

# NEW JERSEY BOARD OF PUBLIC UTILITIES

## **I/M/O A GREENHOUSE GAS EMISSIONS PORTFOLIO STANDARD AND OTHER REGULATORY MECHANISMS TO MITIGATE LEAKAGE DOCKET NO. EO08030150**

### **STAKEHOLDER MEETING**

Board Hearing Room  
2 Gateway Center, 8<sup>th</sup> Floor, Newark, NJ 0712

**June 5, 2008**

9:30 P.M. - 12:30 P.M.

### **MEETING NOTES**

#### **Participants:**

Alma Rivera BPU; Ami Morita; Rate Counsel; Anne Marie McShea, BPU; Brian Jones; MJ Bradley Assoc; Brian Loos, BPU; Chris James, Synapse; Daniel Cunningham, PSEG; David Langseder, Pepco Holdings Inc; David McCloskey, PSEG; Gary Helm Conectiv; Howard Thompson, Russo Tumulty for PPL; James Hough, PSEG; Jim Glasser, Public Advocate; Joe Carpenter, DEP; John Valeri, PSEG; Ken Carulta, PSEG; Ken Schuyler, PJM; Lance Miller, BPU; Michael Van Brunt, Covanta Energy; Paul Madden, South Jersey Gas; Ron Jackson BPU; Sam Wolfe BPU; Sara Bluhm, NJBIA; Scott Hunter, BPU; Stephen Wemple, ConEd Solutions; Steve Gabel, Gabel Associates for IEPNJ; Wes McNeilly, Atlantic City Electric.

#### **(1) INTRODUCTION (Sam Wolfe, BPU Chief Counsel)**

- Today's meeting focuses on the (9) questions specified in the Board Order on Leakage Mitigation.
- S. Wolfe reviewed issues and comments received following the April 30 stakeholder meeting on GHG leakage mitigation measures and key issues to be resolved.
- Two proposals to mitigate leakage were reviewed at the last meeting held April 30<sup>th</sup> including PSEG Carbon Abatement Proposal and the RAP Proposal which relied on LSE providing allowances for imports. Comments were received and reviewed and posted online at njcleanenergy.com
- RPA comments emphasized the need to avoid unnecessary additional rate increases and to settle the issues on interstate commerce. Additional comments were also provided on the need for tracking and monitoring of emissions to ensure transparency and the need to address causality relative to the RGGI program and increase in imports. RPA also recommended outreach to other RGGI states in regards to their leakage mitigation measures.
- ConEd Solutions' and Hess' written comments emphasized monitoring leakage [in conjunction with ee measures] as the first priority and noted the proposed leakage mitigation measures will likely increase costs. Hess also noted that a federal ghg program in 2009 could supercede the need for leakage mitigation.
- While there are multiple factors impacting leakage, S. Wolfe commented that we are acting under a Board statutory mandate to address leakage and must respect that mandate to develop leakage mitigation measures other than ee and respect the statutory definition of leakage.
- S. Wolfe summarized the experience of other RGGI states within PJM including Maryland and Delaware in implementing a GHG EPS, or other measures to mitigate leakage. In PJM we can say that the other states aren't doing anything yet. BPU is speaking with MD and needs further clarification on their direction but understands their strategy to preserve reliability depends to a large extent on increasing capacity to import electricity from areas to the west of the state. BPU is also speaking with DE, which has a very small staff and little spare resources to devote to leakage mitigation. PSEG also spoke with generators operating in MD/DE to gain a better understanding of their views on leakage and measures to mitigate it.

- Outside of PJM, California and Massachusetts may provide models to be considered. However, CA is much larger and is its own ISO, giving it much greater ability than New Jersey to influence emissions associated with imports without assistance from other states. Under a 2006 CA law (Senate Bill 1368), long-term investments by CA utilities in baseload generation must meet an emissions portfolio standard set at 1,100 lb/MWh, equivalent to the CO2 emission rate of a natural gas combined-cycle generator. Chris James of Synapse noted that in MA, an equivalent law is progressing through the legislative process; BPU will follow up with MA to learn more.

