

2008 Integrated Resource Plan

CEAB Review Status Report

I. Introduction

The Connecticut Light & Power Company and the United Illuminating Company (together, “the Companies”) submitted *An Integrated Resource Plan for Connecticut* (“the Plan”) to the Connecticut Energy Advisory Board (“CEAB”) on January 1, 2008 pursuant to Section 51 of Public Act No. 07-242, An Act Concerning Electricity and Energy Efficiency (“Section 51”). The Companies prepared the Plan together with their consultant, The Brattle Group, and presented the Plan to the CEAB on January 4, 2008.

Section 51 sets forth constructive and comprehensive requirements for the Plan.¹ Additionally, it established aggressive time frames for the Plan’s initial preparation by the Companies and subsequent review by the CEAB. Section 51 requires the CEAB, in consultation with the Independent System Operator – New England (“ISO-NE”), to review and approve or to review, modify and approve the Companies’ Plan. Once approved, the CEAB must submit it, together with a statement of any unresolved issues, to the Department of Public Utility Control (“DPUC”) by April 30, 2008.

This document provides a status report on the CEAB’s process on the Plan to date and a broad summary of public input on the Plan thus far, together with the CEAB’s preliminary observations. For purposes of this summary, the comments are characterized broadly in order to provide a general view and do not reflect all substantive points on any one issue or by any particular commentator.

II. CEAB Review Process to Date

Preliminary Assessment of Statutory Compliance. The CEAB requested its technical consultant, La Capra Associates, to review the Plan and perform a preliminary assessment of the extent to which the Plan provides the information requirements set forth in Section 51. The purpose of the preliminary assessment was to provide the CEAB a starting point for its further consideration of the Plan. The review included a day-long

¹ At page 48-49 of the Plan, the Companies made clear that there are limitations to their Plan’s analysis. As submitted to the CEAB, the Plan: Contains only limited analysis related to transmission; is not a siting analysis for new generation capacity; is not a procurement risk management study; and, is not a regional renewable energy market study.

Additionally, at page 2 of the Plan, the Companies set forth other limitations to their analysis, many of which they suggest can be addressed in other venues or in subsequent years’ Plans. More specifically, the Companies state that the study: was not intended to provide a cost/benefit analysis of transmission options; did not compare the economics of transmission vs. generation vs. demand-side options; and, does not constitute a transmission reliability assessment.

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technical discussion between representatives of the CEAB, La Capra and the Companies. When the preliminary assessment was completed on January 28, 2008, it was provided to the CEAB and then discussed at its regularly scheduled meeting on February 1, 2008. The CEAB also made it available to interested persons.

The Companies submitted a joint letter to the CEAB on February 8, 2008 in which they offered assistance to inform and enhance the CEAB's review of the Plan. Specifically, the Companies offered to answer the CEAB's questions regarding the Plan's assumptions, analytical methodologies, results and conclusions and to make adjustments to the Plan's modeling. The CEAB appreciates the Companies offer. We believe close consultation and collaboration between CEAB and the Companies is essential to successfully advancing the planning process. The CEAB and the Companies will build on the work that the Companies have done to date to develop needed modifications to the 2008 Plan that the CEAB will approve for consideration by the DPUC.

Public Input. On January 11, 2008, the CEAB issued a request for public comment on the Companies' Plan and asked for submission by February 7, 2008. Specifically, the CEAB requested comment on the way in which the Plan meets the statutory criteria, and/or the specific ways in which the Plan should be modified to better conform to the statutory requirements. Twenty entities submitted written comments.² Some comments focused on single elements of the Plan, such as demand-side management ("DSM") and others provided comprehensive evaluations of the Plan. In addition, more than forty individuals sent electronic mail to the CEAB to convey their views of the Plan; most supported the Plan's recommendations concerning demand side management ("DSM") measures. Overall, the CEAB received substantial and in many cases detailed written comments from a broad spectrum of interested persons and organizations.

On February 11, 2008, the CEAB held a public hearing on the Plan in Hartford Connecticut, consistent with Section 51. More than a dozen persons spoke at the Public Hearing. Nearly all speakers had also submitted written comments.³ In addition, the Brattle Group, the Companies' consultant, offered comments and indicated it is interested in engaging the CEAB in continued dialogue on the Plan.⁴ The public hearing was transcribed so that members of the CEAB whose schedules prevented attendance were able to review the comments provided verbally.

