



**State of Connecticut  
Energy Conservation Management Board (ECMB)**

**ECMB Initial Comments and Recommendations  
on the  
2010 Integrated Resource Plan**

**Submitted to the Connecticut Energy Advisory Board (CEAB)**

**February 17, 2010**

The Energy Conservation Management Board (ECMB) appreciates the opportunity to review and comment on the 2010 Integrated Resource Plan (IRP) for Connecticut prepared by the Connecticut Light & Power Company and the United Illuminating Company (the Companies or EDCs) with the assistance of the Brattle Group. The IRP was prepared pursuant to Section 51 of Public Act 07-242, An Act Concerning Electricity and Energy Efficiency, which requires the electric distribution companies to submit a comprehensive resource plan to the Connecticut Energy Advisory Board (CEAB) and the Department of Public Utility Control (DPUC or Department).

The ECMB respectfully submits to the CEAB the following initial comments and recommendations on the 2010 Integrated Resource Plan. These comments were approved by the ECMB at its meeting on February 17, 2010.

The ECMB plans to continue its review of the 2010 IRP, and its interactions with stakeholders and the CEAB, and may submit additional comments on the IRP at a later date.

**Summary of ECMB Initial Comments and Recommendations**

1. Despite the desires of customers and policy makers, Connecticut consumers and businesses will continue to face high energy costs, and the IRP forecasts that the already-high power supply-related costs will continue to increase. Connecticut has very little influence over energy prices in the regional and global markets. Reducing *energy use* is the most effective way for Connecticut customers to reduce their *energy costs*.

Legislators and policy makers who are concerned about high energy costs in Connecticut should look carefully to solutions and resources that have a realistic chance at *reducing* or at least *stabilizing* projected energy costs for Connecticut customers. Customers wishing to

reduce their *energy costs* (and their energy bills) are best able to do so by reducing their energy consumption.

2. From the perspective of Connecticut's *customers and businesses*, the All Cost-Effective DSM resource strategy reduces customer energy costs more than any other strategy analyzed in the IRP, and does so in the face of the rising power supply-related costs forecasted by the IRP.

The All Cost-Effective DSM resource strategy would reduce customer costs by \$423 million *annually* by 2020, and would result in the lowest power supply costs for customers compared to any other resource strategy in the IRP. The Targeted DSM strategy would reduce customer energy costs by \$109 million annually by 2020, providing about one quarter of the incremental energy cost reductions of the All Cost-Effective strategy, and would reach fewer customers.

3. From the perspective of Connecticut *energy, environmental, and economic policy*, the All Cost-Effective DSM resource strategy provides more of the benefits needed to meet Connecticut's stated policy objectives than any other resource strategy analyzed in the IRP, provides additional benefits that were not included in the IRP documentation, and is fully consistent with the requirements in Legislative statute (PA 07-242). The All Cost-Effective DSM strategy also meets all four objectives or needs set forth by the CEAB.

The All Cost-Effective DSM strategy provides additional jobs and economic benefits in Connecticut, which are not considered or analyzed as benefits within the IRP analytical framework. Considering the jobs benefits would increase the economic value to Connecticut significantly beyond the \$423 million annually in 2020. Environment Northeast estimates a \$510 million increase in Gross State Product and 3,640 job-years created in 2020.

4. Connecticut policy makers should *pursue the benefits* of the All Cost-Effective DSM resource strategy to provide significant energy cost savings for consumers and businesses, help meet environmental requirements, provide jobs and economic benefits, and achieve Connecticut's policy objectives. However, these benefits should be achieved by implementing the CEEF's innovative program and financing strategies developed by the ECMB, described in #6 below, which would result in program costs lower than those estimated in the IRP.

No other resource strategy analyzed in the IRP can meet the policy objectives and provide an equivalent level of energy cost savings and other benefits for Connecticut customers.

5. The resource planning and policy focus should shift to identifying how best to pursue and achieve the substantial benefits and energy cost savings for Connecticut consumers and businesses that have been identified in the IRP analysis of the All Cost-Effective DSM resource strategy.

The question should not be *whether* to pursue the economic, environmental, and jobs benefits identified in the All Cost-Effective DSM resource strategy, but *how* to pursue the benefits, and how best to fund and finance efforts.

