Agenda Date: 1/08/03
Agenda Item: 2G

STATE OF NEW JERSEY

Board of Public Utilities
Two Gateway Center
Newark, NJ 07102
www.bpu.state.nj.us

IN THE MATTER OF NEW JERSEY NATURAL GAS COMPANY DISTRIBUTED GENERATION TARIFF FILING	))))	ENERGY DECISION AND ORDER DOCKET NO. GT01070450

(Service List Attached)

BY THE BOARD:

On July 26, 2001, New Jersey Natural Gas Company ("NJNG" or "Company" or "Petitioner") filed a petition with the New Jersey Board of Public Utilities ("Board") pursuant to N.J.S.A. 48:2-21.2(1)(c), seeking Board approval of an initial Distributed Generation Service ("DGS") Tariff reflecting proposed terms, conditions, and prices. This petition is filed in accordance with the Board's March 30, 2001 Order in NJNG's rate unbundling proceeding, Dkt. No. G099030123, wherein the Board approved a Stipulation, which, among other things, required the Company to develop a DGS classification applicable to customers using new Distributed Generation ("DG") technologies.

Distributed Generation is the production of electric power at or near the site where it is going to be used, by generators that are smaller and preferably more efficient and environmentally friendly than traditional power plants. DG produced energy in excess of customers' requirements, can also be resold into traditional bulk electric power distribution systems. Under its proposed DGS tariff, NJNG would deliver natural gas for use by residential and commercial customers who employ distributed generation technologies.

According to the Company, DGS is expected to provide numerous benefits as electric customers reduce their demand for electric energy and capacity generated from traditional sources and turn to non-traditional sources such as DG technologies. NJNG asserts that the most important benefits expected are electric distribution system reliability and environmental improvements, as well as the avoidance of costly upgrades to electric transmission and/or distribution systems. The Company further asserts that Distributed Generation may also contribute to electric utilities' efforts to effectively manage costs for peak system requirements in a market based Basic Generation Service ("BGS") mechanism.

By offering DGS, benefits are also anticipated for NJNG and its customers. Since Distributed Generation Service usage typically peaks in the summer period while NJNG's traditional gas service peaks in the winter periods, new DGS load is expected to enable NJNG to improve its system load factor and better utilize existing assets to service summer DGS peaking requirements, thereby offsetting potential price increases to existing customers. The availability of DGS is also expected to enable NJNG to increase its gas distribution load and prospective sales revenues.

The Company's proposed Distributed Generation Service would be available through two separate DGS tariffs; one for residential customers and one for commercial customers. DGS would be available to customers using DG technologies, including but not limited to microturbines and fuel cells. DG currently encompasses a variety of technologies under various stages of product development and commercial deployment. According to NJNG, common DG technologies also include reciprocating engines and combustion turbines. Common to all DG technologies is that the generation of electricity is produced on site or near to customer loads. Certain DG applications can be interconnected to the electric grid where excess generation can be supplied back to the grid. Other DG technologies can be independent of the grid.

The Company asserts that each DG technology is suitable for different markets and customer needs. According to NJNG, microturbines are typically used in commercial and industrial markets to provide base load power or combined heat and power from 30 to 200 kilowatts ("kW"). The large fuel cell systems are generally for large commercial and industrial markets, while modular fuel cell systems from 4 to 250 kW are currently being developed for residential and small commercial markets. The Company asserts that reciprocating engines are generally sized from 20 kW to 10 megawatts ("MW") and are generally used to provide standby and peaking power or combined heat and power to commercial and industrial markets. The Company further asserts that Combustion Turbines ("CTs") employ the same technologies as traditional generating stations but on a smaller scale and have the ability to utilize waste heat. Larger customers traditionally use CTs in applications ranging from 1 to 30MW.

Under NJNG's DGS proposal, commercial and residential customers will be responsible for arranging the purchase and installation of DG equipment. Automatic Meter Reading ("AMR") devices will not be required for residential DGS customers but will be required for commercial DGS customers. The Company reserves the right, however, to install an AMR at its own expense for residential customers. NJNG's tariff proposal as filed requires both residential and commercial DGS customers to pay for any costs if additional facilities became necessary to provide the service.

