

The Development of an Evaluation, Measurement and Verification Forum for the Northeast Region

Julie Michals and Elizabeth Titus, Northeast Energy Efficiency Partnerships, Inc.

ABSTRACT

Northeast states are increasingly relying on investments in building sector demand side resources as primary strategies to achieve critical energy and environmental goals over the next decade and beyond. As such, states have an increased interest in consistent evaluation, measurement and verification (EM&V), and related protocols, to determine and report energy and peak demand savings, and associated costs and emission reductions, from these resources.

In response to this growing need, Northeast Energy Efficiency Partnerships (NEEP) conducted a study in early 2006 which identified important differences in EM&V practices, definitions and savings assumptions for electric energy efficiency resources across the region. Based on NEEP's report, and more recent experience working with New England states to inform M&V protocol development for demand resources in the ISO-New England Forward Capacity Market, NEEP launched a project in Fall 2007 to explore the feasibility of a regional EM&V forum to develop and support the implementation of consistent EM&V and related protocols across the Northeast region. This project, consisting of a scoping study and a multi-year EM&V Forum Plan, was completed in May 2008.

This paper provides an overview of the scoping study results and the EM&V Forum elements, including its scope, functions, priority projects, governance and structure, and budget and revenue plan. In closing, the paper identifies the key opportunities and challenges the region will face in implementing the proposed EM&V Forum, and the development efforts currently underway.

Introduction and Background

Northeast states are increasingly relying on investments in building sector demand side resources as primary strategies to meet state and regional climate change mitigation goals and address other energy and environmental policies over the next decade and beyond. As such, states have an increased interest in consistent and/or common evaluation, measurement and verification (EM&V), and related protocols, to determine and report energy and peak demand savings, and associated costs and emission reductions, from these resources.

In response to this growing need, Northeast Energy Efficiency Partnerships ("NEEP") conducted a study in early 2006 which identified important differences in EM&V practices, definitions and savings assumptions for electric energy efficiency resources across the region (Michals and Titus, 2006). Shortly after NEEP's 2006 study was released, ISO-New England embarked on developing the market rules for its wholesale Forward Capacity Market (FCM). This included the development of M&V standards for demand side resources, which for the first time were integrated into the wholesale electricity market. Recognizing the need for the states to work together to develop common M&V protocols in the context of the emerging ISO New England FCM, the New England Public Utilities Conference (NECPUC) passed a Resolution *Supporting the Development of Common Protocols to Measure, Verify and Report Energy*

Efficiency Savings in New England, committing commission staff to the development of common M&V protocols. NEEP responded to the resolution by convening and facilitating a New England State Program Working Group (SPWG) represented by energy regulators, energy efficiency program administrators and M&V experts to provide coordinated input into ISO-New England's development of its FCM M&V Manual for demand resources (ISO New England, Inc. 2007). The SPWG process helped to ensure that the ISO-New England M&V standards (e.g., acceptable M&V methods, precision and accuracy requirements, reporting standards) would allow peak demand impacts from state funded energy efficiency programs to participate in the new forward capacity market. The SPWG activities have also included some coordinated studies to support FCM M&V Plans, such as a measure life study, and development of coincidence factors to demonstrate savings during ISO defined peak performance hours for priority measures.

The Northeast Regional Greenhouse Gas Initiative (RGGI) is another policy that would benefit from consistent EM&V protocols. State and regional policymakers are looking to energy efficiency as the key, near-term and least cost strategy for meeting the carbon cap levels set under RGGI. While RGGI does not include offsets for electric energy efficiency savings directly (although it does for natural gas efficiency, and other fuels), state decisions are being made to allocate a large percentage, if not all, of auction or allowance proceeds to electric efficiency program investments. As a result, environmental regulators have recognized that consistent EM&V, tracking and reporting of associated electricity savings and their impact and cost to reduce carbon emissions will be important. Furthermore, while there are currently no tradable credits for electric efficiency savings under RGGI, future national and multi-national models may include electric efficiency and an emission credit trading system in which common M&V protocols will be needed.