6. The ECMB has been developing innovative approaches to address the questions regarding how best to pursue all cost-effective energy efficiency, especially since the passage of Public Act 07-242. The ECMB is focused primarily on increasing comprehensiveness to provide more energy cost savings per customer, helping customers become more effective managers of their own energy use, and leveraging the ratepayer funding using financing and additional sources of funding, thereby resulting in ratepayer costs per unit of energy savings that are lower than those projected in the IRP. The ECMB is also focused on providing the energy-saving and cost-saving benefits of increased energy efficiency to more customers in Connecticut.

These program concepts and strategies are focused on *achieving deeper savings per customer, with the participating customers (who receive the higher energy cost savings) paying for a larger portion of the total project costs*, supported by innovative financing, continuous improvement/strategic energy management, and market transformation initiatives.

7. The ECMB has concerns regarding the Targeted DSM strategy in that the Targeted strategy, as expressed in the IRP, does not appear to be consistent with the program strategies and approaches the ECMB has been developing for C&I customers, and does not include enough of the high performance measures to provide comprehensive offerings to customers.
8. The ECMB recommends that the increased funding level set forth in the Targeted DSM strategy (an increase equivalent to 0.7 mills, though not through the SBC charge) is appropriate for the next two years as the next step in ramping up to the higher levels of customer energy efficiency described in the All Cost-Effective DSM strategy. However, the ECMB does not recommend the specific program approaches proposed in the Targeted DSM strategy. Instead, the specific programs offered and supported with the increased funding should be consistent with the approaches the ECMB has been developing and implementing.

The Targeted DSM strategy in the IRP sets forth an annual funding increase of about \$20 million, which is equivalent to an increase of 0.7 mills. The ECMB recommends this level of funding increase to support an incremental ramp up for the next two years. However, the ECMB does not recommend implementing the higher funding level by increasing the System Benefits Charge (SBC), currently at 3.0 mills, through the legislative process. Instead, the ECMB suggests that the DPUC could authorize additional collections through its regulatory proceedings, in a manner similar to how the DPUC authorized funding in the past for the Energy Independence Act (EIA) Phase I programs.

Connecticut policy makers have an opportunity to assess progress, revise strategies, change funding levels, and make any other adjustments, as appropriate, in the 2012 IRP process, and in CEEF annual plan proceedings before the DPUC.

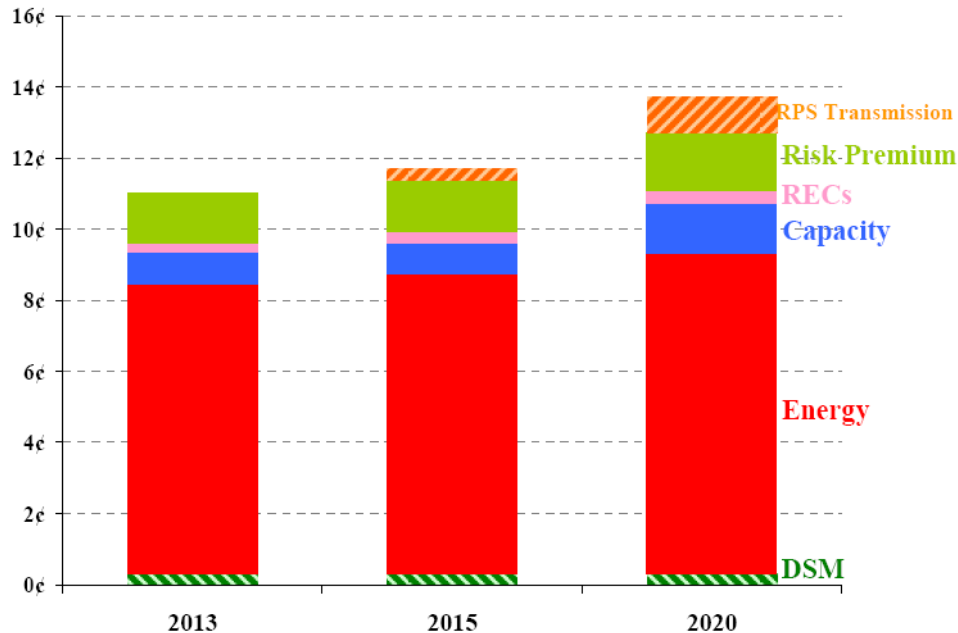
Additional support for this summary of the ECMB's initial comments and recommendations is found below.

