

**STATE OF CONNECTICUT  
DEPARTMENT OF PUBLIC UTILITY CONTROL**

<b>DPUC Review of the</b>	<b>:</b>	<b>Docket No. 08-07-01</b>
	<b>:</b>	
<b>Integrated Resource Plan</b>	<b>:</b>	<b>October 10, 2008</b>

**Connecticut Energy Advisory Board  
Brief**

**I. Introduction**

The Connecticut Energy Advisory Board (“CEAB”) appreciates the opportunity to participate in the Department of Public Utility Control’s (“Department” or “DPUC”) consideration of the CEAB’s *2008 Comprehensive Plan for the Procurement of Energy Resources* (“Plan) pursuant to Section 51 of Public Act 07-242, *An Act Concerning Electricity and Energy Efficiency* (“Section 51”). Section 51 creates a valuable opportunity for the State of Connecticut to assess, on an ongoing basis, customer requirements over a ten-year period together with a holistic review of the potential resources available to meet them, and to focus investment decisions on resources that minimize costs to customers over time and maximize consumer benefits consistent with the state’s environmental goals and standards.

The recommendations and supporting analysis before the Department were prepared under compressed timeframes relative to the substantive work required. In the CEAB’s opinion, both the EDC’s *Integrated Resource Plan for Connecticut* dated January 1, 2008 and the CEAB’s Plan dated August 1, 2008 fall short of a well-considered and fully developed plan envisioned by Section 51. The supplemental analysis prepared for inclusion in the CEAB Plan, as well as the Supplemental Analysis requested by the CEAB and performed and submitted by the EDC’s on August 1, 2008, provide important enhancements but did not fully address Section 51 requirements. This result was unavoidable in the first planning cycle.

The CEAB's 2008 process presented valuable information and went a long way toward initiating important dialogue by and between stakeholders and identifying further analysis and information required to meet Section 51's directives. The CEAB agrees entirely with a suggestion implicit in questions presented by the Department staff that, ultimately, the Plan should present a side-by-side comparison of various resource options to inform a determination as to which best meet the statutory criteria. (Trans. at pp.362-363) Further, the CEAB underscores that while Section 51 contemplates for the creation of actionable recommendations, the dynamic nature of needs and the resources available to meet them require judgment about a complex array of issues, including customer cost impacts, changing environmental standards and evolving market conditions. (Trans. at pp. 291-292; 377 – 378; and, 331-336) The CEAB's Future Planning Recommendations relative to the analysis that should be prepared prospectively is an important element of the CEAB's Plan and is intended to help meet these ends. (CEAB Plan at pp. 53 and 55-57)

To facilitate the Department's review pursuant to Section 51(e), the CEAB sets forth below the Plan's action items in connection with Procurement Recommendations and Future Planning Recommendations and comments on several issues that arose during the hearing. In addition, the CEAB summarizes its views on areas that merit analysis prospectively to help guide decisions on the optimal resource mix to meet the state's objectives, as well as recommended near-term action items for various entities involved in planning.

## **II. Procurement Recommendations**

As the CEAB has noted, the development of the Plan followed review of the EDC's IRP and a four month collaborative effort to address six key areas including: 1) procuring energy resources; 2) managing energy demand or demand-side management (DSM); 3) developing renewable energy; 4) generating sufficient electricity; 5) reliably transmitting electricity; and, 6) managing emissions to comply with Connecticut's environmental standards. (CEAB Plan at p. 2.) Ultimately, analysis of these elements should lead to an optimum resource mix that minimizes costs and maximizes benefits associated with meeting environmental goals. (Section 51; CEAB Plan at p.56; Trans. at

p. 281). As noted further below, the CEAB also believes that enhancing energy security is an important objective that warrants consideration in planning.