**(2) ESTIMATED RGGI IMPACTS ON IMPORTS (Joe Carpenter, DEP)**

J. Carpenter of DEP provided an overview of estimated RGGI impacts on imports of electricity into PJM from electric generating units located outside the RGGI region. His presentation is available online at NJCleanEnergy.com

RGGI has been examining leakage and has done some modeling to estimate the amount of leakage and impacts on pricing. An MOU was signed Dec 2005. It directed staff to study the issue who issued a draft on leakage March 2007 and issued a final study March 2008. Both of these reports can be found on the RGGI Website – <http://www.rggi.org/emisleak.htm>

**Results** – RGGI issued (3) Category Recommendations to address the issue of Leakage which are summarized in the slides:

**Category 1 Recommendations** focus on energy efficiency. S. Wolfe points out the statutory mandate directs us to implement a solution other than ee unless the AG rules that an emission portfolio standard is not consistent with the interstate commerce clause.

**Category 2 Recommendations** include measures that would directly address carbon emissions including an emission portfolio standard (eps)

**Category 3 Recommendations** include “load-based emissions cap-and trade programs (load-based cap)”, which would place a cap on absolute emissions related to all electricity delivered for retail sale by an LSE or multiple LSEs.

**Final Recommendations** – RGGI states should monitor for leakage; aggressively promote ee; and monitor federal efforts;

**The estimates in the RGGI Staff Working Group Leakage report** included the following low and high scenarios related to leakage:

- 18% - 27% of emission reductions would be lost to leakage through 2015
- 1% increase in electricity prices in 2015, under the "middle of the road" modeling scenario (they ran multiple scenarios)
- The "High Emissions Scenario" estimated potentially 4% increase in electricity prices in 2015
- \$2 to \$3 allowance price estimated between 2009 and 2015

The modeling that RGGI Staff Working Group did for the Potential Emissions Leakage and the Regional Greenhouse Gas Initiative Report which form the basis of their conclusions on leakage percentage and price can be found on the RGGI website: <http://www.rggi.org/documents.htm>

**Look under "IPM Energy Modeling Documents" for the following documents**

- Tabular Output Reference Cases
- Tabular Output Carbon Policy Scenarios

**Discussion:** A number of questions and Issues were raised which will be considered off line including: How will CHP would be treated; Did modeling assume transmission upgrades; Is NJ different from PJM wide estimates.

**(3) EMISSIONS TRACKING and MONITORING (Ken Schuyler, PJM Interconnection, LLC)**

Ken Schuyler of PJM reviewed the GATS-EIS System and the how it would track imports and exports of electricity and provide data transparency. His presentation is available online at NJCleanEnergy.com

See RGGI Recommendations for a discussion of the importance of tracking systems  
[http://www.rggi.org/docs/il\\_report\\_final\\_3\\_14\\_07.pdf](http://www.rggi.org/docs/il_report_final_3_14_07.pdf)

**PJM GATS-EIS** is a regional environmental registry and information system to track attributes in PJM. The original driver in developing the system was Fuel Mix and Disclosure Requirements and state RPS requirements.

**Key Design Elements include:** – All MWhs of PJM generation are tracked; A certificate market separate from energy is enabled for renewables; GATS does not track energy transactions; The system is multifunctional in meeting fuel mix, emissions and verification requirements; It's a regional system for all PJM States; It is also Policy neutral to allow flexibility to meet separate state requirements; Also supports behind the meter generation; Certificates incorporate multiple source data for generation and emissions data (eia; epa etc.) ; GATS certificates created on a monthly basis.

**Emissions data tracked in GATS** include CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>x</sub> - Emissions data comes from a hierarchy of sources (see slides) including data entered by the generator during the Acct Holder Review Period; Non renewable generators are currently registered; PJM calculates emission rate using epa unit level and annual emissions for generators in the acid rain program. New emissions data from 2007 now being loaded in; EGRID emissions rate data from 2004 to be used for plants if other data not available. Last option for source data is using fuel type default.

**How is data verified?** GATs Administrator can check against default rates.

**PJM Certificates are created monthly** – NEPOOL creates quarterly certificates but PJM needed more flexibility to accommodate different states.

**Annual settlement** occurs in February for the preceding calendar year. Annual Settlement is calendar year. Can PJM change its compliance period to an energy year? Annual settlement does not affect state rps reporting requirements.

**Public Reports on PJM GATS include** PJM residual mix and system mix and renewable generators registered in GATs. PJM System Mix report is available monthly and on an annual basis. It shows the number of certificates and the percent by fuel type. System mix includes everything sold into PJM market. Residual mix includes everything not sold.