## ECMB Initial Comments and Recommendations

- Despite the desires of customers and policy makers, Connecticut consumers and businesses will continue to face high energy costs, and the IRP forecasts that the already-high power supply-related costs will continue to increase. Connecticut has very little influence over energy prices in the regional and global markets. Reducing *energy use* is the most effective way for Connecticut customers to reduce their *energy costs*.**

The 2010 IRP forecasts significant increases in energy prices and rates. Connecticut customers can expect to face increasing average power supply-related costs from 2013 to 2015 (a 6 percent increase in real terms) and to 2020 (another 17 percent increase), as shown in Figure 6 from the IRP.<sup>1</sup>

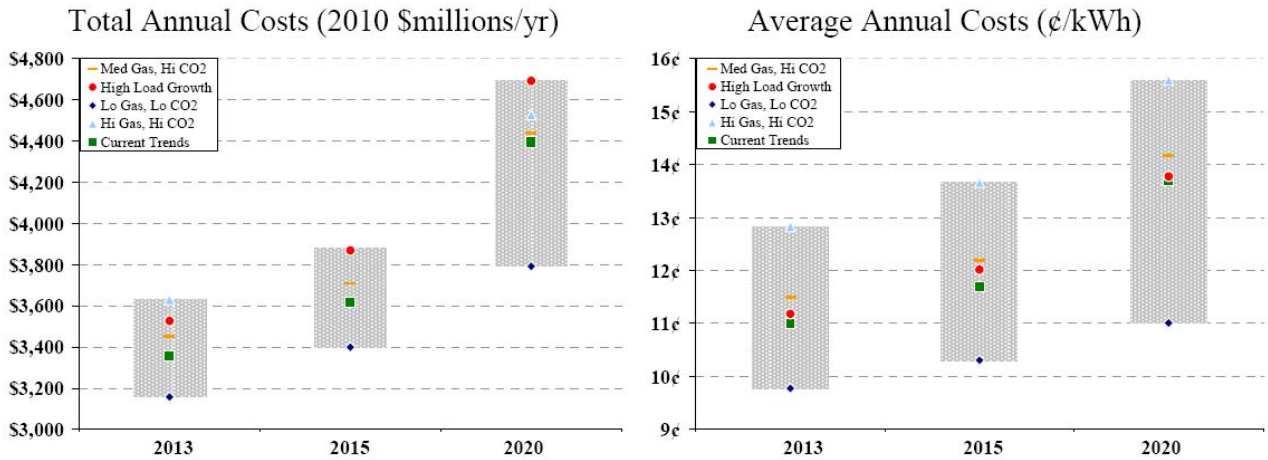
**Figure 6**  
**Connecticut Customers' Annual Average Power Supply-Related Costs (2010 ¢/kWh)**  
Base Case Projection



The IRP forecasts that customer energy supply costs will continue to increase regardless of the assumptions or the scenario considered in the IRP, as shown in Figure 20.

<sup>1</sup> Note that the DSM costs are a small and declining portion of power supply-related costs in the Reference strategy shown above: 2.7% in 2013, 2.6% in 2015, and 2.2% in 2020. The cost of energy is the primary determinant of the power supply-related costs.

**Figure 20**  
**Connecticut Customers' Power Supply-Related Costs Across Scenarios**



Legislators and policy makers who are concerned about high energy costs in Connecticut should look carefully to solutions and resources that have a realistic chance at *reducing* or at least *stabilizing* projected energy costs for Connecticut customers. As the ECMB has reported previously, and as the ECMB’s study in 2008 documented, reducing energy use is the most effective way for Connecticut customers to reduce energy costs.

The ECMB’s 2008 report on the drivers of electric prices<sup>2</sup> concluded:

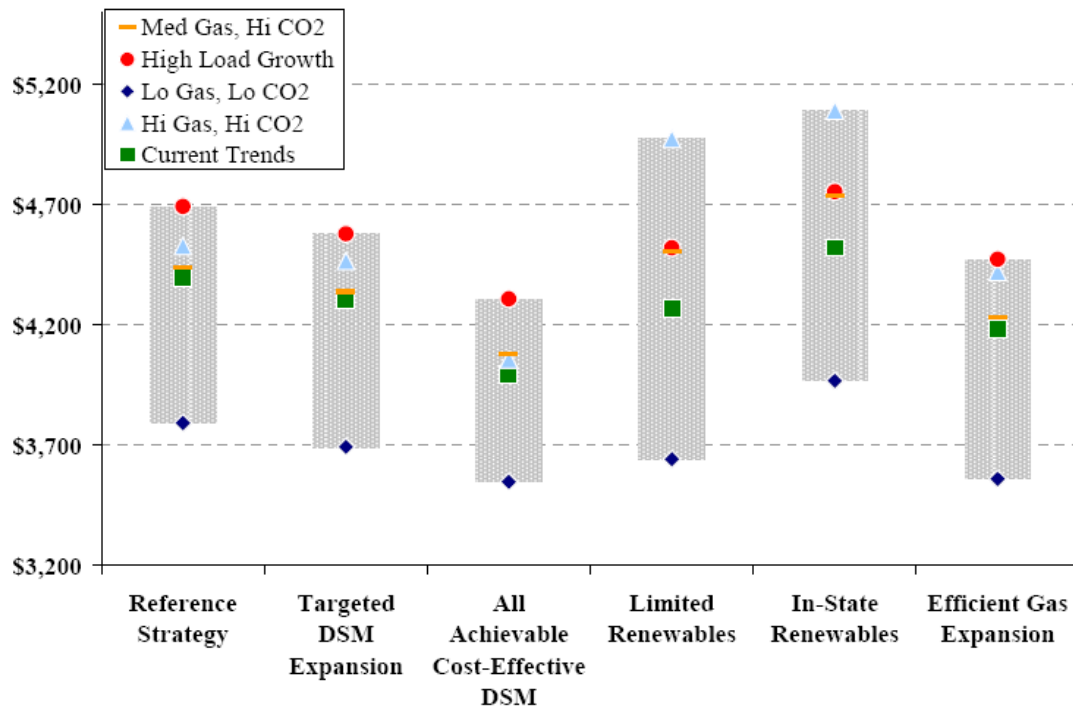
- No single program or action is likely to materially change short-run electric *prices* for Connecticut customers. Connecticut has very little influence over energy prices in the regional and global markets.
- Customers wishing to reduce their *energy costs* (and their energy bills) are best able to do so by reducing their energy consumption. Increasing energy efficiency reduces both energy use and peak demand.

Considering the energy price forecasts in the IRP, the same is true today.

**2. From the perspective of Connecticut’s customers and businesses, the All Cost-Effective DSM resource strategy reduces customer energy costs more than any other strategy analyzed in the IRP, and does so in the face of the rising power supply-related costs forecasted by the IRP.**

<sup>2</sup> “The Cost of Electricity: An Analysis of the Components and Drivers of Electricity Costs in Connecticut.” Report prepared for the ECMB by Bruce Blakey. May 15, 2008.

**Figure 29**  
**Connecticut Customers' Annual Power Supply-Related Costs in 2020 (2010 \$Mill)**



The All Cost-Effective DSM resource strategy would reduce customer costs by \$423 million *annually* by 2020, and would result in the lowest power supply costs for customers compared to any other resource strategy in the IRP (see Figure 29 from the IRP, shown above). The All Cost-Effective DSM strategy would reduce both energy consumption and peak demand.

In contrast, the Targeted DSM strategy would reduce customer energy costs by \$109 million annually by 2020, providing about one quarter of the incremental energy cost reductions of the All Cost-Effective strategy, and would reach fewer customers.

Not pursuing the energy cost savings in the All Cost-Effective DSM resource strategy would be equivalent to a \$423 million *annual* rate increase by 2020 (relative to the Reference strategy based on current funding) or a \$314 million *annual* rate increase by 2020 (relative to the Targeted DSM strategy).