To develop the rates for the DGS tariff, NJNG performed a cost analysis that assessed the anticipated load profiles for alternative DG applications and their cost impacts on the Company. NJNG determined DG related gas load profiles by the customers' electric requirements and the portion of that requirement to be served by DG technology. The Company acquired electric load data from Regional Economic Research ("RER"), an independent research firm, which allowed NJNG to develop typical customers' daily gas usage under normal and design weather conditions and to match the underlying weather data to NJNG's specific weather conditions.

New Jersey Natural Gas Company asserts that its cost analysis relied on current investment cost data and its 1993 cost allocation study, adjusted for costs applicable to DGS, to estimate the cost of connecting new DG load to the Company's system. After making adjustments to reflect customers' DGS load characteristics, the Company's cost analysis also incorporated ongoing operating and other existing facility costs needed to service the DGS customers.

For the residential customers, NJNG proposes to separately meter DGS at the customer's premises to ensure that rates are applied to the correct usage. The Company estimates the average monthly cost of connecting a residential DGS customer at $5.63 exclusive of taxes, based upon the weighted average cost of installing new meters and services and upgrading existing services for DGS customers. There are three types of residential DGS customers expected: existing NJNG customers who choose DGS, which are expected to represent approximately 65% of residential DGS customers; new NJNG customers seeking both natural gas heating and DGS, which are expected to represent approximately 25% of residential DGS customers; and new NJNG DGS only customers, which are expected to represent approximately 10%.

NJNG based its pricing of residential DGS on the total revenue requirement for new and existing facilities and ongoing operating costs and the characteristics of the various DG load types. The proposed rates for residential Distributed Generation Service include a separate customer service charge of $6.54 per account, inclusive of taxes, designed to recover the additional investment in facilities to connect DG load and a seasonal delivery usage rate for summer and winter months of $0.1543 per therm and $0.2264 per therm, respectively, inclusive of New Jersey Sales Tax, New Jersey Corporate Business Tax and all other applicable riders and taxes. The delivery rates recover the balance of the total DGS revenue requirements in excess of the customer charge revenues.

The Company states that for the commercial customers, the type and cost of metering will depend on the size of the customer. The Company expects that services for commercial customers are unlikely to be upgraded for DGS. If a service upgrade becomes necessary, the cost will be guided by the terms governing main and service extensions as contained under the special provisions of the commercial DGS tariff.

The Company states that its proposed pricing of commercial DGS is influenced by the higher variability of customer DGS load and the "demand charge pricing structures" characteristic of these customers. The proposed commercial DGS pricing consists of a separate monthly customer charge of $14.96, a monthly demand charge at a pre-tax rate of $0.50/therm "applied to the greater of the peak demand that occurs during the winter or one-half of the peak demand that occurs during the summer" a summer usage rate which recovers "the remaining demand-related costs based on an assumed load factor of 70%, and a winter usage rate at the summer usage price plus $0.03 per therm, pre-tax". In order to apply the demand charge to the appropriate billing determinants, NJNG's DGS commercial tariff requires a telephone connection to enable communications between remote metering on the customers' premise and the Company's system.

According to the Company, its DGS pricing proposals reflect the underlying costs of servicing the load, provide appropriate price signals to DGS customers, promote fairness between rate classes, and establish rates that are easily understood by customers.

NJNG's standard Terms and Conditions of Service will be applicable to NJNG's proposed DGS tariff, except with respect to NJNG's proposed separate metering requirements unique to residential and commercial DGS and modified main and service extension policy applicable to commercial DGS service to compensate for the shorter commercial life of DG technologies. The Company proposes that margins be at least three to eight times the cost of the main and service extensions depending upon expected life of the particular DG technology being employed.

The Company claims that future growth of the DG market in its service area will be driven primarily by customers' desire to shave load, increase power reliability and power quality, as well as energy independence and concern for the environment. The Company contemplates that the early market DGS participants may include colleges and universities, hospitals, government facilities, communication centers, call centers, data centers and the military. NJNG estimates that fuel cell for residential size units may be commercialized in the next eighteen months with demonstration units being the primary market focus within this time frame. The Company is targeting three to five installations of residential units and up to 10 total fuel cell units in its service area in the next two-years. According to the Company, the microturbine is not sized for the residential market but is suitable for customers seeking power quality and reliability. It estimates that between ten and fifteen microturbine units will be installed in its service area over the next two years.

