



June 30, 2008

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Newark, New Jersey 07102

**RE: PSEG Comments on a Greenhouse Gas Emissions Portfolio Standard and other  
Regulatory Mechanisms to Mitigate Leakage  
Docket Number EO08030150**

PSEG Services Corporation, on behalf of its affiliate PSEG Power LLC ("PSEG Power") (PSEG Services Corporation and PSEG Power are collectively referred to as "PSEG"), appreciates the opportunity to provide comments to the New Jersey Board of Public Utilities on the Matter of a Greenhouse Gas Emissions Portfolio Standard and other Regulatory Mechanisms to Mitigate Leakage, Docket Number EO08030150, in response to the public stakeholder review process established by Board Order on March 18, 2008.

PSEG has offered for consideration a Carbon Abatement Program ("CAP") to mitigate leakage and maintain the environmental integrity of the greenhouse gas emissions cap established by the Regional Greenhouse Gas Initiative ("RGGI"). CAP would require Load Serving Entities (LSE's) to purchase a set percentage of *Carbon Abatement Certificates* ("CACs") from generators that participate in the RGGI program (either by RGGI mandate or through a voluntary opt-in provision). This will ensure that a set percentage of generation comes from sources that operate under RGGI (mandatory or voluntary) and will provide incentives for the operation of the PJM's cleanest units. CAP encourages clean and efficient sources, which will result in a lower carbon intensity for the state versus if RGGI is implemented without CAP.

The CAP approach is different from a more traditional emissions portfolio standard ("EPS"), because CAP does not attempt to directly regulate the carbon intensity of energy sold in the state. For reasons described below, PSEG does not believe a traditional EPS approach is workable in PJM.

CAP can be implemented within the existing RGGI framework, has real environmental benefits, will not impede interstate commerce, and will reflect costs to consumers that correspond to the environmental benefits of avoided greenhouse emissions. CAP mitigates the deleterious effect of "leakage" and maintains the integrity of the RGGI emissions cap.

A more detailed description of the CAP proposal and its mechanics is provided in the CAP white paper as an attachment to these comments.

In addition to the testimony provided to the Board at stakeholder meetings on April 30, 2008 and June 5, 2008, PSEG would like to offer the following comments in response to the questions raised by the Board on this matter:

- 1) COMMENT: ***Is RGGI expected to cause an increase in imports of electricity into NJ from electric generating units located outside the RGGI region? If so to what extent?***

RGGI is expected to cause an increase of net imports of electricity into NJ from electric generating units located outside the RGGI region. ICF Consulting (“ICF”), using their IPM model, predicts net imports will increase from 26% to 35% under RGGI in 2021 based on a CO2 price of \$6.35/ton (nominal).

- 2) COMMENT: ***How much would such an increase in imports of electricity affect “statewide greenhouse gas emissions” as defined in the Global Warming Response Act, to include not only in-state GHG emissions but also GHG emissions associated with electricity generated outside the State but consumed in the State?***

ICF predicts that RGGI, energy efficiency, and renewable energy policies would cause NJ in-state greenhouse gas emissions to decrease by over 4.5 million tons per year by 2021. However, increased generation from areas outside of RGGI (due to leakage) would increase the RGGI region’s greenhouse gas emissions by 5.0 million tons per year.

Because the RGGI modeling includes a package of policy options to mitigate CO2 emissions, including renewable energy and energy efficiency, it is difficult to determine with precision how much of the CO2 reduction the modeling predicts for NJ comes from the RGGI cap itself versus the other policy options modeled.

- 3) COMMENT: ***To what extent is RGGI expected to cause a difference in the cost of producing electricity between electric generating units located in NJ and hypothetical identical units located in PJM outside the RGGI region? This information should be developed for coal fired electric generating units, oil-fired generating units, combined-cycle generating units fueled by natural gas or oil, and simple cycle generating units fueled by gas or oil.***

RGGI will produce cost differences between RGGI impacted units and identical units outside the RGGI region. The magnitude of these differences is illustrated in the table below:

**RGGI Bid Price Adders Per \$1/ton CO2 Costs**

|           | HR( MMBtu/MWh) | CO2 Rate (lbs/MMBtu) | Bid Price Increase (\$/MWh) |
|-----------|----------------|----------------------|-----------------------------|
| Coal      | 10             | 207                  | 1.04                        |
| Oil-Steam | 11             | 165                  | 0.91                        |
| CC-Gas    | 7              | 116                  | 0.41                        |
| CT-Gas    | 13             | 116                  | 0.75                        |

