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**MEMORANDUM**

May 23, 2007

To: ISO New England
From: Derek K. Murrow, Director, Policy Analysis
RE: New England Electricity Scenario Analysis
Comments on the First Draft Report (May 16, 2007)

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Environment Northeast (ENE) is a nonprofit research & advocacy organization focusing on the Northeastern U.S. and Eastern Canada. Our mission is to address large-scale environmental challenges that threaten regional ecosystems, human health, or the management of significant natural resources. We use policy analysis, collaborative problem solving, and advocacy to advance the region's environmental and economic sustainability.

We have participated in the stakeholder process run by ISO New England and appreciate their willingness to listen to stakeholder comments and solicit input. While some of these issues have been raised by ENE and others before, upon issuance of a draft report, we feel it is necessary to highlight a few of our key concerns with the analysis. If any of these comments do not accurately reflect what was modeled or how the modeling was done, we would appreciate any clarification ISO New England can provide.

- It should be clear that although there was stakeholder input in the development of this work product, the final design and assumptions used were determined by ISO New England.

- A choice was made by ISO New England not to assess the total costs of each scenario on a net-present value basis (total cost in current dollars), which makes the results hard to compare and interpret. Different metrics taken in isolation will give policy makers very different impressions of the relative costs and benefits of the various scenarios.

- Policy makers are very focused on total costs to consumers, but the report does not lay out total average energy costs or better yet, the net present value of total energy expenditures. A consumer's total bill is made up of any fixed charges plus their consumption times the rates. The consumption element of the bill is key and one of the few elements that the region and policy makers have control of through expanded energy efficiency investments. The differences in total consumption and total costs for each scenario should be included in the report.

- As we understand the model, it is looking at a one year snapshot in time. This may make sense for supply technologies and give a sense of the relative costs and benefits, but for energy efficiency it skews the results significantly. Energy efficiency projects and programs have an upfront cost, represented as a capacity cost, in the first year but the benefits are delivered over many years (often more than 10). Only examining efficiency investments over a one year period and not capturing the full energy savings is a significant problem. We know that supply costs have been in the range of $60

to $80 per MWh recently, with generation charges for residential customers often over $100 per MWh. This is in comparison to the cost of saving consumers energy through efficiency programs that deliver a unit of energy saved for about $30 per MWh (total cost divided by the discounted energy saved over the lifetime of the project/program). This significant shortcoming of the analysis should be discussed in the report.

- The way energy efficiency was modeled is also inconsistent with reality. It was modeled as a resource that bids in at no cost, when efficiency projects cannot in fact bid into the energy market. This appears to under represent the benefits since it assumes the LSEs would still have the same load to meet, when in fact their load would decline due to the efficiency investments. Efficiency investments should depress the marginal clearing price, as the report indicates, AND reduce load. This translates into a savings for LSEs, such as the one shown in Table 7, that is significantly greater than the savings from a reduced energy price. Table 7 shows both the % change in marginal clearing price and % change in LSE costs to be about the same, an approximately 10% reduction in cost. The annual LSE cost reduction should be much higher than the 10% shown when reductions in load are also considered.

- Even with, what appears to be significant under reporting of benefits or savings to consumers, energy efficiency and demand response investments are identified as resources that *economically justify investment*. As we understand the results, this indicates that energy efficiency justifies the investment in some cases based on only one year's energy savings.

- The choice to group energy efficiency and demand response into one scenario significantly confuses the results. The two resources are very different in terms of costs, the way they function, and what their benefits are. Efficiency investments have savings throughout the year as well as in peak periods, where as demand response is only activated during periods of high demand. In addition, you pay for energy efficiency once and receive many years of savings, while for demand response you usually have to pay for delivery every time it is called on. Demand response is an important resource that should be utilized and assessed in a study like this, but it should have been assessed separately from energy efficiency. The two sensitivity cases that look at energy efficiency and demand response alone illustrate the differences in costs, benefits, and emissions between the two technologies. In the assumptions section the range of costs should be broken out into costs for efficiency versus costs for demand response. The differences between results from the stand alone efficiency and demand response cases should also be highlighted and discussed in the text of the report and in the results summary.

- Although it has been raised in multiple stakeholder meetings, the report continues to misrepresent the way the Regional Greenhouse Gas Initiative (RGGI), which caps $CO_2$ emissions from large power plants, is structured.
    - There is not a New England $CO_2$ cap – the cap is regional and trading can and will happen across the region (NY and some PJM states). The state caps essentially represent each state's apportionment of the regional total and the number of permits they will release to the regional market.
    - The RGGI program includes banking which may well allow allowances from early periods to be used in later years like the period modeled by the ISO.
    - The RGGI program includes the use of offsets which allow companies to pay for emissions reductions in other sectors instead of reducing emissions within the electric sector.

- Energy efficiency significantly reduces the demand for RGGI allowances due to lower load growth and we are not confident that this is adequately captured, because of the way efficiency was modeled.
- It is not clear how the CO2 totals modeled by ISO for both small and large plants relate to the RGGI cap levels that apply only to plants over 25 MWs.

- The following are suggestions to consider related to making the report more accessible and clear:
  - The model year should be highlighted throughout (all tables and figures) to make it clear that what is presented is a snapshot in time at about 2020-2025
  - It seems clearer to represent a reduction in costs as a negative number in both dollar and percentage terms (Table 7)
  - Given the importance of the energy efficiency only sensitivity shown in Table 7, this case should also be included in Figure 6 and Table 8
  - Section 5.4 reads like a set of summary or concluding remarks, in contrast Section 6 and 6.1, Summary and Conclusions, seems incomplete; we would suggest that 5.4 be moved to Section 6.

Thank you for the opportunity to review the draft report and submit comments. We would welcome an opportunity to discuss the report and these comments with ISO New England staff.

For additional information on this memo or follow up questions, please contact Derek Murrow at (203) 285-1946 or dmurrow@env-ne.org.