The CEAB's Plan provided the following procurement recommendations:

1. The immediate focus of resource acquisition procurement actions should be demand-side management and renewable energy credits.
2. The IRP supports the potential benefits of bilateral contracting as a means to stabilize and/or reduce standard service rates. Consider combining bilateral and REC contracting.
3. No other resource acquisition procurement activities are recommended in this 2008 Procurement Plan.
4. The IRP supports adopting demand response (DR) and energy efficiency (EE) program levels as defined in the DSM Focus case as the 3–5 year objective.
5. The DPUC should investigate whether DSM Focus case objectives can be reasonably met in a cost effective manner compared to generation and transmission while minimizing ratepayer and CEEF funding, and avoiding potentially more costly investments in new generation and transmission.
6. The DPUC should determine the appropriate ramp up for DSM Focus, balancing the results of the Utility Cost Test and Total Resource Cost Test for cost-effectiveness with near term rate impacts.
7. A significant portion of the uncommitted standard service REC requirements for 2014 and beyond should be obtained through long-term contracts to lower the overall cost of RPS and to assure the full development of the needed renewable resources.
8. The DPUC should direct the EDCs, along with the CCEF, to create a pilot contract solicitation that allows the DPUC to evaluate the potential of contracting for bundled RECs, energy and capacity to further reduce REC costs.
9. While the supplemental CEAB and utility analysis establishes that a significant portion of existing Connecticut oil and gas steam capacity could retire over the next ten years, the CEAB does not recommend the immediate solicitation of any replacement capacity within Connecticut.
10. Since the supplemental analysis indicates significant economic pressure on existing generation, the DSM, REC, and bilateral contracting resource acquisitions should be based on the assumption that some retirements occur.

11. The CEAB will be reviewing alternative solution analysis of the NEEWS project either via the reactive RFP process triggered by a Siting Council filing or via alternative analysis proffered to support an exemption.

12. Resource acquisitions should be evaluated to include more stringent emission limits in future regulations. These could include greenhouse gases such as carbon dioxide, criteria pollutants such as NOx or SO2, and toxic pollutants such as mercury.

(CEAB Plan at pp. 51-52)

The CEAB appreciated the Public Comment, Testimony and discourse during the hearing on its Plan and the EDC's IRP. Nothing in that process caused the CEAB to modify any of the recommendations above. For that reason, the CEAB limits its comments in this Brief to several issues that arose at the hearing.

**A. The CEAB intended its Recommendations to have the benefit of the Department's further analysis and process as necessary and appropriate.**

As an initial matter, in light of this initial process, there were a number of questions about what the CEAB intended the Department to do with its recommendations. In particular, questions focused on whether the CEAB intended the Department to adopt its recommendations in this Docket, even if the recommendations were not entirely aligned with prior Department Decisions or had not otherwise been fully analyzed, such as energy efficiency budgets. (Trans. at pp. 296; 445-446; 532-533) In the CEAB's view, the Department is best suited to determine what issues it can approve based on the record in this proceeding, and what issues warrant further process. For that reason, the CEAB did not offer an opinion in this regard. In light of the questions presented, however, the CEAB offers the following.

In the course its work, the CEAB monitored and considered Department Decisions on a host of issues relevant to the Plan, including energy efficiency spending levels, and the parameters of bilateral contracts and contracts for renewable energy credits. (CEAB Plan at pp.3-4; 11; 22-24; 29-30) As the CEAB prepared its recommendations, it understood the well-established, transparent and participatory processes by which the Department makes decisions.

While the CEAB's stakeholder processes provide a great deal of value and information, the CEAB did not consider those input opportunities as a substitute for the DPUC proceeding on the Plan and/or further proceedings on specific issues within it. (Trans. at pp. 447; 532-533) Accordingly, when the CEAB recommended the DPUC consider bilateral contract opportunities, for instance, the CEAB assumed the DPUC would follow whatever process it deemed appropriate if it concluded the recommendation has merit. The CEAB had the same procedural assumption in connection with DSM focus case: the CEAB 1) recommended the DSM focus case as a long-term objective and 2) viewed the question of the degree to which the DSM should be increased next year, or the year following, to be properly made by the Department in proceedings on DSM programs and budgets, in which it can consider customer impacts and perform detailed cost-benefit analysis. (Trans. at pp.291-292; 295-296; 377-378; 446; 447; 533).