**Enhancements Planned for RGGI**

- NEW Generator Attributes to indicate those generators *Affected by RGGI , Unaffected small fossil fuel; RGGI region unit.*
- Infer net imports into RGGI portion of PJM and environmental attributes of imports based on non RGGI PJM residual mix
- NEW REPORTS – developing methodology for estimating emissions as described in RGGI report. To be completed by end of 2008.

**Discussion:** PJM can create an historic report pre implementation of RGGI and post implementation of RGGI. Although it should be noted that the definition of Leakage does not include a causality factor. However, NJ EMP is designed to reduce ghg and cause a net decrease in imports. An historic report on imports would be very relevant to that initiative.

ConEd Solutions – knowing how much NJ has historically imported from carbon emitting resources and tracking imports from Jan 2009 is important and a significant data set. Leakage is important but it may not be a significant problem as soon as 2009; federal legislation can take care of leakage if it arises later. A better approach might be to put aside the statutory mandate for the moment. The BPU made it clear that it will consider all options - but emphasized that we do have a statutory mandate to promulgate rules by July 1, 2009 to mitigate leakage.

**Where should we be in absence of a mandate and what do we do in context to the mandate?**

- Rate Counsel asked for clarification on whether causality is part of the statutory definition of “leakage”; statutory definition was read aloud, with no mention of causality.
- **Definition of Leakage NJSA 48:3-87(i)** – Defines Leakage as “an increase in greenhouse gas emissions related to generation sources located outside of the State that are not subject to a state, interstate or regional greenhouse gas emissions cap or standard that applies to generation sources located within the State.”
- **Questions on tags:** Rate Counsel requested clarification on a ‘rggi-region unit’ and other attributes. PJM noted that the attributes are not mutually exclusive and can apply simultaneously. S. Wolfe noted that the location attribute available in GATS is not enough to establish whether unit is subject to RGGI; it’s also based on capacity above 25MW, and ineligibility of exemptions for certain cogeneration units. PJM is speaking with Chris Sherry to determine exceptions. Another possible tag would be not subject to RGGI but opts into RGGI to retire allowance and facilitate participation in the PSEG proposed carbon abatement certificate (CAC) program. GATS would need a new category – “Outside RGGI, but able to earn CAC.”
- **Will PJM track NON RGGI Unit or NON RGGI Region Unit?** Is there a reflection of the load created within the state that is net metered? PJM data includes PJM settlement system. PJM would not see units off setting the load if its not registered within the system.
- **Is NJ specific data available?** It is possible to create a NJ specific report.

**(4) ENVIRONMENTAL DISCLOSURE RULES (Ron Jackson, BPU)**

Review of New Jersey’s Environmental Information Disclosure Rules on fuel source and related emissions. <http://www.nj.gov/bpu/pdf/rules/20071018energychapters4and8.pdf>

New Jersey’s Environmental disclosure requirements N.J.S.A. 48:3-87 (2007) require an electric power supplier or basic generation service provider to disclose on a customer's bill or on customer contracts or marketing materials, a uniform, common set of information about the environmental characteristics of the energy purchased by the customer, including, but not limited to: (1) Its fuel mix, including categories for oil, gas, nuclear, coal, solar, hydroelectric, wind and biomass, or a regional average determined by the board; (2) Its emissions, in pounds per megawatt hour, of sulfur dioxide, carbon dioxide, oxides of nitrogen, and any other pollutant that the board may determine to pose an environmental or health hazard, or an emissions default to be determined by the board; and (3) Any discrete emission reduction retired pursuant to rules and regulations adopted pursuant to P.L.1995, c.188.

**Discussion:** NJ Environmental disclosure rules are intended to inform consumers and provide a basis for making energy choices based on the environmental attributes associated with the energy sources. However in today’s market, energy procurements are not always tied directly to

the source (as in a bilateral contract) and can be difficult to tie to a specific generator or set of environmental attributes. A significant portion of NJ's energy supply is procured from the Spot Market which represents a mix of resources. IN most cases the supplier is using a default label that reflects the PJM mix.

Environmental Information Disclosure Rules may be useful in tracking and reporting emissions as part of a GHG EPS program to help facilitate leakage mitigation, if the decision is made to go forward with an EPS. These rules would require updating consistent with current emission and attribute tracking system in operation via PJM Generation Attribute Tracking System, Environmental Information System (GATS-EIS).

