



**REGIONAL EVALUATION,
MEASUREMENT & VERIFICATION FORUM**

**Quarterly Project Committees Meeting
July 28, 2011, Teleconference Notes and Action Items**

Participants:

Name	Organization	Name	Organization
Sheldon Switzer	Baltimore Gas & Electric	Cecily McChalicher	NEEP
Cindy Jacobs	Connecticut Department of Public Utility Control	Julie Michals	NEEP
Steve Waite	Consultant	Denise Rouleau	NEEP, Consultant
Brian Gallagher	Delaware Energy Office, Consultant	Elizabeth Titus	NEEP
Tom Ledyard	KEMA	Jim Cunningham	New Hampshire Public Utilities Commission
Crissy Godfrey	Maryland Public Service Commission	Katie Mammen	New York Department of Public Service
Huilan Li	Maryland Public Service Commission	Earle Taylor	Northeast Utilities, Consultant
Christina Halfpenny	Massachusetts Department of Energy Resources	John Zabliski	NYSEG & RG&E
Erin Malone	Massachusetts Department of Public Utilities	Judeen Byrne	NYSERDA
Marilyn Ross	Massachusetts Department of Public Utilities	Sam Swanson	Pace Energy
Paul Horowitz	Massachusetts EEAC, Advisor	Dave Pirtle	PEPCO
Dave Jacobson	National Grid	Nikola Janjic	VEIC / Efficiency Vermont
Mike Sherman	Navigant Consulting	Barry Murphy	Vermont Department of Public Service
Emily Li	NEEP		

Meeting Action Items:

1. Forum participants to provide comments on the draft Incremental Cost Study report by COB July 29.
2. The [Glossary Version 2.1](#), [Mid-Atlantic TRM Version 2](#), and [Commercial Lighting Measure Persistence Study Report](#) are now available on the Forum website.
3. For the Emerging Technologies study:
 - a. ERS/NEEP to send program administrators an email that asks them to identify data they have for the priority measures.
 - b. Forum participants to notify NEEP as soon as possible if they would like a measure added to the priority list (see PPT slide 25 for the current list of measures).
4. Forum participants to email Elizabeth Titus (etitus@neep.org) with any feedback about the proposed next steps (i.e., priority measures) for the loadshape project. NEEP to also solicit feedback on priority measures via upcoming 2012 project survey.

5. NEEP to reach out to Forum participants for feedback and develop a proposal for using the unspent Incremental Cost Study funding and Add-On Research funding.
6. NEEP to send an updated 2011 invoicing estimate to each funder.
7. Forum participants to provide feedback to Julie Michals (jmichals@neep.org) by August 19 on the proposed 2012-2014 EM&V Forum Framework.
8. NEEP to issue the 2012 project planning survey in mid-August.
9. NEEP to continue to monitor the NAESB and SEE Action efforts and let Forum participants know when input is needed.

Meeting Overview:

Julie Michals (NEEP) opened the meeting and introduced the meeting participants. She reviewed the meeting agenda: 1) Forum Completed Research & Evaluation Projects, 2) 2011 Project Updates, 3) Evaluation of the Regional EM&V Forum, and 4) National EM&V Project Updates - SEE Action and NAESB.

Julie Michals provided an update on Forum leadership. She shared that Clifton Below (NH PUC) has filled the open Steering Committee co-chair role and will be serving at least into the fall. The Project Committees co-chairs will all continue to serve through October in the interest of continuity.

A. Forum Completed R&E Projects

Elizabeth Titus (NEEP) shared that the [Glossary Version 2.1](#) and [Mid-Atlantic Technical Reference Manual \(TRM\) Version 2](#) are now complete and available on the Forum's website.

Incremental Cost Project Overview

Elizabeth Titus stated that the draft Incremental Cost Study report is out for review, and comments are due by COB July 29. She acknowledged project manager Denise Rouleau (NEEP Consultant) and Mike Sherman (Navigant Consulting) are available to answer questions during this call.

The purpose of this project is to provide updated estimates of incremental cost for a set of priority measures. Incremental cost is defined as the difference in cost between a baseline and an efficient measure, including both material and labor cost. Incremental cost is useful to program implementers and program evaluators, is often included in TRMs, and is used as an input to cost effectiveness screening.

This study began with a review of secondary incremental cost sources that confirmed that primary research was necessary. In its primary research, Navigant conducted 180 interviews (about 15/measure), and the interview results were supplemented with program administrator data and internet research. Navigant divided the region into six sub-regional markets and developed regional adjustment factors that were applied to base costs. Regression analysis was used for material cost, and arithmetic mean was used for labor cost.

Navigant found that developing cost curves for incremental cost worked well, as it increases flexibility and provides economies that are not typical in incremental cost studies. Program administrator data was very helpful, but Navigant was not able to collect it comprehensively from every part of the Forum region.

