

DRAFT
Summary of ISO New England Environmental Advisory Group Teleconference
February 12, 2010

Attendees

Mark Babula	ISO New England
Chuck Carlin	Unaffiliated
Wayne Coste	ISO New England
Don DiCristofaro	Blue Sky Environmental
Bob Donaldson	MA DEP
Matt Garber	ISO-New England
Paula Hamel	Dominion
Mike Henderson	ISO New England
Chris James	Synapse Energy Economics
Jim Platts	ISO New England
Joel Rinebold	CCAT
Jason Rudokas	NESCAUM
Helve Saarela	ISO New England
Sharon Weber	MA DEP

Introductions and Administrative

Mr. Platts welcomed all attendees to the meeting. After introductions, he reviewed the dates for the remaining planned EAG teleconferences in 2010. A July 9th date has been set between the June and October dates.

Scheduled RSP Planning Advisory Committee meetings and their topics include February 24 – the RSP planning process, March 18 – transmission update, April 27 – resource issues and May 25 – environmental issues.

Analysis of Historical Peak Day NOx Emissions

Mr. Coste provided a disclaimer that all the Peak Day NOx Results are still preliminary. He reviewed the chronology of the work that has been presented over the last four teleconferences and then he presented new results. He presented weighted averages for NOx emission rates for combinations of generation and fuel categories in both lbs/mmBtu and lbs/MWh. This had been requested by an EAG member.

At the December meeting Mr. Coste presented a calculation of hourly decremental NOx rates for the 20 peak-load days for approximately a 500 MW decrement from the system peak generation. The calculation summed up the MW and NOx decrements for the last 500 MW of fossil generation brought online, i.e. highest bid prices, to meet the peak load. The calculation was done for all 24 hours for each of the 20 days and plotted along an hourly scale. The calculation was also done for two other cases, one

where any hydro (including pumped hydro) in the 500 MW decrement was removed since this would be dispatched even at a lower load level given its energy limited nature. The third case removed the hydro and any generation operating because of transmission constraints. By removing these two types of generation from the 500 MW decrement, only the incremental blocks of fossil units that would be decreased (cycle off), as the peak is reduced, was obtained. This case would capture the true decremental emissions from variable (cycling and peaking) fossil generation as load decreased. The 500 MW decrement usually contained about 80 bid increments of generation.

The new results presented at this meeting were graphs showing the generation – fuel types associated with each of the fossil generation bids making up the 500 MW decrements for each hour of the peak day. These results were presented for four selected days out of the twenty peak load days. For the 500 MW generation decrement, the peak NOx emissions in tons for the peak hour varied from less than 1 ton to 2.5 tons for the four days shown. Mr. Coste then presented a set of summary charts for the analysis that had been presented at previous EAG meetings.

Summarizing the results, the total system peak hour NOx emissions ranged from 6 to 13 tons for the 20 peak load days. The average peak hour's NOx emission rate was 4 lbs/MWh, and over the entire day, 50 lb/MWh. For the 500 MW generation decrement, the fuel and generation types most typically used during the 20 days were steam plants using residual oil, gas turbines using No. 2 distillate and jet fuel, and combined cycle plants using natural gas. Mr. Coste suggested some open issues for regulatory agencies to consider regarding these results.

Questions (in italics), *Comments/Responses* (in roman)

On the peak load day July 27, 2005 there is a drop in generation in hour 13. Is this a load reduction? No. It is a generation reduction due probably to the difficulty in achieving exactly 500 MW every hour because of the lumpiness in the bid MW.

How were dual fuel units dealt with? By assuming only the primary fuel was used as indicated in the CELT report.

These results should be well received by the regulators as they can support SIP filings.

Mr. Henderson pointed out that the results only reflect the past years analyzed and the system resources can change in future years which could affect any future results.

The colors on slides 14 through 17 are difficult to distinguish and a better explanation for excluding the hydro bids is needed. These will be improved and the slides reposted.

Slides 9 and 10 that show the weighted average emissions rate by generation and fuel combinations look useful.

Should the daily peak hour rate or daily cumulative rate be used? It depends. EPA may be interested in the smaller time increment. Regulators will need to discuss this with the regulatory agency's modeling staff.

Would these rates be used to determine the NOx reductions from energy efficiency? The regulators are still exploring this.

Process for Submitting Economic Study Requests

Mr. Henderson presented the stakeholder process for submitting economic study requests. He reviewed the tariff requirements and the objectives of “Attachment K” studies. The stakeholder study submittals must be made by April 1. By May 1 a PAC meeting will be held to present the study proposals. By June 1 the PAC will meet and set the priorities of up to three studies submitted. The type of study requests can encompass generation, transmission and energy efficiency. He provided samples of completed economic studies and typical study economic and environmental metrics that are calculated.

Questions (in italics), *Comments/Responses* (in roman)

Could a study consider ramping up PHEV market penetration at different charging rates and times? Yes and this was done as a sensitivity case in the Governor’s Study.

Environmental Issues

Mr. Platts presented an update on key environmental issues that had been presented by Peter Carney of the NYISO at the December 18 Interregional Planning Stakeholder Advisory Committee (IPSAC) meeting. The issues covered included ozone, SO₂, PM, regional haze, CAIR, mercury, CO₂, open-cycle cooling water and coal combustion byproducts. He discussed the most current developments for each of these issues and asked the EAG for comments and any omissions.

Questions (in italics), *Comments/Responses* (in roman)

At the November PAC meeting, a presentation was made on shale gas developments. The presenter stated that these developments would be a “game changer” and make a huge difference for a number of environmental issues. Who gave the presentation? It was Tom Riley of the Northeast Gas Association.

NERC Retirement Study

Mr. Platts gave a brief overview of a current NERC study to evaluate potential retirements of fossil units due to environment developments. An economic criterion is being used to determine which fossil units might be candidates for retirement based on the costs for environmental compliance compared to wholesale energy costs in the geographical area of the plants. The study would evaluate the reliability impacts of these potential retirements. The environmental issues being considered are CAIR, mercury, coal combustion byproducts and the cooling water requirements under the CWA Section 316b. A draft of the study report is expected in the spring.

Questions (in italics), *Comments/Responses* (in roman)

In addition to mercury there may be a need to look at nickel in fuel as a toxic emission. Is this a concern for heavy oil? More data is needed.