**B. A needs determination should guide resource acquisition decisions, consider more than Forward Capacity Market economics and, be based on a long term view.**

Section 51(c), and the question of need, was at issue during the hearing. (Trans. pp. 260; 266-268; 370). Specifically, there interest in the following provision: "Resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible." In the CEAB's view, the statute contemplates, in a fairly straightforward way, that a finding of a need for resources should guide resource acquisition decisions.

Second, in the determination of need, it is important that Forward Capacity Market requirements not be the only metric considered. (Trans. at p. 307) Other relevant metrics need to be included in future analysis, such as operating reserve requirements.

A reliability-based needs assessment is "not necessarily the be-all, end-all for some of these decisions." (Trans. at p. 371) To the extent the IRP is limited to capacity requirements to meet reliability metrics, it will not provide the analysis to inform other decisions, including consideration cost impacts; fuel types, diversity and their environmental impacts; the extent to which generation needs can be met by renewable resources and other important issues. (Section 51 and Trans. at p. 336)

The CEAB answers affirmatively Chairman Downes' question as to whether it is "fair to say that the analysis that are based on total capacity simply looking at, you know, total megawatts required versus total megawatts out there, is fine as far as it goes, but it doesn't really go to an optimal mix". (Trans. at p. 336). The complex decisions contemplated by Section 51, including how to minimize costs over time and achieve the benefits associated with meeting environmental goals, requires complex analysis that looks beyond the capacity balance sheet.

Finally, while the state can today conclude that it has adequate capacity to meet current needs, Section 51 directs analysis and consideration of what may happen over the next three, five and ten years. The CEAB views this planning process to be focused on longer-term objectives. As noted during the hearing, the CEAB considered its recommendations to be strategic in nature, consistent with the longer term focus of planning, and that the details of the recommendations would proceed to be considered by the DPUC as appropriate. (Trans. at p. 533) Thus, even when an examination of need confirms there is no present need for resources, the inquiry about resource planning procurement should not end. Rather, the Department should evaluate information and analysis to determine whether procuring some resources based on needs several years out is warranted. This inquiry is especially important in the context of resources with long lead times. (Trans. at pp. 295-298) The Supplemental Analysis, discussed further below, is an initial effort toward developing an analytical framework to inform these decisions prospectively.

### **III. Recommendations In Connection with Future Planning Actions**

As noted above, the Plan requires a more comprehensive analytical framework to conform to Section 51 and to provide a stronger foundation for resource decisions. To facilitate progress to that end, the CEAB set forth Recommendations relating to future planning cycles. They are as follows:

1. The DPUC should consider establishing the generation procurement framework under Section 52 in advance of future plans that may counsel construction of new generation.

2. Upon completion of the ECMB's 2008 DSM Potential Study, future Plans should provide a review of and possibly revisions to DSM Focus objectives.
3. Additional analysis on CHP should be included in future Procurement Plans.
4. Assess the economic potential renewable resource import options for Connecticut including consideration of nearby resources, northern New England, Canadian renewable resources, transmission projects and information from the ISO New England Economic Study.
5. The utilities should complete the integration of evolving DEP emissions regulations and their impact on generation retirements into Procurement Plans.
6. The DPUC should investigate the contracting process for repowering, retrofits, or long-term life extension from existing generation.
7. The CEAB, in consultation with the Distribution Utilities, should include more detailed information concerning nuclear power development in future Procurement Plans.
8. Future Procurement Plans should include Non-Transmission Alternatives (NTA) and economic benefits assessments for all proposed significant transmission projects.
9. More thorough and current estimates of the necessary environmental retrofits and their costs should be included in Procurement Plans.
10. Future Procurement Plans should provide additional information that can be included in the base information when the DEP considers the impact of its changes to air quality regulations.

(CEAB Plan at p. 53)

Some of the items above are directly connected to meeting the requirements of Section 51, such as work on combined heat and power and the integration of transmission into the Plan. Others are intended to inform further development of the Supplemental Analysis.

