DE 17-136 EERS Benefit/Cost Working Group AGENDA

March 14, 2019 9 am – 12 noon – Hearing Room A

Website: (http://www.puc.nh.gov/EESE%20Board/EERS Working Groups.html)

Conference Line: 1-866-951-1151, Room: 6462278 www.uberconference.com/sera-nh

- 1. Introductions
- 2. Roles and Responsibilities
 - EM&V Working Group Administrative lead
 - Miles Ingram, Eversource National Standards Practice Manual Study
 - Tina Poirier, Liberty Utilities Energy Optimization Study
 - Benefit/Cost Working Group Technical lead
 - Liz Nixon, NH PUC
- 3. Current NH Screening Practices Led by Utilities and Synapse
 - a. Total Resource Cost Test
 - The 2018-2020 three-year plan and the 2019 update to the plan are a good starting point to understand the TRC test. As stated in those documents, TRC is a ratio of the net present value of energy and non-energy impacts over the life of program measures (numerator) to the total costs, defined as the net present value of program costs plus out-of-pocket added costs that customers pay to install energy efficiency measures versus a standard efficiency measure (denominator).

The TRC uses incremental costs and savings between an agreed-upon baseline and efficient level.

The following topics are covered in the slides from Miles' presentation, which will be published by the B/C Working Group.

- b. Utility System Costs
- c. Utility System Benefits
- d. Non-Utility System Costs
- e. Non-Utility System Benefits
- f. Other Assumptions
 - i. Assessment Levels for plan, projects, and PI (e.g., portfolio, sector, etc.)
 - ii. Discount Rates
 - iii. Analysis Period and End Effects (measure lives)
 - iv. Early Replacement
 - v. Net to Gross (including Free Riders, Spillover, etc.)
 - vi. Other
- 4. NSPM discussion Led by Synapse
 - a. Overview of study
 - b. First task: review of NH EE cost-effectiveness policies
 - i. Introduce policy table
 - ii. Request stakeholder inputs prior to next BC WG meeting
 - c. Description of other tasks
 - d. Timeline of meetings and Synapse tasks
 - e. Overview of the report
 - f. Next meeting
 - i. Agenda
 - ii. Seeking comments in advance

- 5. Energy Optimization discussion
 - a. Study Expectations
 - i. Points of Contact:

Stu Slote is Project Director, and he will handle oversight, quality control, and contractual matters.

Decker Ringo is Project Manager, and he will manage the execution of the tasks and handle day-to-day interaction, project communication, and content generation.

ii. Regular Meetings:

Navigant plans to attend April B/C Working Group meeting in person. We will attend other monthly B/C Working Group meetings by teleconference. We will also have monthly update calls with the EM&V Working Group on an alternate schedule, happening 2 weeks before the B/C Working Group meetings. That way, our project stakeholders will get updates on a bi-weekly basis.

iii. Overall Schedule:

The first two tasks of our study are data gathering tasks and those begin now. - Task 1 will look at current New Hampshire practices and policy goals.

- In parallel with Task 1, Task 2 will examine how energy optimization measures are treated in other jurisdictions.

April B/C meeting: discuss results from Task 1 on current NH policies May B/C meeting: discuss findings from Task 2 on other jurisdictions June: Deliver draft final report

July B/C Working Group: Present draft report

July: Deliver finalized report

This timeline is consistent with the schedule described in Navigant's proposal. Navigant will circulate a draft report outline in April so that stakeholders may comment on the content and structure of the report.

b. Current NH fuel switching screening practices

This is first task in our study: a review of current fuel switching practices and of how these practices are screened. What we understand so far:

- i. NH utilities use a Total Resource Cost ("TRC") test to evaluate the savings from fuel switching measures. Earlier in the meeting, Miles discussed the different costs and benefits that are included in that calculation.
- ii. The savings are evaluated against the baseline equipment in the new fuel type. So, if a customer switches from a propane furnace (which would have typical efficiency of 80-82%) to a qualifying electric heat pump (which may have efficiency of over 300%), the program savings are not calculated relative to the original propane equipment. Instead, they are calculated relative to a baseline heat pump (with efficiency of around 240%).
- iii. This evaluation relative to the new-fuel baseline was not always the case. In 2013, for some heat pump measures, some utilities claimed positive fuel savings and negative electric savings, with positive overall savings.
 Examples: NHEC, Unitil, and PSNH (now Eversource) claimed fuel savings in MMBtu for ENERGY STAR Mini-Split measures.
 Mary Downes clarified that this method of counting displaced fuel savings was only used for one or two years; it was not a long-standing practice. The large negative

electric savings were not helpful for meeting electric savings goals. After 2013, NH followed MA's lead in not counting displaced fuels.

Now, MA is using an energy optimization calculation, but only for whole-home heat pump systems that are integrated with a fuel-fired heating system. MA does not expect a large quantity of these claims. For a full fossil-to-electric conversion (i.e., fossil system is removed), MA counts only the electric savings.

