

# SUSTAINABLE ENERGY ANALYTICS, LLC

## SEA

30 Stott Ave.  
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ECMB Technical Coordinator  
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Re: Request for Written Comments Regarding Enhanced Demand-Side Management Technologies to be Offered by Energy Efficiency Partners

Dear Madams and Sirs:

Sustainable Energy Analytics LLC (“SEA”), a newly formed subsidiary of the Connecticut Municipal Electric Energy Cooperative (“CMEEC”) is pleased to provide these comments in response to the referenced Request for Written Comments. SEA was formed to participate in the Connecticut Energy Efficiency Partners Program including the Energy Efficiency Partners Program created by Public Act 07 -242. SEA is providing integrated services to customers combining demand and efficiency technologies with innovative supply solutions.

SEA would like to respond in two parts: first -- in a set of overarching principles that should inform and shape any specific rules or requirements – and, second – through answers the specific questions contained in the Request for Written Comments.

### **Overarching Principles (Not in Priority order)**

- **Innovation should be encouraged.**
- **Selection of partners should set up a policy environment not an “approval for each measure” environment. “Select good partners and let them innovate” with an appropriate amount of delegated decision-making vested in the partners should be the philosophy.**
- **Comprehensive solutions that integrate demand-side management solutions and innovative electric supply options should be ranked higher in overall benefit to the State.**
- **Repeatable and scalable solutions that can favorably impact multiple customers should be considered of higher value for the state.**

- **Programs and technologies that provide integrated customer service solutions should be ranked higher than single stand alone measures.**
- **Technologies that focus on load shifting and load shedding during periods of higher marginal electricity prices, peak system periods and high congestion cost periods should be considered as a reliable tool to address growing peak electricity demand in the Connecticut.**
- **The process of selecting efficiency partners should focus on “policy development” and their overall strategy for integrating demand-side management tools into a comprehensive customer solution that includes innovative electric supply options and takes advantage of new metering and time-of-day pricing options mandated by June Special Session Public Act 05-1 and Public Act 07-242.**

### **Comments on/Responses to Questions**

1. How should “enhanced demand-side management technologies” provide added value to Connecticut, above and beyond the value currently being provided by existing programs and initiatives (including but not limited to Conservation & Load Management/CEEF, CCEF, and DPUC programs) available to electric customers?

**SEA offers no comments on the enhancements to the existing programs. SEA is not currently a participant in these programs.**

2. What specific technologies should be considered as “enhanced demand-side management technologies?” Which specific technologies might you, as a potential participating customer or potential Energy Efficiency Partner, propose?

**There are a variety of technologies that should be considered, but the primary change should be to rank active or dynamic efficiency higher as it changes the mindset and requires more active participation on the part of the participant. Dynamic efficiency is efficiency engineered into the hardware or technology. Often that requires care in engineering design, construction, maintenance and operation. A short list of technologies would include:**

- **HVAC retrofit with load shedding automation controls**
- **Emergency and distributed generation that would be used for price response measures**
- **Geothermal heat pumps**
- **Ice and thermal storage systems**
- **Controls for the customer, grid and distribution systems**
- **Advanced metering and network operations**
- **Time of use metering and signals**
- **Real time commodity pricing that supports advanced metering systems**

- **Building Management Systems and enhancements/retrofits to accommodate load shedding and curtailment strategies and integration into electric commodity pricing signals**
- **Efficient transformers and line technology**
- **Power Factor correction and enhancement**
- **Renewable resources at both the customer and utility levels**
- **Bio-fuels applications for electricity production**
- **Green Building design**
- **Appliances that read price signals**
- **LED lighting applications**
- **Combined heat and power applications for grid-parallel and grid-connect applications**

**There are many other techniques (e.g. commissioning), programs (educational awareness and training) and processes (waste stream recycling) that have value in the Energy Efficiency Partners (“EEP”) programs. Further, there are new technologies, processes and programs being introduced that could have value in reducing customer cost, improving reliability or minimizing the impact on the environment.**

3. Should “enhanced demand-side management technologies” include a variety of measures and approaches, such as:
  - a) New technologies or measures;
  - b) Technologies that are available and tested but not fully commercialized;
  - c) Comprehensive and multi-resource approaches that package several technologies for a customer, as in integrated projects; and/or Technologies that are not commonly implemented in the CEEF or CCEF programs?
  - d) Technologies that are not commonly implemented in the CEEF or CCEF programs?

**YES, to all of the above.**

4. Should preferential treatment or incentives be offered to any enhanced demand-side management technologies, which employ renewable technologies or methods?

**In light of the number and variety of existing renewable energy programs, SEA suggests that the Energy Efficiency Partners program not lose focus by trying to layer on another set of renewable incentives.**

5. Should Energy Efficiency Partners funding be available to fund studies or analysis to assist customers in developing and analyzing the costs and benefits of potential Partner projects, particularly for integrated projects (see 3c above)? If so, what should be the maximum cost of such a study funded with Partners funding?

