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March 18, 2005

Patrick H. Wood, III
Chairman
Federal Energy Regulatory Commission
888 First Street, N.E. Room 11A-1
Washington, DC 20426

Re: Market Design and Environmental Opportunities
Follow up to Discussion at Boston Technical Conference

Dear Chairman Wood:

Ken Colburn (NESCAUM) and I appreciated the opportunity to informally discuss with you our thoughts on market design and its connection to environmental/natural resource issues during the technical conference in Boston on March 4 -- in particular, the potential for using capacity market design as a tool to allocate resources and/or facilitate environmental and other policy objectives within the electric industry.

Attached is a short discussion paper regarding the extent to which such considerations rightfully fit within the rubric of "resource adequacy." As you may recall, our general view is that recognizing, and potentially weighting, distinctions in capacity attributes (e.g. emissions, fuel, water consumption, efficiency, size, function, cost) within the capacity market design provides an opportunity to efficiently and simultaneously facilitate multiple system needs and policy objectives.

Please note that this is **not** provided on behalf of any client, market participant or interested party other than the authors as individuals seeking to stimulate beneficial policy discourse. We would very much welcome the opportunity to further pursue these ideas with you and your staff. We can be reached at (617) 784-6975 [kcolburn@nescaum.org] or as listed above.

Sincerely,

N. Jonathan Peress

Enclosure
cc: Kenneth Colburn

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3/18 to FERC

*** *DISCUSSION DRAFT* ***

Electrical Connections: Aligning Capacity Market Changes with RGGI in the Northeast

N. Jonathan Peress and Kenneth A. Colburn
March 2005

The Federal Energy Regulatory Commission (FERC) is requiring regional power system operators to make changes in regional electricity markets to better ensure *resource adequacy.* The design of new markets to support reliability provides a rare and far-reaching opportunity to advance efforts to deploy demand-side, efficiency, renewable and lower-emitting resources by recognizing the beneficial attributes of these technologies within the rubric of resource adequacy.

In response to FERC, the Northeastern system operators have generally proposed revisions to regional *capacity markets* that would pay substantial new revenues to existing generators (~$2.6 billion per year in ISO-NE). (For reference, compare this sum to the approximately $100 million in total annual systems benefits charges for energy efficiency and renewable power in New England.) There is widespread opposition among state utility regulators to these proposals due to (1) the enormous new costs that they would impose upon ratepayers, particularly in transmission-constrained areas such as Connecticut and metropolitan Boston, and (2) the fact that the proposed capacity market designs would disproportionately pay existing generators. The current proposals do not adequately differentiate and recognize the economic, environmental, health, and reliability benefits that alternative energy resources (e.g. demand side, efficiency and distributed generation) can provide in comparison to large, centralized generating facilities.

In many instances, the additional capacity revenues are weighted to reward the very same "vintage" generators that regional air quality initiatives have been targeting for years. Due to their respective locational value, the effect would be to increase the economic value of many of these old facilities, further extending their useful life. Although not yet quantitatively analyzed, this approach to revising the capacity market is likely to make system-wide carbon reductions more difficult and/or more costly because older facilities with less thermal efficiency would reap disproportionate financial rewards. Analysts have identified problems with this methodology, particularly the extent to which it excessively compensates existing generation resources. (*See for example*, http://www.synapse-energy.com/Downloads/Synapse-paper-capacity-for-the-future.pdf.)

In many respects, the Regional Greenhouse Gas Initiative (RGGI) and the capacity market share similar objectives (e.g., resource adequacy and creating financial incentives for the deployment of new, cleaner ways to meet power demand). Thus, they may be able to go hand-in-hand. Instead of imposing broad, additional capacity market costs to assure resource adequacy, future capacity revenue streams could be tailored to leverage technology turnover, capture waste energy, and enhance efficiency. Environmental emissions would be substantially reduced by achieving and maintaining resource adequacy through incentives that better recognize the value

of such supply side additions, demand side improvements, and demand response. In short, the proposed capacity market compensation scheme, if approved, should be modified, to *over time* enhance revenues to more-desirable units and practices and reduce revenues to less-desirable units. This could both facilitate and distinguish short-term reliability needs and long term resource adequacy objectives. Moreover, since out-of-region generation capacity would be treated in the same fashion, leakage of higher-emitting generation output into the Northeast as a consequence of RGGI carbon limitations would be discouraged by this approach.

On this basis, efficiency and technology deployment would be enhanced, resulting in a supply portfolio with lower carbon intensity. Thus, capacity market financial incentives encouraging the deployment of cleaner technology and the turnover of capital stock would enhance resource adequacy in a way that would *complement* RGGI's efforts to reduce carbon dioxide emissions from existing generators. Current proposals, on the other hand, may represent a worst-case scenario with respect to RGGI, as they would pit increased capacity revenues for "vintage" generators against the States' goal of reducing emissions from those units.

Under the complementary approach suggested here, additional costs to ratepayers would not only buy greater reliability, but also foster technology turnover, efficiency, and emissions reductions in a manner that would actually decrease system-wide costs in the future. The current proposals for capacity market design would not purchase similar long term benefits and, if left unchecked, are likely to further manifest historic system bias towards centralized generation served by high voltage transmission; thus, amplifying the cost of achieving carbon-intensity reduction targets over the long run. Aligning capacity market objectives to RGGI's objectives can provide a policy basis for a more sensible outcome.