to Finding XII-8)

While the use of verbal communications is useful to JCP&L senior management in understanding the impact of claims and legal cases on JCP&L's operations, it is not a substitute for formal written reports that provide the level of detail JCP&L needs to fully understand these activities. The Legal Department should begin providing monthly formal reports to JCP&L senior management that detail this information and data.

C. Facilities and Property Management

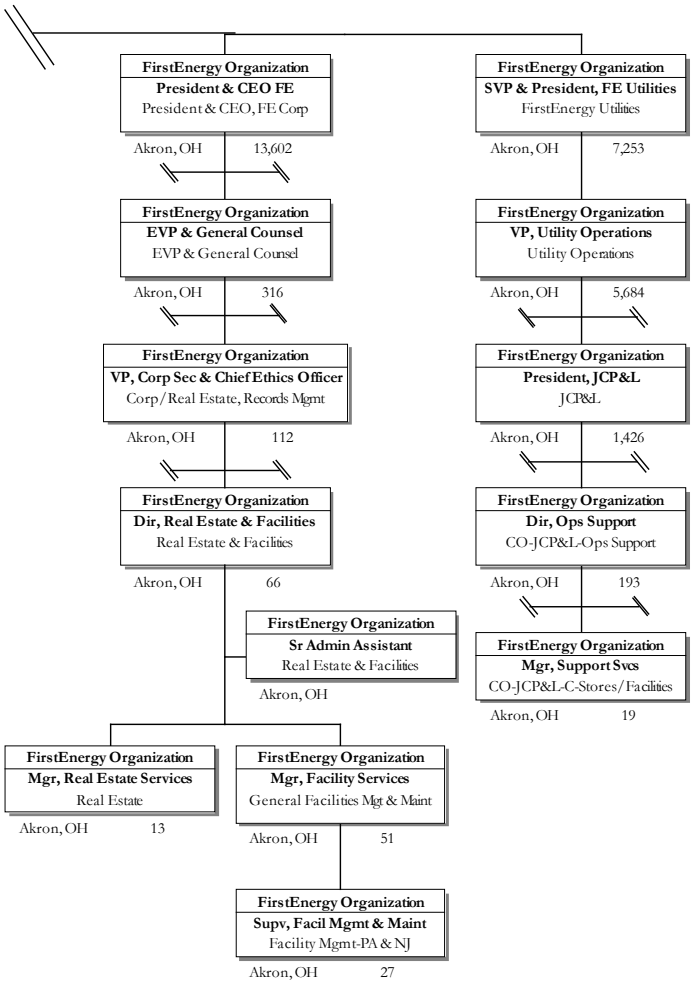
This section addresses Jersey Central Power & Light Company's (JCP&L) real estate and facilities activities.

Background and Perspective

Organization and Staffing

Real estate and facilities activities for FirstEnergy (FE) companies are coordinated out of the General Counsel organization, with utility companies each responsible for maintaining their own facilities. *Exhibit XII-14* shows this organization for FE/JCP&L.

Exhibit XII-14
Real Estate and Facilities Organization
2006 to 2010
as of December 31, 2010



Source: Information Response 54

Real estate and facilities activities are coordinated by the Director of Real Estate and Facilities. Reporting to her are managers for Real Estate Services and Facilities Services. Reporting to the Manager of Facilities Services is a Supervisor responsible for facilities management in Pennsylvania and New Jersey. The FE facilities group is directly responsible for only FE corporate buildings. The current organization was created in 1997 and there have been no major organizational changes since that time.

JCP&L operations are responsible for their own facilities and maintenance but will use the FE facilities organization for assistance with analyzing and justifying (through the budgeting process) building and real estate purchase/expansion, leasing, usage, and sales/salvage. The Supervisor, Regional Facilities, in addition to administrative staff, has four building maintenance and six janitorial personnel. Staffing

levels for JCP&L facilities has slightly declined over the past five years, going from 21 employees in 2005 to 19 employees in 2009.

Budgeted and Actual expenses

Exhibit XII-15 shows the budgeted and actual expenses for JCP&L facilities capital and operations and maintenance for the past 5 years.

Exhibit XII-15
JCP&L Facilities/Property Management Capital & O & M Expenses
2005 to 2009

ACTUAL					
Category	2005	2006	2007	2008	2009
Capital	$517,980	$265,009	$410,403	$1,380,375	$246,145
O & M	$4,630,292	$4,076,486	$4,460,560	$3,999,110	$3,208,650
Grand Total	$5,148,272	$4,341,495	$4,870,963	$5,379,486	$3,454,795

BUDGET					
Category	2005	2006	2007	2008	2009
Capital	$382,730	$122,987	$323,996	$94,941	$128,587
O & M	$5,067,742	$4,584,698	$4,334,101	$4,346,089	$3,312,446
Grand Total	$5,450,472	$4,707,686	$4,658,097	$4,441,030	$3,441,033

Source: Information Response 225

Facilities O&M budgeting is based on historical spending adjusted for any expected changes in spending during the facilities assessment in the budgeting process. Budgeted and actual operations and maintenance (O&M) have remained stable over the past 5 years, even declining by 20 percent in 2009. Capital expenditures have been higher than budgeted, particularly in 2008, when capital roof improvements were done at seven JCP&L facilities. JCP&L stated that the overruns came from bids coming in higher than expected and unanticipated breakdowns. The O&M positive variance in 2006 came from snowplowing expenses being less than anticipated in that year. Facilities expenses are estimated and broken out separately in each department's operations budget.

Major JCP&L facilities, changes, and reporting.

Exhibit XII-16 shows a breakdown of major JCP&L land and facilities.

Exhibit XII-16
Facility Inventory (Owned and Leased)
as of December 31, 2009

	Decription/Use	Address	Municipality	County	Gross Sq. Ft.	Assessed Value (Land & Bldg)	Annual Rent	Age
Owned	MGO	300 Madison Ave. Morristown, NJ 07960	Morris Twp	Morris	201560	21000000		1961
	Allenhurst	521/525 Main St Allenhurst, NJ 07711	Alenhurst Boro	Monmouth	132,392	13,845,600		1959
	Berkeley District Office	Pinewald-Keswick Rd Ba'vile, NJ 08721	Berkeley Twp	Ocean	25,846	1,293,300		1978
	Cookstown Service Ctr	214 Cookstown-New Egypt Rd Wrightstown, NJ 08562	North Hanover Twp	Burlington	12,445	754,700		1957
	Farmingdale Service Ctr & Sub	Railroad Ave. Farmingdale, NJ 07727	Howel Twp	Monmouth	39,928	5,948,900		1969
	Forked River Material Distrib Ctr	798 Rt 9 South Forked River, NJ 08731	Lacey Twp	Ocean	45,291	Not separately		
	Freehold District Office	30 Rhea St Freehold, NJ 07728	Freehold Boro	Monmouth	25,865	3,430,300		1966
	Freneau Service Ctr	Wilson Ave Monmouth, NJ 08772	Matawan Boro	Monmouth	3,690	2,304,800		
	Lakewood Customer Ops Ctr	655 Squankum Rd Ocean, NJ 08701	Lakewood Twp	Ocean	34,402	5,578,300		1901
	Lakewood Garage	655 Squankum Rd Ocean, NJ 08701	Lakewood Twp	Ocean	27,276	2,997,600		1951
	Larrabee Service Ctr & Sub	Randolph Road Ocean, NJ 07731	Howel Twp	Monmouth	3,345	3,022,900		1988
	Long Branch District Office	291 Monmouth Rd West Long Branch, NJ 07764	W Long Branch Bobo	Monmouth	15,170	2,258,200		1962
	Old Bridge District Office	1345 Englishtown Rd Old Bridge, NJ 08857	Old Bridge Twp	Middlesex	21,801	1,300,000		1962
	Point Pleasant District Office	405 New Jersey Ave Point Pleasant, NJ 08742	Point Pleasant Beach Boro	Ocean	20,412	4,920,300		1956
	Toms River Service Ctr	25 Adafre Ave Toms River, NJ 08753	Toms River Twp	Ocean	13,842	679,400		2001
	Union Beach Service Ctr	1500 Florence Ave Union Beach, NJ 07735	Union Beach Boro	Monmouth	42,347	519,500		1956
	Wall Service Ctr	Monmouth, NJ 08772	Wal Twp	Monmouth	17,365	1,488,000		1960
	Boonton Customer Ops Ctr	46 Parsippany Blvd Boonton, NJ 07705	Parsippany-Troy Hils	Morris	17,964	1,448,500		1955
	Dover Region Head ᵍtrs-McFarlan	105 East McFarlan St Morris, NJ 07801	Dover Town	Morris	33,577	1,315,000		1959
	Dover Service Ctr-Richboynton	Richboynton Rd Morris, NJ 07801	Dover Town	Morris	21,668	1,328,000		1998
	E. Hanover Service Ctr	150 N. Ridgedale Ave, NJ 07936	E Hanover Twp	Morris	32,924	4,679,500		1998
	Flemington District Office	Rt 31 Flemington NJ 08822	Raritan Twp	Hunterdon	18,492	2,305,700		1964
	Hopatcong (Landing) Service Ctr	175 Center St Landing, NJ 07850	Hopatcong Boro	Sussex	16,318	662,000		1965
	Morris Park (Philipsburg) Svc Ctr	301 Red School Lane, NJ 08865	Lopatcong Twp	Warren	5,503	1,305,900		1951
	Morristown Service Ctr	10 Legion Place Morristown, NJ 07960	Morristown Town	Morris	81,725	3,400,000		1907
	Newton District Office	112 Hampton House Rd Newton, NJ 07860	Hampton Twp	Sussex	19,547	1,102,000		1962
	Philli ᵖsbur ᵍ Service Ctr	400 Lincoln St Philli ᵖsbur ᵍ,, NJ 08865	Philli ᵖsbur ᵍ Town	Warren	56,645	2,690,200		1947
	Summit District Office	51 Chatham Rd Summit, NJ 07901	Summit City	Union	23,763	2,750,000		1972
	Washington Customer Ops Ctr	111 Kinnaman Ave. Washington, NJ 07882	Washington Twp	Warren	19,142	100,800		1959
	West Wharton Service Ctr	West Dewey Ave Wharton, NJ 07885	Wharton Boro	Morris	16,483	360,000		1960
Leased	Wharton Material Distribution Ctr	98 North Main St Wharton NJ 07885			38,000		280,100	
	Pub Affairs-Cap View (Trenton)	150 West State St. Trenton, NJ 08608			2,051		41,020	
	Florham Sub Property	Florham Park, NJ					4,800	
	Allenhurst Walk In	300 Main St. Alenhurst NJ 07711			2,000		44,004	
	Allenhurst Parking lot	Allenhurst, NJ 07711					3,000	
	Red Bank-Cust Svc	331 Newman Springs Red Bank, NJ 07701			11,200		376,250	
	Red Bank-HQ 1 River Center	331 Newman Sᵖrin ᵍs Red Bank, NJ 07701			53,807		1,254,528	

Source: Information Response 732

JCP&L has stated that there are no anticipated real estate or facilities needs for JCP&L in the foreseeable future, nor are there any legal or regulatory issues or challenges that would affect the real estate/facilities area.

The last significant facilities change was moving JCP&L headquarter functions from Allenhurst (JCP&L owned) to Red Bank, NJ (leased). In evaluating this move, JCP&L stated that facilities requirements were considered in arriving at the decision to move although no documentation or analysis was maintained. Options considered included renovating existing space, build on current owned property, build on new property, or lease. Cash flows were estimated for each scenario and Net Present Value numbers were determined (as well as the sale price of the Allenhurst facility to break even).

The move to Red Bank took place in 2004 with two floors leased: 28,669 square feet for FE Shared Services customer service functions (reduced to 17,500 square feet when the lease was renegotiated in 2010) and 52,934 square feet on another floor for JCP&L headquarters/corporate functions.

JCP&L has not conducted any planning studies or analysis to evaluate current utilization, future requirements, or disposition or leasing of excess land and office holdings. JCP&L plans to sell its former headquarters facility in Allenhurst, NJ, which is now vacant. JCP&L does not anticipate any additional real estate of facilities needs or additions in the foreseeable future.

JCP&L currently does not utilize any property or facility management manuals or procedures, there are no procedures or documented business practices specific to the facilities function, and there have been no internal audits of the JCP&L facility and property management function in the past 5 years.

Monthly reports are maintained up and down the Real Estate and Facilities Management chain that summarizes recent important events, payments, budgets, and status of ongoing issues.

Space standards have been developed and periodically reviewed that apply to all FirstEnergy offices, work stations, and office support areas. These standards include not only space/size criteria, but also various space amenities, e.g. floor and wall coverings, lighting and window treatment, furniture and chairs.

Maintenance and Repair

Maintenance and repair at JCP&L facilities are coordinated by supervisors responsible for Morristown Corporate facilities and Northern and Central Districts. Those building repairs and maintenance not included in lease agreements are handled by in-house personnel or contracted out depending on the type and complexity of the repair (e.g. roofing, plumbing, landscaping). Simple repairs are conducted by JCP&L staff at Morristown and Central Division. All services in Northern division are contracted out. In-house janitorial personnel are utilized in Central Division at 7 locations, with all other locations contracting out janitorial (not included as part of the leasing terms).

JCP&L facilities utilize a LOTUS based corrective work order system for identifying, scheduling, and documenting maintenance and repair. Terminals are located throughout all JCP&L properties. Repair requests will be routed to the responsible supervisor (Morristown or Northern/Central District) who will then assign JCP&L personnel to perform the work or arrange for contractors to come in. A Help desk is maintained to coordinate work orders and take emergency orders by phone. Contractor lists and

contact points are maintained at the Help Desk. There is also a Project Manager function responsible for coordinating/managing major repairs, such as roof replacements and building renovations. Bidding for all contracted work is conducted through the Contracts Group in Supply Chain with facilities supervisors assisting in identifying local bidders. When work orders are closed out, the requesting party is informed. Monthly reports are distributed to all facilities supervisors and ad-hoc reports are available tracking new work orders, open and aged work orders, and completed work orders.

The Help Desk also maintains equipment lists and planned maintenance schedules electronically in SAP. Each month, the system generates the planned maintenance to each facility's supervisor. These PM tickets include the tools and specific activities to accomplish the work. When the work is completed, the ticket is closed out and reported back into the system.

Findings and Conclusions

Finding XII-9 **FE/JCP&L Real Estate and facilities organization properly maintains its buildings and properties by using simple, straightforward methodologies for managing its repair and upgrade workloads.**

Responsibilities for JCP&L buildings are clearly defined with Service Company personnel responsible for assisting in analysis and input to budgets, and supervisors located in New Jersey assigned to coordinate work for corporate and JCP&L land and buildings. Project managers (identified positions) are assigned to manage/coordinate contractors on larger projects. Monthly reporting is performed up through the Service Company officer level on JCP&L real estate and facilities activities and issues. Facilities supervisors interact with building supervisors to coordinate work and determine needs.

All contracts are negotiated and let through the Service Company's Supply Chain Department. Planned maintenance and corrective maintenance work is handled through a straightforward, easy to use database system that has terminals throughout all JCP&L facilities and can be accessed by responsible JCP&L personnel. Facilities supervisors review, assign, schedule and follow up on all work and affected parties are notified when the work is completed. System work orders contain all necessary information and periodic reports are generated to track backlogs and progress. Planned/preventative work orders are automatically generated and tracked monthly.

Finding XII-10 **There are no formal facilities forecasting or planning methodologies or techniques in place.**

Facilities management and personnel interact and communicate with operations and JCP&L management on facilities needs on a case-by-case basis. Any planning or forecasting is informal and it is difficult to determine to what extent future needs are being properly addressed. Analysis in support of major facilities changes (e.g. move to Red Bank) is not maintained in any historical file.

Recommendations

Recommendation XII-8 Develop a Facilities Master Plan. (Refer to Finding XII-10)

Develop a strategic facilities planning process that defines changes in JCP&L's business going forward and the necessary facilities changes that will best support these changes. Planning can go beyond space planning to consider changing technology, demographics, work content (e.g. employees skills, changes in contract versus in-house employees), among other topics. As part of this process, define analysis techniques for evaluating facilities needs and maintain a historical record of all major facilities analysis.

In particular, the plan should specifically address the excess space not currently in use at the main office in Morristown versus the need for leased space in Red Bank and other facilities.

A Strategic Facilities Plan or Facilities Master Plan will ensure this function is operated in the most cost-effective manner and best supports JCP&L operations.

D. Supply Chain

This section addresses the provisioning of materials and services to Jersey Central Power & Light Company (JCP&L).

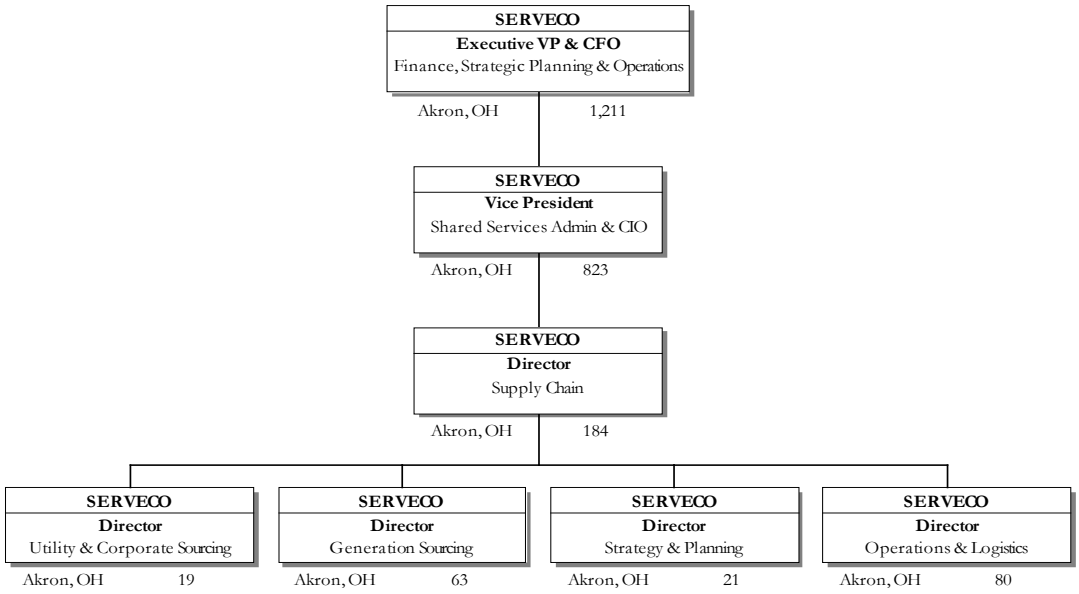
Background & Perspective

The Supply Chain function at FirstEnergy (FE)/JCP&L is a hybrid organization structure. Procurement of, and logistics for, materials and services is centralized in the Supply Chain organization within the corporate FirstEnergy Service Company (SERVECO). The physical warehousing and distribution of materials and supplies in the field is decentralized to JCP&L.

