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BY ELECTRONIC MAIL AND FIRST CLASS MAIL

January 25, 2010

Connecticut Energy Advisory Board
c/o Ms. Gretchen Deans
Connecticut Economic Resource Center
805 Brook Street, Building 4
Rocky Hill, CT 06067

Re: Response to CEAB Request for Written Comments due January 25, 2010 on “Policy and Technology Options for Repowering Connecticut’s Generation Fleet” (the “NRG Whitepaper”) prepared by NRG Energy, Inc. (“NRG”) in connection with the 2010 Connecticut Integrated Resource Plan (“2010 IRP”)

Dear Ms. Deans:

Towantic Energy, LLC (“Towantic”) hereby respectfully files the following comments on the NRG Whitepaper dated January 7, 2010, in accordance with the invitation to comment by the Connecticut Energy Advisory Board (“CEAB”).

EXECUTIVE SUMMARY

The NRG Whitepaper correctly sounds the call for near-term energy planning and procurement by the State of Connecticut in anticipation of retirement of old facilities, even though the Connecticut energy distribution companies (“EDCs”) may not conclude in their Integrated Resource Plan for Connecticut dated January 1, 2010 (the “2010 IRP”) that current demand requires generation additions.¹ Towantic, which owns a fully developed and permitted 500MW combined cycle, natural-gas fired power plant site in the southwest Connecticut load pocket, knows well that development of new resources is expensive, time-consuming and fraught with uncertainty. We further agree with the NRG Whitepaper’s assertion that the New England merchant market is flawed and is unable to provide a “new-build” or “repowering” signal to developers or plant operators.

¹ Towantic believes the assumptions underlying the 2010 IRP are flawed, as detailed in our 2010 IRP comment letter submitted together with this letter.

However, Towantic strongly believes that favoring repowering of old plants (instead of retiring them and replacing them with new generation resources) is not necessarily in the best interests of Connecticut ratepayers, will result in uneconomic decision-making and essentially pays again for plants that had long-ago amortized their capital costs through state-provided and ratepayer-funded power procurement agreements or other regulatory recovery. Towantic instead suggests that the CEAB survey the available options for adding generation by conducting a proactive Request for Proposals (“Proactive RFP”) as described in the January 19, 2010 letter issued by the Department of Public Utility Control (“DPUC”) and, together with the DPUC, select resources to add based on a resource’s ability to: (i) address local operating reserves and other system reliability needs; (ii) reduce electricity costs to Connecticut ratepayers; (iii) efficaciously and significantly reduce pollutant and greenhouse gas emissions; (iv) integrate with the State’s existing electrical and gas infrastructure; and (v) provide permitting and in-service date certainty. Projects of all types, including repowered old resources and new generation, should compete on a level playing field to determine the best solution for Connecticut.

The Towantic project has been designed to satisfy these criteria to provide significant economic and environmental benefits to the Connecticut ratepayers and the New England grid. The Towantic project:

- is located at the intersection of the Algonquin gas pipeline (just yards from a brand-new compressor station) and a Connecticut Light and Power-owned 115kV transmission lines; therefore, similar to a repowering site, the required interconnection work and associated need for rights-of-way will be minimal. As part of planned construction, a new switchyard will be dedicated to the ISO-New England system paid for by Towantic.
- is electrically connected into the load pocket of southwest Connecticut and will mitigate the need for the NEEWS project by significantly reducing the east-west power flow that now occurs as power from other parts of New England is inefficiently dispatched to serve the southwest Connecticut load center. The Towantic project will provide the local reliability benefits that new baseload generation would bring for Southwest Connecticut and Boston as described by ISO-New England in its 2009 Regional System Plan.²
- designed with a heat rate of 7000 BTU/kWh or lower and incorporating GE turbines intended to cycle frequently and with lower start costs, will dramatically lower the overall average heat rates in Connecticut and save Connecticut ratepayers approximately \$45-90 million in 2013 and \$400 to \$760 million from 2012 to 2018.³

² ISO-NEW England 2009 Regional System Plan issued October 15, 2009, www.iso-ne.com/trans/rsp/2009/rsp09_final.pdf

³ Letter from The Brattle Group to GE Energy Financial Services dated September 15, 2008.