- 4) COMMENT: ***What measures, besides a GHG EPS, are available to mitigate leakage? Should the Board consider alternatives such as:***
- a. ***A carbon procurement adder, which would require electric power suppliers and basic generation service providers to incorporate into their evaluation of different electricity procurement options a “shadow price” reflecting a cost of carbon emissions that power plants outside the RGGI region would incur if they were subject to RGGI;***
  - b. ***A requirement that, for service to New Jersey customers, long-term power purchases by an electric power supplier or basic generation service provider meet a specific carbon dioxide emission rate;***
  - c. ***An overall cap on emissions associated with electricity provided at retail by each electric power supplier or basic generation service provider;***

- d. The creation of certificates to be issued for each megawatt-hour generated by an electric generating unit that uses one RGGI allowance for each ton of carbon dioxide it emits, coupled with a requirement for all electric power suppliers and basic generation service providers to hold a specified number of such certificates.**

The Board should pursue a mechanism that is both practicable and provides effective mitigation against CO2 emissions leakage. We believe the CAP proposal meets both of these criteria. PSEG takes no position at this time as to the merit of each individual proposal, but would like to note the following:

- Option “a” above requires out of state producers to pay more and thus raises constitutional concerns.
- Options “b” and “c” above are not practicable as proposed due to the dynamics of the PJM electricity market. Large electric suppliers typically buy and sell an array of physical and financial products for energy, capacity and other electrical services to create a portfolio of price and volume entitlements and obligations. Further, PJM generally operates as “buy all/sell all” market in which generators bid all of their output for sale to PJM, typically operate only if dispatched by PJM and buy back from PJM their entire requirements to serve load. Purchases and dispatch decisions of owned resources are evaluated and entered into on the basis of their contribution to the overall portfolio and, except in rare cases, are not earmarked as supply sources for specific counter-parties. Options “b” and “c” are thus inconsistent with reality of the market place in that they seem to assume the ability of a supplier to identify specific contracts or other supply sources for particular supply arrangements.

- 5) COMMENT: ***What is the experience of other states in implementing a GHG EPS, or other measures to mitigate leakage?***

PSEG does not know of any comparable state GHG EPS mechanism, as for instance, the California electricity market can not be compared to the complex interaction between and among RGGI jurisdictional applicability, NJ greenhouse gas emissions, and PJM interstate market conditions.

- 6) COMMENT: ***For each measure proposed to mitigate leakage:***

- a. To what extent would the measure be expected to affect the retail price of electricity in NJ?***
- b. To what extent would the measure be expected to mitigate leakage?***
- c. What work is involved in developing and implementing the measure and what is the estimated cost of the development and implementation?***

For the PSEG CAP proposal to mitigate leakage:

- a. PSEG has not modeled the impact of CAP on retail prices. The biggest cost driver in the RGGI program will be the cost of RGGI allowances. While the cost of acquiring CACs will be borne by LSE’s and passed on to ratepayers, this will be partially offset by a reduction in the wholesale cost of power. We would expect the CAP program to result in a cost to consumers higher than RGGI with unmitigated leakage, but less than a national program similar to RGGI in stringency.
- b. The CAP proposal will reduce price disparity between RGGI and non-RGGI units and therefore there should result in a substantial reduction of leakage.
- c. The CAP program is designed to operate using the existing PJM Generation Attribute Tracking System (GATS). While PSEG has not estimated a cost, PJM has suggested in

public comments provided during this stakeholder process that the needed modifications would be minimal.

As noted throughout this document, PSEG has concerns about the efficacy of other proposed leakage mitigation mechanisms and thus reserves additional comment on the above at this time.

- 7) COMMENT: ***How can a NJ GHG EPS, or other measure to mitigate leakage, be designed so that it does not merely shift cleaner megawatt-hours to the portfolios of NJ electric power suppliers and basic generation service providers, without actually affecting electric generation or the emissions associated with it? Will this result in a cost to NJ ratepayers without a corresponding environmental benefit?***

For any leakage mitigation system to be effective, it must affect unit dispatch in PJM. Any “certificate only” trading program that doesn’t influence dispatch may simply result in shuffling “environmental attributes” without any improvement to the environment. CAP would impact unit dispatch in PJM by providing an incentive to operate lower emitting units. While CAP, as with any other mitigation mechanism, will result in an added cost to ratepayers, the cost would be offset by CO2 emissions reductions and the corresponding environmental benefit to New Jersey.