FE Supply Chain

The centralized corporate Supply Chain organization is part of the Finance, Strategic Planning, and Operations group as shown in *Exhibit XII-17*. It reports to the Vice President, Shared Services Administration & Chief Information Officer.

Exhibit XII-17
Supply Chain
as of July 8, 2010



Source: Information Response 54 Supplemental Attachment 2

The Supply Chain organization has four units:

- Utility and Corporate Sourcing provides procurement services for the FirstEnergy Utilities' (FEU) business unit and corporate functions. There are separate groups for each area, meaning there is a dedicated group for FEU sourcing. The Utilities Sourcing unit has a manager and buyers.
- Generation Sourcing provides procurement services to the fossil and nuclear generation groups.
- Supply Chain Strategy and Planning provides assistance with major sourcing initiatives, supplier diversity, and supply chain information technology. It also operates a service center for purchase order creation with the proper legal terms and conditions.
- Operations and Logistics arranges for transportation of materials and supplies from vendors to the field and manages a specialized investment recovery function. Routine FEU investment recovery operations, such as for scrap cable, are handled by the FEU opco (operating companies) Stores functions. This FE centralized unit operates the nuclear and fossil generation storerooms, but it does not operate the Ohio, Pennsylvania, or JCP&L opco storerooms. This unit also manages the stock catalog and stock code numbers to reduce duplication.

Approximately three-quarters of the total supply chain materials spend is for inventoried items (i.e., items normally kept in stock at JCP&L warehouses). The other one-quarter of the materials spend is for non-stock items for specific projects or capital spares. In 2009, the FEU total spend for materials, equipment, and services was $450 million. The total spend for JCP&L was $73.8 million. JCP&L spend in 2009 for materials and equipment was $28.4 million and $45.4 million for services. Total FEU-specific supply chain expenses were $1.1 million in 2009, $400,000 below budget. JCP&L is charged 22.85% of the supply chain costs. Supply Chain utilizes the SAP supply chain modules for information processing.

Supply Chain prepared a 2010 Integrated Supply Plan for the FEU business unit. This plan includes an economic overview and its likely impact on FEU, market opportunities, expiring contracts, major sourcing initiatives, forecast spend and assumptions, and key strategies. The Supply Chain key strategies for FirstEnergy Utilities in 2010 are:

- Review and clarify specifications on materials and services for major projects
- Combine and leverage spend through vendor rationalization while enhancing supplier diversity
- Provide price stability on key commodities by eliminating variable pricing
- Procure across FE to maximize value
- Aggressively manage the entire supply chain
- Mitigate risk by assessing and standardizing contract content and by strategically evaluating the renewal of contracts

All Supply Chain procurements are done on standardized purchase orders, as the Supply Chain organization does not issue many long-form and/or individualized contracts. FE Supply Chain also has a purchasing card (P-Card) system that allows employees to purchase minor items at retail with a card that is like a credit or debit card. Total FirstEnergy P-Card spend in 2008 was $40 million. There are standard P-Cards, field force P-Cards for bargaining unit employees, and storm P-Cards issued only to supervisors and above for use during storms. The storm P-Cards have higher spending limits. In addition, Supply Chain staffs storm desks for emergency purchases during storms anywhere in the FE service territories. P-Card usage is closely controlled and audited extensively.

Most goods and services are procured through the Supply Chain organization. However, there is a category of "No Purchase Order" items that bypass the Supply Chain unit. No Purchase Order items include low-risk, one-time purchases for less than $10,000 that are impractical for the P-Card; utilities; energy transactions; charitable contributions; legal bills; tuition reimbursements; pole attachments; insurance premiums; and human resource benefits. The FE controller sets the No Purchase Order policy with Supply Chain review and concurrence. The FE Legal Department reviews No Purchase Order contracts but Supply Chain does not.

Typical services that do go through the Supply Chain procurement process include vegetation management, line construction/storm support, cable locating, flagging, pole inspections and transmission line inspections.

The Supply Chain organization operates on a "total cost of ownership" philosophy. That is, it makes procurement decisions in consultation with representatives of the eventual users and considers transportation costs, payment terms, escalation clauses, lead times, supplier diversity, spares costs, inventory costs, costs of installation, warrantees, repair costs, expected life, and other factors relevant to each purchase that affect the total cost of owning a particular item. One practical effect of this type of philosophy is to allow for standardization on one manufacturer's brand of equipment. This standardization reduces the number of spare parts and the amount of training time needed. It also increases leverage with the selected manufacturer through a higher-volume, longer-term relationship.

Supply Chain utilizes a "Commodity Playbook Light" process for the procurement of services and commodity-based materials. The Commodity Playbook uses a combined Supply Chain and business unit client representative team working with a structured process/form to analyze the commodity purchase from multiple perspectives. Those viewpoints include historical spend, business unit needs, marketplace intelligence, market conditions, impact on the business unit, sourcing options, sourcing recommendations and timing, negotiating strategies, payment terms/discounts, sourcing action plans, documentation of the decision on the award, and contract execution checklists. The Playbook also includes a sourcing strategy checklist.

Supply Chain typically issues one- to three-year blanket purchase orders for a family of products, with options for negotiated renewals. However, Supply Chain strives to rebid all purchase orders approximately every six years, even if it is satisfied with the incumbent supplier. The department issues

single purchase orders for one-time specialized purchases. There is a requisition process with required approvals for unique purchases.

Procurement authority limits for both new purchase orders and releases against blanket purchase orders are shown in *Exhibit XII-18*

Exhibit XII-18
Procurement Authority Limits
as of December 31, 2010

Required Authority	Procurement Limit
No Approval Necessary	Purchase orders up to and including $10,000
Purchasing Associates	Purchase orders up to and including $100,000
Buyers/Supervisors	Purchase orders up to and including $1,000,000
Managers	Purchase orders up to and including $2,000,000
Directors	Purchase orders up to and including $5,000,000
Vice President	Purchase orders over $5,000,000 (re-approval required at each $5,000,000 increase)
In addition: On commitments that are greater than $10,000,000 where prior approvals have not been obtained, notifications will be made by the business unit as follows:	
Senior Vice President	Greater than $10,000,000
Chief Financial Officer & Chief Operating Officer	Greater than $15,000,000
Chief Executive Officer	Greater than $25,000,000

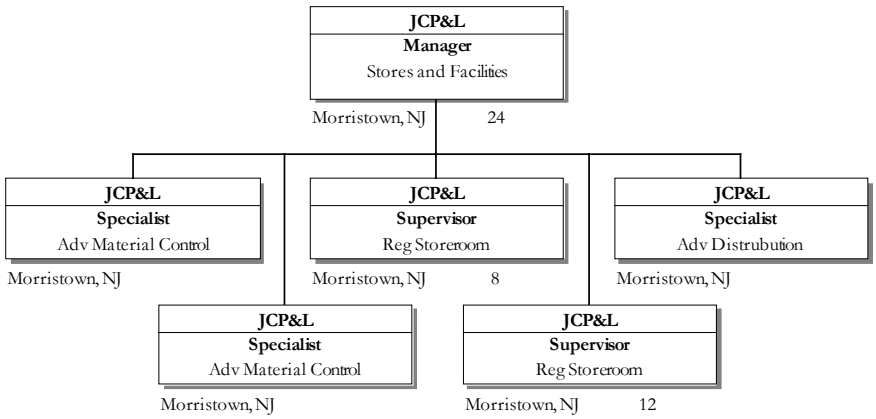
Source: Information Response 246

The SAP computerized procurement system automatically controls for these approval limits.

JCP&L Stores

The JCP&L Stores function reports to the Manager of Support Services under the Director of Operations Support Services, as shown in *Exhibit XII-19*.

Exhibit XII-19
Support Services
as of July 8, 2010



Source: Information Response 54

There are two JCP&L central storerooms, one in the North region and one in the Central region. These two storerooms resupply the 21 work centers in their respective regions. The work center inventories are kept by the work center operations units and are audited twice per year. The Stores organization makes decisions regarding maximum inventory levels and reorder points. Almost all ordering is released against corporate Supply Chain blanket purchase orders. The Stores function also supplies FEU standard electrical materials to transmission, distribution, and substation contractors.

Findings & Conclusions

Finding XII-11 The corporate FE Supply Chain organization has a good procurement performance measurement and management program.

The FirstEnergy Supply Chain organization has a comprehensive set of sourcing and procurement performance metrics. It also sets goals for improvement and measures performance against those goals. Supply Chain metrics include:

- Compliance with Supply Chain policies, including supplier diversity, purchase order standard structure, standard terms and conditions, and commodity playbook procurement procedures
- Utilization of electronic technology in the procurement and payment processes

- Issuance of a Consolidated Scorecard that addresses progress against both corporate and Supply Chain objectives. Supply Chain 2009 objectives included:
  - Reducing inventories
  - Utilizing common processes and procedures
  - Improving sourcing and logistics, including supplier diversity and electronic transactions
  - Ensuring budget compliance
  - Extending payment terms (improved cash management)
- Development of various spend analyses (by business unit, vendor, buyer, etc.)
- Use of various procurement and logistics process performance dashboards and reports (on-time delivery, expediting, open orders, contracts expiring, vendor insurance, requisition to purchase order elapsed time, etc.)

Finding XII-12 In 2009, the Supply Chain unit for Utilities had almost 100% compliance with the policies for terms and conditions, supplier diversity, use of the Playbook, and purchase order structure.

The only instances of missed full compliance for Supply Chain – Utilities in 2009 were 83% compliance with purchase order structure in the third quarter (which was still above the Supply Chain overall average of 63%) and 93% compliance with the Playbook in the fourth quarter (which was still above the Supply Chain overall average of 84%).

Finding XII-13 The Supply Chain organization is making progress in converting manual processes to electronic processes.

Overall, the Supply Chain function had 78% of invoices presented electronically in 2009 and paid 76% of them electronically. It has a goal to get to 89% in both categories by 2012. The Supply Chain Utilities unit made improvements from 2008 to 2009 in the percent of spend using electronic auctions and in the percentage of transactions issued electronically.

Finding XII-14 There are generally appropriate inventory performance measures for the JCP&L central storerooms.

The FirstEnergy Supply Chain organization measures and compares the following inventory performance metrics at JCP&L and the other FE opcos:

- Total inventory dollars by category (e.g., line, substation, and meter), which measures the total investment in inventory versus targeted inventory levels and per customer
- Turnover rate, which divides the total issues by the average inventory
- Fill rate, which is the percentage availability of items requested

Finding XII-15 **JCP&L's total inventory has dropped dramatically from 2005 to 2009, but that reduction has not been fast enough to maintain the turn ratios because the volume of issues has also decreased dramatically.**

The turnover rate declined during the 2005–2009 period. The fill rate remained relatively constant, except for 2007, but at a fairly low level. The inventory levels for this timeframe are shown in *Exhibit XII-20*.

Exhibit XII-20
JCP&L Inventory Metrics
2005 to 2009

	2005	2006	2007	2008	2009
Total Inventory Dollars	17,367,224	23,253,451	17,423,033	15,515,912	15,572,069
Turnover Rate[7]	2.10	1.12	2.05	1.38	1.07
Issues in Dollars	36,403,234	25,994,356	35,794,425	21,410,349	16,662,114
Fill Rate[8]	0.73	0.79	0.58	0.77	0.72

Source: Information Response 238 1-5

The JCP&L 2009 turnover rate of 1.07 was better than the FEU overall rate of 1.00. The JCP&L 2009 fill rate of 72%, however, was below the FEU opco average of 84%. Ohio Edison had a turnover rate of 1.90 and a fill rate of 94% for the year.

Finding XII-16 **Although the fill rate is an important measurement for the central stores, it does not measure the impact of unavailable materials on the field crews.**

Most field crew materials are actually issued from the work center storerooms, which are resupplied by the central storerooms. A stock out at the central storeroom may not mean a stock out at the work center. Likewise, having stock at the central warehouse but not at the work center may cause a delay for one or more field crews. Measuring fieldwork delays caused by materials would be a better measure of storeroom effectiveness.

Finding XII-17 **Supply Chain staffing for Utility Support has dropped from 16 in 2006 to 9 in 2009, raising a concern about the capacity for ongoing support of JCP&L and the other operating companies.**

The staffing totals are shown in *Exhibit XII-21*.

[7] Total issues divided by average inventory
[8] Percentage availability of items requested

Exhibit XII-21
Supply Chain Utility Support Staffing
2005 to 2009

	2005	2006	2007	2008	2009
Staffing (Utility Support Staff Only)	16	17	18	14	9

Source: Information Response 236
Note: Four Inventory and Warehouse Support positions were transferred out of the Supply Chain unit in 2008, but still exist in the FEU organization.

This reduction in staffing creates a concern that the FirstEnergy opcos, including JCP&L, may not receive fully effective and efficient supply chain service because of a lack of resources. Central storeroom staffing at JCP&L was not similarly affected.

Finding XII-18 The Supply Chain organization participated in 22 benchmarking studies and related reports in 2005 and 2006 but has not since.

The Supply Chain function can be benchmarked across the utility industry and, to some extent, across other industries. Benchmarking opportunities are available for this function and FE would likely benefit from ongoing benchmarking participation.

Finding XII-19 The Supply Chain organization does not actively participate in standards committees.

Supply Chain buyers do not actively participate on committees for IT products. These committees are staffed with IT subject matter experts who conduct reviews and make recommendations to the IT Governance Committee, which is made up of senior management. The Supply Chain Director is a member of the IT Governance Committee, which approves standards. Supply Chain buyer linkage supports the standards and ensures compliance when issuing requests for proposal (RFPs) and when evaluating supplier responses.

Supply Chain buyers do not actively participate on committees for engineering design, construction, or materials. These committees are staffed with corporate or regional engineers who conduct reviews and submit specifications to the Supply Chain buyers. Supply Chain buyer linkage supports the standards and ensures compliance when issuing RFPs and when evaluating supplier responses.

Finding XII-20 Despite a program to consolidate the three central storerooms in Ohio, there is currently no planned warehouse consolidation for JCP&L.

FirstEnergy consolidated warehousing for the three Ohio operating companies and Penn Power in early 2010. FE plans to consider consolidation of warehousing in the eastern portion of the company,

including New Jersey. The scope and timing of warehousing changes have not yet been approved or determined.

Finding XII-21 **There are limited programs for vendor restocking of work center storerooms, and FE has not outsourced much of the logistics and warehousing functions for JCP&L.**

Given the volume of purchases for FE and JCP&L, opportunities may exist for vendors to restock JCP&L work center storerooms, perhaps even on a consignment (JCP&L does not own the inventory until issued) basis. This approach would avoid the double handling of materials passing through the central storerooms.

In addition, other utilities have outsourced all or portions of their logistics and warehousing to firms specializing in logistics and materials management. FE and JCP&L have not outsourced much of their logistics and warehousing functions. Outsourcing has the potential to reduce costs and improve service.

Recommendations

Recommendation XII-9 **Improve JCP&L turnover rate to 2.1, the level already achieved in 2005. (Refer to Finding XII-15)**

Although improving the turnover rate in a period of declining activity is challenging, JCP&L should be able to at least meet a success level previously achieved. JCP&L should review the stocked items, reorder points, and order quantities to further improve its inventory turnover rate.

Recommendation XII-10 **Improve the JCP&L central storeroom fill rate to 94%, the level already achieved by FEU/Ohio Edison. (Refer to Finding XII-15)**

While reviewing the stocked items, reorder points, and order quantities to improve the turnover rate, JCP&L should also make the necessary adjustments to improve the fill rate, at least to the level achieved by another FEU operating company, Ohio Edison. Adjustments to the order/receipt cycle times for replenishing some items may be required.

Recommendation XII-11 **Measure the amount and cost of field crew lost time due to material availability (stock out) problems. (Refer to Finding XII-16)**

Lost field crew time for any reason is expensive. Such lost time attributable to material availability problems is a controllable cost. The amount of crew time lost to material issues should be tracked and reported. Although it is impossible to eliminate all material delays, JCP&L should identify chronic problems through crew material delay reporting and correct them as quickly as possible.

The analysis and improvement of turnover rate, fill rate and crew lost time due to material availability (Recommendations 1, 2 and 3) should be conducted in concert to assure that improving the turnover rate does not materially impact fill rate and crew lost time negatively.

Recommendation XII-12 Monitor the effect of FE Supply Chain staffing reductions on JCP&L and address adverse impacts as appropriate. (Refer to Finding XII-17)

The FE Supply Chain organization has made strides in streamlining and automating its process. That process, however, still needs adequate expert supply chain human resources. FirstEnergy should monitor the supply chain service levels to JCP&L and make adjustments to Supply Chain staffing to maintain service levels as necessary. It should also make further productivity improvements, as practical, to continue providing good supply chain service to JCP&L.

Recommendation XII-13 Resume Supply Chain participation in benchmarking programs by 2012. (Refer to Finding XII-18)

A large part of the JCP&L cost structure is the procurement of materials and services. Furthermore, the cost of the Supply Chain and storeroom functions is a significant expense. FE and JCP&L can benefit from benchmarking and best practices lessons learned from others to improve the effectiveness of the procurement and materials management processes and to optimize the cost of providing those services. The FE Supply Chain organization should resume participation in procurement, logistics, and warehousing benchmarking programs to an extent appropriate to the scale of its operations by 2012.

Recommendation XII-14 Consider adding Supply Chain staff to standards committees. (Refer to Finding XII-19)

Other utilities include procurement professionals on equipment and materials standards committees. They bring a deep understanding of the procurement process to the committee and they benefit from their participation by learning from the committee how equipment and materials decisions impact operations. FirstEnergy should consider adding a Supply Chain professional to each standards committee that materially impacts JCP&L and the other FEU operating companies.

Recommendation XII-15 Accelerate the consideration of consolidating the two JCP&L regional storerooms. (Refer to Finding XII-20)

Consolidation of the two JCP&L regional storerooms into one may have significant cost, turnover, and fill rate benefits. FE Supply Chain logistics and JCP&L central stores should analyze the costs and benefits of regional storeroom consolidation as soon as practical.

Recommendation XII-16 Investigate the possibility of vendor resupply of JCP&L central and work center storerooms and/or additional outsourcing of logistics and warehousing functions. (Refer to Finding XII-21)

To reduce the total cost of supplying materials, utilities have formed strategic partnerships with major suppliers and specialized logistics companies to streamline the supply chain process. Some companies have gone so far as to outsource most of their process's logistics and warehousing. The FE Supply Chain organization and JCP&L should investigate additional opportunities to partner with major suppliers and specialized logistics companies to provide more of the supply chain process at a potentially lower cost.