- is expected to be dispatched 70-80% of the year. Based on its configuration and location, it will provide power day-in, day-out, and all year round. It can also provide reliable power for the grid's increased load each morning in 10 minutes without excessive damage to the equipment. As the State adds intermittent resources, such as wind and solar, Towantic has the operational flexibility and is capable of being dispatched to meet the system volatility needs. Unlike a peaking resource, Towantic does not have to recoup all of its costs through capacity payments, regardless of actual peak use. It is a resource that Connecticut can count on in lieu of expensive, short-term contracts provided by financial intermediaries that reflect the power market's inherent volatility.
- has start-of-the-art pollution control equipment. We expect that building Towantic and running it in lieu of the existing fleet will reduce SO₂ by 960 tons, NO_x by 270 tons and CO₂ by 215,000 tons⁴. The plant is designed to be air-cooled, dramatically reducing water usage and will be dual-fueled to address possible natural gas curtailment issues.
- is fully permitted and ready to begin construction bringing jobs and tax revenues to Connecticut and the Town of Oxford.

Towantic is not intimately familiar with the sites NRG proposes to repower. However, we point out the following factors when considering repowering or reusing existing sites:

- These facilities will require time-consuming permitting, with uncertain outcomes.
- Retrofitting existing equipment can be fraught with higher technology and construction risks relative to new construction and may require efficiency compromises.
- Depending on the magnitude of the changes to plant size and technology, existing sites may not achieve anticipated efficiencies relative to newly built facilities, as the existing infrastructure is often not well suited for new plant configuration.
- The New England Governors' Renewable Energy 2009 Economic Study prepared by ISO-New England (the "Governors' Economic Study") found that *new build* resources (rather than repowering old and inefficient plants) would be the best way to reduce costs and emissions.⁵

⁴ Letter from The Brattle Group to GE Energy Financial Services dated September 15, 2008.

⁵ Preliminary Results for New England Governors' 2009 Economic Study, www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2009/aug142009/economic_study_draft_results.pdf, compare Scenarios 2,3 and 4 (retire existing resources) with Scenarios 5,6 and 7 (repower existing resources).

- Retrofitting or repowering existing sites would require shut down of existing capacity prior to the replacement capacity being on line; hence, repowering would put additional burden on grid reliability.
- These facilities are all quite old. Each was originally supported with a power purchase agreement or rate-based recovery and currently receives capacity payments through the ISO-New England forward capacity market. We do not see a compelling State need to maintain old sites except to the extent that they are otherwise able to compete in a resource solicitation.

It is important that the CEAB take a careful look at Towantic. Although we believe it is the right resource to add now, it cannot be built without the certainty of revenue provided by a power procurement agreement and, without encouragement, the development opportunity cannot be maintained forever. We therefore urge the CEAB to allow Towantic to compete fairly with all proposed resources on a level-playing field to prove that it is the best choice for the State of Connecticut.

DISCUSSION AND COMMENTS TO NRG WHITEPAPER

1. Towantic agrees that there is a need to develop a procurement plan and proactive RFP to replace existing old, inefficient fossil generation.

Towantic supports NRG's recommendation that the CEAB institute a competitive procurement process, notwithstanding the EDCs' contention in the 2010 IRP that no additional generation capacity is required, to determine if the State of Connecticut can achieve economic and environmental benefits by replacing existing capacity in the state with new, more efficient power generation resources. Towantic believes that such a procurement plan should fulfill the State's future energy vision, maximize ratepayers benefits, maximize energy efficiency, minimize environmental impact, maximize reliability, and use competitive mechanisms to ensure best efficiency and lower costs.

Towantic also agrees that environmental compliance will add additional pressure to shut down old, inefficient generation in Connecticut. The federal Environmental Protection Agency ("EPA") has indicated that it is likely to require additional action on the part of the Connecticut Department of Environmental Protection ("DEP") to address ozone non-attainment, resulting in a requirement that existing generators acquire additional NOx and SO2 emissions credits to continue operating or alternatively, retire. It is not clear how the existing plants will be able to be certain to recoup such expenditures through the ISO-New England forward capacity market. Further, the regulation of carbon emissions appears imminent, either as a result of legislation or through EPA rulemaking. The consequences of such regulation will also be to increase the costs of generating power, without a concomitant increase in revenues. Connecticut regulators can decide to compensate old, inefficient resources for increased emissions costs indefinitely, but Towantic believes a better

alternative is to consider adding state-of-the-art, highly efficient, generators with a much lower environmental footprint. It also makes sense to reduce pollution by letting non-compliant facilities retire, especially when the old plants are located in designated environmental justice areas. The new resources can take advantage of technologies such as air-cooling to minimize water use if, as expected, new water conservation requirements are enacted.

