

Summary of Meeting #6
ISO New England
ENVIRONMENTAL ADVISORY GROUP (EAG)

February 29, 2008

ISO Offices, Holyoke, MA

Participants

Platts, Jim (Chair)
Babula, Mark
Coste, Wayne
DeCoursey, Matt (phone)
Fontaine, Joe (phone)
Hamel, Paula (phone)
Henderson, Mike
Howland, Dave
James, Chris (phone)
Karlic, Cindy (phone)
Konary, Shawn
Plante, Jeff
Rodrigue, Rick
Sedano, Rich (phone)
Seth Kaplan (phone)
Wendel, Carol (phone)
Wong, Peter (phone)

Affiliation

ISO New England
ISO New England
ISO New England
Levitan and Associates
NH DES
Dominion
ISO New England
MA DEP
Synapse Economics
NRG
Mirant Kendall
Environmental Resources Mgmt
CT DEP
RAP
CLF
ISO New England
ISO New England

1.0 Introductions

Mr. Platts opened the meeting with introductions by those present and on the telephone.

2.0 Summary of Meeting #5

Mr. Platts asked for any comments or corrections to the Summary of EAG Meeting #5 (December 7, 2007), and there were none.

3.0 2006 Marginal Emission Rate Analysis (MEA)

Ms. Helve Saarela presented the results of ISO's 2006 MEA Analysis. The methodology was the same as for the 2005 MEA, i.e. based primarily on monthly emissions of generators in the EPA Clean Air Markets Data Base and ISO monthly energy data from interfossil generation, i.e. intermediate and peaking gas and oil units. The results showed a significant decrease in the marginal rates from 2005, especially for SO₂, NO_x. The 2006 total emissions also showed a significant drop from 2005 values. The factors contributing to these decreases were lower total energy production, higher nuclear, hydro and natural gas generation, while oil generation decreased dramatically and coal generated less than in 2005. Mr. Fontaine pointed out that nuclear upgrades could also be contributing to more nuclear production. These results will be

reviewed by the Power Supply Planning Committee and the Planning Advisory Committee and a report drafted by early April.

The emissions results by state show Vermont with the highest rates. This was explained by the state having only small peaking combustion turbines and diesel generation that run a few hours per year.

Mr. Kaplan suggested that demand response resources be included as well in the analysis.

4.0 RSP08 Production Simulations and Modeling

Mr. Mike Henderson reviewed the scope of work for the RSP08 production simulations for economic and emissions estimates. He discussed the 13 bubble representation of the New England load areas and their transmission interface capabilities and the assumptions for representing future resources from the FCM Auction and needs beyond 2010. Mr. Henderson then presented graphs representing hypothetical results the RSP08 would produce. These include reference estimates for production and LSE expenses and sensitivity cases. Similarly estimates of SO₂, NO_x and CO₂ would be developed along with sensitivity cases. Graphs of energy produced by fuel type and summer period and peak load day NO_x emissions would also be developed. Sensitivity cases would be produced for high loads and fuel prices and incremental changes in load and in relative gas and oil prices.

The New England RGGI cap allocation would be a good proxy metric for the RGGI cap and could be met with trading of allowances. Ms. Hamel commented that third parties in the market could make allowances less available for generators. Ms. Karlic pointed out the availability of offsets for 3.3% or more of compliance needs would increase the cap. Mr. Howland asked about how sensitive emissions would be to economic factors. These would be included in the sensitivity cases. Mr. Coste pointed out that purchases are uncertain and could affect emissions.

Mr. Wong stated that the IRC calculation would reflect known transmission upgrades. The question was discussed if the new resources should be selected to meet the state RPS requirements. Mr. James commented that this could be handled by the Alternative Compliance Payment and this should be mentioned as the default for RPS compliance.

Mr. Coste indicated that he was not clear as to how to model emergency generators.

Mr. Platts covered how the specific assumptions for the simulations would be developed for the load forecast, resource additions, fuel prices, allowances prices and emission rates.