E. Fleet Management

This section addresses the provisioning and maintenance of Jersey Central Power & Light Company (JCP&L) owned and leased vehicles and equipment for the JCP&L field forces. It covers the JCP&L owned and leased vehicles and equipment used by transmission and distribution (T&D) line crews, substation mechanics, meter technicians, meter readers, and other field forces.

FirstEnergy (FE) no longer assigns personal vehicles to employees who are not regularly assigned to fieldwork. Only employees who are regularly assigned to fieldwork have the use of company-owned vehicles and equipment. For incidental use of personal vehicles on FE and JCP&L business, employees are reimbursed at the federally allowed mileage rate. For business trips over 160 miles, employees are asked to rent a vehicle.

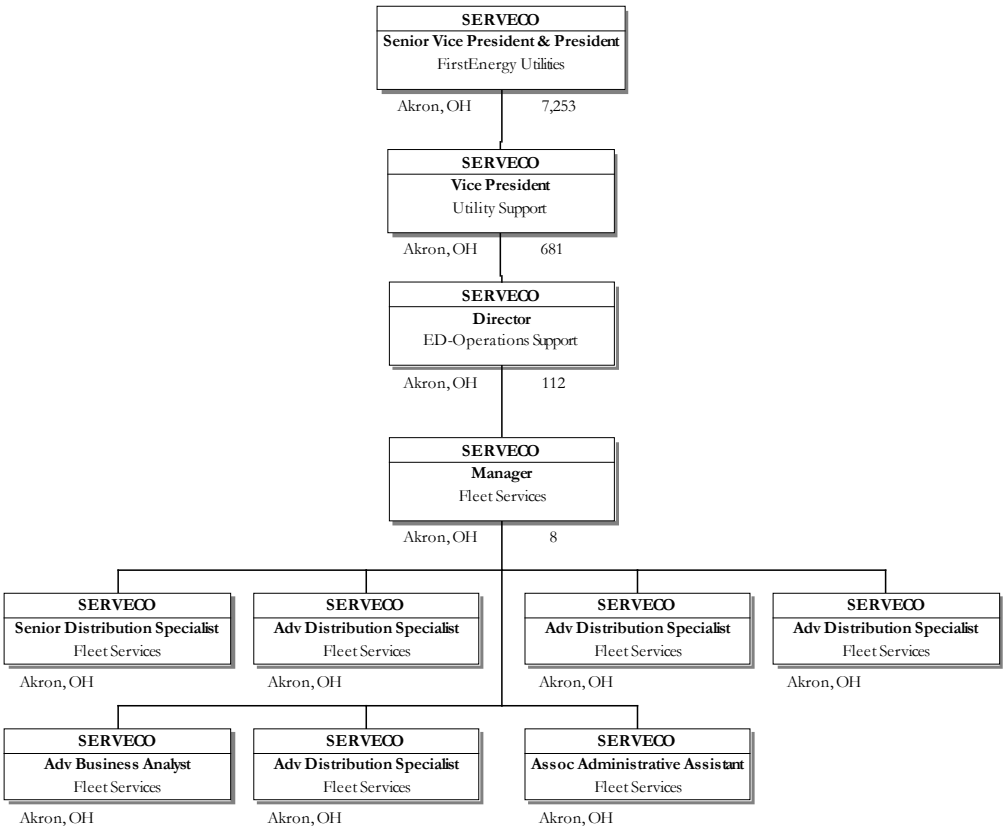
All JCP&L bargaining unit employees except meter readers hired on or before April 1, 2005 utilize JCP&L owned or leased vehicles for field work. In the case of JCP&L bargaining unit represented meter readers, new meter readers are not assigned JCP&L owned or leased vehicles and are required to provide their own vehicles. This vehicle policy change was negotiated between JCP&L and the union as part of a collective bargaining agreement. The remaining meter-reading vehicles are being phased out as the meter readers with grandfathered JCP&L owned or leased vehicle use retire or transfer.

Background & Perspective

Fleet management is a hybrid FirstEnergy Utilities (FEU)/JCP&L organizational structure. Vehicle acquisition, policies, procedures, performance measurement, and systems are provided by an FEU-centralized Fleet Services unit for all FirstEnergy Utilities' business unit operating companies (opcos), including JCP&L. The actual physical work of fleet management is performed by JCP&L Fleet Services employees who are deployed in the JCP&L service territories.

FirstEnergy Utilities' Fleet Services is part of the Operations Support organization. This organization falls under the Vice President of Utility Support who reports to the FEU President as shown in *Exhibit XII-22*. The FEU Fleet Services organization is part of FirstEnergy Services Company (SERVECO).

Exhibit XII-22
FEU Fleet Services
as of December 31, 2009

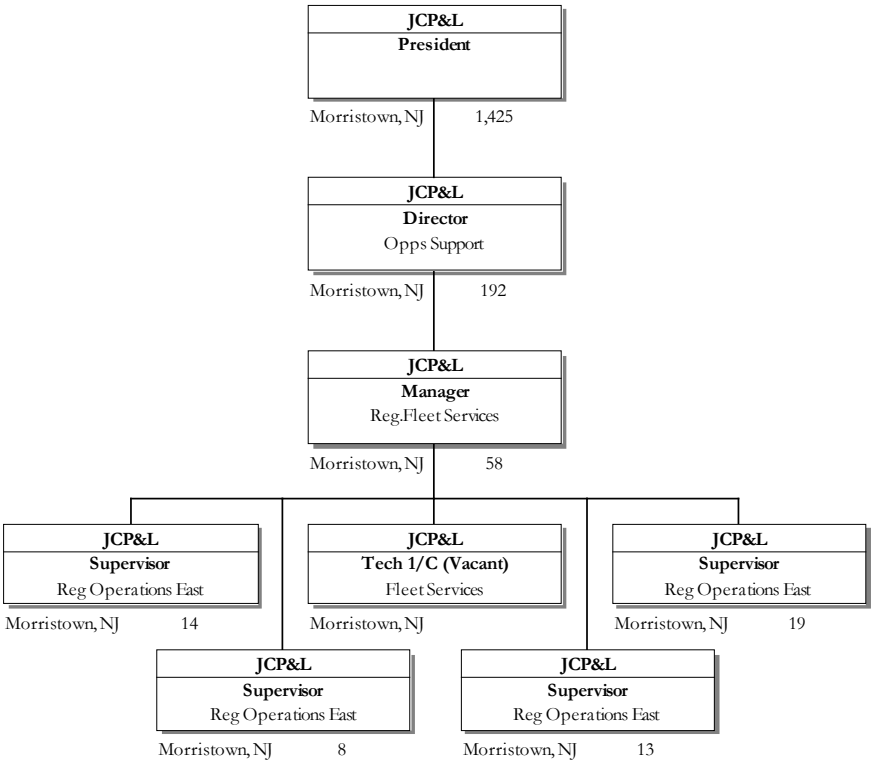


Source: Information Response 54

The FEU Fleet Services organization holds a monthly conference call with all of the operating company Fleet Services managers. The aim of this call is to discuss developments and performance.

The physical work of JCP&L fleet management is performed by the Fleet Services organization in one of the two operations support services units. These units report to the JCP&L President as shown in *Exhibit XII-23*.

Exhibit XII-23
Operations Support Services
as of December 31, 2009



Source: Information Response 54

The JCP&L Fleet Services workforce has remained relatively constant from 2005 to 2009, as shown in *Exhibit XII-24*.

Exhibit XII-24
JCP&L Fleet Services Employees
by Classification
2005 to 2009

	2005	2006	2007	2008	2009
Auto Painter	3	3	3	3	3
Clerk Senior	5	5	5	5	5
Fleet Service Chief	4	3	4	4	4
Fleet Services Tech 1/C	40	44	42	41	39
Fleet Services Tech 2/C	2	2	1	1	1
General Utility Worker (Tool Rep – Transportation)	0	0	0	0	1
Manager	2	2	2	1	1
Supervisor	4	4	4	4	4
Total	60	63	61	59	58

Source: Information Response 256

Of the two net reductions in workforce over the period, from 60 to 58 employees, one was from the consolidation of the manager position from two regional managers to a single manager for both JCP&L regions. The other was a net reduction of one in craft and support worker positions.

Exhibit XII-25 shows the trends in the JCP&L fleet size by type of equipment, and *Exhibit XII-26* explains the FEU fleet asset classifications.

Exhibit XII-25
JCP&L Fleet Trends by Asset Class
2005 to 2009

Asset Class	1	2	3	4	5	6	Total 1-6	7	8	9	Total 7-9	Total All
2005	331	228	55	217	77	31	939	330	65	50	445	1384
2006	293	243	54	219	76	31	916	323	63	50	436	1352
2007	283	264	55	226	88	21	937	322	65	48	435	1372
2008	220	288	54	219	88	22	891	322	64	50	436	1327
2009	206	290	50	227	88	22	883	321	63	50	434	1317
05-09 Change	-125	62	-5	10	11	-9	-56	-9	-2	0	-11	-67

Source: Information Response 257

Exhibit XII-26
FEU Asset Class Definitions
as of December 31, 2009

Class	Description
1	**Light Duty <8500 gross vehicle weight (GVW**) Primarily downsize pickups, minivans, or passenger cars and units impacted by the EPACT
2	**Medium Duty 8501–17,499 GVW** Includes full-size pickups and vans, substation vehicles, small-stake body trucks, etc.
3	**Heavy Duty >17,499 GVW** Includes all heavy trucks other than aerial units, digger derricks, or crane trucks
4	**Aerial Trucks** Includes all man-lift capabilities regardless of size
5	**Digger Derrick Trucks** Includes all digger derricks
6	**Crane Trucks** Includes all trucks with mounted cranes; off-road cranes are included in construction equipment
7	**Trailers** Includes all trailers regardless of size
8	**Construction Equipment** Includes all backhoes, loaders, excavators, off-road cranes, dozers, etc.
9	**Forklifts, Mowers, Misc.** Includes all forklifts, riding sweepers, scrubbers, ATVs, mowers, and other miscellaneous equipment

Source: Information Response 257

The overall fleet size has been reduced by 67 units from 1,384 to 1,317 from 2005 to 2009. The biggest reductions were in Asset Class 1, light-duty vehicles (such as those assigned to meter readers whose JCP&L supplied vehicles are being phased out), with about half of those reductions offset by increases in Asset Class 2, medium-duty vehicles.

The ratio of fleet units per technician and support worker changed slightly from 1384:42 in 2005, or 33.0 vehicles per technician, to 1317:41 in 2009, or 32.1 vehicles per technician. This means that each technician had an average of about one fewer vehicle to maintain.

The JCP&L Fleet Services organization has 21 maintenance locations throughout the JCP&L service territory. The garages located in Dover and Farmingdale also have body shops. In addition to the garages that handle major repairs on the day shift, there are night-shift mechanics who report to the fieldwork centers. The night shift mechanics perform scheduled preventive maintenance and minor repairs when the field crews are off. In addition, the garages provide roadside minor repairs and towing for breakdowns in the field.

The JCP&L Fleet Services organization performs most work in-house, including some manufacturers' warrantee work, such as on aerial trucks. The major categories of work that are contracted include hydraulic cylinders, windshields, upholstery, transmissions, and tire repair. Approximately 90% of spare parts and materials are covered by blanket purchase orders, and Fleet Services issues telephone releases against those blanket purchase orders to obtain the materials. The remaining 10% of the fleet purchases

are made with the FE credit card (P-Card) at local supply shops. JCP&L maintains 24 fueling locations. All FirstEnergy fuel is procured from one company at fixed prices.

FirstEnergy Utilities uses operations and maintenance (O&M) leases when it acquires new vehicles and has little capital spending for fleet. In 2008 and 2009, JCP&L capital expenditures for fleet were $393,000 and $123,000 respectively. There were no fleet capital expenditures from 2005 to 2007.

JCP&L Fleet Services O&M costs increased from 2005 to 2008, but they dropped below the 2005 level in 2009, as shown in *Exhibit XII-27*.

Exhibit XII-27
Fleet Services O&M costs
2005 to 2009

	2005	2006	2007	2008	2009
Actual	$16,572,853	$17,195,681	$17,711,561	$18,017,686	$15,199,466
Budget	16,248,358	16,567,589	17,448,203	17,749,976	14,944,118
Variance	–2.00%	–3.79%	–1.51%	–1.51%	–1.71%

Source: Information Response 251

JCP&L Fleet Services' actual costs run 1.5% to 3.8% over budget.

FirstEnergy Utilities and JCP&L Fleet Services use a maintenance repair weighting factor (MRF) for vehicles to normalize the maintenance work required by type of vehicle or equipment. As examples, an intermediate sedan has an MRF of 1.0 and a digger/derrick truck has an MRF of 7.5. MRFs have been established for all types of vehicles and equipment.

FirstEnergy Utilities and JCP&L have mechanic standard hours for preventive maintenance work but not for corrective work. FEU and JCP&L manage to "direct hours," which is the percentage of mechanic time accounted for in M5. FEU and JCP&L track preventive maintenance jobs that are overdue, low utilization vehicles, and fleet units per mechanic, preventive maintenance orders per mechanic, and MRFs per mechanic.

JCP&L Fleet Services uses the FEU fleet management system M5 from Assetworks, which is common in the industry. FEU is currently using Release 2.1 and will upgrade to the current version 2.5 by the first quarter of 2011. Preventive maintenance schedules for each piece of equipment are entered into M5, as are all corrective repair work orders. Mechanic time is entered into M5 on the work order by the mechanic before the work order is completed. The invoices for the parts used are processed against the work order in M5 by a clerk before the work order is closed. M5 includes a fairly complete vehicle history.

Findings & Conclusions

Finding XII-22 FirstEnergy Utilities' Fleet Services has developed an orderly and industry-typical set of policies and procedures for fleet management.

The standard policies, procedures, and processes followed by JCP&L and the other FEU opcos include:

- Vehicle Maintenance Work Flow
- New Vehicle Lease and Purchase Processing
- Lease Payments
- Vehicle Disposal
- Parts Ordering and Processing
- Mechanic Time Reporting

Finding XII-23 JCP&L fleet availability is better than the FEU opco average.

JCP&L vehicle availability is better than the FEU operating company (opco) average and all other FEU opcos, except Toledo Edison, as shown in *Exhibit XII-28*.

Exhibit XII-28
FEU Fleet Availability
as of December 31, 2009

Company	Total # of Down Time Hours	Total # of Vehicles	Total Available Hours /Vehicle	Total Available Hours All Vehicles	YTD Avg. Down Time %	YTD Avg. Availability %
Ohio Edison/Penn Power	6,378.5	1,091	170.0	185,470	3.4%	96.6%
Toledo Edison	506.4	247	170.0	41,990	1.2%	98.8%
The Illuminating Co	3,067.0	656	170.0	111,520	2.7%	97.3%
Penelec	5,056.1	639	170.0	108,630	4.1%	95.9%
Met Ed	2,511.6	529	170.0	89,930	2.7%	97.3%
JCP&L	4,810.8	883	170.0	150,110	2.4%	97.6%
Total FE Avg. & Totals	22,330.4	4,045	170.0	687,650	2.9%	97.1%

Source: Information Response 428

FirstEnergy Utilities defines downtime hours as the total hours that vehicles in Asset Classes 1–6 are not available between the hours of 7:30 A.M. to 4:00 P.M., Monday through Friday. The hours are calculated in the M5 fleet management system based on the open and completed dates and times of each work order.

Finding XII-24 The recent fleet cost trend is favorable.

Exhibit XII-29 shows that Fleet Services' cost per unit and cost per MRF increased from 2005 to 2008 until decreasing in 2009 to approximately the 2005 level.

Exhibit XII-29
JCP&L Fleet Costs
per Unit and per MRF
2005 to 2009

Year	Actual Costs	Total Units	Cost Per Unit	Total MRF's	Cost Per MRF
2005	$16,488,932	1384	$11,913.97	4271.20	$3,860.49
2006	$17,198,863	1330	$12,931.48	3938.74	$4,366.59
2007	$17,712,852	1307	$13,552.30	3923.67	$4,514.36
2008	$17,629,210	1275	$13,826.83	3838.32	$4,592.95
2009	$15,082,387	1266	$11,913.42	3864.78	$3,902.52

Source: Information Response 266 Revised

JCP&L reduced its Fleet Services overtime cost from $652,039 in 2005 to $171,916 in 2009 (excluding overtime incurred for other FEU opcos).

Exhibit XII-30 shows that the major Fleet Services costs are fuel, labor, lease and rental costs, and materials and equipment.

Exhibit XII-30
Fleet Services Cost Component Trends
2005 to 2009

Category	2005	2006	2007	2008	2009
Fuel	$2,196,611	$2,733,831	$2,967,592	$3,812,046	$3,439,713
General Business	$263,128	$104,918	$114,366	$115,838	$51,523
Labor	$5,646,827	$5,779,737	$5,576,162	$5,635,847	$4,913,158
Lease & Rental Costs	$4,179,603	$4,475,510	$4,789,691	$4,517,317	$4,384,321
Materials & Equipment	$3,334,990	$3,414,207	$3,774,367	$3,051,954	$1,935,678
Professional/Contractor – Other	$421,259	$289,714	$141,622	$48,350	$37,041
Dues, Fees, Licenses, & Permits	$446,514	$400,945	$349,053	$447,859	$320,953
Total	$16,488,932	$17,198,862	$17,712,853	$17,629,211	$15,082,387

Source: Information Response 673

For the 2005–2009 period, fuel costs and lease and rental costs were the only categories to increase. All other cost categories decreased.

Finding XII-25 **FirstEnergy Utilities and JCP&L do not follow their own vehicle replacement guidelines and the average fleet age is relatively old, which might result in excessive field-force work delays attributable to vehicle and equipment problems.**

FirstEnergy Utilities' current vehicle replacement guidelines are summarized below in *Exhibit XII-31*.

Exhibit XII-31
FE Vehicle Replacement Criteria
as of December 31, 2009

Asset Class	Asset Class Description	Vehicle Replacement Criteria (Either Mileage or Age, or Both)
1	Light Duty <=8500 GVW	>=100,000/10 yrs
2	Medium Duty 8501–17,499 GVW	>=100,000/10 yrs
3	Heavy Duty >=17,500 GVW	>=125,000/12 yrs
4	Aerial Trucks	>=150,000/15 yrs
5	Digger Derrick Trucks	>=150,000/15 yrs
6	Crane Trucks	>=125,000/12 yrs
7	Trailers	15 yrs
8	Construction Equipment	15 yrs
9	Forklifts, Mower, Miscellaneous	15 yrs

Source: Information Response 267, Attachment 2

A fleet management consulting firm used by FEU recommends heavy-duty aerial truck replacement in years nine or 10. FEU's replacement guidelines are longer than typical for the industry, with heavy-duty equipment replacement at 12 to 15 years. FEU and JCP&L, however, do not even follow these guidelines. FEU suspended adding new vehicles in 2009 and does not currently have a lease agreement in place to add new vehicles. However, a process to select a new lease vendor is underway and a lease agreement should be in place by the second quarter of 2011.