As noted at the hearing, the CEAB requested the Supplemental Analysis for the purpose of beginning with a plausible base case and developing scenarios based on different assumptions and policy goals, such as emissions reductions. (Trans. at pp. 331-335) Due to time constraints, the Supplemental Analysis developed only one test year. In subsequent plans, this type of analysis should continue to allow the Department to

consider a range of potential futures based on different assumptions. (Trans at pp.333 - 335) As the Department observed, the EDC's IRP analysis accounted for those resources that exist and/or are committed; it did not take into account other sources of additional capacity, such as from the state's distributed generation incentive program or the \$30 million invested by the CCEF annually. (Tran. at pp. 329-334) Future plans should include analysis reflecting various generation, retirement and emissions reductions scenarios. One such case that the EDCs should be directed to run is a plan that assumes full compliance with current legislative and regulatory requirements (i.e., RPS requirements, environmental regulations adopted for implementation at some future date, etc) to demonstrate the costs and other metrics of the scenario. In the CEAB's view, this type of analysis is needed to inform resource acquisition decisions with respect to the kinds of resources needed to meet the state's objectives and the optimal timeframe in which to make such investments. (Trans. at pp. 297-298; 336).

The Supplemental Analysis also begins to establish the framework by which to evaluate the impact of potential environmental decisions on electric costs. (Trans. at p. 424). As a representative of the Department of Environmental Protection testified, this year's process was the beginning of a dialogue to develop a better understanding of the relationship between energy and environment. (Trans. at p.421) In this area, the Plan provides an important opportunity to recognize the state's public health and environmental goals as necessary components of electric planning. (Late File No. 6) Accordingly, prospectively, it is important that the Plan include potential environmental scenarios to allow the state to understand their cost implications and the trade offs. (Trans. at pp. 424 - 426). Importantly, the Plan is a mechanism through which the state can weigh environmental decisions and data in electric planning and conversely, inform the state's environmental decisions about their potential affect on electric service and costs.

The CEAB requests that the Department provide direction or clarification Future Planning items above. This guidance is particularly useful if the Department disagrees with any of the Recommendations, if the Department believes that any major item should be added, or if the Department prefers not to invest time and resources analyzing market structures such as the return Cost of Service performed by the EDCs in this cycle.

#### **IV. Issues for Development in Subsequent Planning**

In the CEAB's judgment, the EDC's January 1, 2009 report should focus on several issues. They include: 1) A complete supplemental analysis recommended by the CEAB during the collaboration process as discussed in Section 2.3.2 and Appendix K; 2) An update regarding any material changes in assumptions that would affect the validity of any analysis provided in the 2008 process; and, 3) any report on new material or information regarding resource options should include DSM, renewables, CHP, and existing Connecticut generation. (CEAB Plan at pp. 55-56)

In addition, the CEAB offered its view of several areas where future analyses should be enhanced to better support decision making for Connecticut in connection with the multiple objectives of Section 51. (CEAB Plan at p. 56). They are as follows:

*A. Future Procurement Plans should incorporate some aspects of risk analysis and an optimization of resource mix.*

The incorporation of scenario analysis is an excellent way to recognize uncertainties and risks, such as market price uncertainty, technical performance of resources, environmental regulations or risks to system reliability. Analysis should lead to a recommendation of the optimum resource mix.

*B. Future Procurement Plans should specifically analyze the cost and potential benefits of the following supply resources.*

The CEAB believes it is timely to investigate and evaluate particular resource options to inform whether specific kinds of procurement activity may be advisable:

1. Import of renewables and nuclear power from Canada, including transmission requirements and costs.
2. Combined heat and power potential – small scale and grid- connected projects.
3. Connecticut and domestic sited additional nuclear capacity.

4. Connecticut and regional potential for advanced or clean coal generation with or without carbon sequestration.

*C. Future Procurement Plans should determine the impact from emerging technologies (such as plug-in hybrid vehicles) on electric energy requirements and the resulting emissions.*

Market fluctuations in the global energy world and the effect on price levels could result in technological responses and changes in life choices, such as where people live, work and transportation choices. It is important that future plans consider the longer term effects of such trends.