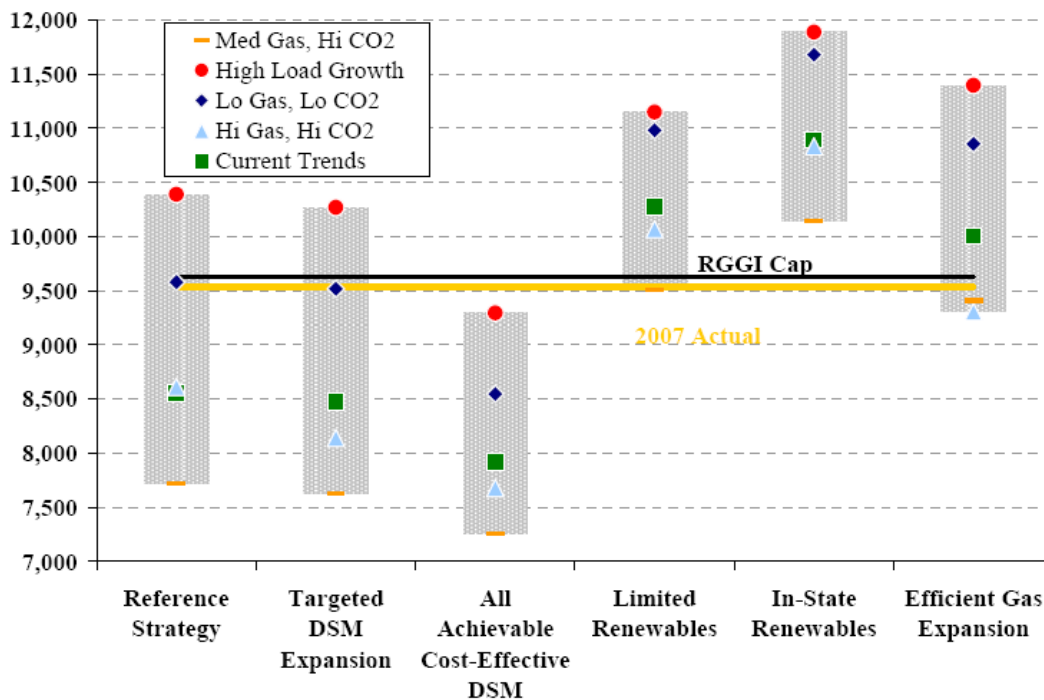
Also, the increased level of effort and number of measures in the All Cost-Effective DSM resource strategy, compared to the Targeted DSM strategy, would provide the energy-saving and cost-saving benefits to more customers in Connecticut, thereby reducing and minimizing the number of non-participants.

3. From the perspective of Connecticut *energy, environmental, and economic policy*, the All Cost-Effective DSM resource strategy provides more of the benefits needed to meet Connecticut’s stated policy objectives than any other resource strategy analyzed in the IRP, provides additional benefits that were not included in the IRP documentation, and is fully consistent with the requirements in Legislative statute (PA 07-242). The All Cost-Effective DSM strategy also meets all four objectives or needs set forth by the CEAB.

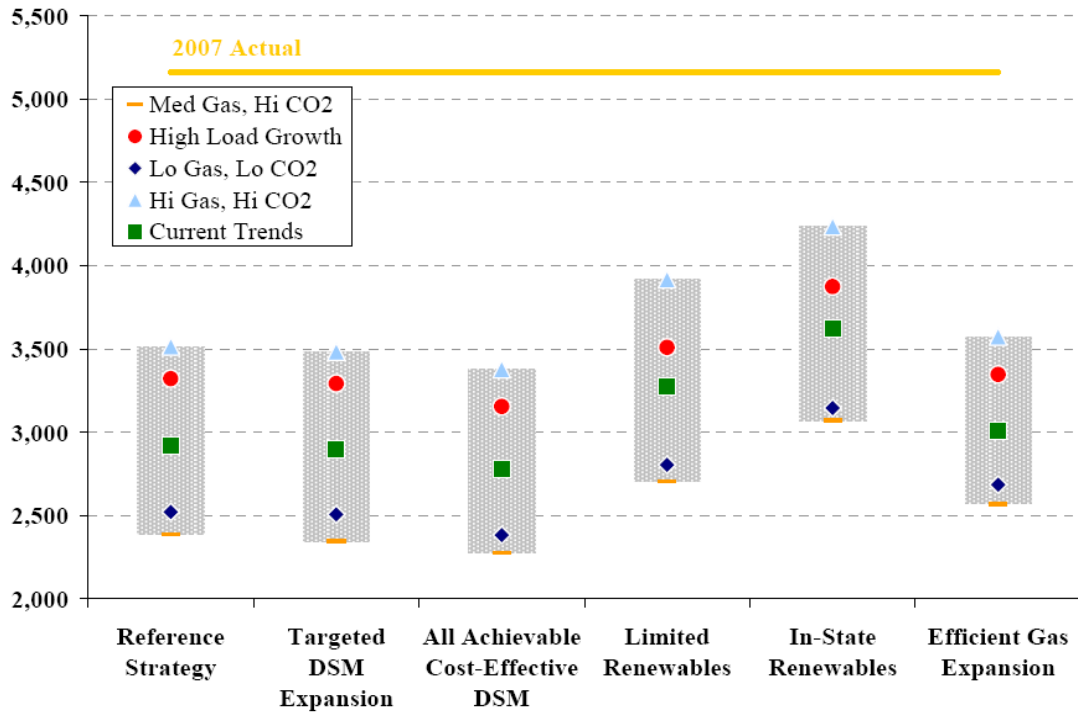
In addition to customer energy cost savings of \$423 million annually by 2020, the All Cost-Effective DSM resource strategy:

- Provides significant environmental benefits by helping Connecticut to meet environmental requirements, which provides additional value and economic value (see Figures 31 and 35 from the IRP, shown below). The All Cost-Effective strategy reduces CO2 and NOx emissions more than any other strategy in the IRP. The NOx reductions provide additional economic value to Connecticut by helping the state to meet ozone requirements – and this additional value was not included in the IRP analysis.
- Mitigates risks, including the risks of increasing and volatile future prices.
- Creates additional in-state jobs, and enables a fundamental shift of Connecticut’s economy toward sustainability.

**Figure 31**  
**Annual CO<sub>2</sub> Emissions in Connecticut in 2020 (Tons 000)**



**Figure 35  
Annual NO<sub>x</sub> Emissions in Connecticut in 2020 (Tons)**



The All Cost-Effective DSM strategy also meets all four objectives or “needs” set forth by the CEAB:

- Reliability – DSM is a diversified, distributed resource.
- Low cost – provides the lowest cost resource path analyzed in the IRP.
- Environmental requirements – helps meet environmental requirements.
- Secure supplies – does not rely on foreign imports or out-of-state fuels.

The All Cost-Effective DSM strategy provides additional jobs and economic benefits in Connecticut, which are not considered or analyzed as benefits within the IRP analytical framework. Considering the jobs benefits would increase the economic value to Connecticut significantly beyond the \$423 million annually in 2020. Environment Northeast estimates a \$510 million increase in Gross State Product and 3,640 job-years created in 2020.<sup>3</sup>

Finally, and importantly, the All Cost-Effective DSM resource strategy will achieve all cost-effective energy efficiency and demand reduction resources, as required by Legislative statute PA 07-242.<sup>4</sup>

<sup>3</sup> Comments of Environment Northeast on the 2010 Integrated Resource Plan, January 25, 2010.

<sup>4</sup> Section 51(c) of PA 07-242 states: “Resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible.”

- 4. Connecticut policy makers should *pursue the benefits* of the All Cost-Effective DSM resource strategy to provide significant energy cost savings for consumers and businesses, help meet environmental requirements, provide jobs and economic benefits, and achieve Connecticut’s policy objectives. However, these benefits should be achieved by implementing the CEEF’s innovative program and financing strategies developed by the ECMB, described in #6 below, which would result in program costs lower than those estimated in the IRP.**

Whether from the perspective of Connecticut’s consumers and businesses, or from the perspective of Connecticut’s energy, environmental, and economic policy makers, the All Cost-Effective DSM resource strategy provides more of the benefits needed to meet Connecticut’s stated objectives than any other resource strategy, reduces customer costs by \$423 million annually by 2020, helps meet environmental requirements, and is the only option in the IRP that is fully consistent with the requirements in Legislative statute (PA 07-242).

No other resource strategy analyzed in the IRP can meet the policy objectives and provide an equivalent level of energy cost savings and other benefits for Connecticut customers.

- 5. The resource planning and policy focus should shift to identifying how best to pursue and achieve the substantial benefits and energy cost savings for Connecticut consumers and businesses that have been identified in the IRP analysis of the All Cost-Effective DSM resource strategy.**

The question should not be *whether* to pursue the economic, environmental, and jobs benefits identified in the All Cost-Effective DSM resource strategy, but *how* to pursue the benefits, and how best to fund and finance efforts.

While increasing energy efficiency programs reduces the total costs for customers and provides other benefits, there are two questions that are often raised:

- How to mitigate the rate impacts associated with increasing ratepayer funding for energy efficiency programs?
- How to reduce the rate impacts for customers who do not participate in the programs?