In 2008, FEU developed a vehicle lifecycle replacement strategy. The analysis and strategy reveals that:

- The FEU fleet includes 6,800 vehicles. Total vehicle replacements from 2004 through 2008 were 1,922. This figure equates to an average of 384 per year and an average 18-year replacement cycle (6,800 vehicles divided by 384 replacements per year). Of the 6,800 vehicles in the fleet, in 2008 approximately half qualified for replacement under existing guidelines.
- FEU's average age of vehicles is 9.1 years, 3.2 years older than the industry average.
- Older vehicles have more problems than newer vehicles. Vehicles that are 10 to 12 years old had the most work orders opened during 2007 for no start (cannot get to the job), road call (breakdown on the job), and driver report of trouble when returned. It is likely that the oldest

vehicles are used as spares and have less utilization and, therefore, fewer opportunities for problems.

- FEU's ownership costs of lease and license fees per vehicle of $5,219 are $1,285 lower than the industry average of $6,504. This lower cost of ownership, however, is almost exactly offset by higher operating costs per vehicle for labor, parts, and contract maintenance of $5,863 per vehicle. This figure is $1,262 higher than the industry average of $4,601.
- The study estimates/assumes 30,000 unproductive lost-time hours, worth $1.5 million per year, for vehicles seven years or older. This equates to 4.4 lost time-hours per vehicle per year, or, roughly just two crew hours per vehicle.
- Newer vehicles have advantages in lower emissions, better employee morale, and more safety features.

The vehicle lifecycle replacement strategy recommended replacing an average of 568 vehicles per year from 2009–2013, 218 per year more than the then current plan of 350 per year. The study showed the overall cash and O&M impact, but it did not calculate a discounted cash flow present value of the recommendation based on increased replacements and lower maintenance and downtime costs. FEU and JCP&L are not following the replacement strategy laid out in this document.

Exhibit XII-32 shows that JCP&L has the oldest vehicle fleet (Asset Classes 1–6) but that its construction equipment (Asset Class 8) is the second newest.

Exhibit XII-32
Average & Quantity
as of July 2010

	Toledo Edison		CEI		Ohio Edison		Penn Power		Penelec		Met Ed		JCP&L	
Asset Class	**Qty**	**Avg Age**	**Qty**	**Avg Age**	**Qty**	**Avg Age**	**Qty**	**Avg Age**	**Qty**	**Avg Age**	**Qty**	**Avg Age**	**Qty**	**Avg Age**
1-Light-Duty Vehicles <8501 GVW	7	12.4	48	8.9	128	5.6	21	5.7	153	9.9	189	8.7	198	12.3
2-Medium Trucks 8501–17,499 GVW	67	7.9	240	6.5	220	6.2	52	3.3	183	7.4	120	10.0	270	7.6
3-Heavy Trucks >17,499 GVW	12	17.5	24	10.6	60	14.8	6	8.0	24	14.4	27	13.0	48	11.6
4-Aerial Trucks	77	8.2	150	8.4	255	8.1	57	5.7	182	8.4	120	10.1	217	11.0
5-Digger Trucks	42	10.8	54	9.1	76	10.5	10	8.9	53	12.9	34	10.9	85	11.1
6-Crane Trucks	8	14.3	4	14.8	25	18.4	7	13.6	9	16.7	18	17.3	22	9.5
Total Qty & Avg. Age Rolling Stock	**213**	**9.5**	**520**	**7.8**	**764**	**8.2**	**153**	**5.6**	**604**	**9.3**	**508**	**10.0**	**840**	**10.2**
7-Trailers	95	18.3	224	18.7	345	18.9	67	18.0	326	19.9	202	19.4	314	13.4
8-Construction Equipment	27	12.7	48	16.5	63	21.2	7	9.4	47	19.0	22	18.1	61	12.6
9-Misc. Equipment – Forklifts, etc.	14	17.9	52	16.4	40	11.2	3	16.7	95	17.5	42	19.0	49	15.9
Total Qty Avg. Age Non-Rolling Stock	**136**	**17.2**	**324**	**18.0**	**448**	**18.5**	**77**	**17.2**	**468**	**19.3**	**266**	**19.3**	**424**	**13.6**
Total Qty & Avg. Age	**349**	**12.5**	**844**	**11.7**	**1212**	**12.0**	**230**	**9.4**	**1072**	**13.6**	**774**	**13.2**	**1264**	**11.3**

Source: Information Response 627

FEU and JCP&L have no designated spare vehicles, per se. JCP&L does, however, have vehicles for its full complement of field employees. Because of absences, training, and other reasons, a portion of the field workforce does not need its vehicles each day and those unused vehicles are used as spare vehicles, as needed, for reassignment to the other field forces where vehicles or equipment are unavailable.

Exhibit XII-33 shows the percentage of vehicles with 50 or fewer miles of use operated by the FEU operating company.

Exhibit XII-33
Vehicles with Fifty or Fewer Miles of Use
as of December 31, 2009

Company	Number of Vehicles	Fifty Miles or Fewer	Percentage Fifty or Fewer
Ohio Edison/Penn Power	1099	347	31.6%
Cleveland Electric Illuminating	664	203	30.6%
Toledo Edison	283	58	20.5%
Penelec	639	86	13.5%
Met Ed	533	114	21.4%
JCP&L	883	296	33.5%

Source: Information Response 428

JCP&L has the highest percentage of vehicles with 50 or fewer miles of use, indicating that it might have more "de facto" spare vehicles.

The CREWS work management system used by T&D and substation field crews has a time category for "Vehicle Breakdown." *Exhibit XII-34* shows the 2005 to 2009 JCP&L hours and dollar charges to this time-delay category.

Exhibit XII-34
Hours and Dollars Charged to
Vehicle Breakdown in CREWS
2005 to 2009

Year		Hours	Dollars
2005	Overtime	185.40	$10,197.00
	Straight Time	1,489.95	$74,497.50
2005 Total		**1,675.35**	**$84,694.50**
2006	Overtime	198.03	$10,891.65
	Straight Time	1,537.40	$76,870.00
2006 Total		**1,735.43**	**$87,761.65**
2007	Overtime	253.70	$13,953.50
	Straight Time	1,428.60	$71,430.00
2007 Total		**1,682.30**	**$85,383.50**
2008	Overtime	217.40	$11,957.00
	Straight Time	1,579.00	$78,950.00
2008 Total		**1,796.40**	**$90,907.00**
2009	Overtime	65.30	$3,591.50
	Straight Time	1,342.70	$67,135.00
	2009 Total	**1,408.00**	**$70,726.50**
Grand Total		**8,297.48**	**$419,473.15**

Source: Information Response 669

A high of 1,796 hours was charged in 2008, but the number dropped to 1,408 hours in 2009, the lowest in the five-year period. The wage cost in 2009 was nearly $71,000 associated with this delay code.

There is no comparable vehicle breakdown time code in FieldNET, the other major work management system, which is used by meter technicians, field collectors, and meter readers.

There were 1,581 JCP&L road-call work orders in 2009.

Finding XII-26 **All fleet preventive maintenance is calendar based rather than the better practice of triggering preventive maintenance on a combination of mileage or engine hours of use and calendar time.**

For example, oil changes could be scheduled at 6,000 miles or six months, whichever is first. Although FEU does track mileage and hours of use by vehicle and piece of equipment (hours per work order, not engine hours), such figures are not used to trigger preventive maintenance. Mileage and hours of use are tracked in the CREWS and FieldNET work management systems, and the data is transferred to M5.

Finding XII-27 **FirstEnergy Utilities does not track fuel usage by vehicle.**

Mileage and hours of use are reported for Asset Classes 1–6 and 8, the rolling stock, primarily through the CREWS and FieldNET work management systems. Although fuel usage is tracked in total, it is not tracked per vehicle. Fuel use per mile or per hour could be another diagnostic data point in evaluating the performance and cost of a particular vehicle or class of vehicles.

Finding XII-28 **FirstEnergy has not conducted a full lease-versus-buy analysis for vehicles and equipment since 2004.**

Although it is a moot point while new vehicle and equipment acquisitions are suspended, it has been six years since the last full lease-versus-buy analysis. During that time, economic and financial conditions have changed such that a new analysis may produce a different result than the 2004 decision, which was to use the operating lease structure through Bankers Leasing.

Recommendations

Recommendation XII-17 **Reinstate JCP&L fleet replacements and catch up to both the FEU fleet replacement guidelines and the fleet replacement strategy within five years, if practicable and cost beneficial. (Refer to Finding XII-25)**

The FEU fleet replacement guidelines are conservative and the fleet replacement strategy analysis was thorough and considered the total cost effectiveness of fleet and field crew labor costs. The guidelines and strategy are consistent with industry practices. FirstEnergy Utilities should re-implement the guidelines and strategy within five years to optimize the fleet and field crew labor costs, but only after performing a study that shows that the maintenance repair weighting factor is increasing and JCP&L's fleet availability is dropping from 2009 levels.

Recommendation XII-18 **Accelerate the implementation of scheduling preventive maintenance through a combination of mileage or engine hours of use and elapsed calendar time, if feasible and cost beneficial. (Refer to Finding XII-26)**

FEU Fleet Services recognizes that using a combination of mileage or engine hours of use and elapsed calendar time is a superior practice in scheduling preventive maintenance. Such a practice should be implemented over time and FEU should consider tracking engine hours of use for vehicle and equipment categories, which would benefit materially from using engine hours as a trigger for preventive maintenance unless the cost and complexity of the required programming changes to CREWS are significant and outweigh the potential benefits.

Recommendation XII-19 **Implement the tracking of fuel usage by vehicle and add fuel use efficiency to the evaluations of individual vehicle and class-of-equipment performance and cost, if feasible and cost beneficial. (Refer to Finding XII-27)**

FirstEnergy Utilities and JCP&L generally keep good vehicle and equipment maintenance and performance history records. Adding fuel use efficiency information in a cost effective manner will further enable empirical analysis of performance and better repair or replace decisions, but only if a simple, cost effective tracking system can be installed or devised. Both FEU and JCP&L Fleet Services are quite capable of using this additional information.

Recommendation XII-20 **Conduct a thorough lease-versus-buy analysis before resuming the acquisition of vehicles and equipment for JCP&L. (Refer to Finding XII-28)**

As noted in *Recommendation XII-17*, JCP&L should resume the prescribed vehicle and equipment replacement program as soon as practical. Additionally, a new lease-versus-buy analysis should be conducted based on current and forecasted financial and economic conditions. That way, the lowest net present value cost on an after-tax basis can be identified for acquiring vehicles and equipment for JCP&L.

F. Information Technology

This section discusses JCP&L's information technology function, which is managed by the FirstEnergy (FE) Information Technology (IT) group within the FE Service Company (SERVECO) organization.

Background & Perspective

Mission, Goals, and Objectives

The mission of the FirstEnergy Information Technology organization is to provide FirstEnergy with high-quality solutions to support effective business operations and to transform processes by focusing on the following strategic themes:

- Emerging technologies
- Continuous improvement
- Alignment with business operations
- Financial management
- Talent development
- Reliability/security

The organization's goal is to deliver easy-to-use, reliable business systems and information with current and future technology that provide the highest value to FirstEnergy at a speed that keeps pace with FE's changing business. Its values recognize the importance of IT employees in providing quality services to foster and drive leadership in technology through the following efforts:

- Teamwork
- Knowledgeable workforce
- Proactive communications
- Change leadership
- Accountability and ownership

IT is focusing on the following six key drivers to support implementation of its strategic vision:

- Ease of use
- Speed to market
- Flexible technology options
- Reliable solutions
- Enhanced value
- Skilled, flexible workforce

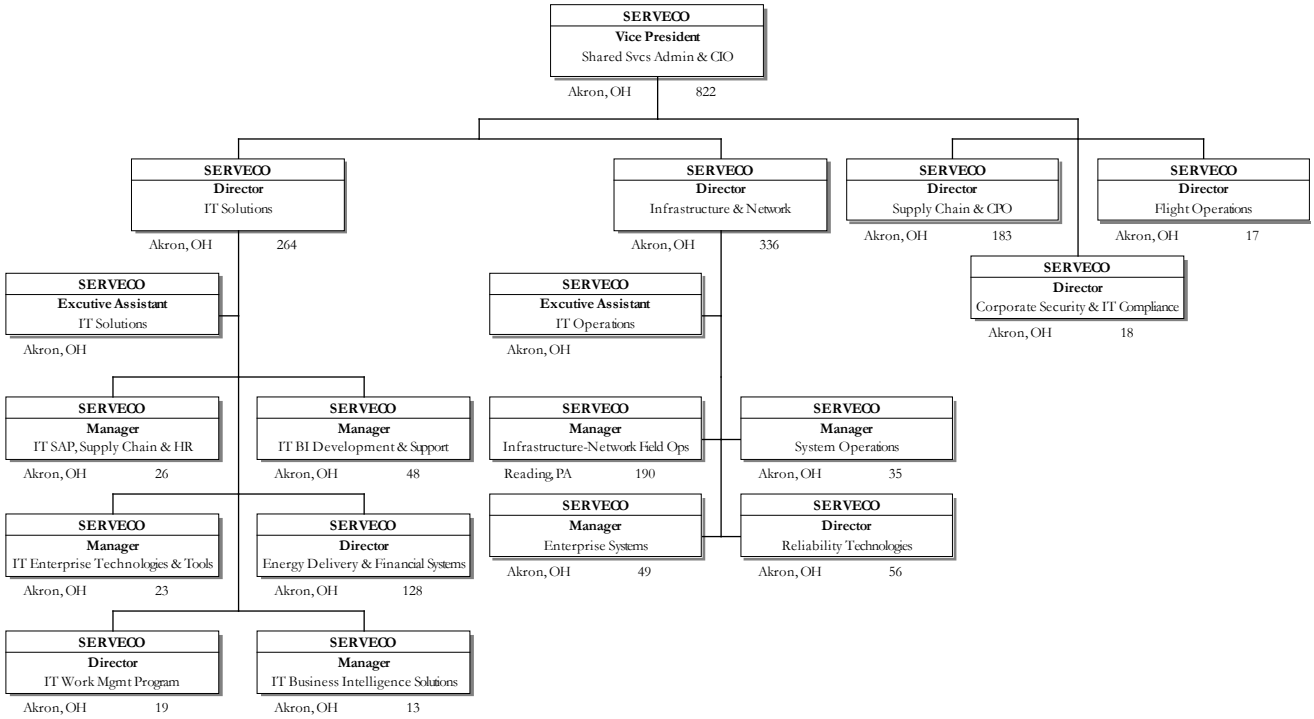
The organization's objectives are designed to improve cross-functional development of the IT workforce to enhance skills that drive organizational efficiency. It accomplishes this aim by:

- Building sustainable regulatory compliance processes that are uniform across the business, thereby ensuring that all requirements are met
- Enabling greater functionality in FirstEnergy enterprise technologies that produce measurable productivity gains for the FE corporation
- Collaborating with the business to eliminate costly legacy assets and to reduce the amount of low-value activities while maintaining a high service level
- Improving the performance and reliability of the network infrastructure while positioning it for the future

Organization and Staffing

Exhibit XII-35 displays the five groups that report to the Vice President of Shared Services Administration & Chief Information Officer (CIO). Three of these groups are discussed in this section regarding FE's information technology function, specifically IT Solutions, Infrastructure & Network, and Corporate Security & IT Compliance.

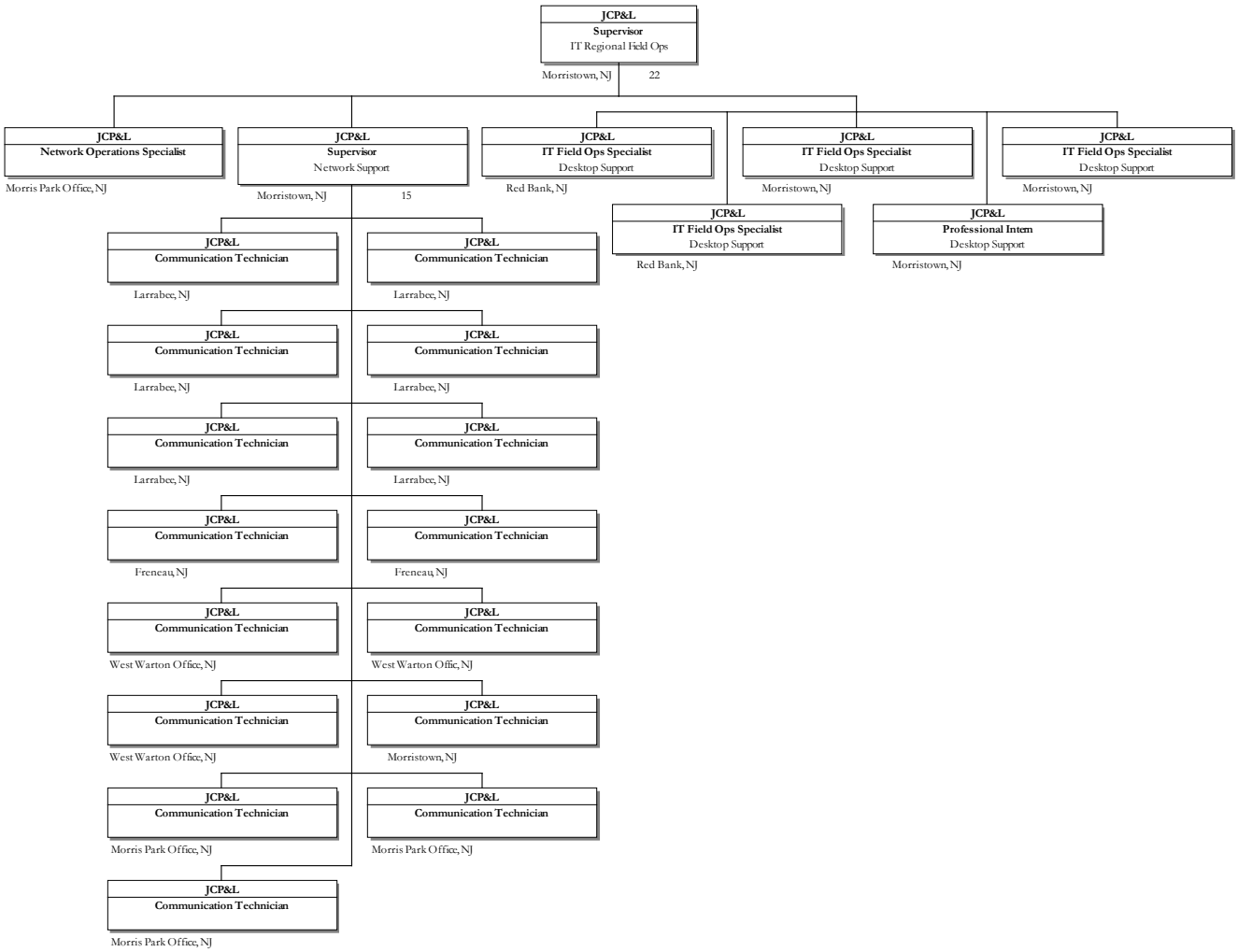
Exhibit XII-35
VP Shared Services Administration & CIO Organization
as of June 30, 2010



Source: Information Response 54 and Company Update

Exhibit XII-36 displays the New Jersey Field Operations group supporting JCP&L employees.