Decker explained that MA is considering splitting savings from energy optimization measures into different steps. So, the switch from existing fossil system to efficient electric system would have three steps: (1) early retirement step from existing fossil system to codecompliant fossil system, (2) fuel switch step from code-compliant fossil system to codecompliant electric system, and (3) energy efficiency step from code-compliant electric system to high-efficiency electric system. MA is considering this approach because they have different NTG assumptions for early retirement, fuel switching, and energy efficiency. Miles pointed out that NH always uses NTG of 1.0. Navigant should report unique approaches like this, but Navigant should recognize that this stepped approach would be less applicable in NH.

c. Fuel Switching options

What measures are included in the scope of "energy optimization"? The group agreed we should consider:

- Customers who are replacing their existing fuel-fired heating equipment (such as oil boilers or propane furnaces) with an electric heat pump or high-efficiency gas equipment.

- Customers who are displacing some of their fuel consumption by installing a heat pump alongside fuel-fired equipment in a dual-fuel scenario.

- Combined heat and power (CHP) measures, although NH does not have much CHP activity

Measures such as solar water heaters are less interesting, because they are not rebated through EE programs. We should ask other jurisdictions if solar WH is included, but we should not attempt to characterize solar WH measures.

Miles noted that measure-by-measure differences are not the primary focus of this study. This study should focus on the general principles that other jurisdictions are using to evaluate fuel switching measures. In other words, what is the fundamental approach that other jurisdictions are using? Are they considering oil-to-gas measures? Why or why not?

Mary noted that we should probe whether retrofit and new construction measures are handled differently. In MA, new construction measures are compared to a baseline of the user-defined reference home (UDRH). Commercial new construction may assume a fossil fuel baseline, though.

Miles noted that calculating savings relative to a baseline of fossil fuel equipment will require defining the fossil fuel baseline equipment. This study should estimate the PUC resources that would be required to define new baselines.

d. Next Meeting

Before the April B/C Working Group meeting, we will review New Hampshire documents related to energy optimization, to develop an understanding of how NH handles energy optimization measures.

We will also reach out to PUC staff, EESE board stakeholders, and utility staff for structured phone interviews. Interviews will focus on:

- i. defining fuel switching
- ii. the motivation for supporting fuel switching through the NH Saves program
- iii. the aspects of neighbor states' programs that are relevant to this study

The group discussed whether Navigant should reach out to stakeholders in the delivered fuels industry (i.e., oil and propane). On one hand, recommendations from this study will be more compelling if they include input from all stakeholders that would be affected by energy optimization measures. On the other hand, the oil and propane industry will have an opportunity to comment on the adjudicative docket, and the industry's perception of energy optimization measures is predictable (the group expects the oil and propane industry will not have a favorable view of energy optimization). The group recommended that Navigant reach out to the Business and Industry Association (BIA) of NH. The BIA represents the interests of oil and propane companies, and the BIA has membership on the EESE Board. (After this B/C WG meeting, Brian Buckley (OCA) recommended that Navigant conduct any outreach to the delivered fuels industry *after* some progress has been made in the literature review.)

In parallel with these interviews, we will be conducting Task 2 of our study, which looks at jurisdictions outside of NH. This will include a review of policies, impacts, treatments, etc.

At the April B/C working group meeting, we will discuss the results of our internal review. At the May B/C working group meeting, we will discuss the results of our external review.

General notes:

- Regarding project coordination, it would be problematic if Synapse and Navigant submit reports for review at the same time. To the extent possible, the deliverables from Synapse and Navigant should be submitted on a staggered schedule to allow time for review.
- The reports from Synapse's NSPM study and Navigant's EO study are on the same track but do not need to be integrated into one report. The B/C Working Group will submit the reports together, but the reports will be separate documents.
- Liz Nixon asked if Navigant's study will examine the economics associated with customer decisions regarding fuel switching. Analysis of *customer decisions* is outside the scope of this project, since customer decisions depend on more than just economics, and we do not plan to study customer preferences. Navigant would be happy to define a set of energy optimization measures and use our internal tools like the energy optimization model to estimate the costs and savings from them. Because measure characterization is not the project's focus, our characterizations will draw heavily from assumptions (such as building loads, equipment sizes, installation costs, etc.) developed elsewhere, such as the Energy Optimization model developed for Massachusetts in 2018. This model describes the customer costs associated with a variety of energy optimization measures.
- Brian Buckley (OCA) noted that there may be a workforce development aspect of other jurisdictions' approach to energy optimization. For instance, jurisdictions may have training programs focused on heat pump installations. Navigant should probe this aspect. After the B/C WG meeting, Brian provided links to a NEEP action plan and a Rhode Island strategy document that describe workforce development goals.
- The table of policies that Synapse is developing will be published on the B/C Working Group's website. Navigant will examine the policies and orders relevant to energy optimization, which will be a subset of Synapse's list.
- Carol Woods noted that NHEC has incentives for energy optimization measures that are not regulated, and she asked how those would be affected. Navigant offered to discuss these measures in an individual interview.