**Yes. Independent studies as well as unique vendor studies serve the purpose of understanding the costs and benefits and make the customer comfortable that their unique situation is understood. Implementing new technology into processes that offer efficiency advantages but come at an unbounded reliability risk will probably not get implemented. By doing studies that bound the risk, demonstrate an understanding of the unique situation and codify or validate the benefit to the customer are critical to implementation. The more complex or integrated the project the more important it is to assess both the risks and the values.**

**There should be no maximum cost specified. If the customer is part of the mix and the energy partners have calculated a reasonable benefit that the study cost should fit within the range that keeps the benefit and the benefit cost effective.**

6. What specific criteria should be used to evaluate and approve “enhanced demand-side management technologies” for Energy Efficiency Partners?

**The question may need clarification. If the goal is to pre-qualify partners through the certification of public convenience and necessity (“CPCN”) approval process, then the pre-qualified partners should be making the judgment on the technologies and the applications in conjunction with the customers. Criteria would not be necessary. The pre-qualification process is one of setting the policy environment that does not require continual approval and check as long as one is operating within the assigned policy space. This should not be a one size criteria program.**

**Evaluation criteria for Efficiency Partners proposals should focus on the overriding goals and objectives of the program and the legislation.**

7. What responsibilities and requirements should Energy Efficiency Partners have to meet in order for technologies and projects to be approved? For example, please comment on the following, at a minimum: Partner demonstration of performance and cost-effectiveness (i.e., the burden of proof regarding technology performance), product and installation warranties, assumptions of responsibility (indemnification), and interconnection requirements.

**The question may need clarification. Again, if the goal is to pre-qualify partners through the CPCN approval process, then the partners should be making the judgment on the technologies and the applications in conjunction with the customers. Comments similar to the response to question 6 are incorporated herein by reference. The pre-qualification process is one of setting the policy environment that does not require continual approval and check as long as one is operating within the assigned policy space. This should not be a one size criteria program.**

**Criteria should be flexible and minimal as the Partner is pre-qualified to work in an area. Control can be in the form of periodic reviews and the ability to say stop following a progress report or prior to the commitment of money.**

**Further, if the state is to receive benefits of new technology then some failure needs to be accepted in order to get the quantum jump in efficiency and load shaping performance.**

8. Should the renewable energy partners be required to participate financially in order for the projects employing their technologies to be approved?

**Yes. Partners should have “skin in the game”.**

9. What performance standards, measurement and verification (M&V) standards, and reporting requirements should be required for Energy Efficiency Partner projects and “enhanced demand-side management technologies?” Initially, the ECMB believes that the technologies should be required to meet the same performance, M&V, and reporting standards of measures implemented in the C&LM/CEEF and CCEF programs.

**If the program is reducing FMCCs through an ISO-NE program, then the ISO-NE program verification should be adequate and no other M&V should be required. If no ISO-NE program is involved then the applicable program should be used.**

10. Which cost-effectiveness test(s) should be used to evaluate “enhanced demand-side management technologies” to “ensure that all ratepayer investments maintain a minimum two-to-one payback ratio?” Also, how should reductions in federally mandated congestion charges be incorporated and/or addressed in the cost-effectiveness test(s)?

**NO RESPONSE at this time and would like more time to respond on this issue.**

11. How should receiving funding (past or present) from both the C&LM Fund and the Energy Efficiency Partners program (which is prohibited by the legislation) and program shopping be prevented? How should these concerns be monitored, and by whom?

**NO RESPONSE**

12. Should the Demand Reduction Value of an Energy Efficiency Partners project be required to be enrolled or bid into the ISO-NE Forward Capacity Market

(FCM)? If so, who should be responsible for submitting the documentation to ISO-NE, and who should receive the FCM revenues?

**SEA does not believe that the requirement for enrollment or bidding should be imposed by prescription. Choice should be the customer's and the partner's in how to maximize value of an investment in enhanced demand-side resources. The responsibility of managing documentation and the interface with ISO-NE should be the Efficiency Partner and the participating customer(s).**

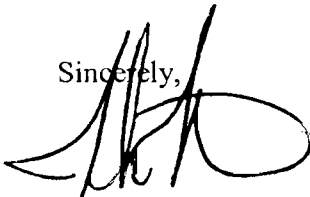
**Innovation comes from not being too prescriptive.**

**We believe the less prescription the more room there is to innovate. Maybe the value is in environmental improvement or other risk factors that are reduced by the hardware or the program.**

In summary, we applaud the ECMB on its efforts. We would defer to ISO-NE on issues of reducing FMCCs and the equipment manufacturers on the specific technical questions. We would also defer to current contractors on the changes in the existing C&LM and CEEF programs. The EMCB should allow the greatest flexibility in the programming and should put the effort in the CPCN review and selection of the partners. The ECMB should not be put into the position of second guessing the partners in the EEP programs.

Thank you for the opportunity to comment on the proposed Energy Efficiency Partner program implementation and we look forward to continued participation in the process.

Sincerely,



John F. Bilda  
Chairman of the Board  
Sustainable Energy Analytics

cc: Glenn Wilson, Chairman of the Board, CMEEC  
Maurice Scully, Executive Director, CMEEC  
Donald Downes, Chairman, Connecticut Department of Public Utilities Control  
Stephen Whitley, Chief Operating Officer, ISO New England  
Marc Goldsmith, Interim President, SEA  
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