Exhibit XII-36
JCP&L Regional Field Operations Organization
as of June 30, 2010



Source: Information Responses 54 and 321

IT Solutions

Included in the IT Solutions organization are the following groups:

- *Energy Delivery & Financial Systems*: This group is led by a director who has six managers as direct reports. Each of these six managers lead one of the following application development areas:
  - Customer front office
  - Billing and revenue operations

- Finance
- Energy delivery (ED)
- FE Solutions (non-regulated)
- FirstEnergy Nuclear Operating Company (FENOC) and generation

- *IT Work Management Programs*: A director leads a group of 19 employees on a special project that involves development and implementation of FE's IT work management programs. This project, which is a special initiative for putting mobile units in trucks, is expected to last approximately four years. Currently, JCP&L uses PowerOn (outage management system) and AutoDesk (GIS); however, this initiative will add Click (scheduling) and Syclo (mobile) software with Panasonic Toughbook laptops. Started in 2009, the initiative was implemented at Cleveland Electric Illuminating (CEI) by August 2010. JCP&L implementation is not scheduled until sometime in 2012. In addition to newer technology, this initiative is expected to provide improved scheduling of work as well as turn-by-turn directions. JCP&L doesn't currently use automatic meter reading (AMR) technology. With the Public Act 129 push in Pennsylvania, FE presently has a two-year plan for evaluating AMR in PA; however, there are no specific plans to implement AMR in OH or NJ, although FE may look at this possibility after PA is implemented.
- *Enterprise Technologies & Tools*: This group, led by a manager, is responsible for supporting development platforms, developing standards, assisting developers (as appropriate), web management, and support (including support of the web methods integration platform), and supporting the enterprise document management system, which is P8 (formerly FileNet) software. This group is currently performing a P8 upgrade project to improve reliability. Also underway is the implementation of Day CQ5 software for web management. This implementation began with non-regulated entities, after which a business case will be made in 2011 to determine whether regulated entities will be implementing.
- *SAP, Supply Chain, & HR*: This group, led by a manager, provides overall governance for SAP application modules, specifically the master schedule. It also supports the business unit (BU)/SERVECO relationships involving the FE Supply Chain and HR organizations.
- *Business Intelligence Solutions Center*: This group, led by a manager, is responsible for the Solutions Center strategy. It also interfaces with architects to act as a consultant to BUs before projects start in the Business Systems group. In addition, it promotes the use of SAP/business intelligence (BI)/middleware technical standards, the focal point for Applications Design Review (ADR) process, etc.
- *Business Intelligence Development & Support*: This group, led by a manager, is a result of the centralization of BI into one group. Recently, a three-year roadmap for this group was developed. The setting up of miscellaneous IT initiatives to improve technology performance, including their business cases, followed. The employees of this group support tools as well as dashboard reporting. In use are the SAP business warehouse (BW) and non-SAP BW (using Informatica), with Cognos as a front-end application for creating dashboard reports. Since

2008, the IT organization has been encouraging BU power users to develop their own Cognos dashboards and to move away from use of spreadsheets. As a result, this group sometimes provides training at user forums. This group also provides communications to the entire FE organization when IT changes occur, such as outages. A second function is the applications development and support of selected non-enterprise-wide applications using enterprise tools (Legal, Flight Operations, and selected other Shared Services organizations), plus Lotus Notes, one of the enterprise-wide tools. Most of these applications are off-the-shelf (OTS) software packages, although a few have been developed in-house. The group uses an agile methodology to develop its applications because speed to market is important. Group members must evaluate whether to move data and connect to it (faster results) or directly connect to data (faster development) when developing applications. Also part of this group is FE's Resource & Program Management group, which consists of three employees who are responsible for:

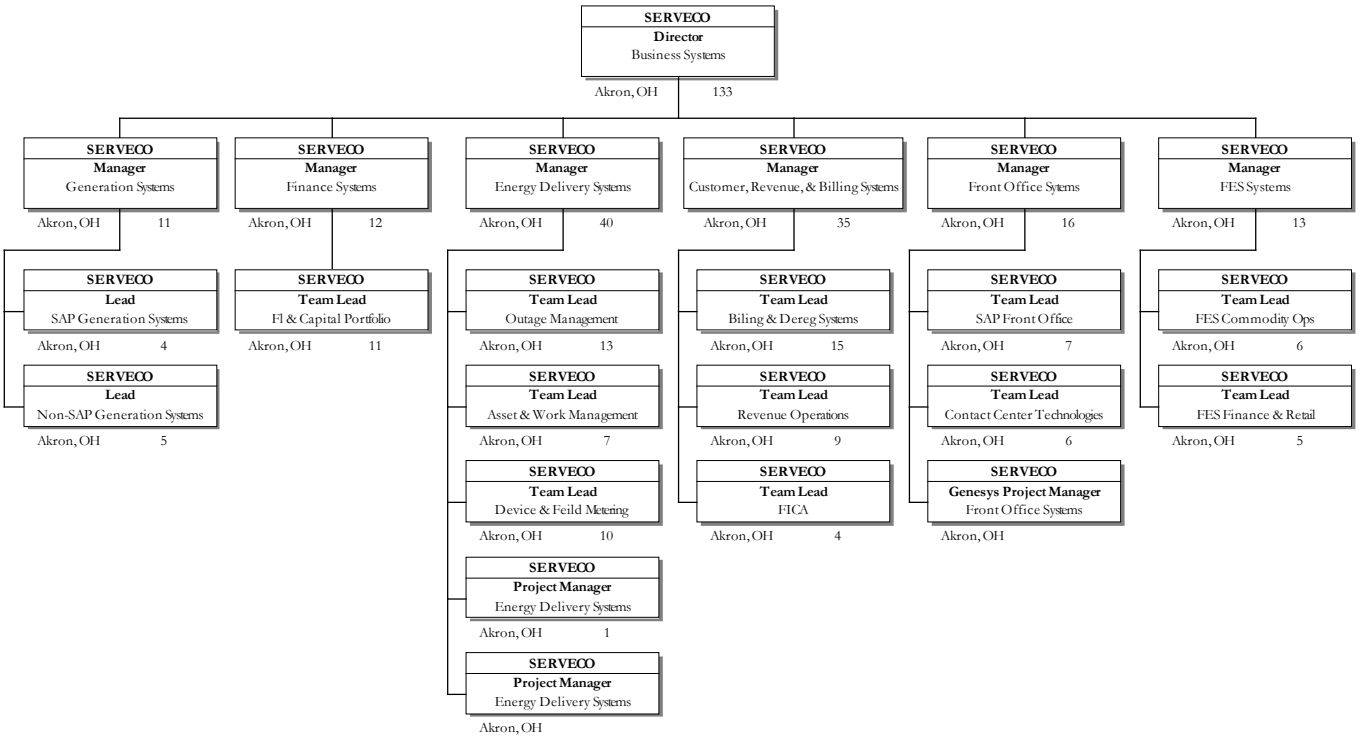
- Project management office (PMO) activities, with responsibility for a project's budgeting, resource planning, and other administrative standards
- Resource planning for the IT Solutions group, in which group members annually look at demand for skill sets (using HP PPM) and identify high-level gaps in resources. They then turn such matters over to individual IT managers to resolve. On a quarterly basis, the group provides ongoing support.
- Budgeting for the IT Solutions group (under the director's management), including financial upfront development, plus monthly monitoring

One of these IT Solutions groups that interfaces substantially with JCP&L management and staff is the Energy Delivery & Financial Systems group (also referred to as the Business Systems group). This group is the point of contact with business units (BUs), including the energy delivery, call center, and financial/accounting areas. Such areas include:

- Front-office systems (call centers at two major locations in Reading, PA and Akron, OH and another smaller call center in Toledo, OH) (regulated only)
- FirstEnergy Solutions (FES) (unregulated retail supplier, not using SAP but ABP) (unregulated only)
- Energy delivery systems (outage management, work management, GIS, etc.) (regulated only)
- Customer, revenue, and billing systems (SAP, plus billing systems) (regulated only)
- Finance and corporate systems (SAP, budgets, etc.) (regulated and unregulated)
- Generation process support (fossil and nuclear plant operations) (unregulated only)

Exhibit XII-37 displays the Energy Delivery and Financial Systems (Business Systems) group.

Exhibit XII-37
Energy Delivery & Financial Systems (Business Systems) Organization
as of June 30, 2010



Source: Information Responses 54 and 580

Each group has an IT lead with supporting staff, which consist of both technical (development) and business (analytical/testing) employees working on projects who report to the lead. On major projects, there is also a business lead from the Operations group (not part of the IT organization) who is a seasoned employee responsible for providing resources to the team. If a problem exists with the Operations group providing resources, then that issue is escalated to the director to resolve with the BUs. The business units are also responsible for setting priorities.

Most major ED projects are managed by this group; however, the work management initiative has been established as a separate group that is managed by its own Director of Work Management Systems. Large projects are often handled in this way, especially if new technology is involved. Use of mobile devices in trucks is approximately 1.5 years away in NJ, as such usage is expected to start during the fourth quarter of 2011 and be fully implemented by 2012.

Exhibit XII-38 lists all major IT system/application initiatives that were underway when Schumaker & Company began fieldwork on this project, with an update as of mid-2010 as to each project's status.

Exhibit XII-38
Major IT Initiatives
as of June 30, 2010

Project Title	Project Description	Status
Critical Infrastructure Protection (CIP)	Implementation of all policies, procedures, and standards necessary to meet all requirements of the North American Electric Reliability Council's (NERC's) cyber security standards	Completed
Mobile Work Management Initiative (WMI)	Implementation of a scheduling/dispatching application that uses mobile data terminals for troubleshooters, line construction, substation construction, and supervision of outage and planned work	Initiated rollout of WMI system, with expected completion date of June 30, 2013; JCP&L is to deploy by late 2012
Call Center System Improvements	Implementation of enhanced functionality for call center monitoring, forecasting, scheduling, work load distribution, and routing	60% complete, with expected completion date of October 31, 2011
2009–2010 SAP Enhancement and Support	Upgrading the enterprise SAP systems, in which the upgrade package provides maintenance updates and provides additional functionality, including installation of ERP Enhancement Package 4, Support Package Stack 5, Netweaver Enhancement Package 1, Support Package Stack 5	Completed
Business Information Improvements	Providing standardization and improvements in reporting and data management	Various stages of completion
Mainframe Elimination/Migration	Retiring the current 9672-R15 mainframe hardware and applications	98% completed, with expected completion date of September 30, 2010
Network Transformation	Improving the reliability and expanding the FirstEnergy IT network that supports voice, data, and video systems used throughout the corporation	60% completed, with expected completion date of December 31, 2012
Desk Personal Computer Operating System Upgrade to Microsoft Vista	Updating all PCs in fleet to Windows Vista operating system	98% completed, with expected completion date of October 31, 2010
Upgrade of the Corporate Document/Records Management System (FileNet/P8)	Upgrading the existing FileNet/P8 application from version 3.5 to 4.5.1.	90% completed (in final testing stages), with expected completion date of September 6, 2010

Source: Interview 118 and Information Responses 276, 518, and 579

The IT Solutions group uses multiple development environments, thereby allowing employees to move from development, to testing, and to user acceptance testing (done for major projects) before moving on to production. The application development methodology (ADM) online tool is used to assist in the management of IT projects. As shown below, Phase 2 Requirements Analysis has identified tasks specific to creating a testing strategy for projects. Phase 3 Design, Construct, and Test has tasks related

to the types of testing that may be performed depending on the requirements of the project (unit, integration, system, and user acceptance testing).

Infrastructure and Network

Included in the Infrastructure and Network organization are the following groups:

- *Systems Operations*: This group, led by a manager, is responsible for data center operations (Akron and Wadsworth, OH), satellite operations (Reading, PA), technical security operations (including intrusion and prevention implementation, with IT security having responsibility for direction), printing and inserting daily bills for all FE companies, disaster recovery plans (DRPs), and system network operating center (SNOC) 24/7 monitoring (Akron, OH) for the entire FE network. The server acquisition–associated guiding principles that IT uses in its data center include the following:
  - Size assets to meet life expectancy during initial acquisition (i.e., UNIX servers are sized for five years and X86 servers are sized for four years).
  - Develop/analyze new capacity requirements by working with application support staff and vendor architects.
  - When replacing existing assets, analyze performance data provided via HP OpenView tool suite to understand existing application peak loads/utilizations.
  - Use proactive HP OpenView alerts to handle the notification of potential server capacity issues in which server administrators are alerted to critical resources exceeding limits for a particular time period. These alerts can be reviewed to determine if there is an application issue or an infrastructure-related issue requiring a possible patch.
  - On an exception basis, IT adds capacity (memory/CPU) to existing assets experiencing performance problems by evaluating FE's options versus the expected remaining life of an asset. That process entails:
    - Adding capacity to the current asset
    - Purchasing a new asset and cascading the legacy asset to other application requirements
    - Purchasing a new asset and retiring the legacy asset due to asset age
  - These processes work with the multiple-year business planning process, which is described later in this document in *Finding XII-30*.
- *Infrastructure/Network Field Operations*: This group, led by a manager, has desktop support analysts (DSAs) who provide support to groups throughout the FE organization. (These employees do not assign IDs, passwords, or roles/responsibilities; the HR Department does.) There are approximately 6,000 laptops at FE, and roughly 488 in NJ. There are approximately 8,600 desktops at FE, and roughly 712 in NJ. Currently, FirstEnergy is using Vista SP2, MS Office 2003, and Lotus Notes but will be investigating the possibility of upgrades in future years. Presently, FE's policy is to replace desktops every four years and laptops every three

years, although the organization is considering going to every five years for desktops. Activities for this group include:

- Configuration management (Akron, OH and Reading, PA) of desktop images and distribution, network/software patches, asset management, contract management, and client research and development (R&D) activities
- Voice operations (Akron, OH) supporting telephones and video conferencing –A high level of standardization exists within the FE organization. Typically, Verizon is used for cell telephones (only a few provider choices exist) unless coverage is not adequate (in which case AT&T is used). Pagers generally come from American Messaging, although occasionally local companies are used, if required.
- Messaging and collaboration (Akron, OH), including responsibility for e-mail (Lotus Notes/Domino), spam, etc.
- Central security administration (CSA) (Akron, OH) for user security provisioning and de-provisioning
- Datacom (Akron, OH) responsibility for the corporate data network, including synchronous optical networking (SONET) routers and switches, and break/fix implementation
- Six regional field operations (RFO) organizations (various OH, PA, and NJ locations), including 23 NJ employees – The employees of these organizations are typically of two types:
  - Desktop analysts who provide virtual service desk (VSD) Level 1 support (24-hour coverage); desktop support and analysis Level 2 hands-on support for hardware, operating systems, office applications, but NOT business applications, VPN, Citrix, etc.; and occasionally support of the applications support team, when needed
  - BU/communications technicians supporting circuits, carriers, equipment substations (supervisory control and data acquisition (SCADA) remote terminal units (RTUs)), communications huts, etc.

- *Reliability Technologies*: This group, led by a director, is responsible for the engineering and design of the network and integration with the network of energy management system (EMS) and generation management system (GMS) platforms, SCADA points, interconnects to PJM Interconnection (PJM), etc. FE has two control centers, one in Wadsworth (OH) and one in Reading (PA). The employees of this group are responsible for network engineering design, with subsequent implementation and support performed by the IT Infrastructure/Network Field Operations group. Major initiatives currently underway include a network transformation that addresses critical points, rollover, and fiber expansion and EMS/GMS reliability.
- *Enterprise Systems*: This group, led by a manager, is responsible for the design and deployment of various platforms used within the FE organization, including Windows/WMware (used for smaller applications) and Unix/AIX (used for SAP and Energy Delivery systems), SAP, and

storage. This group, which also has responsibility for FE's Internet and Intranet, uses HP OpenView to monitor IT operations.

Corporate Security and IT Compliance

The Corporate Security and IT Compliance organization provides policies, procedures, and guidelines as well as strategic direction for all FE organizations except FENOC. In addition to its corporate security and IT compliance activities, this group also coordinates business continuity plan (BCP) activities, which according to SERVECO management goes hand-in-hand with DRP activities. Corporate-wide and departmental plans are currently in place. Initially, a task force (composed of Corporate Security/IT Compliance, HR, Legal, and Communications representatives and meeting regularly) was established to address training and communication areas. Subsequently, a steering committee (composed of executives from these same groups and meeting annually) was also established. Both BCP and DRP documents use the same tools, a combination of Strohl, MS Word, and Visio software. As part of training efforts, BCPs are often tested through regional dispatch office (RDO) drills and actual events, such as the following 2009 and 2010 JCP&L activities described in *Exhibit XII-39*.

Exhibit XII-39
JCP&L BCP Tests
2009 to 2010

	Northern New Jersey (NNJ)	Central New Jersey (CNJ)
Black start drills (practicing those procedures necessary to bring the electric system back on-line after a total blackout) involving PJM system restoration training involving simulation of outages and restoration of customers	11/3/2010	3/3/2009, 11/18/2010, and 12/2/2010
Actual event (fire alarm) in which system operations were turned over to other JCP&L RDO	6/14/2010	3/21/2010, 3/22/2010, and 4/13/2010
Stress test – PowerOn disaster recovery failover plan and the production hardware environment	10/22/2009	10/22/2009

Source: Information Response 822

Other Processes and Systems

Governance

In 1999, an application development methodology (ADM) was developed primarily for use when implementing new applications, not upgrades, although modification projects may also use ADM steps. It was formalized as a means to provide sustainability and applicability for systems and applications. Then in 2000, four IT committees, specifically the ADM Committee, the Applications Design Review (ADR) Committee, the Architecture Review Board (ARB) Committee, and the IT Governance

Committee, were established to provide governance of IT architectures, processes, and services. Their respective responsibilities are as follows:

- The ADM Committee's role (with at least one representative per IT director) is to provide guidance on changes to the ADM and associated processes, while ensuring any modifications do not compromise existing Sarbanes-Oxley (SOX) controls.
- The ADR Committee's role (with 50 representatives from across the IT organization) is to conduct peer reviews of a project's technical implementation strategies. The goals of such assessments are to promote adoption and to identify gaps related to the IT standard products, architectures, and services.
- The ARB Committee's role (with 12 representatives, including one from the IT strategy team, one from the IT PMO, five representatives from a cross-section of IT, and five representatives from a cross-section of FE business units) is to ensure alignment of IT architecture with corporate goals and objectives.
- The IT Governance Committee's role (with nine VPs or designated directors from FE business units, plus the CIO as facilitator) is to provide leadership in making business decisions that ensure the best use of IT to support corporate goals and objectives.