**(5) FOLLOW UP ON INTERSTATE COMMERCE CLAUSE (Sam Wolfe, BPU)**

Follow up discussion on how regulations to implement specific leakage mitigation measures can be designed in a way that does not conflict with the Interstate Commerce Clause of the United States Constitution.

- S. Wolfe linked two of the questions in the Board's order from its February 27, 2008 meeting. Question 7 asks in part:

How can a New Jersey GHG EPS, or other measure to mitigate leakage, be designed so that it does not merely shift cleaner megawatt-hours to the portfolios of New Jersey electric power suppliers and basic generation service providers, without actually affecting electric generation or the emissions associated with it?

Question 9 asks in part:

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 . . . ?

- Wolfe asked the group to discuss whether there would be a tension between (i) an effort to design an "effective measure to mitigate leakage" that would satisfy the concern in Question 7 about shifting "cleaner megawatt-hours" to New Jersey portfolios, and (ii) compliance with the Interstate Commerce Clause, unless at least Maryland and Delaware implemented the same measure.

**Discussion:**

- PSEG believes its program comports with interstate commerce clause.
- PSEG agrees that there is a tension between having an "effective measure to mitigate leakage" and complying with the Commerce Clause, unless Maryland and Delaware participate. If Maryland and Delaware do not participate, then generators in those states could earn carbon abatement certificates under the PSEG program, providing an oversupply of certificates without a corresponding increase in demand for certificates. Other mitigation measures to prevent "greenwashing" are likely to raise interstate commerce problems.
- Gary Helm at Conectiv – Reviewed and supports PSEG Cap program as the better of the two programs reviewed to date. Conectiv is not aware of any other state efforts but consider DE and MD very vulnerable to leakage. Any thought on how to bring them on board would be beneficial. DE's sole effort to mitigate leakage is a transition period, with 40% of the RGGI allowances being allocated to generators rather than auctioned initially, with a phase-out of allocations and phase-in of 100% auction over 5 years.
- Pepco Holdings reviewed the PSEG Cap Proposal and has not taken a formal position but will be in discussion with regulatory commissions in other states on potential ratepayer impacts.
- New York State also as a primary importer/exporter to PJM should also be considered. If New York is not doing something on leakage then it's another potential sink. NY approach is

very relevant but dealing with other RGGI states is a heavy enough lift.

- Does PSEG proposal impact dispatch? S. Wolfe suggested that if it does not impact dispatch, it will not mitigate leakage. PSEG response is that CAPS program works off of allowances and the program does not really effect dispatch as RGGI does not impact dispatch – it's based off the price of allowances.
- Has PSEG done any analysis on the most effective price? \$50 would be the threshold that would take coal out for gas. Would change in dispatch affect reliability? Change in dispatch is minimal as would be any change in reliability.
- ConEd Solutions suggested that PSEG Proposal could generate more bilateral transactions which preclude PJM dispatch which could affect reliability.
- PSEG designed the program so that it doesn't need bilateral contracts similar to the way RPS is designed so that contracts are to purchase recs vs. generation. CAPs acts as an equalizer so that a combined cycle generator could bid into pjm with benefit of CAC.
- BPU will continue efforts to work with MD and DE on coordinated approach to leakage

**REQUEST FOR FINAL WRITTEN COMMENTS by JUNE 30<sup>TH</sup> to RGGIAdmin@NJCleanEnergy.com**

**(6) FOLLOW UP DISCUSSION ON GHG LEAKAGE MITIGATION PROPOSALS**

Follow up discussion on the proposed GHG leakage mitigation measures and best approach for New Jersey relative to effectiveness in mitigating leakage; costs involved in developing and implementing the measure; and the impacts on the retail price of electricity in New Jersey:

- a. RAP Emissions Performance Standards
  - b. PSEG Carbon Abatement Proposal
  - c. Other proposals (none received to date)
- PSEG and RAP will take further questions on its proposals.
  - How would Combined cycle be treated??
  - RC asking additional question on Dispatch? PSEG comments that the biggest cost is fuel. If a RGGI cost is put on an efficient unit It may push it back down the dispatch list but the CAC could equalize differential and put it back on the list. The effect on dispatch would be based on the value of the price of the CAC.
  - Do you expect to see a shift in dispatch for coal? The high case for RGGI allowances would likely not see gas displaced by coal.
  - It seems like the CAPs program will not impact leakage relative to rggi vs non rggi units.
  - How is the CAP going to impact level of imports? Less efficient gas units outside RGGI would be dispatched first.
  - IF RGGI clears low , CAPs may not be needed.