Elizabeth Titus explained that this project combined the budgets for two 2010 Forum studies, and the contract budget was \$100,000 less than the available amount. Navigant will likely spend less than the contract budget, barring extensive feedback on the draft report from Forum participants. She invited feedback on whether to use the remaining funds to extend the project and work on additional measures. The additional measures could be those that were listed as second priority in the RFP.

Nikola Janjic (VEIC/Efficiency Vermont) asked about the timeline for additional work on the second priority measures. Elizabeth Titus replied that it would take several weeks to confirm the plan, as the project subcommittee would have to confirm their support and Navigant would need to develop a budget and schedule.

Mike Sherman stated that Navigant would be able to make rapid progress on additional measures since the basic research and analysis structure is in place.

Commercial Lighting Persistence Study Overview

Elizabeth Titus explained that this project is now complete and was funded by stakeholders in New England and New York. She stated that Tom Ledyard from the KEMA contractor team is available to answer questions during this call.

The purpose of the study was to research commercial lighting products that have been installed for some length of time and estimate their effective useful life (EUL). The EUL is the median retention time (point at which ½ of the units installed in a program year are no longer in place). This is an important project for the FCM, as commercial lighting is a large source of savings, and this study can be used to verify that the information used for the FCM is correct.

The sampling for this study was challenging, as it was unclear how much data would be available. The sample design and budget were finalized after a preliminary scan of available data. There were several challenges that caused the project to be delayed: one sponsor decided not to participate after the project got underway, other sponsors took quite awhile to provide data, and another sponsor had glitches in their tracking system.

KEMA also looked at disaggregated results: large and small C&I, high and low hours of use (HOU), and three categories of building type. The differences in confidence interval for the disaggregated results are shown at both the 80% and 90%. The small sample sizes limited KEMA's ability to get robust disaggregated results.

KEMA found that much of the equipment did not fail within the studied timeframe, and the largest reason for end of life is removal. Elizabeth Titus suggested that a possible focus of future study could be to examine remodeling rates by building type to help inform program planning.

Elizabeth Titus explained that the contract budget was slightly under the \$600,000 allocated for this project, but she anticipates that this project will fully expend the contract budget. The final version of the report is now posted to the website: [Commercial Lighting Measure Persistence Study](#).

Julie Michals thanked Elizabeth Titus for her work managing these large projects, and she thanked the subcommittee members who participated in these projects.

Action Items:

1. Project Committees members to provide comments on the draft Incremental Cost Study report by COB July 29.
2. The [Glossary Version 2.1](#), [Mid-Atlantic TRM Version 2](#), and [Commercial Lighting Measure Persistence Study Report](#) are now available on the Forum website.

B. 2011 Project Updates

Emerging Technologies Project

Julie Michals provided an overview of the Emerging Technologies project. Energy and Resource Solutions (ERS) has been selected as the project contractor. NEEP expected four proposals, but received two proposals, as the other firms were unable to complete their proposals in the given

timeframe. The project subcommittee was impressed with the ERS proposal, which included a substantial amount of primary research and a very good team. The contract with ERS is for the full amount budgeted for the project (\$225,000) and NEEP made it very clear that this is a not to exceed budget. Chris Neme (Energy Futures Group) is serving as the technical advisor, and Elizabeth Titus is also helping to manage the project.

Julie Michals shared that the project kick-off meeting took place on July 26. She notified program administrators that ERS/NEEP will be sending them an email that asks them to identify data they have for the priority measures. A data request will also be sent to program administrators as part of this project. Work on this project will be conducted through the fall and winter, with a final report due in March.

Dave Jacobson (National Grid) asked if the list of priority measures is final. He would like to know if program administrators in the region are offering high efficiency versions of biomass pellet boilers. Nikola Janjic stated that several states in the region (NH, NY, ME, PA and VT) have incentives for biomass programs and should be given consideration.

Julie Michals stated that the ERS team will reach out to program administrators and get a better sense of what programs they have. She added that participants should notify NEEP as soon as possible if they would like a measure added to the priority list (see PPT slide 25 for the current list of priority measures).

Regional Energy Efficiency Database Project

Julie Michals explained that this project supports the implementation of the [Common Statewide EE Reporting Guidelines](#). NEEP received 10 proposals for this project, and five were at or below the budget. All of the proposals were comprehensive, well-written, and from qualified contractors. Peregrine Energy Group was selected as the project contractor. Peregrine will use a web-based system for the reporting tool and database. The system will use an Excel-based tool for data entry. The project kick-off meeting will take place on August 1, and the database will be developed throughout the fall with an expected launch date early next year. The goal is to use the tool in 2012 to report state program impacts from 2011.