² AARP; Attorney General; American Lung Association; Connecticut Clean Energy Fund; CMEEC; Clean Water Action; David Jackson; Elizabeth Beiter Oldfield; Energy Conservation Management Board; Environment Northeast; FirstLight; Robert Fromer; Lee Hebert; League of Women Voters of Connecticut; Milford Environmental Concerns Coalition; New England Power Generators Association; Northeast Energy Efficiency Partnerships; Noble Environmental Power; NRG; Constellation/Retail Energy Supplies Association; UTC.

³ Direct Energy spoke at the public hearing but did not submit written comment; Direct is, however, a member of RESA, which submitted written comments.

⁴ See, Transcript dated February 11, 2008 at 79.

III. Public Comment Summary

The CEAB sets forth below the Plan's four Recommendations with a broad description of public comments on each followed by CEAB's initial observations. In addition, because public comment highlighted several core elements of the Plan to be of common concern, we describe and offer brief observations on those. They include: overall statutory compliance; transmission analysis; assumptions concerning retirement of in-state generators; availability and advancement in technology; and, return to cost of service.

A. COMPANIES' RECOMMENDATION No. 1 Maximize the use of demand side management within practical, operational and economic limits, to reduce peak load and energy consumption

The first Recommendation in the Companies' Plan is to maximize the use of demand-side management ("DSM") within practical, operation and economic limits to reduce peak load and energy consumption received particularly broad support.⁵ The Energy Conservation and Management Board ("ECMB") stated that it and its consultants worked closely with the Companies on the DSM portion of the Plan. The ECMB concluded that the Plan established ambitious, achievable energy and peak demand savings targets for DSM programs through 2018 as part of overall effort to achieve all cost-effective energy efficiency and demand reduction. According to the ECMB, the only "economic limit" that should be applied for "maximizing the use of DSM" is demonstration of conservation and load management program cost-effectiveness. The current "economic limit" constraining the such programs, program funding levels, must be addressed by increasing funding for the programs in 2008 and future years.

Many commentators encouraged immediate implementation and funding of DSM irrespective of whether other central elements of the Plan are ready to move forward at this time. The vast majority of individuals (speaking as citizens rather than as representatives of an organization) strongly supported this element of the Plan. One commentator observed that increasing DSM is the only aspect of the Plan that involved immediate action: all others called for exploration, evaluation or consideration.⁶

Other commentators expressed concern that the Plan's DSM goals are overly aggressive, lack cost-effectiveness analysis, cost-comparisons to other resources and a feasibility assessment.⁷ Several commentators stated that the Plan overstates the ability

⁵ See, American Lung Association cover letter; CMEEC at 3; Clean Water Action at 2-3; ECMB at 1 -2; Environment Northeast at 1, 7-8; NEEP at 1-3. In addition, the vast majority of the individuals who sent e-mails to the CEAB focused exclusively on, and in strong support of, DSM.

⁶ See, Environment Northeast at 3.

⁷ See, Firstlight at 5; New England Power Generators Association at 11; NRG at 7-10.

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of DSM to maintain reliability within practical and economic limits.⁸ Additionally, one commentator observed that the Plan did not address potential funding mechanisms to implement DSM, including those that would complement current ratepayer funded programs to minimize ratepayer costs, such as building codes or appliance standards or combined heat and power.⁹

CEAB Observation: Section 51(c) directs that resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible. In this regard, the Companies' DSM recommendation is consistent with the statutory directive. And, the Plan contains a meaningful assessment of the DSM potential needed to eliminate growth in energy in demand.¹⁰ More work, however, needs to be done on how best to accomplish the goal and to ensure the customer cost impact of demand-side resources are reviewed on an equitable basis with non-demand side resources. With regard to the suggestion that the DSM move forward immediately irrespective of other unresolved issues in the Plan, we believe the level of cost-effective DSM should be identified in the context of the overall Plan.

B. COMPANIES' RECOMMENDATION No. 2 Explore other power procurement structures such as longer term power contracts on a cost of service basis with merchant and utility owners of existing and new generation.

