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DIVISION OF RATE COUNSEL  
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CHRIS CHRISTIE  
*Governor*

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March 3, 2010

**Via Electronic Mail and Regular Mail**

Frank A. Felder, PhD  
CEEEP, Edward J. Bloustein School  
Rutgers, The State University of New Jersey  
33 Livingston Ave., Room 249  
New Brunswick, NJ 08901

**Re: Benefit-Cost Analysis of the Proposed Energy Efficiency Utility Programs Associated with the New Jersey Economic Stimulus Plan (CEEEP Draft Report dated December 15, 2009)**

Dear Dr. Felder:

Enclosed please find comments submitted on behalf of the Department of the Public Advocate, Division of Rate Counsel, in connection with the above-captioned matter. Copies of these comments are also being provided to all parties by electronic mail and hard copies will be provided upon request to our office.

These comments were prepared to provide preliminary input on the draft report, as requested by CEEEP. Rate Counsel reserves its right to comment further in the course of developing the benefit cost analyses for the economic stimulus plan.

Thank you for your consideration and assistance.

Respectfully submitted,

STEFANIE A. BRAND  
Acting Public Advocate  
Director, Division of Rate Counsel

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Deputy Public Advocate

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**Comments of the New Jersey  
Department of the Public Advocate,  
Division of Rate Counsel, regarding**

**“Benefit-Cost Analysis of the Proposed Energy Efficiency Utility  
Programs Associated with the New Jersey Economic Stimulus Plan”  
(CEEEP Draft Report dated December 15, 2009)**

**March 3, 2010**

**Introduction**

The within comments regarding the above-captioned draft report prepared by CEEEP (“Draft Report”) are categorized into four general areas: (1) Preliminary Matters; (2) Clarification Items; (3) Missing Information; and (4) Suggestions for Improvement.

**1. Preliminary Matters**

The Introduction should address the fact that the Draft Report addresses certain utilities and not others, as reflected in the Tables appended thereto. The Draft Report should also note that additional cost benefit analyses will be performed in the future, as set forth in the Board Orders and Stipulations entered in the economic stimulus energy efficiency program dockets.

**2. Clarification Items**

(a) The first two sentences of Section II on page 1 read as follows:

Avoided costs are a key component to the energy efficiency benefit-cost analysis. The data sources and the process for determining several key avoided cost values and assumed values are discussed below.

However, the ensuing discussion in the Draft Report addresses all of the input assumptions and analytical methods used, not just avoided costs. We suggest that CEEEP modify these two sentences accordingly.

(b) Regarding Forecasted Commodity Prices, p. 1: The post-2015 adder for a “national CO<sub>2</sub> program” should be revisited in future analyses to reflect more current information. Perhaps the analysis could be run with and without the adder.

(c) Regarding CO<sub>2</sub> prices, the Draft Report states on page 2 as follows:

2009 and future 2012 allowance prices were taken from the RGGI [Regional Greenhouse Gas Initiative] Auction. For the years 2010-2011 and 2013-2014, values were derived by escalating previous years by the 2009-2012 growth rate.

However, RGGI CO<sub>2</sub> prices are not mentioned in the discussion of retail and wholesale electricity prices on page 1. We suggest that CEEEP clarify this point.

(d) Regarding avoided distribution savings, the Draft Report states on page 2 that:

The avoided transmission savings are assumed to be zero and the avoided distribution savings are assumed to be 11% for electric and 1% for natural gas, taken from the New Jersey Clean Energy Program Protocols to Measure Resource Savings.

It is not clear from the cited text what the percentages represents. First, please confirm that this is the avoided energy loss in Transmission and Distribution (“T&D”) systems, not the avoided T&D capacity costs. Second, please clarify the denominators for these percentages. Finally, the avoided transmission cost assumptions should be revisited when new information becomes available.

(e) A sentence should be added on page 3 to clarify the “Free Ridership” value attributable to low-income and Urban Enterprise Zones (“UEZ”) Whole House programs. The addition of the following sentence is suggested, for clarification: “However, for low-income programs and for PSE&G’s residential whole house program targeted to municipalities containing Urban Enterprise Zones, it was assumed to be zero.”<sup>1</sup> The free ridership assumptions should be revisited when new information becomes available.

(f) Another component of incremental cost should be added as a part (b) to first sentence in the subsection captioned “Incremental Costs” in the “Default Program Inputs” section, so that the first sentence reads as follows: “The incremental cost is (a) the additional cost of purchasing an energy efficient product instead of a standard product, or (b) the cost of installing weatherization and insulation measures.”

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<sup>1</sup> In a memo prepared by Synapse and circulated by Rate Counsel on 5/18/09, the following recommended net free ridership assumptions were provided: commercial–industrial programs, 10%, and residential programs, 20% (except low income program, 0%).