*D. Future Procurement Plans should consider their impact on energy security.*

Beyond meeting reliability and other objectives, the CEAB believes that resource plans should also assess and consider the system's vulnerability to natural disasters, technological failures and terrorist attacks.

## **V. Action Items**

Because planning is an ongoing process that requires ongoing work, the CEAB set forth its view of actions on behalf of various parties that should be pursued, provided the Department agrees with the recommended path forward. A list of those activities is as follows:

**Connecticut Clean Energy Fund** should be responsible for the following action items:

1. Support the Distribution Utilities in the long-term contracting for RECs.
2. Support a pilot study to determine if there are benefits of bundled long-term REC, capacity and energy contracts verses long-term REC contracts alone.

**Connecticut Energy Advisory Board** should be responsible for the following action items:

1. Conduct a CHP potential study regarding smaller facilities and use the study as a foundation to evaluate CHP in future Procurement Plans.
2. Review the alternative solution analysis of the NEEWS project either via the reactive RFP process triggered by a Siting Council filing or via alternative analysis proffered to support an exemption.
3. Work jointly with the Distribution Utilities to include more detailed information regarding nuclear generation issues in future procurement plans.

**Energy Conservation and Management Board** Should be responsible for the following action items:

1. Administer current and/or expanded DSM programs to meet expanded DSM goals.
2. Study the means beyond current programs to meet DSM goals including appliance efficiency standards, building codes and other similar measures.
3. With the Distribution Utilities, develop a plan for DPUC approval to meet DSM objectives described in the Plan given information developed in the 2008 DSM potential study.

**Electric Distribution Companies** should be responsible for the following action items:

1. With the ECMB, develop a plan for DPUC approval to meet DSM objectives described in the Plan given information developed in the 2008 DSM potential study.
2. Test the market for combined bilateral contracting of power with REC contracts to determine if renewable energy, price stability and cost reduction objectives can be met with this approach.
3. Assess the retirement risks associated with existing fossil steam units in Connecticut.
4. Procure RECs utilizing the long-term contracting authority granted by the DPUC.
5. Determine the optimal percentage of RECs to be procured under long-term contracts.
6. In future IRPs, assess the economic potential renewable resource import options have for Connecticut including consideration of nearby resources: northern New England, Canadian renewable resources, transmission projects and information from the ISO New England Economic Study.
7. Work jointly with the CEAB to include more detailed information regarding nuclear generation issues in future procurement plans.
8. Complete the integration of evolving DEP emissions regulations and their impact on generation retirements into Procurement Plans.
9. In future IPR analyses, consider at least some cases with more stringent environmental emissions regulations on all air pollutants.
10. Continue analysis on estimates of future environmental retrofits and their costs.
11. Consult with the DEP on pending regulations, modeling output and metrics which would be helpful to the DEP.

**Department of Environmental Protection** Should support the development of future plans by:

1. Working with the Distribution Utilities to assure that the IRP analysis can capture the evolution of environmental regulations under consideration.
2. Incorporating IRP output and Procurement Plan recommendations into its internal processes when evaluating the impacts of potential changes in regulations.

(CEAB Plan at pp. 59-61)

## **VI. Conclusion**

The CEAB appreciates the opportunity to participate in the Department's consideration in this initial planning effort. This process is a first step in developing the

foundational information and analytical framework to enable the state to assess, on an ongoing basis, customer requirements and to comprehensively review the potential resources to meet them consistent with the state's objectives of minimizing costs and achieving environmental goals. The CEAB encourages the Department to adopt the recommendations set forth above and importantly, to provide guidance on analysis the Department would find valuable going forward to enable the Plan to achieve the purposes of Section 51.

Respectfully Submitted,

A handwritten signature in black ink that reads "John A. Mengacci". The signature is written in a cursive style with a large, looping initial "J" and "M".

John A. Mengacci

Chairman

Connecticut Energy Advisory Board