The ADR Committee functions as a step in the ADM (at the conclusion of the requirements analysis phase but prior to the design, construction, and test phases) in which committee members review the design and architecture of an application in progress, either online or via meetings, as appropriate. Only if escalation is necessary as a result of the ADR Committee's inability to resolve conflicts does the ARB Committee meet. During such a meeting, the ARB Committee can grant an exception, change standards, etc. Only pivotal IT decisions go to the IT Governance Committee for review and approval. They can come from the ARB Committee or stem directly from the nature of the project. The IT Governance Committee, which meets quarterly, deals with issues, projects, policies, and budgets but not operational issues. The IT Governance Committee takes major decisions to the Senior Management Committee for approval. The CIO is a member of the Senior Management Committee of top executives, which meets quarterly for three to four hours and is led by the FE Chief Executive Officer (CEO). These activities initially applied to OH entities, which merged in 1997. They then extended to other FE entities (PA and NJ), when FirstEnergy was merged with General Public Utilities (GPU) in 2001.

The incorporation of SOX controls has transformed the IT organization, with the emphasis now on internal controls as opposed to audits. IT is asked to provide better information to BUs so they can test controls. Less emphasis is now placed on validation after the fact, because controls are now considered by IT management as a part of doing business in a timely manner. As a result, the level of documentation has increased, with reviews now being a way to look at continuous improvement.

Internal Audit

The Internal Audit (IA) organization regularly performs IT audits. From 2005 to 2009, this group executed 22 IT audits. In 2010, for example, an internal audit was underway regarding interfaces in customer systems. This audit also encompassed a review of change management activities versus FE's chosen framework. On an annual basis, IT also reviews general IT controls and provides quarterly reports to IA.

Career Development

The IT organization uses a career development model (CDM), as do other FE organizations (as discussed further in *Chapter IX – Human Resources*). Individual positions are designated to a group, with levels and then proficiencies assigned to each group. That way, IT management can easily monitor progression. The CDM for IT employees is sometimes tied to an employee's individual development plan (IDP), because IT tries to juggle company and employees wishes; however, there is no interaction with HR regarding IDPs, although the IDP template is an HR form.

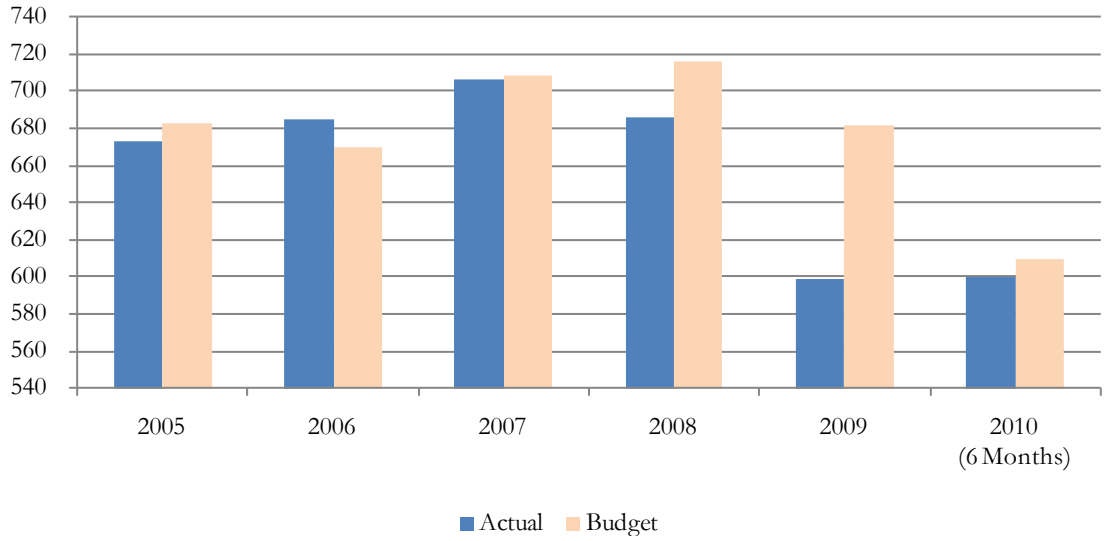
The career development for IT employees is conducted through a combination of mentoring, on-the-job training (OJT), web-based training, classroom training, and knowledge sharing (teaming, train the trainer, etc.). Sometimes the IT organization goes to outside vendors for training, but that decision is dependent on whether the technology is project-based or inherent to the IT group.

The IT organization works in alignment with HR to recruit staff, including interns, using the Talent Talk program.

Staffing Levels

Exhibit XII-41 displays FirstEnergy's staffing levels by year (2005 to 2010) for the IT/Corporate Security groups.

Exhibit XII-40
IT Staffing Levels by Year
2005 to 2010



Source: Information Responses 272 and 578

In 2009, for example, staffing reductions, a voluntary retirement program, and not back-filling attrition resulted in actual staffing levels being lower than the budgeted staffing levels. In most prior years, except 2006) actual levels were lower than budgeted staffing levels. Actual staffing levels for 2010 remained approximately the same as 2009.

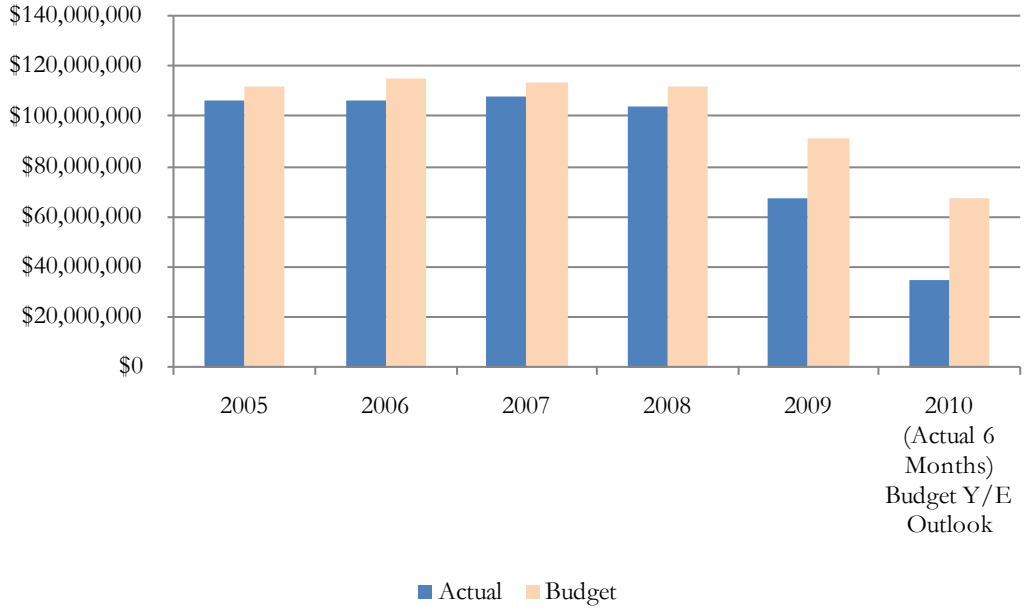
IT Configuration

The current configuration of FE servers, workstations, and laptops that support FirstEnergy's operations are all built from standard images according to internal build documentation. Subsequently, modifications are determined based on a security assessment that is performed monthly. During this assessment, the announced Microsoft security patches are reviewed to determine which of them will be applied and when. The IT organization has documentation detailing each patch as well as a complete inventory list for all servers, workstations, and laptops.

Operating Expenses and Capital Expenditures

Exhibit XII-41 displays FE's operating expenses by year (2005 to 2010) for the IT/Corporate Security groups.

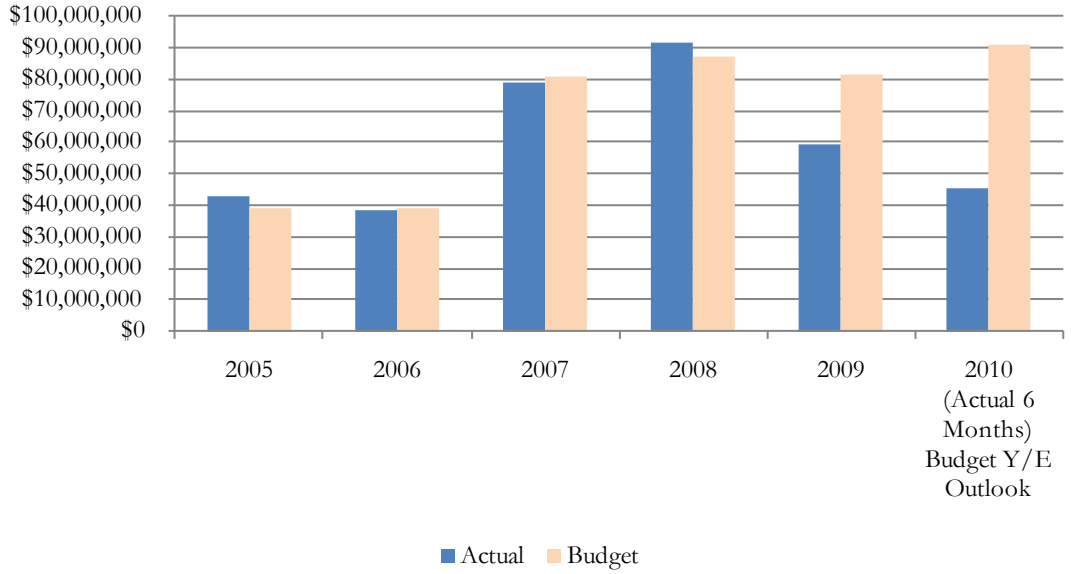
Exhibit XII-41
IT Operating Expenses by Year
2005 to 2010



Source: Information Responses 271 and 578

Exhibit XII-42 displays FE's capital expenditures by year (2005 to 2009) for the IT/Corporate Security groups.

Exhibit XII-42
IT Capital Expenditures by Year
2005 to 2010



Source: Information Responses 271 and 578

In recent years, the number of employees has gone down (as shown previously in *Exhibit XII-40*), as have operations and maintenance (O&M) expenses. At the same time, capital expenditures have gone up, because IT work was reallocated from O&M expenses to capital expenditures. Also, in 2008 and 2009, the economic downturn put IT (like other FE groups) under pressure to reduce costs and be a good steward of monies. Two examples of capital projects in recent years were SAP ($25 million) and credit and collections (although not so large). Both projects were completed in 2009. There has been another uptick in 2010 capital expenditures. The decline in staffing levels has been a result of attrition, FE voluntary retirement programs, and terminations.

Findings & Conclusions

Finding XII-29 The FE IT organization, led by the CIO, reports up through the CFO organization at a lower level than in many organizations.

In today's environment, with technology being a critical element for operating a business organization, not just its financial organization, other progressive companies have moved their IT organization out of the financial organization (where it was often located in the past). These organizations have also elevated the CIO position to one that reports directly to the Chief Executive Officer. At FirstEnergy, the IT organization remains in the Finance, Strategic Planning, and Operations group, reporting to the Executive Vice President (EVP) and Chief Financial Officer (CFO).

Finding XII-30 The FE strategic planning process is improving but the plan does not specifically address the direction in which IT is going.

The IT strategic plan is a multiple-year look obtained by meeting with BU management. After such a meeting the BUs approve a one-year outlook as part of the budgeting cycle (based on an assumed budget). Having a multiple-year plan allows IT to avoid the "all or nothing" way of addressing projects. (Maintenance work goes through the IT help desk and is spread throughout each of the groups.)

When the existing CIO came to FE in 2006, he has indicated that information technology was managed in a "here and now" mode supporting current operations, as follows:

- No plan existed to leverage technology.
- Technology, including SAP, was not being fully utilized.
- The IT organization was not a service organization.
- Duplicate organizations were frequently investigating the use of new technology.

The CIO spent the first six months visiting business units at all levels of the organization, noting a gap in the linkage between BUs and technology. Then in 2006, FE's first five-year IT strategic plan was developed, with a focus on how to leverage SAP technology throughout the FE organization. In 2007, SAP upgrades were undertaken to expand new functionality. In 2008 and 2009, the CIO looked at staff alignment and eliminated duplication of interaction with BUs. The IT organization now has only three direct reports (excluding Supply Chain and Flight Operations) aligning solutions by technology or customer. Unlike in the past, issues crossing multiple areas now have one point of contact with whom to address issues. IT governance is a representation of both IT and BU organizations, and the CIO believes that communication is key to this relationship.

According to IT management, in recent years the philosophy has changed from "get it done" to "create value." Over this timeframe, the FE organization has undertaken four to five major projects, with very little rework (only one to two weeks' cleanup), because they no longer use the "big bang" implementation methodology. Rather, they implement bits and pieces throughout a major project. One example is the credit and collections project involving SAP and customer information system (CIS)

interaction. It was a two-year project, following an 18-month scope period. Within 12 months, the first component was implemented, followed by a call component, and a metrics to take actions component.

Little outsourcing is done, although staff augmentation in selected situations is conducted. When he first came into the FE IT organization, the CIO noted that employee skills were not sufficient. To that end, he began:

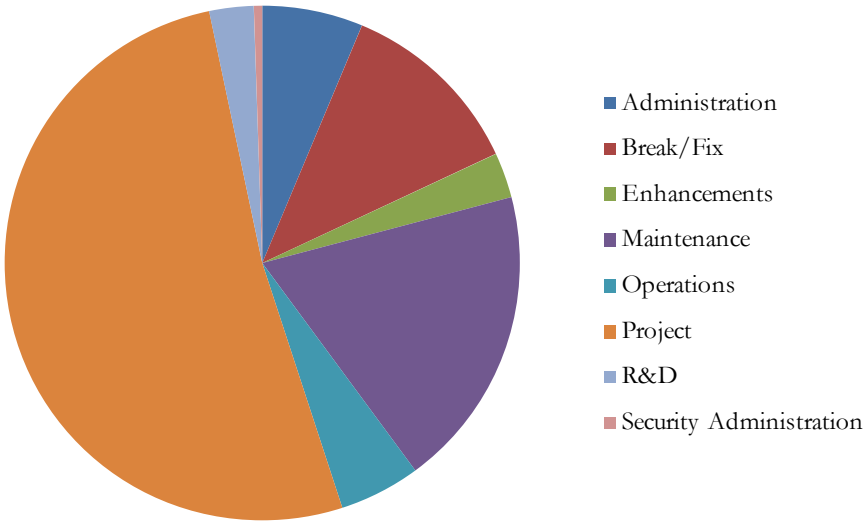
- *Training* – provided training from vendors to transfer knowledge and skills, using both classes (web-based classes) and shadowing of vendor personnel. FE recently converted to Windows Vista, for example, and used Microsoft to help during this transition.
- *Internships* – 77 interns have been hired over the last five years, with 34 having been converted to full-time (FT) employees.

In past few years, IT management indicates that the IT strategic plan was actually an activity-based plan. Now it is aligned with FirstEnergy's objectives, a tendency which in turn drives the activities. The plan is updated annually. The latest plan was a three-year (2011–2012) one that was revised in March 2010. Schumaker & Company consultants agree that this plan is substantially better than simply having a list of projects to be undertaken in the next three years. The plan includes a discussion of FE's corporate mission, vision, and values, FE's business plan summary, a business environment description, a key initiative roadmap (schedule), common metrics, a workforce plan, and major risks and opportunities. Nevertheless, it does not include what direction IT believes FE should be going with respect to the technologies that will meet BU needs. Such are indicated by the list of key initiatives outlined in the plan. One document Schumaker & Company reviewed that did attempt to incorporate technology direction was the business intelligence (BI) roadmap; however, that document covers only a small part of the IT organization.

A linkage exists between IT's annual plan and its five-year strategic plan, the latter of which is made visible to IT staff through individual development plans (IDPs). Among the metrics used are those that focus on safety, cost, and operational areas. An IDP begins with a review of the prior year's results during the first quarter of a calendar year. Each individual development plan has "stretch" components but is based on both employee and management input for the creation of the actual IDP document, with metrics rolling up to the entire IT metrics. A mid-year review of progress against plan is conducted, during which areas for improvement and successes are discussed. At year-end a formal review is held, which can impact compensation. A merit program also exists at FE that incorporates the organization's financial state as well as performance.

Exhibit XII-43 approximates the type of activity performed by the IT Solutions group. As can be seen, most work is project-related.

Exhibit XII-43
% of IT Time by Type of Activity
July 2009 to December 2009



Source: Information Response 282

Finding XII-31 The IT organization has amassed a large body of documentation associated with its policies and procedures.

The IT organization has a considerable number of policy and procedural documentation, including (but not limited to) the following:

- ADM procedures describing the steps required for IT projects, including IT committee descriptions – Such descriptions include the following five phases from initiation through post-implementation:
  - Design (analyze) project
  - Requirements analysis
  - Design, construct (code), test
  - Implementation
  - Post-implementation
- Project management guidelines
- IT security policies, standards, and procedures that apply to the entire FE organization
- CIP policies, programs, and procedures in support of the reliable operation of FE's bulk electric system
- Procedures used by the Network group in maintaining FE's corporate network

- Procedures used by the Infrastructure group in supporting the operations of the corporate data centers as well as the EMS and GMS systems
- Change management and control procedures for tasks affecting IT-managed assets
- Procedures used by the IT PMO for capital projects

The IT organization regularly updates its IT policies and procedures. The primary triggers for updates are the following:

- *Regulatory requirements* – As the regulatory requirements change, FE is required to update its policies and procedures to meet the new stipulations. For example, CIP requirements from the North American Electric Reliability Corporation (NERC) have been revised two times, and each time the prescribed review cycles have changed.
- *Technology changes* – The introduction of technologies adopted by FE may require that the existing policies and procedures be updated.
- *Self-contained update schedules* – Many policies and procedures contain their own review cycles for reviewing and modifying, if applicable, any documentation.

Finding XII-32 The IT organization has a very limited PMO in place.