- (g) The descriptions of Program Administrator Cost Test and Total Resource Cost Test (“TRC”) on page 5 mention “net-cost.” CEEEP should clarify why it is using the term “net cost” rather than the term “cost.”
- (h) Regarding the TRC Test discussion on page 5:
  - a. It is not clear whether avoided fuel (e.g., oil) and water are taken into account.
  - b. It is also not clear what “the increase in supply costs for the periods in which load is increased” means.
- (i) Emission related costs internalized in the market (especially NO<sub>x</sub> and SO<sub>x</sub> associated cost) should be reflected in the TRC Test. The texts for the TRC and the Societal Cost Test should make this point clear. If internalized emission related costs are not included in the TRC, this is an area of improvement in the future Benefit Cost (“BC”) analyses.
- (j) A footnote should be added to the section entitled “Total Resource Cost Test” (page 5) in order to clarify the treatment of federal tax credits. A suggested footnote reads as follows: “Federal tax credits for installing energy efficiency measures were included as benefits in this test. Initially they were also included in the societal test, but in some of the later analyses were excluded from the societal test.”

### 3. **Missing Information**

- (a) Under the section for Forecasted Commodity Prices on page 2, we believe the information on avoided generation capacity as well as avoided T&D capacity is missing. We recommend CEEEP include this information in the Draft Report.
- (b) While the Draft Report provides emission permit price information in dollars per ton, it does not provide information as to how this was translated into \$ per MWh. We recommend CEEEP state clearly how it estimated this value and also provide another table with \$ per MWh for each emission over the study time period.
- (c) The BC analysis for individual utility clean energy plans was an evolving process where some of the underlying assumptions were modified over time with inputs from stakeholders. We think the Draft Report should recognize this fact, by documenting same for clarity.

### 4. **Suggestions for Improvement**

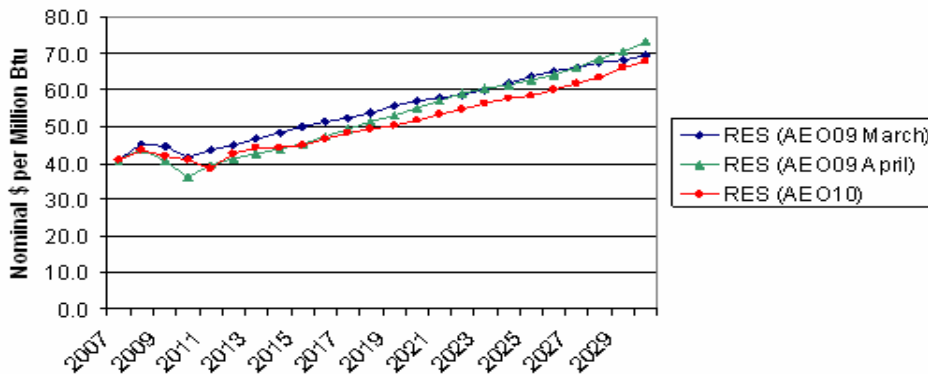
We recommend the Draft Report discuss areas that can be improved or would be investigated more in detail in the future analyses. Examples of the areas of improvement are as follows:

- (a) Avoided emissions: Currently electric avoided emissions are based on average emission rates in 2006 taken from PJM. We think the use of marginal emission rates is more appropriate for this purpose. We also think CEEEP could use more updated information although it may not change the result much. For future BC analyses, we recommend CEEEP consider using marginal emission rates based on more recent data. As an example of marginal emission rates data sources, we suggest CEEEP review a study by Synapse Energy Economics which has calculated

regional marginal emission rates across the nation including the areas that over PJM territory. The report can be downloadable from: <http://www.synapse-energy.com/Downloads/SynapseReport.2008-07.EPA.EPA-Indirect-Emissions-Benefits.06-087.pdf>

- (b) Generation capacity prices: On May 18, 2009, we recommended that CEEEP use an estimate of avoided capacity costs that is closer to that used by PJM as “net CONE” and closer to actual prices of capacity that are clearing in the RPM Base Residual Auctions (“BRA”). If this change has not been made, we recommend CEEEP investigate this issue in the future BC analyses.
- (c) Free ridership: the current free ridership effect is based on Rate Counsel’s suggestion we made on May 18, 2009. As new Measurement and Verification (“M&V”) studies are conducted, should discover more New Jersey specific information on free ridership that would improve the assumption.
- (d) Historical electricity price: we realize that the historical average retail electric rates CEEEP are using based on US DOE Energy Information Administration’s (“EIA”) data are different from what we obtained from EIA. CEEEP is using 15.71 cents/kWh for residential, 14.61 for commercial, and 12.38 for industrial. However, the rates we found are: residential 15.95 cents/kWh, commercial 14.72, and industrial 12.42. We recommend CEEEP revise the historical electricity rates in its future BC analysis of New Jersey efficiency programs.
- (e) Electricity price projection: CEEEP’s electricity price projection is based on the older version of the EIA’s Annual Energy Outlook 2009 (“AEO 2009”) (issued in March). The updated price projection in AEO 2009 April version and the results of the preliminary AEO 2010 take into account the economic crisis and the American Recovery and Reinvestment Act. They are projecting lower electricity prices than in the original AEO 2009 (See Figure below). In CEEEP’s future BC analysis, we recommend CEEEP consider investigating and adopting the updated price projection in AEO 2009 April version or the price projection of AEO 2010.

**Price of Electricity by Sector Assumed by AEO for Mid-Atlantic Region**



- (f) Use of assumptions in general: For future analyses, we suggest that CEEEP play a greater role in harmonizing utility assumptions and in more extensively researching the appropriate data to use where utilities do not provide these.