The Company has stated that it will continue to promote, "through marketing and other efforts," the adoption of DG products in the commercial sector and that its efforts are presently, primarily focused on businesses with high electric demands such as those that have been identified above. The Company asserts that it will also monitor and intensify its marketing efforts to the residential market as the latter evolves. The Company currently has four projects under consideration for DGS. Two have been installed, one of which is based on a natural gas engine driven air compressor and the second, a 2000 kW reciprocating engine. The other two projects are each 250 KW fuel cell units, scheduled to be installed by the end of March 2003.

In response to Staff's inquiries about NJNG's affiliations with DG technology vendors, the Company responded that "[A] New Jersey Resources subsidiary, NJR Energy Corporation, currently owns less than 1% of the stock in Capstone Turbine Corporation as a third party investor. NJR Energy Corporation plays no management role in Capstone, has no ongoing business relationships with the company nor its management, and is not involved with any strategy decisions with the company." NJNG further asserted that its subsidiary, N.J. Natural Energy, once had an agreement with Plug Power to be the exclusive distributor in New Jersey for Plug Power's products, but that the agreement is no longer in force.

New Jersey has sought to encourage the growth of DG technologies because they can provide significant environmental benefits, reduce the State's dependence on fossil fuels and create opportunities for a renewable energy market. Through its Clean Energy Program ("CEP") rebates, the Board has attempted a buy down of the initial installed cost ("first cost") of this technology. The Electric Discount and Energy Competition Act, N.J.S.A. 48:3-49 et seq. ("EDECA") requires the Board, through the Clean Energy Program, to provide financial incentives for Class One renewable projects. Of the DG technologies identified herein, only the fuel cell technology qualifies for Clean Energy

Program rebates under EDECA. The Company's 2002 total CEP budget for the customer sited Clean Generation Program is approximately $1.02 million. On April 23, 2002, the Board suspended all expenditures under the CEP rebate program for natural gas fuel cell projects pending further review. NJNG has stated that only one of its fuel cell projects, which started before April 23, 2002 can be grandfathered to receive rebates under the CEP program.

Staff, the Division of the Ratepayer Advocate ("RPA") and NJNG are the only parties that have participated in this matter. Staff and the RPA propounded formal and informal discovery requests on the Company. Several conferences were held between the parties which ultimately resulted in the execution of the attached Stipulation on December 31, 2002.

The parties to the Stipulation have agreed that the proposed DGS tariffs are designed to meet the needs of NJNG customers who seek to utilize DG technology for on-site generation of electricity and are fair to both existing customers and to new customers interested in taking DGS service. The Stipulation further provides that the service will be metered separately from other gas services provided by the Company. NJNG also agreed to continue to promote the implementation of distributed generation technologies throughout its service territory and work with the parties to promote economically beneficial DG technology for residential customers. NJNG has stated that it will bear the cost of any promotion of DG service.

The parties have agreed that DG technologies are still under development and are newly being adopted in New Jersey, and that the initial terms, conditions and prices agreed to by the parties in settling this matter, are based on estimates of load characteristics and facility costs to serve customers. As such, the parties agreed that within eighteen (18) months of the date of the Board Order adopting the Stipulation, they will review the actual data and experience from the Company's DGS service. Such data to be collected by NJNG will include actual DG load characteristics and facility costs. NJNG has agreed to prepare, and submit to the parties for review, a summary of its relevant experience with actual DG applications in its service territory

The Stipulation provides that the Standard Terms and Conditions in the NJNG tariff will be applicable to DGS service. Proposed initial tariff sheets for residential and commercial DGS services are attached to the Stipulation. These tariff sheets reflect certain modifications of the tariff language in the proposed residential and commercial DGS tariffs which have been agreed to by the parties. NJNG agreed to eliminate tariff language making the residential DGS customers responsible for paying the cost of any additional facilities necessary to provide residential DGS services, since estimated incremental facility costs are already reflected in the proposed rate design for DGS. The residential DGS tariff does, however, reflect that an AMR device is not required under the residential DGS service and that upon prior notice to the customer, the Company reserves the right to install an AMR at its own expense. If the Company decides to install an AMR, the customer is responsible for furnishing an electrical supply and phone line for the operation of the device, in an area acceptable to the Company.

