FINAL MINUTES

ENERGY EFFICIENCY AND SUSTAINABLE ENERGY BOARD

21 South Fruit Street, Suite 10
Concord, N.H. 03301-2429
9am – 12 pm
Friday, April 18, 2014

Members in Attendence:

Kate Peters (PSNH, Acting Chair); Jack Ruderman (PUC); Deb Schachter (NHCF); Rep. Chuck Townsend (NH House-D); Brandy Chambers (OEP); Karen Rantamaki (DAS); Carol Woods (NHEC); Jeff Kelly (NHHBRA); Brian Ramsey (BIA); Ben Frost (NHHFA); Carmen Lorentz (DRED); Deb Hale (Liberty Utilities); Jeffrey Cyr (NHFM); Susan Chamberlin (OCA); Mike Fitzgerald (DES); Theresa Swanick (NHMA); Dan Feltes, (NHLA); Laura Richardson (Jordan Institute); Kate Epsen (NHSEA); Cindy Carroll (Unitil); Debra Hale (Liberty Utilities.

1. **Welcome and Introductions**

2. **Minutes of March EESE Board Meeting**

Minutes adopted following adoption of suggestion that SustainX principal be recognized in the minutes as being Dr. as he had received his Ph.D.

3. **NH's CORE Electric & Gas Energy Efficiency Programs -** Tom Belair from PSNH

Provided PowerPoint Presentation that included an overview of the CORE energy efficiency programs, an update on the 2013 results and the impacts of the programs. Tom noted that representatives from all four of the gas and electric utilities that provide energy efficiency (hereafter referred to as "EE") were in attendance and that their programs were constantly on the lookout for additional ideas and services they can bring to NH.

Noted that the NHSaves website had recently been updated to:

a. Show the benefits of EE;
b. Include a responsive design that enables it to be accessed from multiple media platforms (e.g., PC, smartphone, tablet);
c. Integrate more case studies in response to the *Independent Study of Energy Policy* completed by VEIC in 2011; and
d. Include a blog (e.g., LED 101).

Emphasized that slogan, "*When NHSaves, We All Win*" refers to the fact that while not everyone is getting the direct benefits of EE (i.e., reduction in energy consumption and therefore lower energy costs), everyone benefits due to the rate impacts that occur through load reduction and deferred investments in transmission and generation.

Tom provided an overview of the programs achievements from 2002-2013. Noted that the residential strategy in the beginning focused on electricity heated homes with a 75% incentive and has shifted to a fuel neutral program that targets high energy use homes with a 50% incentive.

Noted that the EE programs received lots of scrutiny including:

a. Annual audit by the PUC;
b. QA/QC by ISO-NE as the Core Programs bid in the EE savings into the Forward Capacity Market (FCM) as a demand reduction resource. It was noted that the FCM provides an additional $2.5 million dollars a year that can fund EE programs in NH ($11 million since 2007).

There was a question related to the Weatherization programs that included how much follow-up was conducted to ensure EE investments are providing actual savings. It was noted that when contractors are new they receive more inspections by program staff and that after a certain number of inspections, contractor projects are inspected 15% of the time. The CORE programs conduct further follow-up on a statistically accurate number of sites to ensure that the initial efficiency savings remain in place.

In addition, the CORE Programs work with the Community Action Programs (CAPs) to leverage Weatherization Assistance Program funding with CORE funding to maximize impact on low-income projects.

Electric Programs

In a review of the total impact of the electric programs to date (2002-2013), it was noted that:

a. Since its inception, the programs have saved NH customers $1.4 billion, which equates to about 6 times the cost of the investments.
b. Efficiency costs on average 2.26 ¢/kWh compared to 13.39¢/kWh retail – avoided cost =8-9 ¢/kWh;
c. CORE Programs achieve a savings on average equivalent to 0.6% of retail sales; and
d. MA has a budget 5 times that of NH and achieves a savings equivalent to 2.5% of retail sales.