Beyond the above-mentioned considerations, Towantic would like to highlight the following from ISO-New England's 2009 Regional System Planning ("2009 RSP"):

- The 2009 RSP specifically suggests that regulators consider adding baseload resources in Southwest Connecticut (and Boston) as a way of augmenting grid reliability, while reducing power costs and pollutant emissions.
- The 2009 RSP has also identified local reliability need in Southwest Connecticut, even when all existing resource are assumed to remain in operation through payment of "reliability-must-run" capacity adders to permit existing plants to break even on their fixed costs. ISO-New England was recently forced to announce that it would maintain an artificially high "floor" price for capacity in its forward capacity market, which would otherwise have expired in its next capacity auction in order to keep existing generation on line.

2. **The Advantages of Natural-Gas fired Baseload Generation.**

Towantic agrees with NRG that Connecticut should put a premium on obtaining flexible generation resources for reliability to supplement intermittent renewable facilities powered by wind and solar energy to insure grid performance in adverse weather conditions. These resources are primarily gas-fired generation with fast start and load-shaping flexibility. Towantic believes that new natural gas fired, combined cycle (NGCC) baseload generation is best able to increase reliability on the grid, reduce costs to ratepayers and reduce overall pollutant emissions.

- Turbine providers have introduced new versions of NGCC technology that provide fast-start capability and more flexibility to cycle to better meet grid reliability needs as well as reducing emissions. It is unlikely, however, that this NGCC technology can be deployed in a repowering application.
- NGCC, utilized in combination with air cooling technology, can dramatically decrease the need for process water over oil, coal and water-cooled, gas facilities.
- Turbine heat rates have declined significantly to increased efficiency of fuel usage and decrease volatility due to fuel costs.

- A typical configuration for an NGCC of 500MWs, well located to meet local reliability needs has been cited both by ISO-New England's 2009 RSP and the 2010 IRP as the best way to reduce power costs to Connecticut ratepayers.

3. Need for Long Term Off-Take Agreement to Provide Certainty for Project.

Towantic strongly supports NRG's assertion that new generation cannot be built without revenue certainty to cover the plant's capital and fixed operating costs. This revenue certainty is not currently available through the ISO-New England markets. First, the forward capacity market clearing price that is required to meet the cost of capital of a new plant will result in a windfall for the existing capacity, most of which has already been fully depreciated pursuant to state-approved rate base or other procurement plans. Second, the five-year term available for a new resource to lock in its capacity price in the forward capacity market is simply too short to efficiently finance a power plant. Last, the revenue a power plant can expect to earn in the energy market is too volatile to provide certainty of capital recovery and an appropriate return on capital to equity providers.

Towantic understands that there are good public policy reasons for the ISO-New England market design, but the result is that it is not likely that any resource developer can expend capital on the scale necessary to build a power plant, without a contractual commitment of reasonable duration from a creditworthy entity. As the DPUC has recently stated in its recent letter to CEAB dated January 19, 2010 regarding a "request for proposal" to assess generation options, a contract would provide the assurance for the project to enter the forward capacity auction which in turn, would provide assurance to the ISO-New England that the project will be developed.

Towantic therefore supports NRG's recommendation that the DPUC direct that contracts be signed for projects that receive approval through the CEAB RFP process. Towantic further points out that a long-term power purchase agreement can be beneficial to the Connecticut ratepayers as well as the resource developer. A long-term (15 years or longer), fixed price contract with a well-located generator can be the backbone of a procurement plan which limits market volatility, rather than relying solely on short-term speculative commodities dealers to provide power, as is currently the practice.

4. Procurement Preferential Criteria.

As stated above, Towantic agrees that new generation resources should be chosen based on whether they:

- Reduce power costs to Connecticut ratepayers,
- Reduce pollutant emissions, and
- Increase grid reliability.