To support these policy developments, NEEP launched a project in the Fall of 2007 to scope and develop a multi-year plan for a Northeast EM&V Forum to develop common regional protocols¹ to estimate, evaluate, track and report energy-related savings, costs and emission reductions from demand-side resources. Funded by the U.S. Environmental Protection Agency, the Energy Foundation, the New York State Energy Research and Development Authority, and Conservation Services Group, and guided by an Advisory Committee representing a wide range of stakeholders², the EM&V Forum project consisted of three stages:

- 1) A feasibility study conducted through in-depth interviews with key stakeholders to test the potential scope, functions, funding and governance of an EM&V Forum (completed February 2008);
- 2) The development of a multi-year implementation and revenue plan (completed May 2008); and
- 3) Securing funding for 2008 start up activities, and on-going operational revenue for the EM&V Forum (currently underway).

¹ "Protocols" herein are defined as common methods, procedures, or conventions that can serve as guidelines and/or standards to allow for consistent exchange, comparison and aggregation of information.

² The Advisory Committee included representatives from New England, New York, New Jersey and the mid-Atlantic states including state utility and air regulatory agencies, federal energy and environmental agencies, program administrators, merchant energy efficiency and demand response providers, an independent system operator, a regional air organization, and national energy service company association.

This paper describes the results from the feasibility study, which served as the basis for the EM&V Forum multi-year development plan. It then gives an overview of the proposed EM&V Forum, including its scope, functions, priority projects, governance and structure, and budget and revenue plan. In closing, the paper identifies the key opportunities and challenges the region will face in implementing the proposed EM&V Forum.

The Scoping Study: Testing Concepts, Functions, Funding and Governance of a Regional EM&V Forum

The first project stage was to conduct a feasibility study to test the level of interest, need, and potential scope of a regional EM&V Forum. NEEP retained Nexus Market Research (NMR) to conduct in-depth, confidential interviews with key stakeholders using an interview guide informed by the project Advisory Committee and a range of M&V experts. A total of 40 individuals from 21 different organizations were interviewed, including energy service companies, federal government agencies, state government agencies, program administrators, and regional organizations throughout the Northeast.

Given the sample frame and size was for a relatively small survey research project, NMR's report noted that there could be a potential sample bias in the report findings. In particular, developing a representative sample was practically impossible because of the diversity of professional responsibilities and geographic reach of potential customers served by such a potential EM&V Forum. As qualitative research, however, the project succeeded in capturing a wide range of values and ideas through in-depth questioning and probing that served as the basis for NEEP to develop a multi-year EM&V Forum plan (Nexus Market Research, 2007).

Key Findings from the NMR Scoping Study

The in-depth interviews tested a range of EM&V Forum elements, including:

- customers and users (energy and air regulators, program administrators, merchant demand resource providers, ISOs or RTOs, federal agencies)
- geographic scope (New England, NY, NY, mid-Atlantic states)
- public policies served (economic, energy and environmental)
- types of fuels addressed (electricity, natural gas, fuel oil)
- range of technologies served (energy efficiency products and services, demand response, load management, combined heat power, building integrated renewables)
- overall functions (develop common EM&V protocols, guidelines and reporting formats; facilitate coordinated research and evaluations; collect savings, cost and emissions data and aggregate to regional levels; provide access to EM&V information; provide custom services and training resources)
- specific tasks in support of overall functions
- governance and administrative structure
- potential funding structures

The overarching findings and conclusions from the NMR study were as follows:

1. Respondents were diverse in their understanding of the Forum concept due to the range of interviewee perspectives (policy vs technical level).
2. There was generally strong and widespread support for a regional EM&V Forum.
3. The feasibility and likelihood of success would be enhanced by a “less is more” strategy, where the agenda should be focused and selective with options for expansion.
4. The geographic scope should center on capacity market territory(s), recognizing overlap with and expansion to RGGI states. The value proposition of a regional forum was noted to be greater if it covered the Northeast states versus only discreet power pool regions.
5. The Forum should focus on protocols for electric efficiency, expand to natural gas, and address fuel oil later.
6. The Forum should begin with energy efficiency products and services and demand response, and expand to other technologies later (building integrated renewables and combined heat and power).
7. Primary focus should be on common protocol development, research and evaluation coordination, and information access functions. The other functions considered, “aggregating and analyzing data” and “training and customer services” were ranked a lesser priority although “aggregating...data” was important to environmental regulators in order to analyze the impact of energy efficiency activities to meet regional climate change and ozone attainment goals.
8. The Forum should at the least be established by NEEP, and could be administered by NEEP, given its experience as a convener and facilitator on a range of issues, including EM&V activities. Stakeholders need to be included in the Forum structure and governance, and NEEP needs to address any real or perceived potential conflicts of interest.
9. There was interest in funding support for Forum start-up and operation. The options for funding and participation in the Forum would likely depend on its ultimate functions and types of customers served.