There was a question regarding the impact that the electric EE programs have on the need to develop new capacity. The follow-up discussion noted that while EE does reduce demand within the ISO-NE region and therefore the need for *additional* capacity, new facilities will still be necessary due to retirement of existing generation facilities. It was noted that in earlier meetings a report had estimated that $260 million in deferred transmission had been realized through EE efforts within the ISO-NE region. (See minutes and ISO-NE presentation from February 2014 meeting).

Gas Programs

The gas programs to date (2002-2013) were also reviewed.

a. They have saved 16.7 million MMBTU (16.7 TBTU) since inception;
e. Saved customers $259 million, which equates to about 5 times the cost of the investments; and
f. Average cost = 23¢/lifetime therm vs. 96-155¢/therm.

Residential Programs

The benefit of working with CAPs is that they can get into homes and do not only EE work but critical upgrades as well (e.g., converting old knob and tub wiring and eliminating fire hazard so can add insulation).

To help residents determine whether they are eligible for EE programs, utilities developed the online heating index. For those residents that do not qualify for programs, the website does provide a list of BPI certified energy auditors (35-40).

Representative Townsend observed that the program may serve low-income and higher income customers, but that some lower to mid-income households may not find their way into the program. The utility representatives noted that they are talking to people every day, and the staff are trained to steer them to the financing options and that even have staff who can help them complete the home energy index scoring. It was noted that those who are most concerned about energy costs are often more likely to participate.

Municipal Programs

Following HB 123 (2013) the utilities were instructed to set aside $2 million dollars of the RGGI auction proceeds for municipal programs (which include school systems). Following the program's development, letters were sent to municipalities in January. Utility representatives have talked to about half already.

Prior to 2014, they had completed $1.5 million in municipal work; the $2 million is allowing them to do more targeted outreach. The utilities are also supporting the Local Energy Working Group (LEWG) to conduct outreach to towns. They have also set aside funds for technical assistance, which can be used to hire a contractor to manage a project for a town if they don't have the capacity to do it themselves. In addition, they have established a revolving loan fund of about $900,000.

Following a question regarding which programs have greatest savings, it was noted that the majority of savings from electric programs are coming from commercial programs – save more than 4 times the amount of residential programs. Residential projects tend to focus on lighting; there are larger opportunities in the commercial sector. The funding is flowing proportionately into the sectors from which they originated (i.e., commercial customers received same proportion commercial customers paid in).

There was also a question regarding the impact of the programs on oil & propane as there is no SBC charge for those fuels. Noted that the weatherization programs benefit oil and propane users by reducing the amount of fuel needed to heat their homes – 60% are oil users and 27% propane.

There was also a brief discussion of jobs that noted that residential programs support more jobs per million dollars expended than commercial programs. This is due to the fact that commercial projects are more equipment intensive and residential projects are more labor intensive.

There was an engaged discussion surrounding a slide that showed the cost-effectiveness by state. The slide showed that, other than Maine, NH was able to achieve kWh savings at the lowest cost in New England. Concerns were raised that while the analysis did show that NH's EE investments were cost effective (e.g., 2.26 ¢/kWh vs. 13.39 ¢/kWh), the analysis showed that every state was achieving cost effective savings. The analysis was unclear on why NH's costs per kWh were lower than surrounding states; it was noted that it could be due to the fact that states like MA, were pursuing deeper levels of efficiency that cost more to obtain but that were still substantially cost-effective, though Unitil noted that the measures in their MA programs are essentially the same as measures offered in NH. There was a desire by several board members that the information be conveyed such that, when NH's cost per kWh did rise, it was not perceived as a programmatic failure, it may be a fact that low hanging fruit had been picked.

The difference in cost effectiveness lead to a discussion of market transformation, which included the observation that education alone is not sufficient to achieve market transformation. Education is one step to getting there, as market transformation occurs when the skills and concepts conveyed through that education achieve widespread adoption.