Several commentators expressed concern with the distribution companies entering long-term contracts on a cost of service basis and some suggested that approach would increase costs to customers by placing investment and other risks on them.¹¹ Several commentators suggest further inquiry issues associated with long-term power contracts. CMEEC recommended considering negotiating contracts that could be available to all utilities in state rather than a system in which utilities compete for long term cost of service contracts.¹² In connection with renewable energy resource development, several commentators stated that long-term power purchase contracts for renewable energy resources would be beneficial and offer the potential to lower prices of renewable portfolio standard compliance.¹³

⁸ See, Firstlight at 6; New England Power Generators Association at 11.

⁹ See, AARP at 3, 12.

¹⁰ The Plan's DSM section is one of the more developed Plan elements and the Companies' work with the ECMB may have facilitated this end; working with other entities on less developed Plan elements may achieve similar results more broadly.

¹¹ See, Constellation/RESA at 4-6; New England Power Generators Association at 12-13.

¹² See, CMEEC at 4.

¹³ See, CCEF at 15; Clean Water Action at 5; Environment Northeast at 8-9.

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CEAB Observation: The potential options set forth in the Plan concerning alternative procurement methods and a hypothetical cost of service regime should be viewed against the Companies' express statement that the Plan is not a procurement risk management study. The Plan makes clear that it does not formally address physical or financial portfolio risk management or hedging considerations and that its recommendations to alleviate some procurement constraints are based primarily on potential benefits implied.¹⁴ Given these limitations and the Plan's lack of specificity relative to specific plans or actions for resource procurement, the CEAB believes this area requires further development.¹⁵

C. COMPANIES' RECOMMENDATION No. 3. Evaluate the structure and cost of Connecticut's renewable portfolio standard in the context of a regional re-examination of the goals and costs of similar policies in New England.

Several commentators took exception to the Plan's lack of analysis of renewable resource availability or suggested the Plan's assumptions, and the resulting recommendation concerning the renewable portfolio standard, is problematic.¹⁶ No commentators suggested the Plan's renewable resource analysis was comprehensive. However, one commentator supported the recommendation to review the state's renewable policies in the regional context.¹⁷ Another suggested the proper question is how to achieve current renewable portfolio standard requirements, rather than how to change the requirements.¹⁸ Several commentators observed that the Plan included no assessment of in-state renewable potential or advancements in renewable technologies.¹⁹

The Connecticut Clean Energy Fund ("CCEF"), through analysis performed by Sustainable Energy Advantage, LLC, states that the Plan's analysis on renewable resources omits several important categories of eligible existing and expected renewable energy supply, which when accounted for, suggests the Plan's renewable assumptions are not likely to occur.²⁰ According to that analysis, for Connecticut Class I renewables, there is likely to be a very modest, if any, renewable energy credit shortage, resulting in limited alternative compliance payments over the next several years. The CCEF also sets

¹⁴ See, Plan at pages 48-49.

¹⁵ Pursuant to Section 104 of Public Act 07-242, the DPUC is currently examining supply procurement options. See, Docket No. 07-06-58, *DPUC Report to the Connecticut General Assembly on Standard Service Procurement* and Docket No. 06-01-08RE01, *DPUC Development and Review of Standard Service and Supplier of Last Resort Service – Plan Approval – Bilateral Contracts Outside of Auction*.

¹⁶ See, AARP at 18-19; CCEF at, Environment Northeast at 8-9; Noble at 2; NRG at 17; UTC at 2.

¹⁷ See, CMEEC at 4-5.

¹⁸ See, Environment Northeast at 8.

¹⁹ See, AARP at 19; UTC at 2-3; NRG 17.

²⁰ See, CCEF at 4.

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forth specific recommendations to improve Connecticut's posture relative to Class I renewable portfolio standard compliance, such as allowing banking of renewable energy credits as other New England states allow.