- Load forecast – Use the ISO 2008 50/50 growth forecast i.e. 50% probability of a higher growth and 50% probability of a lower growth. Also simulate a high growth case.
- New Resource Additions
 - The need for new resources will be based on representative Installed Capacity Requirements (ICR) for New England and Local Sourcing Requirements (LSR) for the State of Connecticut and Boston, and the Maximum Capability Limit (MCL) for Maine.
 - The new resources will be added in the following manner:
 - Resources cleared in the FCM Auction for 2010 will be added in their respective load bubbles
 - For post 2010 needs, select the resources in the Interconnection Queue with the earliest commercial in service date. In case of a tie, pick the resource with the earlier Queue position.

- Demand response resources can be accounted for by assuming an earlier simulation year represents a later year based on the DR resources lowering or capping the load growth. Alternatively, they can be modeled explicitly as a load reduction. Mr. Wong pointed out that Price Response programs expire in 2010.
- Fuel Prices – Coal, natural gas, residual oil and distillate oil.
 - The fuel price forecast developed for New England will be based on the EIA’s Annual Energy Outlook (to be available in early 2008).
 - The general environmental agencies’ view is that the standard for distillate oil now is ultra low sulfur (15 ppm).
 - Sensitivity cases:
 - High fuel prices: make natural gas higher than residual oil but lower than distillate
 - Vary the relative price of gas to oil
- Emission allowance prices to be modeled as a fuel cost adder
 - SO₂
 - Recent (annual) allowance price was around \$500
 - Reflect the effect of EPA’s Clean Air Interstate Rule (CAIR) cap reductions in 2010 and 2015
 - The group confirmed that the allowance price would generally drop in proportion to the CAIR cap reduction.
 - NO_x (ozone season)
 - Only CT and MA are under the CAIR cap. Mr. Fontaine pointed out that NH has a state cap from the NO_x Budget Program that would continue.
 - Recent allowance prices was \$600
 - Reflect the effect of CAIR) cap reductions in 2009 and 2015
 - CO₂
 - Propose \$10 per ton for a reference CO₂ price based on a 2007 University of NH RGGI study.
 - Sensitivity case with high CO₂ price of \$40. Mr. Fontaine pointed out that the cost of CO₂ sequestration is about \$40 to \$50 per ton.
 - Mr. James commented that a constant real price over the planning period would not be realistic and some real price escalation should be modeled. He suggested the Synapse Report that is being used as a basis by a number of studies.
 -
 - Mercury will be calculated for coal plants based on energy production and state mercury emission rate or reduction standards
- Modeling of smaller units will be based on 2006 MEA results. Emissions from emergency generators can be calculated from the simulation results.

- Results from simulations will include the total annual generator emissions for SO₂, NO_x, CO₂, and CO₂ from RGGI units. Seasonal and peak day NO_x emissions can also be summarized or plotted.

5.0 Environmental Issues for RSP08

Mr. Platts presented topics that would be covered in the Environmental Issues section of the RSP08 report. Air issues would cover ozone attainment, particulate matter, mercury reductions and CO₂ regulations. Mr. Fontaine pointed out that SO₂ should be discussed separately as a pollutant. In addition, water discharges and the proposed water restrictions and renewable portfolio standards will also be covered.

Mr. Konary pointed out that a court decision ruled against 316b requirements. Meanwhile EPA has issued guidelines for permitting that are to be applied on an individual permit basis.

Mr. Platts presented a table showing the projected contribution of renewable resources in the Interconnection Queue in the year 2020 vs. the projected requirements.

6.0 Other topics

Mr. Platts gave a status of RGGI activities and asked for updates. Mr. Fontaine clarified that NH has RGGI legislation but still needs rulemaking. The MA DOER RGGI regs are not yet final.

Mr. Howland commented how permitting is difficult for new plants as NO_x offsets are needed, are not always available, and are quite expensive.

Mr. Platts mentioned the Spring PAC meetings with environmental presentations. He updated a comparison of GIS data of total New England generators CO₂ emissions with MEA results for 2005 and 2006. The GIS data is considerably higher which appears to be due to default data used in the GIS when facilities don't provide their data.

The meeting adjourned at 1 PM.