The IT organization has Version 1.0 project management guideline (PMG) documentation in place (last revised December 31, 2008) for the following topics:

- PMG Overview
- Project Initiation Guideline
- Project Plan and Scope Development
- Project Management Estimating Process
- Project Management Human Resource Management
- Project Scheduling
- Project Safety Planning
- Project Environmental Planning
- Project Risk Management Process
- Project Procurement Planning
- Project Contractor Management
- Project Quality Management
- Project Communications Management and Performance Support
- Project Reporting
- Project Change Control
- Project Closeout

The Resource and Program Management (R&PM) group performs the following basic project management office activities:

- Oversight progress against budget for capital projects, as 60% of projects are capital (new or enhanced applications) and 40% are non-capital break/fix projects:
  - IT timelines
  - Business cases (how they are done, including templates, and how to plan for resources)
- Training to new project managers
  - One day in-house training by BI group (Project Tech Lead How-To Guide); the content of this training is focused primarily toward BI employees, not other IT project managers
  - Two days general training by Human Resources (HR) group through outside vendor

Regarding PMO activities, the R&PM group does not have sufficient resources for rigorous oversight to ensure that standards included in the PMG documentation are actually being followed. Approximately three to four years ago (2006 to 2007), IT management made a conscious decision not to have the PMO enforce standards or ensure guidelines were being followed. Rather, it left these tasks up to other IT managers. The IT organization does have an ADM Topic Checklist tool that these other IT managers can use to guide employees through the ADM and assist them in determining what project tasks should be reviewed and executed. At a high level, this tool lists all ADM phases, outlines the topics within each phase, and provides a brief description of each topic.

PMO employees are generally part of bi-weekly staff meetings held by other IT directors or managers (for example, Director of ED & Financial Systems). They also take part in the bi-weekly staff meetings conducted by the Director of IT Solutions. During these meetings, which are held on Tuesdays, change management or project management activities can be discussed.

Finding XII-33 The FE IT organization does not sufficiently emphasize the certification of its staff.

According to IT management, certifications, while helpful to employees in performing their role, are not part of an employee's individual development plan. Each IT employee is responsible for obtaining certification on his or her own, if he or she personally desires to do so. As such, there are approximately only 167 technical certifications (including multiple certifications by some employees) and three project management certifications within the IT organization. Encouraging employees to obtain project management and technical certifications helps both FE and its employees by increasing skill sets of employees to more effectively perform FirstEnergy's IT work. They help IT managers validate that employees have the necessary skills, thereby allowing IT managers to focus not only on such skills but other workplace skills that IT staff need to work effectively.

Finding XII-34 **The key IT performance metrics currently in use are limited in nature and are not kept in a consolidated dashboard for reporting across the IT organization.**

Exhibit XII-44 illustrates the key high-level performance metrics IT formally tracks.

Exhibit XII-44
Key High-Level IT Performance Metrics
2005 to 2009

	2005		2006		2007		2008		2009	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Reliability of voice/data network: % network available	DN	DN	DN	99.68	99.68	99.72	99.75	99.42	99.72	99.76
Increase video conferencing usage: Hours of video conferencing usage	NA	NA	NA	NA	DN	1890	3240	3604	3790	9202
Maintain IT Service Desk first call resolution: % of calls to the IT Service Desk that are resolved during the call	72	73.1	72	73.6	72	75.2	74	76.8	76	75.52
Improve IT Time to Respond (TTR) to critical problem notification: % responding w/in 20 minutes of notification	DN	DN	DN	93	DN	90	96	98	98	98.83
Increase Reliability of Critical Systems:% availability rate for EMS. GMS, PowerOn, CREWS, GIS, SAP/CCS, SAP/SSP. Lotus Notes Email	DN	DN	DN	99.72	DN	99.76	99.8	99.84	99.1	99.83
Increase employee engagement: IT Employee Engagement Index (Survey executed every other year)	NA	NA	DN	56%	NA	NA	61%	70%	NA	NA
Acquire Talent Through Internship Program: # Graduating interns offered/acc & accpted full-time employment divided by total # graduating interns	NA	NA	DN	40%	50%	77%	75%	73%	75%	46%

DN: Data not available
NA: Not Active for Year Noted

Source: Information Response 274

As shown, these metrics are fairly limited and are primarily related to the IT Network & Infrastructure group, not the IT Solutions or Corporate Security/IT Compliance groups. The only exception is the metric related to business and technical internships.

Any other metrics are monitored by only individual IT groups. For example, the Field Operations group monitors five metrics, some included in the list above in *Exhibit XII-44* and some not. Those five metrics are:

- First call resolution: 74% 2010 target/78% actual year to date (YTD) (July)
- Abandoned calls: 4% 2010 target/4.6% actual YTD (July) (expects to meet by beginning of year (BOY) 2011)
- Average speed of answer (ASA): 24 seconds 2010 target/27 seconds actual YTD (July) (expects to meet by BOY 2011)
- Network reliability: 99% 2010 target/99%+ actual YTD (July)
- Time to respond for critical items (20 minutes): 98% 2010 target/97.5% actual YTD (July)

The IT organization does not have a formal program whereby individual group metrics (in addition to the key high-level performance metrics) are reported as a consolidated whole to senior management as part of an IT dashboard.

Finding XII-35 IT controls have been incorporated into day-to-day activities.

The controls associated with the IT organization are designed to support FirstEnergy's SOX compliance. These controls are reviewed and tested annually or as needed by the IT SOX liaisons. In addition, the key controls are audited annually by FE's Internal Audit Department and/or by FE's external auditors (PricewaterhouseCoopers LLP). Each IT control is a self-contained document that consists of the following sections: control objectives, IT control mechanism, IT control process, IT change control log, and IT control review. The controls are broken into the following categories:

- IT entity level controls (ITELCs), with the CIO as the process owner, provide the "tone at the top" for the IT organization.
- IT general controls (ITGCs), with the Director of IT Operations and the Director of IT Solutions as process owners, are pervasive controls that cover multiple control objectives or cross-multiple platforms. They include:
  - Change management controls for applications, databases, and infrastructure
  - Security management controls for operating systems, databases, and applications
  - Computer operations controls for backup and recovery and critical system monitoring
  - Physical access to data center
- IT platform controls (ITPCs), with the Director of IT Operations and the Director of IT Solutions as process owners, are specific to a domain environment, plus any associated general controls, including:
  - Security management
  - Server management
  - Mainframe backup and recovery
  - Batch scheduling/reporting
- IT exception controls (ITECs), with the Director of IT Operations and the Director of IT Solutions as process owners, are deviations from the ITGCs and ITPCs and rely on specific controls to mitigate risks in the exception area.

In addition to the annual key control reviews, two other types of control reviews are completed.

- Security configuration reviews are completed twice a year to ensure account access is appropriate for the servers and applicable databases.
- A quarterly review is conducted to ensure that access to the SOX applications is appropriate.

The process owners regularly certify the status of the controls for which they are responsible on the:

- Process Owner Input to (Q1, Q2, and Q3) (Year 20xx) Section 302 certification
- Process Owner Input to (Year 20xx) Section 404 certification

The IT controls are managed through a Lotus Notes database called "FirstEnergy IT Controls" and are accessible to the IT and Internal Audit organizations.

Finding XII-36 No formal service level agreements exist between IT and JCP&L or other FE entities.

IT does not have formal documented service level agreements (SLAs) with FirstEnergy's operating companies. On a corporate basis, however, IT maintains reliability and performance targets that apply to all operating companies. (Refer to *Finding XII-34* for Schumaker & Company concerns about IT performance metrics.)

A good SLA includes such topics such as the following:

- Introduction, including scope and objectives, definition of business partners (IT, SERVECO departments, regulated business units, and non-regulated business units), associated roles and responsibilities of business partners, governance committee roles and responsibilities, and corporate/executive roles and responsibilities
- A detailed listing of target metrics, including metric, metric calculation, goal, target, owner, responsible department, and explanation (if necessary), with the reporting structure and frequency identified
- Required management activities, such as:
  - Identification of material variance and corrective actions
  - Performance accountability for IT employees
  - Methodology for revision of service levels
  - Results of annual business performance surveys
- IT and business partner signatures

By implementing such an SLA, the IT organization is formally required to be accountable to BUs for its activities on their behalf.

Finding XII-37 The IT organization has a robust disaster recovery program, even though it did not begin developing a formal plan until 2004.

FirstEnergy began establishment of its disaster recovery plans at the end of year 2004, starting with its emergency management system (EMS) plan. The DRPs define the required actions in response to events or conditions of varying duration and severity that would activate the recovery plans. They also define the roles and responsibilities of responders. Of FE's approximately 200 applications, approximately 20 are considered to be mission-critical and 60 to be business-critical. Mission-critical applications must have a return to operations (RTO) of less than one hour, while business-critical applications must have an RTO of zero to 48 hours. The FE DRP is composed of a master plan for

each of FE's two main IT facilities, the primary data center referred to as the information system operations center (ISOC) and the second data center (SDC). This latter center is approximately 20 miles away from the ISOC and can act as a hot recovery site for ISOC operations. Each master plan provides an overall summary (structure, roles, responsibilities, and management of events) and a description of each of six tracks (including detailed steps for each track). Those six tracks are primarily:

- *Track 0:* infrastructure items that are needed for other applications to run and other items such as e-mail messaging
- *Track 1:* critical support systems, such as enterprise application integration (EAI) functions
- *Track 2:* applications recovery
- *Track 3:* enterprise systems, such as SAP, recovery
- *Track 4:* storage support, such as EMS and traffic management channel (TMC) products
- *Track 5:* off-site recovery, such as recovery of the cash remittance center (CRC) operations

Each track has a track lead who manages its update and execution. Included in FirstEnergy's disaster recovery plans are worst case scenarios in which all affected facility-based plan recovery procedures would be executed if a formal disaster declaration (such as a complete data center not operational) were declared. Less serious situations, where individual hardware or software components are not operational, are also included. Each documented recovery procedure can also be used individually on a one-for-one basis without the need for a formal disaster declaration. One of IT's philosophies is to use testing/quality assurance (QA) equipment as backup to production equipment, as needed.

The DRP program is made up of individual plans based on a standard template, which is then sequenced by application. Individual application plans include information such as the following:

- Contact information
- Overview information, including summary information, items in/out of scope, requirements, prerequisites, roles/responsibilities, etc.
- Procedures and steps
- Server location/purpose
- Network view diagram
- Revisions
- Testing table history
- Approvals (both IT and business unit representatives)

The annual draft revisions for these DRPs are first reviewed by IT infrastructure representatives before being sent out for review by business unit representatives. The DRPs are stored in a restricted network location that is accessible by assigned staff responsible for implementing the plans for a specific event.

Additionally, the disaster recovery plan is updated monthly and provided in total to each key IT employee in electronic form on a password-protected thumb drive.

Each year, all DRPs are tested either through desktop activities or full-fledged testing activities (if high-availability failover required). All mission-critical items are tested (either physically or via desktop exercises) at least annually, while business-critical items are tested at least once every three years. Other items are tested based on the cycle set as part of the annual review of the disaster recovery plan.

These plans also document what backup information is required and where the required backup information is located. The restoration requirements vary based on recovery strategies, although the methodology for restoration is documented. Any physical backups are copied to a separate physical site.

Each of FE's two data centers is considered a hot site (Teir 1 facility) for the other one. They are approximately 15 miles away from each other, each in a different electric grid served by different substations, with each having dual feeds. Each has full generation backup capability.

Finding XII-38 IT vulnerability assessments and penetration testing are routinely performed.

The Cyber/IT Security area is responsible for cyber and physical security within the FE organization. Every other year an enterprise vulnerability assessment, which costs approximately $150,000, is performed by an outside vendor. Currently, that vendor is SecureState, which has done the assessment the last two times. This assessment project looks at all entry/exit points, including roughly 50,000 Internet protocol (IP) addresses, which encompass 1,000 Windows servers, 300 Unix servers, 10,000 workstations, and other devices. The scope of work typically includes:

- Internal network security assessment
- Internet vulnerability profiling
- Internet penetration testing
- Remote access security review (virtual private network (VPN))
- Social engineering (not done in 2009 for cost purposes)
- Technical baseline/standards review
- Web application security attacks and leaking
- Oracle database (DB)
- Wireless connections
- Mobile device security, including laptop encryption
- Substation networks
- Firewall, intrusion prevention, and proxy server review

Ratings of extreme risk, high risk, medium risk, or low risk are given in total and by work area. In 2009 (May 21, 2009), the FE organization was scored by SecureState as having a medium risk in total, with individual work areas primarily low risk to medium risk but with a few high-risk areas. In 2009 (August 2009), the IA organization also reviewed SecureState's activities to make sure the assessor performed a

complete external system vulnerability assessment and that mitigation plans were developed in response to any findings.

Every year, critical infrastructure protection (CIP) vulnerability assessments are performed by FirstEnergy and SecureState at all seven plants and 54 substations. This group was last in NJ on July 26–30, 2010 to perform assessments. New Jersey has 15 facilities (some involving substation collocation) and one plant (Yards Creek). Additionally, last year (2009) the Manager of Cyber Security & IT Compliance participated in a cyber simulation in New Jersey, referred to as Broken Wire/CIP Man, where various "what if" scenarios were discussed. In 2009, the primary topic dealt with what happens if a bad patch is installed by an unethical administrator.

In addition to these assessments, other activities such as the following occur:

- Online cyber security awareness training must be performed within two weeks of receiving network access as well as once annually in September of each year. Users can retake a test if they fail, but if they are CIP critical, then access is removed immediately. This computer-based training (CBT) was implemented by Global Learning Systems for roughly $100,000 in 2007. FE pays $50,000 annually but is now paying $40,000 to port it internally.
- Passwords, which must include alphabetic characters (upper and lower), numbers, and special character, are changed every 45 days, although CIP requires they be changed only once a year.

Finding XII-39 The IT organization uses ALTIRIS software, but doesn't use the software's wake-up capability.

Among the responsibilities of the Infrastructure/Network Field Operations group within the IT organization includes configuration management of desktop images and distribution, network/software patches, asset management, contract management, and client R&D activities. The group uses ALTIRIS software for remote management of workstations. While it has the capability to wake up powered-down machines to perform activities, FE currently does not use this capability.

Recommendations

Recommendation XII-21 In conjunction with the FE/Allegheny Energy merger integration process, and regularly thereafter, identify and implement the most efficient organizational design to effectively perform the IT function across FE. (Refer to Finding XII-29)

As FirstEnergy makes upcoming organization changes in the future, such as those that will occur due to the Allegheny Energy merger, the FE Service Company should investigate where to relocate the IT organization outside the financial organization to a location where it has a more corporate-wide impact. Not having the IT organization located within the financial organization helps ensure that the needs and requirements of all functions within an organization are given the appropriate priority when choosing what system additions or modifications to implement.

Recommendation XII-22 Incorporate technology direction into IT's strategic planning process. (Refer to Finding XII-30)

While the IT organization has made great progress in developing its strategic plan, it still needs to incorporate what technology direction it generally wants to take going forward. In addition, it must list its key initiatives for the next three years. Individuals within the IT organization need to have the appropriate framework for identifying what technologies (hardware/software) should be chosen when evaluating options and making future decisions. It will also be extremely important if (and when) FE completes the merger of Allegheny Power into its operations.

Recommendation XII-23 Expand the PMO to take on additional responsibilities. (Refer to Finding XII-32)

PMO activities should not be primarily limited to oversight of capital projects' progress against budget and training of new project managers. Rather, they should be expanded to develop and enforce the following of project management standards and to ensure that guidelines are being followed. Often, an IT PMO (and sometimes a corporate-wide PMO) is responsible for such activities as:

- Developing and communicating project management standards and guidelines
- Developing templates and checklists for use by project managers
- Establishing an IT/corporate-wide repository for project management documentation, including but not limited to project charters, project schedules, progress reports, and other documentation
- Reviewing all such project management documentation developed by project managers to ensure that standards and guidelines are being followed
- Managing resources for all IT projects
- Monitoring project management training and certification activities by employee

- Ensuring that formal quality assurance/testing activities are being performed by individuals other than those designing and developing code

FirstEnergy should perform a study to investigate what form its PMO should take. It should then implement that form in a timely manner.

Recommendation XII-24 Expand FirstEnergy's commitment to project management by incorporating all IT employees who are responsible for project delivery into a PMP certification program and closely monitor implementation of this program, whereby all appropriate staff achieve PMP certification to ensure timely progress is made. (Refer to Finding XII-33)

For an organization the size and complexity of FE's IT organization, few employees have project management certifications. Certification not only helps to ensure that individuals have been trained in appropriate project management practices, tools, and techniques, but it also helps to place appropriate emphasis by FE management on the importance of best practices with regard to project management. Emphasis on project management certification helps ensure standardization of project management implementation efforts. It also helps determine which employees are truly interested in furthering their position within the IT organization by obtaining their Project Management Professional (PMP) certification through the Project Management Institute. FirstEnergy indicates that it is committed to developing the skills of project managers, yet it does not require PMP certification. Inclusion of project management certification goals should be incorporated into the performance plans of appropriate employees. In addition to PMP certification, as part of its development of project managers, FE should also ensure that skill-based mentoring and exposure to a variety of on-the-job development experiences are included in this program.

Appropriate employees for inclusion in this program include not only project managers but also the directors and managers who have projects managers in their organization. That is because these individuals also need to understand project management philosophies, concepts, techniques, and tools.

Recommendation XII-25 Implement a relevant IT dashboard. (Refer to Finding XII-34)

The existing IT performance targets do not reflect an organized approach to effectively improving the IT organization's performance. IT management, in conjunction with BUs, should determine what key metrics are relevant and then identify the particular targets against which results are measured. The key performance indicators (KPIs) for IT groups, as well as any success measures for individual IT employees, should be aligned so that they support the key IT performance targets included in an IT dashboard. Similarly, these key IT performance targets should support the IT strategic plan (described earlier in *Finding XII-30* and *Recommendation XII-22*). Routinely (preferably monthly), dashboard results against targets, with explanations when targets are not achieved, should be published to all IT employees and major business partners. In the future, when a target is not achieved, a formal action plan should be

developed and a responsible person should be assigned to improve results and subsequently achieve the target.

Recommendation XII-26 Expedite completion of SLAs with all major client groups. (Refer to Finding XII-36)

To truly become "a valued business partner," the IT organization must increase its client focus by interacting more frequently and effectively with its client groups. One of the ways the IT organization can begin to accomplish this aim is by establishing service level agreements with each of IT's major client groups. These groups include both individual SERVECO departments and other BU groups, such as major JCP&L groups. Each major client group must be addressed through an SLA, which should also incorporate all major IT groups. These agreements, however, must not be developed and simply placed on a back shelf without further consideration. A mechanism must be developed that requires the IT organization to at least quarterly (if not monthly) provide feedback to the client groups as to how it is doing against the expectations included in the SLAs.

Recommendation XII-27 Transition to the use of the remote management software's wake-up capability. (Refer to Finding XII-39)

The use of the ALTIRIS wake up capability can be limited by the hardware FE uses for its workstations, especially older types. As older workstations are replaced, the Infrastructure/Network Operations group should implement the software's wake up capability, which would allow IT employees more flexibility when they could perform various configuration management activities.