CEAB Observation: The Plan's recommendation relative to renewable resources and RPS compliance would benefit from additional information and market analysis such as that provided by the CCEF in the same way that the Plan's DSM analysis benefited from the constructive input of the ECMB. As noted above, the Companies' stated that the Plan's recommendation to re-examine the state's RPS was not presented in connection with a thorough examination of the region's renewable energy market and that additional analysis should be pursued.²¹ Moreover, as a general matter, the suggestion that the question of how the state can meet the current Class I renewable portfolio standard requirements be fully explored prior to considering how to modify it makes sense.²² Further work in this area would also enable the Plan to better meet Section 51's requirement to assess the impact of environmental standards and how different resources could help achieve them, as well as the extent to which the state's generation needs can be met by renewable (and combined heat and power) facilities.

D. COMPANIES' RECOMMENDATION No. 4 Consider potential ways to mitigate exposure of Connecticut consumers to the price and availability of natural gas.

AARP, through analysis prepared by Synapse Energy Economics, Inc., stated that the Plan did not provide a plan to mitigate the risk of natural gas and that had the Plan complied with the seven statutory requirements the Plan would mitigate the exposure of natural gas price and availability risks.²³ Another commentator suggested that the electric prices in both restructured and non-restructured markets have increased as prices are tied to the price of natural gas and solutions should be in the form of permitting and siting improvements, not changes to market structure.²⁴ The Attorney General said the state should break the link between natural gas prices and electricity prices and recommends a generator refund mechanism.²⁵ Several commentators noted the connection between increased renewable resources and natural gas price mitigation.²⁶

²¹ See, Plan at 49.

²² Pursuant to Section 71 of Public Act 07-242, the DPUC is examining issues associated with long term contracts for renewable energy credits. See, Docket No. 07-06-61, *DPUC Examination of Electric Distribution Company Contracts for Renewable Energy Credits*.

²³ See, AARP at 19-20.

²⁴ See, New England Power Generators Association at 13.

²⁵ See, Attorney General at 4.

²⁶ see, AARP at 19; Noble at 4.

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CEAB Observation: The means to mitigate various risks associated with reliance on natural gas are interconnected with several core aspects of the Section 51. For example, the Companies' Plan considered new nuclear and coal facilities and alternative ownership arrangements for generating units. In our view, Section 51 contemplates further development of comprehensive ways to mitigate natural gas risks beyond those included in the Plan. The Companies' willingness to provide further analysis will be helpful to advancing this aspect of the Plan.

E. OVERALL STATUTORY COMPLIANCE

Most commentators that assessed the Plan's overall compliance with statutory requirements concluded that the Plan does not conform.²⁷ In fact, no commentator that offered an assessment of the IRP's overall compliance with the statute opined that the Plan met the statutory requirements. However, on the issue of the Plan's compliance with the DSM segment of the statute, there was strong support for the Plan.²⁸

CEAB Observation: In general, we do not believe the Plan satisfactorily conforms to the statutory criteria. While the Companies prepared substantial analysis on an aggressive schedule, the Plan requires incorporation of further data (for example, on retirement assumptions, renewable resource availability, combined heat and power penetration and an energy security assessment associated with potential energy resources as set forth in Section 51(b)(5)), considerable refinement on some core issues and greater specificity on how to accomplish goals.

We are confident that the regulatory framework need not preclude or inhibit preparation of a comprehensive integrated resource plan that accounts for various plausible scenarios, including scenarios concerning resources or assets that the Companies do not own or otherwise control. As one example, that the Companies do not own generating assets in Connecticut does not prevent alternative planning analysis that incorporates reasonable retirement assumptions. We believe further work on the Plan will benefit from continued contributions from the Companies on the full scope of issues and from input from other participants.

²⁷ See, AARP at 2; Firstlight at 4; New England Power Generators Association at 3; NRG at 3-4.

²⁸ See, ECMB at 2-3; Environment Northeast at 7-8; e-mailed correspondence

F. TRANSMISSION ANALYSIS

Several commentators considered the Plan's lack of any analysis concerning transmission resources to be problematic.²⁹ In general, these commentators observed that the Plan assumed the proposed New England East West Solution ("NEEWS") project goes forward, yet offered no cost or comparative analysis of NEEWS and alternative resource options.³⁰ No commentator suggested that the Plan's approach to transmission was comprehensive or otherwise in conformance with the statute.