These findings and conclusions were also generally supported by additional written responses to the interview guide received from project Advisory Committee members as well as experts who reviewed the draft NMR interview guide.

Finally, at the direction of the Project Advisory Committee, NEEP staff conducted some additional outreach to key stakeholders to address several “information gaps.” These included: current and anticipated M&V needs and interests of NY-ISO; expert advice from nationally recognized evaluators; priority EM&V Forum projects for Year 1 of the plan; and additional insights about potential conflict of interest and bias concerns regarding NEEP as the organization to house the Forum. The results from this additional outreach are reflected in the discussion of the Northeast EM&V Forum Plan.

The Northeast EM&V Forum Three-Year Plan

The second stage of this project was for NEEP to develop a multi-year EM&V Forum development plan based on the findings from the NMR research and additional outreach by NEEP to address the identified information gaps. A draft development plan was reviewed and informed by the project Advisory Committee and NEEP's Board of Directors in April 2008. In late April 2008, NEEP issued the Northeast EM&V Forum Three-Year Plan ("Forum Plan") (Coakley, Michals and Titus, 2008).

The Forum Plan covers the period 2009-2011, with an initial start-up period July-December 2008. Its key elements are:

- 1) customers and value proposition;
- 2) functions, services and projects;
- 3) governance and operational structure;
- 4) three-year agenda; and
- 5) budget and revenue plan.

Forum Customers and Value Proposition

The EM&V Forum customers and audiences will likely include:

- a. State policymakers and regional organizations: energy and environmental regulators, and associated regional organizations³
- b. Demand-side resource program administrators: gas and electric distribution companies, state agencies and authorities, third party program administrators, and program contractors
- c. Merchant demand-side resource providers and practitioners: energy efficiency and demand response providers, building owners and managers
- d. Independent System Operators and Regional Transmission Organizations: NY-ISO, ISO New England, and PJM
- e. Federal Agencies: US Environmental Protection Agency, US Department of Energy, Federal Energy Regulatory Commission (FERC)

The extent to which these different types of customers and audiences will be served by the Forum will clearly vary depending on their priority needs, and how the Forum is funded.

The value proposition of the EM&V Forum is, as discussed earlier, to support the successful implementation and evaluation of state and regional policies that promote demand-side resources. More specifically, the EM&V Forum's objectives are to:

³ These regional organizations include, among others, the Northeast State for Coordinated Air Use Management (NESCAUM), the New England Conference of Public Utility Commissions (NECPUC), the New England Governors' Council (NEGC), the Mid-Atlantic Conference of Regulatory Utilities Commissioners (MACRUC), the Mid-Atlantic Demand Resources Initiative (MADRI), and the New England States Committee on Electricity (in formation).

1. *Increase the credibility of demand resources* to support procurement policies, the participation in wholesale capacity markets (and reinvestment of FCM revenues back into programs), and the allocation of RGGI allowance proceeds to demand resources, and so on, by providing: a) greater consistency of savings values for similar measures and programs; b) increased transparency of and accessibility to EM&V protocols and inputs; and c) a direct link between energy and air regulator estimates of savings, cost and emission impacts.
2. *Reduce evaluation and other research costs* by leveraging funds across a range of interested parties through coordinated research and analysis that spends research and evaluation budgets more efficiently. Currently, Northeast states spend nearly \$14 million a year on research and evaluation with many studies delayed or not undertaken due to lack of resources. Coordination reduces the cost to individual states of studies they would have undertake otherwise, and in some cases offers opportunities for more robust results (e.g., through larger sample sizes).
3. *Increase the participation in demand-side resource markets* by having one set of regionally accepted protocols across the Northeast region to measure, verify, track and report impacts which will minimize confusion for and reduce barriers for the growing market of demand-side resource providers.
4. *Improve state and regional demand-side resource and energy planning and implementation* by having readily available and consistent inputs, protocols and reporting format and tools. This will simplify planning and reporting processes, and allow for comparative analyses across the region to assess the effectiveness of various policies and their implementation.
5. *Inform the likely development of national standards and protocols* for demand side-side resources. The FERC is encouraging the development of common M&V protocols to assess the impacts of demand-response programs for regional power pool planning and reliability. Supporting this effort is the North American Energy Standards Board (NAESB) current project to develop national M&V protocols for demand response, and possibly also model best practices for M&V for energy efficiency. The EM&V Forum activities will coordinate with and influence such efforts, and likely inform any future development of M&V protocols to support national or multi-national carbon markets.