- 8) COMMENT: ***How can NJ best track emissions associated with in-state consumption of electricity generated outside the State, and effectively monitor compliance with a GHG EPS or other regulatory mechanism?***

It is infeasible for New Jersey to track emissions associated with in-state consumption of electricity generated outside of the State. PJM operates as a competitive wholesale power market, where units are dispatched based on economics. PJM does not consider state borders when it dispatches units and power flows freely across state lines. When a unit in NJ is called on by PJM, it is not called to serve load in NJ, but rather to meet load on PJM’s system. In other words, there really is no “out of state” versus “in state consumption of electricity generated outside of the State.”

PJM operates as a competitive wholesale power market, where units are dispatched based on economics. PJM does not consider state borders when it dispatches units and power flows freely across state lines and as the market is structured and it is not possible to track the flow of electrons from generator to LSE to end consumer. As discussed above in our response to question #4, it is generally not possible to track by contract either.

Any leakage control mechanism or leakage tracking system would therefore need to be designed in a way which recognizes the limitations of PJM’s ability to track electricity from generator to end user. The advantage of CAP is that it does not require the tracking of electricity or emissions. Instead, there is an estimate of CO2 emissions based upon load and historical generation. The CAP then simply requires retirement of CO2 credits (CACs) to account for that historic generation profile.

- 9) COMMENT: ***For any effective measure to mitigate leakage, how can regulations to implement that measure best be designed in a way that does not conflict with the Interstate Commerce Clause of the United States Constitution, Art. 1, sec 8?***

Any measure to mitigate leakage must not discriminate against or unduly burden interstate commerce. We believe that the CAP proposal responds to the Legislative mandate requiring the BPU to establish a greenhouse gas emissions portfolio standard or other mechanism to mitigate the effects of leakage in a manner that does not unconstitutionally burden interstate commerce. CAP does not discriminate against interstate commerce; rather its purpose is to prevent an increase in CO2 emissions resulting from RGGI leakage. Since the regulatory effect of CAPS is neutral, it would not be subject to legal “Heightened Scrutiny” under the Commerce clause.

CAP also meets the balancing test set forth by the Supreme Court of the United States in *Pike v. Bruce Church, Inc.* Specifically, CAP would effectuate the legitimate public interest of the State of New Jersey in reducing CO2 emissions yet the program's effects on interstate commerce, if any, would be incidental, and are clearly outweighed by the program's environmental benefits.

Preventing leakage through CAP would mitigate the increase of CO2 emissions from pre-RGGI implementation. A secondary, but very important environmental benefit, would also be the reduction of other major power plant pollutants, including sulfur dioxide, oxides of nitrogen and mercury. CAP could also provide incentives for the construction and operation of cleaner generating units, further reducing CO2 emissions. In contrast, the burdens on interstate commerce, to the extent they occur, are not excessive. Out-of-state generators may voluntarily participate in CAP to obtain any perceived benefits of program, yet can still generate and provide power to the pool without penalty even if they choose not to participate in the program. This is uniquely accomplished under CAP by separating the environmental attributes of CAP from the wholesale of electricity into the PJM grid. Lack of participation in CAP by an out-of-state energy producer does not prohibit that generator from selling electricity into the PJM market; instead, the burden is placed upon New Jersey load serving entities. Out-of-state generators should retain the same position in the PJM dispatch stack as they hold pre-RGGI.

For these reasons, we believe that a carefully implemented carbon abatement program would not conflict with the interstate Commerce Clause of the United States Constitution.

PSEG appreciates the opportunity to comment on this matter. If you have any questions, please do not hesitate to contact Mark Scorsolini ([Mark.Scorsolini@pseg.com](mailto:Mark.Scorsolini@pseg.com)) or me ([Donald.McCloskey@pseg.com](mailto:Donald.McCloskey@pseg.com)) at (973) 430-8555.

Sincerely,



Donald McCloskey

Director

Environmental Strategy and Policy