CEAB Observation: As noted above, the Companies emphasized the Plan's transmission resource approach was purposeful: it was not intended to provide a cost/benefit analysis of transmission options; it did not compare the economics of transmission vs. generation vs. demand-side options; and, it does not constitute a transmission reliability assessment.³¹

The Plan must incorporate transmission planning in order to achieve an integrated view of resources consistent with Section 51.³² For example, the Plan's recommendation on DSM, assuming it is fully funded and implemented, would materially affect load growth. DSM planning may be influenced by the level of potential avoided transmission and distribution plant and, conversely, transmission plans may benefit from an accurate assessment of planned DSM. The requirement for an assessment of demand-side resources on equal footing with non demand-side resources should include transmission and distribution resources. The CEAB anticipated the Plan it received from the Companies would integrate transmission planning; further work to develop effective and useful comprehensive analysis of all resource options will require transmission-related information. The Companies' offer to provide additional information to assist the CEAB's review will be constructive in this regard.

²⁹ See, Clean Water Action at 1; Firstlight at 6-7; New England Power Generators Association at 7; NRG at 13-15.

³⁰ See, Clean Water Action at 1; Firstlight at 7; NRG at 13.

³¹ See, Plan at page 2.

³² CMEEC has previously suggested to the CEAB that proposed transmission projects are properly considered in the context of the state's integrated resource planning effort. See, Comments submitted to the CEAB by CMEEC on August 3, 2007.

G. ASSUMPTION CONCERNING IN-STATE GENERATOR RETIREMENTS

Several commentators took strong exception to the Plan's assumption that there will be no generator retirement in Connecticut given the vintage of Connecticut's generating units, expected environmental regulations, and the conclusion of reliability must run agreements in 2010.³³ NRG, for example, said the Plan's retirement assumption is implausible and that the Plan must take into account the potential of older generating units to require environmental or other upgrades to avoid retirement, and evaluate whether refurbishment of the units would be a viable resource solution to achieve environmental standards and minimize ratepayer costs.³⁴ No commentators suggested that the IRP's retirement assumptions were reasonable.

CEAB Observation: The Plan's absence of assessments under possible generator retirement scenarios is a real limitation. The large number of aging power plants in Connecticut has been an issue raised by ISO New England in its regional system planning process. Similarly, the Connecticut Siting Council assessments of Connecticut's loads and resources have reported the magnitude of aging capacity in this state. In consultation with generator owners, the Plan will benefit from better information on the risk of loss of existing in-state generation and associated issues. The Companies' willingness to perform additional modeling runs will enable this work to be accomplished most efficiently.

H. AVAILABILITY AND ADVANCEMENTS IN TECHNOLOGY

Several commentators noted that the Plan did not recognize technology availability and advancements and pointed to technologies such as combined heat and power that can reduce dependency on natural gas and provide cooling in peak summer periods.³⁵ One commentator took exception to the fact that the Plan did not recognize evolving coal technology that could mitigate climate change.³⁶ No commentator suggested the Plan adequately considered technology availability and advancements.

CEAB Observation: Section 51(a) contemplates that the Plan will review a broad range of energy resources, such as combined heat and power and other emerging energy technologies to meet projected customer requirements. The Plan needs further work in this area.

³³ See, Firstlight at 10; NRG at 5-7; New England Power Generators Association at 6-7.

³⁴ See, NRG at 5-7.

³⁵ See, AARP at 3, 19; Clean Water Action at 5; NRG at 17, UTC at 2.

³⁶ See, NRG at 17-18.

I. RETURN TO COST OF SERVICE

Several commentators supported the notion of some form of return to cost of service regulation or other fundamental market changes, asserting that retail competition has failed.³⁷ Several commentators expressed concern with the Plan's cost of service recommendations, suggesting, for example, that they are beyond the scope of the statute, provide no value to an impartial evaluation of energy resources, or are based on unrealistic assumptions that result in flawed analysis.³⁸

CEAB Observation: Overall, because the statute contemplates the Plan will be implemented, the CEAB believes the Plan it approves should generally fit within the state's current statutory framework to enable implementation. In any event, in this case, the Plan's hypothetical Cost of Service regime observation was offered without comment or a plan on how assets would be acquired at Cost of Service.

³⁷ See, AARP cover letter; Attorney General at 3 and 5.

³⁸ See, New England Power Generators Association at 9; RESA/Constellation at 2.