Julie Michals stated that NEEP staff will communicate with stakeholders in each state and identify who will be in charge of completing the data collection tool. This will ensure that the appropriate people are testing the tool as Peregrine develops it. She added that this project is an important step to move forward with common reporting.

Codes and Standards Project

Elizabeth Titus said NEEP was asked at the September 2010 Codes and Standards Workshop to keep the momentum going on this topic. NEEP is moving forward as quickly as possible and is pursuing US DOE funding through an upcoming solicitation. If US DOE funding is not available, the Institute for Market Transformation (IMT) may be another source of funding. She added that Massachusetts Program Administrators have hired a consultant who is working with them on development of codes and standards program design and will also work with them on Codes and Standards attribution strategies, and the EMV Forum and NEEP Policy staff are monitoring this effort, hoping to undertake a project that complements or coordinates with the Massachusetts work.

Loadshape Research Projects

Elizabeth Titus stated that NEEP Technical Advisor and staff have been reviewing lessons learned from the first loadshape projects. These include:

- PJM's interpretation of its M&V manual requires metering in the region; this will be considered in the development of future project scopes.
- There is high value in program administrator tracking data.

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- NEEP will try to be as sensitive and responsive as possible to program and filing dates.
 - NEEP will change the subcommittee structure to be smaller and include participants who can participate regularly.
 - NEEP will add more time and budget into project estimates. This will include thinking about metering over more than just one season, as the value of a short season in extrapolating to an 8760 loadshape was questioned for the lighting project.

Elizabeth Titus shared NEEP's proposed next step for the loadshape research project: a \$20,000, two month 2011 project to develop metering data collection protocols that would be sole sourced to KEMA. A draft SOW will be developed by Steve Waite for review and further consideration by the project subcommittee.

The project subcommittee will also need to decide top priority measures to research using the 2011 loadshape project funds (and possibly 2012 funds). NEEP plans to include short list of possibilities in its 2012 agenda planning survey. Participants were asked to email Elizabeth Titus (@neep.org) with any feedback about the proposed next steps for the loadshape project.

2011 Budget Status

Julie Michals provided an overview of the budget status:

- 2009 projects are complete and funding is fully expended. NEEP has concluded that remaining funds allocated to the A4 project are not needed to support NAESB retail M&V work, so NEEP is looking to apply it elsewhere.
- 2010 projects are almost done: the Incremental Cost Study is wrapping up, and the net savings project is underway.
- Some 2011 projects are not yet underway, including the loadshape and add-on research projects. NEEP is still talking to Maine and Delaware about their funding status. Due to the limited participation from these states, there is a shortfall of \$117,000 in the 2011 budget, and NEEP received direction from the Steering Committee to use unspent funds from 2010 to make up the difference. Unspent 2009-2010 funds in the amount of \$105,000 fill most of the gap, and NEEP plans to take \$12,000 off the add-on research budget to meet the rest of the shortfall. NEEP needs feedback on how to use the balance of the budget allocation for the Incremental Cost Study and the funding allocated for add-on research.

Nikola Janjic agreed that additional incremental cost research would be valuable, and would like the subcommittee to identify which measures should be addressed.

Dave Pirtle (PEPCO) suggested researching incremental cost as it relates to Home Performance with Energy Star. Elizabeth Titus replied that incremental costs for several residential HVAC measures are included in the original incremental cost study. Dave Pirtle also suggested researching incremental cost for consumer electronics, as more programs are including them.

Nikola Janjic added that evaluating Home Performance with Energy Star could be its own project rather than rolling it up into the incremental cost study. Dave Pirtle added that Itron, the Maryland state evaluator, has been discussing this topic, so it would be a duplicative effort for the Forum if Maryland decides to pursue it.

Julie Michals stated that NEEP will reach out to Forum participants for feedback and bring a proposal about what to do with the unspent Incremental Cost Study funding and Add-On Research funding.

Julie Michals explained that the estimated 2011 invoicing amount for each funder has changed from NEEP's original estimate earlier this year. At the beginning of the year, NEEP estimated that 60% of the loadshape project would be invoiced this year; now NEEP is estimating that 20% will be invoiced. The

add-on research, net savings, and emerging technologies projects are other 2011 projects where 2011 invoicing may be different than expected. NEEP will send an estimate to each funder to indicate invoicing in 2011 relative to what was expected and communicated previously.

Action Items:

3. For the Emerging Technologies study:
 - a. ERS/NEEP to send program administrators an email that asks them to identify data they have for the priority measures.
 - b. Forum participants to notify NEEP as soon as possible if they would like a measure added to the priority list (see PPT slide 25 for the current list of measures).
4. Forum participants to email Elizabeth Titus (etitus@neep.org) with any feedback about the proposed next steps (i.e., priority measures) for the loadshape project. NEEP to also solicit feedback on priority measures via upcoming 2012 project survey.
5. NEEP to reach out to Forum participants for feedback and develop a proposal about what to do with the unspent Incremental Cost Study funding and Add-On Research funding.
6. NEEP to send an updated 2011 invoicing estimate to each funder.