**NEXT STEPS:**

What's next??? Board's order was to hold no more than 3 stakeholder meetings. If there will be more detailed comments on questions there could be more discussion.

- 1. Written Comments are due June 30<sup>th</sup> on 9 questions.**
- 2. A third informal stakeholder meeting will be scheduled to discuss comments – stakeholders to be notified by listserv.**
- 3. BPU President Fox, who is the presiding Commissioner in this proceeding, approved the following change to the schedule:**

<b>Date:</b>	<b>Action:</b>
June 30, 2008	Stakeholders to submit written comments with proposed answers to the nine questions listed in the Board's Order.
Between July 8, 2008	Hold a third public stakeholder meeting, to discuss the written comments.
By July 28, 2008:	Hold legislative-type hearing
By July 31, 2008:	Final written comments due

- 4. BPU will follow up with ICF for interim leakage report before 2015 and will circulate to the listserv.**

**(7) REVIEW OF 9 QUESTIONS IDENTIFIED IN THE BPU BOARD ORDER ON LEAKAGE MITIGATION**

***Questions 1 and 2 – Will RGGI cause an increase in imports and if so to what extent will that effect GHG Emissions?***

This issue was address by DEP presentation of RGGI modeling on estimated imports. However the RGGI projected 18 - 27% figure (i) does not consider new transmission, (ii) does not include Maryland in RGGI, and (iii) projects leakage through 2015, and therefore does not indicate the extent to which leakage may be significant earlier. Has any additional modeling been done on the cost of allowances? PSEG looked at allowance prices overall which will be relative to the allowance price and co2 emissions rate per MWh.

***Questions 3 AND 4. – Are there other measures aside from EE in EMP such as CHP and increased renewables that may mitigate leakage?*** CHP and renewable generation in NJ could reduce imports and hence leakage. Facility improvements (replacements / upgrades ) could improve facility efficiency and hence impact leakage.

**BPU REQUESTS WRITTEN COMMENTS** on this question.

***Question 5. What is the experience in other RGGI states?***

This was discussed in the introductory comments by Sam Wolfe. Steps and measures taken in CA, MD, DE and NY were briefly discussion but BPU will seek additional input from these states.

***Question 6. To what extent would each of the proposals considered mitigate leakage?***

**BPU REQUESTS WRITTEN COMMENTS.** Rate Counsel request more detail be provided by PSEG and RAP. PSEG has provided a White Paper and Summary Slides. More questions can be raised. (Send questions to [RGGIAdmin@NJCleanEnergy.com](mailto:RGGIAdmin@NJCleanEnergy.com) )

***Question 8 – How can we best track emissions?***

This question was addressed in the presentation by Ken Schuyler on the PJM GATs tracking system.

***Question 9 - 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.***

This question was addressed in the discussion summarized above under (5) above.

**LINKS:**

PLEASE SEND ALL **WRITTEN COMMENTS** TO BPU BY JUNE 30<sup>TH</sup> TO  
[RGGIADMIN@NJCLEANENERGY.COM](mailto:RGGIADMIN@NJCLEANENERGY.COM)

**REQUESTS FOR ADDITIONAL INFORMATION** ON THE RAP AND PSEG PROPOSALS MAY ALSO BE SUBMITTED ASAP TO THE ABOVE EMAIL. ALL RESPONSES WILL BE CIRCULATED TO THE LISTSERV.

**RGGI REPORT AND MODELING DATA** ON LEAKAGE CAN BE FOUND ON THE RGGI WEBSITE AT <http://www.rggi.org/documents.htm>

**RGGI WORKING GROUP PRESENTATIONS** AND MEETING NOTES ARE AVAILABLE ONLINE AT NJCLEANENERGY.COM AT <http://www.njcleanenergy.com/rggi-working-group>

**THE BOARD ORDER** ON RGGI LEAKAGE MITIGATION MEASURES IS ONLINE AT <http://www.njcleanenergy.com/files/file/2-27-08-8D.pdf>