G. Records Management

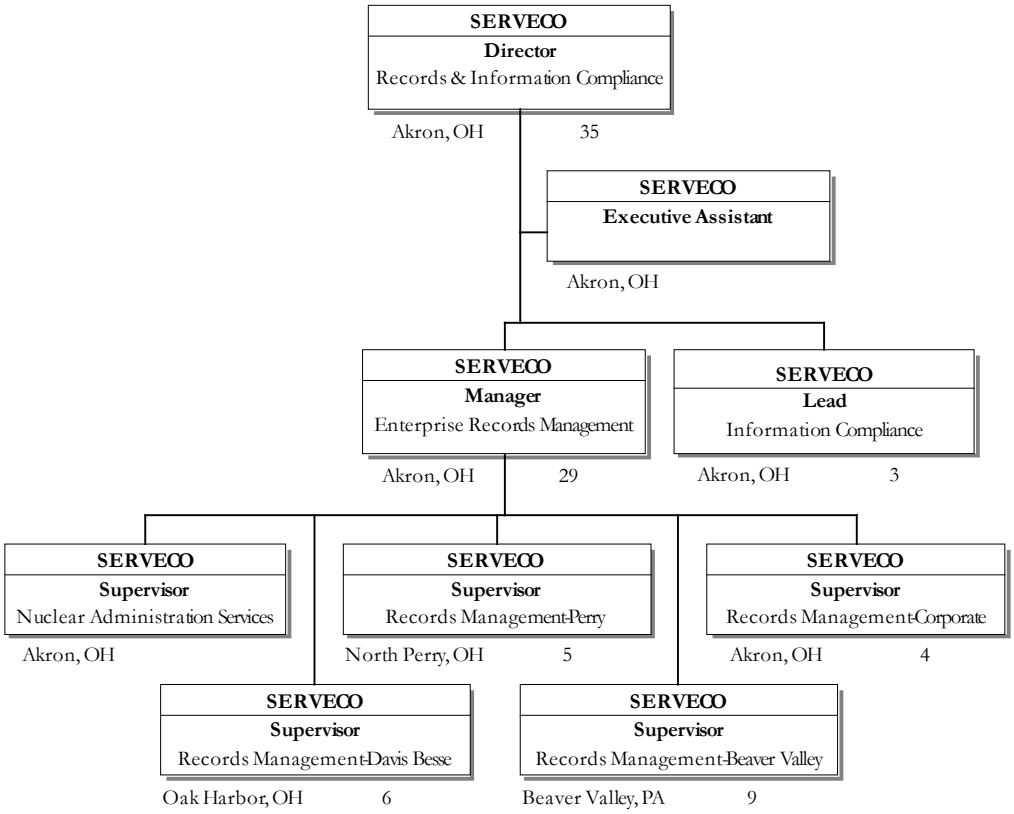
This section discusses Jersey Central Power & Light (JCP&L) Company's records management program, which is managed by the FirstEnergy (FE) Records & Information Compliance Department (R&ICD) group within the FE Service Company (SERVECO) organization.

Background & Perspective

Organization and Staffing

Exhibit XII-45 illustrates the FE R&ICD group.

Exhibit XII-45
SERVECO Records & Information Compliance Department
as of June 30, 2010



Source: Information Response 54

FE's use of automated records management processes dates back to 1994. That automation included the use of bar coding for boxed paper records. Until the completion of the merger between FirstEnergy and GPU, Inc. (GPU) in 2001, records management was generally decentralized among business units. In 2002, as a merger synergy savings opportunity, a committee was formed to develop a business case for centralization of the organization's records management functions to achieve cost savings and business process improvements. In 2003, the enterprise records management (ERM) program was established as a consolidated shared services organization that was extended in 2005 to its current state as the Records & Information Compliance Department. It is now the responsibility of the R&ICD to govern all of the organization's policies, processes, and automation procedures associated with records management. Within FE, records are characterized as either "business" (based on a retention schedule) or "situational" (based on a litigation hold). Within the R&ICD organization, the Enterprise Records Management group manages business records, while the Information Compliance group manages situational records.

Enterprise Records Management

The ERM Manager is a Certified Records Manager (CRM) licensed by the Institute of Certified Records Managers™ (ICRM), an international certifying organization of and for professional records and information managers. The purpose of this organization is to create a standard designation by which persons involved in records and information management can be measured, accredited, and recognized in accord with the experience and knowledge criteria established by their peers.

Records are created within individual FE departments, all of which are responsible for following the R&ICD program guidelines. At a given point in time, as determined by the individual department, the records are prepared (including indexing) and released to R&ICD. Upon receipt of a department's records, R&ICD is responsible for all records management functions. Such responsibilities include scanning, retrieval, both hard copy and electronic storage of records, management of legal holds, records retention, records management system maintenance, and records destruction. Among the documentation related to records management, FirstEnergy has a corporate policy (CP-104) for records retention, a business practice policy for confidential and proprietary information (BP-8.1), a business practice policy for records accuracy and management (BP-8.5), a litigation hold policy, and documentation for preparing, scanning, and retrieving FE records. Additionally, FE has electronic communications management, e-mail management, and electronic communications etiquette documentation in place.

Lifecycle and usefulness determines whether business records are turned over to the Enterprise Records Management (ERM) group or are kept in individual departments. Of those documents that are sent to the ERM group, some come from departments in paper form while others come in electronic form. In all cases, however, departments are able to input metadata electronically before sending files to the ERM group. Therefore, R&ICD management indicates that the group provides central governance but NOT necessarily central recordkeeping.

In 2005, enterprise-wide implementation of IBM/FileNet P8 as the records management tool began. FE has approximately 20 million records, of which 99% are paper or other physical types (such as microfiche). Going forward, however, all records sent to the ERM group are indexed using the P8 system, which provides users with 24/7 availability to search electronic documents using keyword searches. P8, the corporate-wide standard for FE's records management system, is an integrated suite of software designed to provide enhanced management of electronic documents and records throughout their lifecycle. P8 applications in use include content manager (used primarily by individual departments for access, revision, and lookup of controlled documents), records manager (used primarily by the ERM group to facilitate the conversion of paper records to electronic format, thereby enabling record-releasing organizations to workflow electronic records directly to the system and providing 24/7 online user access to those records), and e-mail manager (used for accountability, search, and preservation of e-mail that is relevant to legal discovery requests).

Starting in July 2008, any new ERM users were required to use P8. If an individual department wants to use something else, it must go to IT and request a waiver. Infokeeper (IK), a separate application, allows users to perform data entry, record requests and retrievals, pickups and returns, and custom searches via a web server. Currently, InfoKeeper, which is also the bar-coding system, is not interfaced with P8; however, as part of the current P8 upgrade, it will be interfaced automatically in one to two years. Other systems include (a) Visual Corporate Keeper (VCK), a records management system for hard copy records such as paper, maps, microfilm, and microfiche that was developed to manage and maximize warehouse space, to reduce labor costs, and to allow records to be stored dynamically (they can be moved from one location to another with a simple barcode scan) and (b) WebSync, an automated connection between IK and VCK.

Before setting up its enterprise-wide system, FE benchmarked other utility organizations to see which ones controlled records on an enterprise-wide basis. According to R&ICD management, most had failed because they had not given enough attention to the nuclear organization. Therefore, to overcome this oversight, FirstEnergy's ERM group is comprised of four sub-groups, three nuclear groups and one corporate group, although this latter group is responsible for all non-nuclear groups.

FE scans only active records from the historical records prior to 2005 (as a back file conversion), such as those used frequently by FirstEnergy Nuclear Operating Company (FENOC) employees. FE management considers it too costly to perform an entire back file conversion of all historical records.

Sometimes FE must retain hard copies as well as images, such as minutes and contracts. As a result, the R&ICD group must obtain legal interpretation if a group requests destruction of these records.

Information Compliance

When the Legal Department initiates a litigation hold on FE records, the Lead of the Information Compliance group activates and leads the Discovery Response team. The ERM Manager is also on the team. The team members meet to determine what information is to be held, including search criteria.

The Information Compliance Lead is also responsible for the search and collection of relevant e-mail, which must be collected from two sources: P8 and Lotus Notes, as follows:

- *P8 Repository* – includes all email messages (new, replies, and forwards) that were classified by Lotus Notes users. Classification criteria is applied as follows:
  - Business information
    - *Long-term value*: communications with other contracting parties regarding contract terms, contract disputes, and similar matters (15-year retention limit)
    - *Strategic value*: information compiled in a final strategic document (e.g., a presentation, a business plan, transient information collected in an annual report/summary, a document that is one-of-a kind/unique in nature, or historical project information) (six-year retention limit)
    - *Near-term value*: draft information ultimately compiled in a final strategic document (e.g., a presentation, a business plan, or a project working file) (three-year retention limit)
    - *Minor short-term value*: routine communications among FE e-mail account holders (e.g., work schedules and status reports) (one-year retention limit)
  - Personal information (no action-zero retention limit)
  - Litigation hold (The system suspends destruction of user-classified email until released by the Legal Department.)
- *Lotus Notes User Mailboxes* – unclassified email messages or email received from external sources and not forwarded are not saved in the P8 Repository. Unlike other archiving systems, the e-mail manager system is not configured to archive all e-mail messages. That is, users can delete items in their inboxes that come from external sources. However, when a litigation hold is applicable, mailboxes are imaged and initially scanned for relevant messages. After this initial scan, no additional scans are done; users are responsible for classifying relevant messages.

The Information Compliance group is responsible for maintaining and updating information about litigation holds on a portal for both business and situational records. This group also performs audits of records management processes, not the Internal Audit (IA) Department. As a result, many nuclear quality assurance practices have been incorporated into the non-nuclear activities. As FE continues to manage numerous e-Discovery requests, changes in workforce, and the migration of corporate records into the P8 system, R&ICD management has stated the critical need for concurrence across records management activities and their customers to ensure success. Therefore, in the third quarter of 2009, the Information Compliance group performed a records management audit, which was titled "Records Storage Audit Report." This audit was requested by the ERM group for the purposes of verifying that records management program activities were performed as a value service to the organization and aiding in the establishment of new procedures to effectively manage records management activities. Six findings identified program deficiencies and made recommendations for future improvement, although

the related issues were not in direct correlation with any noncompliance, nor was there any documented evidence to suggest that FE policies were not being followed.

- *Issue 1 – Daily Procedure Steps*: Daily performance of delivery, retrieval, and restocking of boxed records was not based on any written procedure or process.
- *Issue 2 – Verification of Work Orders*: Work orders that sit beyond a week as incomplete were filed in a pending folder within the storage room. No account or report, however, was produced to verify supervisory follow-up for any gaps in service resulting from open orders remaining pending for extended periods of time.
- *Issue 3 – Records Center Safety*: The records management function did not follow any standardized procedure to establish a safe environment while working in the Corporate Records Center (paper records storage). Department employees were usually alone in the Corporate Records Center and did what they felt was appropriate to safeguard themselves.
- *Issue 4 – Records Center Storage Appearance*: While the Corporate Records Center was considered effective in the safekeeping and preservation elements of records storage, box retrieval could be more efficient, with shelf signage that closely resembles the location system used on box barcodes.
- *Issue 5 – Secure Disposal/Destructions:* A concise destruction process was not available for the ERM group nor was a referable document for employees who are charged with final destruction. Once records have been placed on legal hold, not considering the retention period, clear communication must exist to ensure such records stay intact for the duration of the hold.
- *Issue 6 – Notification of Litigation Hold:* The audit did not reveal the existence of a list of known legal hold records held by the ERM group.

A follow-up audit in the second quarter of 2010, titled "Records Storage Audit Follow-Up Results," was performed. All issues, except *Issue 4*, were or are in the process of being addressed. As an example, a "Delivery Guideline for Corporate Records" documentation was developed and at completion of our fieldwork was awaiting final review and approval by the Supervisor, Enterprise Records Management and approval by both the Manager, Enterprise Records Management and the Director, Records & Information Compliance. An initial judgment was made, however, that the proposed signage discussed in *Issue 4* was unnecessary, because the personnel authorized to access the facility are fully knowledgeable about the shelving layout and identification. Since that initial judgment, management and staff have considered the likelihood of other, less knowledgeable personnel accessing the facility (e.g., in the event of an emergency or the potential use of temporary employees) and installed the recommended signage by the end of 2010.

Additionally, the R&ICD organization is in the process of developing an audit program for areas outside the records management group, although no audits of these areas have been developed to date.

Other Major Processes and Systems

Destruction of Records

Using P8, the ERM Manager periodically develops a listing of business records that are eligible for destruction. The ERM team reviews this listing to make sure none of the records are on the litigation hold list. An outside party is contacted to shred paper documents. For electronic records, items past their retention period are first flagged (only if they are not on the litigation hold list). The metadata is retained (P8 is Department of Defense (DoD) 5015.2 compliant). Then ERM group initiates a sweep process to be performed by the Information Technology (IT) organization. Two sweeps are required to delete items—one to identify and one to wipe out.

Disposal of Sensitive Records

A secure disposal program for safe discarding of sensitive information was established in July 2007. Approximately 1,000 locations at 156 facilities throughout the FE organization have bins for the disposal of sensitive information into locked containers. These bins are periodically picked up and shredded by an outside party (the same party that shreds business records that have gone past their retention period). Of these 156 facilities, 123 are serviced regularly and the remaining 33 are serviced annually or on a purge basis. The Information Compliance Lead has keys to these containers in the event that something that shouldn't be placed in one accidentally is, although an Information Compliance team member personally assists in retrieving the desired item and doesn't allow users to rummage through bins.

Training

The R&ICD group is also responsible for the provision of training for FE departments, as follows:

- Individual P8 training is done as requested.
- Records retention training, which is conducted biennially (every other year) for FE employees and contractors, provides guidance on the proper records management processes included in CP-104 and BP 8.5 policies.
- E-Discovery training, which started in 2009, is also done biennially.
- Secure disposal program training (as described in CP-804) was given to employees in 2007, when the program was started.

Benchmarking by Others

Since FE centralized the enterprise records management function and implemented its electronic records management technology, a number of utility, private sector, and government organizations (approximately 20 companies and two government entities) have benchmarked the FE process. Most of those contacts were made via group interviews on conference calls. In a few cases, specific information

was requested regarding organization, key success factors, change management, and lessons learned. The sample presentations listed below contain proprietary and confidential information.

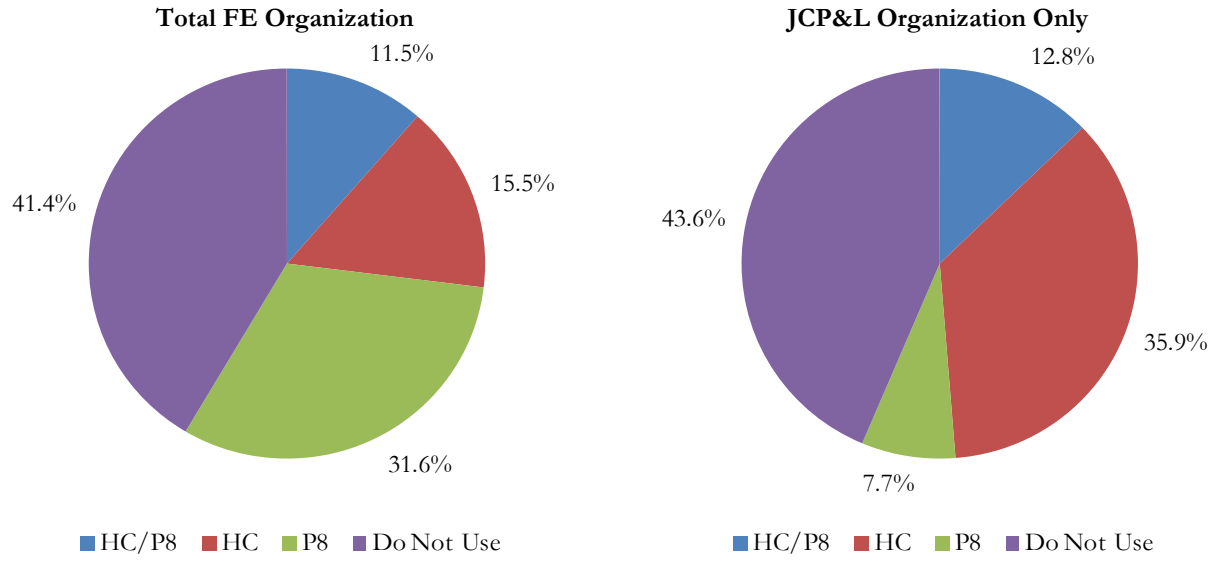
- CCE benchmarking visit
- Key Bank benchmarking visit
- New Brunswick benchmarking visit

Findings & Conclusions

Finding XII-40 Although FE has developed an outstanding records management program, it is not being fully utilized by all FE and JCP&L groups.

Information gleaned from R&ICD's knowledge of whether an FE user department has been set up to use P8 or sends hard copy (HC) to R&ICD shows that approximately 41% of FE user departments (380 of 917) may create records but do not send any documents to the R&ICD group. This tendency is illustrated in *Exhibit XII-46*. Similarly, approximately 44% (34 of 78) of JCP&L user departments also do not send any documents to the R&ICD group, a tendency that is also shown in *Exhibit XII-46*.

Exhibit XII-46
Percentage of FE and JCP&L Organizational Units Using Records Management Program as of June 30, 2010



Source: Information Response 345

Additionally, a formal records retention schedule is in effect at FE; however, no controls are in place to make sure all departments use it. That is because FirstEnergy typically errs on the side of keeping too much information for too long a period of time. Nevertheless, a study was recently performed with the Legal organization to update FE's retention schedule. Resulting from this study was a master schedule,

which is a reference for citations involving Federal Energy Regulatory Commission (FERC), Public Utilities Commission of Ohio (PUCO), Pennsylvania Public Utilities Commission (PaPUC), and New Jersey Board of Public Utilities (NJ BPU) requirements. This master schedule also ties record series (RS) numbers to the records retention schedule. As part of that study, approximately three RS numbers were noted where FE was keeping records too long. Various clarifications of items were also made.

Recommendations

Recommendation XII-28 Take and enforce a more aggressive posture with regard to having departments follow FE's records management program. (Refer to Finding XII-40)

All FE departments should be following the organization's records management program using P8. At this time, according to R&ICD's data, roughly 59% of FE departments (56% of JCP&L departments) actively follow the program. Others may create records but they do not send any documents (neither electronic nor hard copy) to R&ICD. Given that a formal records management program has been in place for over five years, one would expect these percentages to be closer to 100%. The R&ICD organization should establish an implementation plan and schedule (no longer than two to four years) for having all FE departments actively involved.