There is considerable focus at the ECMB and in other forums in Connecticut on identifying how best to pursue and fund higher levels of energy efficiency, to achieve the benefits and energy cost savings for Connecticut consumers and businesses, while mitigating the impacts on ratepayers – i.e., how much to do, how to do it, how to fund or finance it, and who should pay for it.

- 6. The ECMB has been developing innovative approaches to address the questions regarding how best to pursue all cost-effective energy efficiency, especially since the passage of Public Act 07-242. The ECMB is focused primarily on increasing comprehensiveness to provide more energy cost savings per customer, helping customers**

These program concepts and strategies are focused on *achieving deeper savings per customer*, with the *participating customers (who receive the higher energy cost savings) paying for a larger portion of the total project costs*, supported by innovative financing, continuous improvement/strategic energy management, and market transformation initiatives. The ECMB's strategies include:

- Fully integrated electric and gas programs, as well as assistance for fuel oil and other fuels, to make it convenient for residential customers and businesses to install multi-fuel measures and achieve whole building energy savings, thereby attaining deeper savings, while reducing program delivery costs.
- A focus on achieving deeper savings to provide meaningful energy cost savings to customers, e.g., providing energy savings of 20-50% rather than only 5-15%. Customers will notice the higher energy savings on their utility bills, and the higher level of energy cost savings will mitigate the effect of increasing energy prices that customers will face in the future.
- Innovative financing and program strategies that allow project energy efficiency savings to pay for themselves at lower costs to the CEEF and ratepayers while offering attractive investments for participating residents and businesses. The attractive financing results in program participants being able to pursue more energy efficiency measures and deeper savings, while also being able to pay for a larger portion of the total project costs (thereby relying less on high rebates to encourage customer participation).
- For business customers, more effective use of energy service contracts, positive cash-flow financing for businesses, and energy service companies (ESCOs) to leverage CEEF funds and address the needs of a broader array of businesses.
- Convenient and attractive financing for residential customers, including convenient ways for customers to secure the financing on the front end to pay for the energy efficiency measures, and mechanisms that make it easy for customers to repay the financing on their utility bill or through a parallel companion bill.
- Innovative approaches for attracting and securing significant amounts of outside capital for financing that complement and leverage ratepayer and public funds.
- For business customers, continuous energy improvement/strategic energy management (via the Business Sustainability Challenge program and other comprehensive systems approaches) that would assist businesses to sustainably improve their operational practices and invest in strategic energy efficiency improvements on their own merits.

- Updated market transformation initiatives for high performance systems, net-zero energy buildings, and strategic energy management that would make these approaches standard practice for Connecticut’s residences and businesses.

Note that there is a very strong focus on C&I financing in ECMB discussions, which some policy makers may not be fully aware of since many Connecticut discussions regarding energy efficiency financing tend to be focused primarily on residential financing.

**7. The ECMB has concerns regarding the Targeted DSM strategy in that the Targeted strategy, as expressed in the IRP, does not appear to be consistent with the program strategies and approaches the ECMB has been developing for C&I customers, and does not include enough of the high performance measures<sup>5</sup> to provide comprehensive offerings to customers.<sup>6</sup>**

The Targeted DSM approach is based on the Reference Level (characterized as the current DSM funding level) supplemented by the partial expansion of two Residential initiatives, six high performance C&I measures (from the Connecticut Energy Efficiency Potential Study), and a chiller retirement initiative. This program approach, as communicated in the IRP, appears to be at odds with the ECMB’s vision and innovative program strategies in the following ways:

- The ECMB has worked to fundamentally transition away from the business-as-usual approach emphasizing commodity-based, single retrofits, and towards higher performance programs that best meet customers’ needs through comprehensiveness, high performance measures, measure integration, system/building optimization, innovative financing, and the ability of customers to sustainably manage their own energy use. The Targeted DSM strategy does not adequately account for the ECMB’s innovative C&I program concepts.
- The Targeted DSM strategy does not properly account for gas and electric measure integration that would provide better value to customers, increase program penetration, and reduce program delivery costs.
- The high performance C&I measures in the Targeted strategy represent only 6 of the 93 C&I high performance measures and less than 25% of the savings potential. The ECMB’s strategy calls for promoting all of the high performance measures in an integrated manner that best meet customers’ needs, not simply promoting isolated or individual measures.