It was noted that a barrier to market transformation, is the demand in the market place. Builders can't build the best homes if the market won't bear the additional (incremental) cost of construction. Some of these costs are driven by changes in standards. As we make make standards more stringent, there becomes a strain on the labor market as fewer people have the necessary skills to build to that standard. This drives up costs, beyond any additional costs that may be driven by equipment or material costs.

4. **BREAK**

5. **Smart Grid -** Allison Mackey, Manager, Power & Utilities at Ernst & Young

Presented an introduction on smart grid, its benefits and challenges and how smart grid may align with EESE goals.

Presented a broad definition of smart grid that included generation to home area networks. Due to this broad definition, noted that smart grid is only enabled when all are involved, consistent with broad engagement of EESE Board participants.

Provided a comparison of how the grid of today compares to the smart grid of the future: centralized large scale generation → distributed renewables and storage.

Noted that a smart grid is necessary to maintain the reliability and safety of such a system. For instance, an electric system with multiple small-scale renewable systems feeding into it will need to be managed differently to ensure that line workers are not at risk when working nearby. The generation will also be more intermittent and meeting demand will require integration of more elements.

While a smart grid will allow system operators control over an increasingly diverse system, smart technology will also offer customers greater opportunities to participate in the energy market as well as greater control over their energy consumption and performance. In both cases, this will come down to information management.

It was noted that in NH, this information element has elevated concerns about privacy and how much information utilities and others might be able to gather and how much they may be able to ascertain. The presenters felt that with the nature of encryption, coupled with the fact that the information flowing out of the meter only shows how much electricity is being used, rather than what it is being used for, that users would be quite safe.

The privacy issue led to a discussion of how the smart grid deployment would engage with customers. This included a discussion of opt-in or opt-out alternatives, which can have different impacts on participation rates and allay privacy concerns to different degrees.

Another issue raised was radio frequency impacts and how to deal with the arguments regarding exposure.

Also discussed was the issue of low-income residents being able to participate or benefit from some of the smart grid elements due to the need to invest in smart enabled technology to use within their home area network – this would be very unfortunate as low-income residents benefit from EE and Energy Conservation savings disproportionately. It was noted in NH, that many people still do not own their own computer. In response, it was noted that in some regions, including the PEPCO served areas around Washington, DC, computers/displays are provided as a standard part of the program to enable some level of participation.

The presentation also included an overview of steps to rolling out smart grid and factors related to the speed/robustness of that roll-out.

The presentation also documented how the US compared against other countries in terms of development and deployment. The US is leading the way in terms of AMI deployment and its model is being used in Germany, Australia, England & Norway.

6. Board and Program Updates

a. Legislative

SB245 – bill that would make structural changes to the Site Evaluation Committee so that it is smaller and more responsive and allows for more local input.

HB 1129 – meeting on Wednesday, April 23rd

HB532 – PACE – meeting on Wednesday, April 30th

EESE Legislative Subcommittee did not meet.

SB 191 (2013 Session) - State Energy Strategy - April 29th – 9 AM – Meeting of EESE Board and others to discuss state energy strategy engagement. Draft Strategy to be released on May 1.

b. PUC

EERS Outreach – Les has been meeting with Board members and interested individuals to hear thoughts in advance of developing a straw EERS. Will be continuing to meet with people. Has dates on May 2nd and beyond. Requested members who have not yet scheduled meetings to be in touch to do so.

RPS Hearing – May 1st – DE 14-104 to discuss shortage of Class III RECs as all Class III that originated in NH have been sold in other states. Hearing to investigate an imbalance in the market as Commission has authority to revise class obligations up or down.

c. LEWG – *Local Energy Solutions Conference* – held at Winnisquam High School on April 12th. 240 in attendance with high marks coming in for the day and for the individual sessions.

d. NHHBRA – Home Builders Institute Bootcamp – based on program developed in the South to prepare youth, the under-employed, recently incarcerated, or veterans with skills to meet the demands of the construction industry.

7. Adjourn.