C. Evaluation of the Regional EM&V Forum

Julie Michals explained that the Evergreen Economics presentation of the Forum Evaluation results is posted to the private website. This presentation covers evaluation methodology, an overview of the results, and recommendations for improvement. The major takeaway is that it gives the Forum a green light to forge forward. NEEP invites feedback on the presentation and report.

2012-2014 Framework

Julie Michals reviewed the proposed 2012-2014 EM&V Forum Framework. The Forum goals remain largely the same: 1) effective use and implementation of Forum products in the states, 2) align national protocols with Forum products, 3) conduct joint research, 4) support ISO/RTO adoption and use of Forum products, 5) expand the application of Forum products beyond ratepayer funded programs, and 6) evolve the Regional Energy Efficiency Database to meet regional needs.

For the three major project areas:

- *Protocol Development*: shift from development to implementation, and address protocol development for emerging technologies.
- *Research and Evaluation*: continue this work, as it is highly valued.
- *Education and Information Access*: increase focus on outreach and education to help implement Forum products and continue other efforts.

For Forum Operations: continue NEEP's role as project manager and fiscal agent. Suggested modifications include streamlining communications and project subcommittee membership, as well as matching resources with the project agenda to avoid an overstretched staff.

For 2012-2014, NEEP proposes a \$2-\$2.5 million annual budget, depending on the scope of the research and evaluation projects. The cost allocation framework will remain the same. NEEP will work to leverage participation from other states and continue to leverage funding from multiple sources. NEEP is now looking for Forum participant feedback on the 2012-2014 framework, with the goal of having a specific 2012 agenda and budget ready for Steering Committee approval in December.

Nikola Janjic stated that it is challenging to review documents since several Forum projects are being completed around the same time. He suggested staggering the research and evaluation projects rather than having fewer projects. Julie Michals replied that the projects were initially staggered, but they

ended up finishing at the same time for several reasons. NEEP will work try to avoid this situation in the future.

Potential 2012 Forum Projects

Julie Michals asked for feedback on the list of potential 2012 Forum projects. The proposed projects include topics that were deferred from previous years and topics that have been identified through subcommittees or other sources as of interest.

Participants had no feedback at this time. NEEP will issue the 2012 project planning survey in mid-August, and would like to have one representative from each state respond on behalf of their state.

Action Items:

7. Forum participants to provide feedback to Julie Michals (jmichals@neep.org) by August 19 on the proposed 2012-2014 EM&V Forum Framework.
8. NEEP to issue the 2012 project planning survey in mid-August.

D. National EM&V Project Updates - SEE Action and NAESB

Julie Michals provided an overview of the NAESB wholesale EE M&V standards and the retail EE M&V model best practices (MBPs). The wholesale standards were approved in March 2011. The retail draft model business practices are currently out for informal comment, and there will be a formal comment period in the future. Julie Michals has played a large role in drafting the MBPs, so they incorporate Forum work. The goal is to bring the recommended MBPs to NAESB for approval in October. NEEP will notify Forum participants when the formal comment period is scheduled.

Julie Michals provided a summary of the US DOE/EPA SEE Action project. SEE Action now has a new website: www.seeaction.energy.gov. Malcolm Woolf (Maryland Energy Administration), a Forum Steering Committee member, is one of the co-chairs leading this effort. SEE Action is working on several projects, including:

- *Common National Reporting*: US DOE is focusing its attention on review and improvement of EIA Form 861. Julie Michals is part of the working group that will be improving this form. There are no program administrators on this working group, and Julie will work to recruit some Forum participants who might be interested in providing feedback.
- *Uniform Methods Project*: A technical committee is being formed to develop this document.
- *National EE Savings Database*: This will be targeted towards states new to EE and EM&V.

Julie Michals explained that there is an overlap between SEE Action and NAESB work. NEEP has helped to bring together stakeholders from each project and coordinate the work appropriately. NAESB will be high level, while SEE Action will be more detailed. NAESB and US DOE staff have agreed to coordinate, and communication lines are in place. NEEP will continue to monitor these efforts and let Forum participants know when input is needed.

Action Item:

9. NEEP to continue to monitor the NAESB and SEE Action efforts and let Forum participants know when input is needed.

Julie Michals shared the schedule for upcoming meetings:

- August 16-18: IEPEC Conference in Boston, MA.
- September 25-27: ACEEE EE as a Resource Conference in Denver, CO.
- October 12: EM&V Forum Annual Public Meeting in Albany, NY.
- November 17, 2-4pm: Next Quarterly Project Committees Meeting.