---

<sup>5</sup> High performance measures are comprehensive/multi-fuel measures that go beyond simple equipment change-outs, including: high performance lighting and HVAC design, whole building/integrated building renovations, industrial systems optimization, strategic energy management, and electronic equipment management.

<sup>6</sup> The All Cost-Effective DSM resource strategy also does not appear to be consistent will all of the *program strategies* and approaches the ECMB has been developing, but it does include a more complete list of the measures the ECMB is focused on implementing, including all of the cost-effective C&I high performance measures. The ECMB supports pursuing the benefits identified in the All Cost-Effective DSM strategy and the more complete list of measures, though through the program strategies and approaches the ECMB has been developing.

- The chiller initiative, which is based on a discontinued pilot project, has not been updated to reflect the ECMB's strategic emphasis on comprehensiveness and system optimization. Offering expensive incentives for chiller replacements outside the context of HVAC system optimization, comprehensive projects, system commissioning, operator training, and facility energy management practices is not consistent with the ECMB's program strategies.
  - The IRP does not acknowledge the potential for increased CEEF leveraging, customer cost-share and broader customer participation through innovative financing that the ECMB and its committees have been developing in response to Public Act 07-242, other Legislative actions, and DPUC deliberations and orders. The ECMB's committees have been very active in developing innovative strategies for capital formation, financing, and repayment mechanisms that would be attractive to property owners and businesses for achieving deep energy savings while leveraging limited public funds.
  - The IRP does not account for the significant potential for cost-effective market transformation available through behavior-based strategic energy management for business and continuous energy improvement for industries. For example, the C&I programs are placing a major emphasis on the Business Sustainability Challenge for the 2010-11 program years to work with businesses to incorporate sustainable energy/resource management into their core operations, and to approach energy efficient capital improvements more strategically and on their own merits as a normal business investment.
- 8. The ECMB recommends that the increased funding level set forth in the Targeted DSM strategy (an increase equivalent to 0.7 mills, though not through the SBC charge) is appropriate for the next two years as the next step in ramping up to the higher levels of customer energy efficiency described in the All Cost-Effective DSM strategy. However, the ECMB does not recommend the specific program approaches proposed in the Targeted DSM strategy. Connecticut policy makers have an opportunity to assess progress, revise strategies, change funding levels, and make any other adjustments, as appropriate, in the 2012 IRP process, and in the CEEF annual plan proceedings before the DPUC.**

The Targeted DSM strategy is a reasonable next step in terms of the *funding level* for the next two years to ramp up to higher levels of energy efficiency, and to fully develop and implement the ECMB's innovative program and financing strategies, but the specific programs offered and supported with the increased funding should be consistent with the approaches the ECMB has been working on, as summarized above.

In order to fully realize the potential of the ECMB's innovative program and financing strategies, the CEEF programs need the next two years for full development and implementation.

The Targeted DSM strategy proposed an annual funding increase of about \$20 million, which is equivalent to an increase of 0.7 mills for the energy efficiency programs. Implementing this would increase annual CEEF funding from \$92 million<sup>7</sup> to about \$112 million (net of the additional FCM credit for the incremental DSM), per the data and analysis in the IRP.

The ECMB does not recommend increasing the System Benefits Charge (SBC), currently at 3.0 mills, through the legislative process. Instead, the ECMB suggests that the DPUC could authorize additional collections through its regulatory proceedings to implement the funding increase of \$20 million, in a manner similar to how the DPUC authorized funding in the past for the Energy Independence Act (EIA) Phase I programs.

The ECMB suggests that policy makers have an opportunity to assess progress, revise strategies, change funding levels, and make any other adjustments, as appropriate, in the 2012 IRP process, and in CEEF annual plan proceedings before the DPUC. Connecticut is not locking itself into one IRP-analyzed resource strategy, inflexibly, but instead would be pursuing the benefits of the All Cost-Effective DSM strategy, ramping up to higher levels of energy cost savings for customers, with the opportunity to make adjustments along the way with a flexible and diverse resource.

Thank you for the opportunity to provide these initial comments and recommendations.

---

<sup>7</sup> The 3 mill SBC amount in the Current Trends scenario/Reference strategy is \$92 million in 2013, per Table A.3, on page II-40 of the IRP.