The parties agreed to also modify the proposed commercial DGS tariff by excluding the costs of incremental metering facilities from the customers' responsibility. The Company will furnish and install an AMR device and the customer is responsible for furnishing an electrical supply and phone line for the operation of the device. The commercial DGS

customer will also be responsible for payment of any costs if additional facilities are necessary to provide the service.

With respect to the Optional Bundled Service sections of its residential DGS Tariff, NJNG has also agreed to eliminate its proposed one year term commitment imposed on residential DGS customers who elect to receive bundled service from the Company as opposed to purchasing natural gas from a third party supplier and having NJNG only provide the delivery service.

The Company also agreed to modify its commercial DGS tariff to exclude the costs of incremental metering facilities from the customers' responsibility, since these anticipated costs are already included in the proposed DGS rates.

The residential and commercial DGS tariffs attached to the Stipulation reflect the RPA's calculated alternative revenue requirement and rate design, using the rate of return and rate base approved in the Company's last base rate case. For purposes of establishing the initial tariffs in this proceeding, the parties have agreed to utilize a rate base of $491,800,000 and rate of return on rate base of 10% as opposed to a rate base of $541,189,010 and rate of return of approximately 10.57% as proposed by the Company in its rate calculations. The parties have further agreed to the RPA's rate design except for the elimination of its proposed differential of heating and non-heating residential rates. As such, the residential DGS tariffs attached to the Stipulation maintain the customer charge of $6.54 per month but modify the proposed residential summer and winter DGS delivery rates of $0.1543 per therm and $0.2264 per therm respectively, to $0.1540 and $0.2105/therm inclusive of taxes.

For the commercial DGS rates, the parties to the Stipulation accept the Company's proposed customer charge of $14.96 per account per month and demand charge of $0.5390/therm. However, the commercial DGS tariff attached to the Stipulation reflects summer and winter delivery charges of $0.0698/therm and $0.1022 per therm, respectively, rather than the Company's proposed rates of $.0751 and $.1074 inclusive of taxes.

DISCUSSION AND FINDINGS

NJNG's proposed Distributed Generation Service is an important step in developing the DG technology market and making it available to not only large users but also to small commercial and residential consumers.

The Board, having reviewed NJNG's petition and the Stipulation and the attached revised tariffs thereto, FINDS that the terms of the Stipulation and the structure of NJNG's Initial Distributed Generation Service tariffs are reasonably designed to protect other ratepayers from bearing the cost of the incremental investment or DGS' portion of embedded fixed costs to serve DGS load. The Board FURTHER FINDS that the Stipulation represents a reasonable resolution of this matter, is in the public interest, and provides the parties with sufficient opportunity to commence a review of the Distributed Generation Service and Tariffs within eighteen months to determine if any modifications are necessary prospectively. Accordingly, the Board HEREBY APPROVES the Stipulation, and tariff sheets as modified, effective on the date of this Order. The Board emphasizes that approval of the DGS rates within the tariffs does not imply the Board's adoption of the underlying COSS for determining the Company's base rates.

In addition to the comprehensive report to be provided in eighteen months as agreed to in the attached Stipulation, the Board ORDERS NJNG to provide semiannual reports to this agency, beginning six months from the date of this order. The semiannual reports shall include updates on the penetration of DGS in the residential and commercial markets in the Company's service territory. NJNG shall also provide in its semiannual reports, detailed accounts of its efforts to encourage and accelerate the adoption of DG technology in its service territory. The semiannual reports shall also include DGS load data, estimated electric load displaced by DGS, actual customer energy cost savings attributable to DGS and the Company's DGS margin revenues. The Board FURTHER ORDERS NJNG to submit its comprehensive summary of DGS experience and data to the Board and the RPA within 17 months of the date of this order so that the parties have sufficient information prior to the commencement of discussions. The Board reserves its right to determine the appropriateness of continuing or modifying the initial DGS tariffs on the basis of its review of the aforementioned data and any other relevant information.

The Board also HEREBY ORDERS that NJNG promptly advise the Board, in full detail, of any existing, anticipated and/or future affiliations or changes to current indirect affiliations with DG technology vendors.

DATED: 1/23/03

BOARD OF PUBLIC UTILITIES
BY:

JEANNE M. FOX
PRESIDENT

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CAROL J. MURPHY
COMMISSIONER

CONNIE O. HUGHES
COMMISSIONER

JACK ALTER
COMMISSIONER

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SECRETARY