In addition, Towantic also believes plants having these characteristics should be preferred:

(i) The ability to commit now to meet a timeframe for commercial operations consistent with the 2010 IRP's projected capacity retirement timeline.⁶ We note that permitting processes are expensive, time-consuming and uncertain and projects that have permits should be preferred.

(ii) Siting which decreases concentration of power resources in designated "environmental justice areas".

(iii) In-state resources that minimize congestion and transmission losses by siting close to load pockets.

5. Repowering and reusing existing sites is not necessarily the optimal solution and, hence should not be preferred over other permitted sites.

Towantic does not agree with NRG's proposal that a plan be developed to replace the existing old, inefficient generation by repowering and reusing existing in-state generating capacity, in lieu of choosing resources through competitive bid among all permitted generation sites in the State, as specified under Conn. Gen. Stat. Section 16a-3a(d)(3).

- The Governors' Economic Study shows that replacing 50-70-year old existing generation resources with modern, natural gas-fired, combined cycle plants results in the lowest annual energy price and lowest pollution emissions of all 41 cases studied, including repowering existing sites.
- Permitted generation sites for new development provides more certainty of timely completion than repowerings, which have not been through siting, and environmental approval processes and which may present other technical concerns.
- Newly built generation can assure state-of-the art technology with no compromises necessary to conform to existing site configurations or to take into account existing infrastructure.
- Further, we believe that repowering much of Connecticut's old generation will provide no infrastructure advantage over a new generation site, as the existing infrastructure is either not suited for new plant configuration or needs extensive upgrades. For example, repowering a distillate oil plant will require a new natural gas pipeline interconnection. Similarly, retiring a small plant in favor a new larger plant development will require extensive electrical system upgrades. New generation sites, on the other hand, are selected to optimize proposed plant

⁶ The 2010 IRP Whitepaper shows capacity retirements projected to begin in 2013, ramping up in 2016.

configuration (including fuel selection) with the available infrastructure, such as gas and electric interconnections.

- Repowering existing generation would require shut down to allow construction, thereby reducing the State's generation capacity for several years.

6. Towantic Supports the Need for a Procurement RFP Now.

Towantic agrees that the CEAB should issue a proactive RFP by May 1, 2010, with a power contract award approved by the DPUC by December 1, 2010. It takes 3 to 4 years from permit completion through commissioning of a combined cycle plant. To meet the projected timeline of capacity retirement stated in the 2010 IRP, a contract providing revenue certainty would need to be awarded this year.

CONCLUSION AND RECOMMENDATION

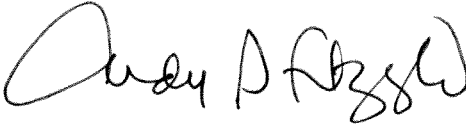
Towantic appreciates the efforts that NRG has put forth in preparing the NRG Whitepaper, and appreciates CEAB's invitation for written comments.

Towantic is supportive of NRG's recommendation that "the Department issue a competitive procurement, even in the absence of consensus on a projected capacity shortfall, to determine if the State of Connecticut can achieve economic and environmental benefits by replacing existing fossil steam capacity in the State with new, more efficient, and lower-emitting capacity", and the proposed guidelines, timeline, and need for power contract/s for such proactive RFP. Towantic also support the recommendation to issue the procurement RFP immediately to allow Connecticut to meet the projected timeline of capacity retirement, and the need to have long-term off-take agreements issued following the results of the RFP.

However, Towantic also believes that the State should carefully consider what new resources it adds to assure that those resources are best able to increase grid reliability, reduce ratepayer costs and improve Connecticut's environmental profile. Repowering existing generation sites (as compared to retiring such facilities and replacing them with new, efficient generations located in strategic locations) may require unacceptable compromises of those goals. Hence, Towantic recommends that all credible proposals, whether repowering or new replacement, should be evaluated to find the best solutions for fulfilling Connecticut's energy needs.

Towantic appreciates consideration of these comments and welcomes the opportunity to assist the CEAB with their continued planning efforts.

Respectfully submitted,
Towantic Energy, LLC

By: 
Its: Vice President