These objectives will essentially guide the Forum's projects and activities in both the near- and long-term. In discussing and developing the value proposition with the project Advisory Committee and other key stakeholders, it was clear that the relative importance of the above objectives differed considerably from one stakeholder to another. For example, while one program administrator representative emphasized the importance that the Forum be able to demonstrate it would indeed reduce research and evaluation costs, another program administrator emphasized the role the EM&V Forum should serve in influencing future development of M&V protocols to support multi-national carbon markets. Overwhelmingly, emphasis on increasingly the credibility of energy and demand savings is considered paramount.

Forum Functions, Services and Projects

The overarching function provided by the EM&V Forum will be to serve as a regional framework to set EM&V priorities and make recommendations for protocol adoption. Within this framework, the specific EM&V Forum functions, services and projects include:

1. *EM&V Protocols Development*: including EM&V methods, energy and demand savings values and assumptions, guidelines for savings precision and accuracy, and scoping and developing a potential on-line protocols and savings assumption database.
2. *Coordinated EM&V Research and Evaluation*: including developing a regional, multi-year plan for priority joint research and evaluation needs and a glossary of common EM&V terms and definitions, conducting savings load shape studies, measure life and persistence studies, common measure cost input assumptions, market characterizations, free-ridership and spillover studies.
3. *Access to Regional-Level Demand-Side Resource Data*: providing on-line access to information about state and regional-level demand side resource data (e.g., studies, results and reports), including creating consistent reporting formats that will allow demand-side resource savings and other data to be reviewed, compared and aggregated across states.
4. *Visibility, Access and Technical Support for Forum Products and Results*. Making Forum products and results (e.g., studies, reports, protocols, recommendations, and references) visible and readily accessible to stakeholders. The Forum will also provide education on its activities and technical support for users of its materials.

Developing and implementing the EM&V Forum functions, services and projects (discussed in further detail below) will include considering and potentially building from models elsewhere in the country that provide greater consistency in M&V protocols, and hence reported energy savings data. In particular, this includes experience and resources used in California, such as the CALMAC on-line database of evaluation plans and studies, and the DEER deemed savings values on-line databases. Both are searchable tools that allow users to download studies and data and both are used by program administrators to inform program planning and the development of program savings. They were developed and are maintained by third-party contractors. See www.calmac.org and www.energy.ca.gov/deer.

A second model for the EM&V Forum to consider is the Northwest Regional Technical Forum (RTF). The NW RTF is administered by the Northwest Power and Conservation Council and serves a four-state region (Oregon, Washington, Idaho and Montana). The RTF provides a range of features including: an on-line database with downloadable default deemed savings values, inputs and formulas; M&V protocols to measure energy efficiency program savings (including guidelines for addressing custom projects); standardized calculation procedures; and reporting formats and module to allow users to upload savings data used for regionally resource planning purposes. See www.nwcouncil.org/energy/rtf/charter.htm

In addition to the above, the Consortium for Energy Efficiency's Evaluation Clearinghouse Database is a searchable database that includes a range of evaluation studies and

reports provided voluntarily by evaluators from around the country, and is hosted and maintained by CEE. See www.cee1.org/search/search.php.

Leveraging the experience and resources from the above models, and in some cases potentially coordinating with these resources in the long run, will be an important consideration by the Northeast EM&V Forum as it ultimately determines which projects and tools to develop to advance the Forum's goals and objectives.

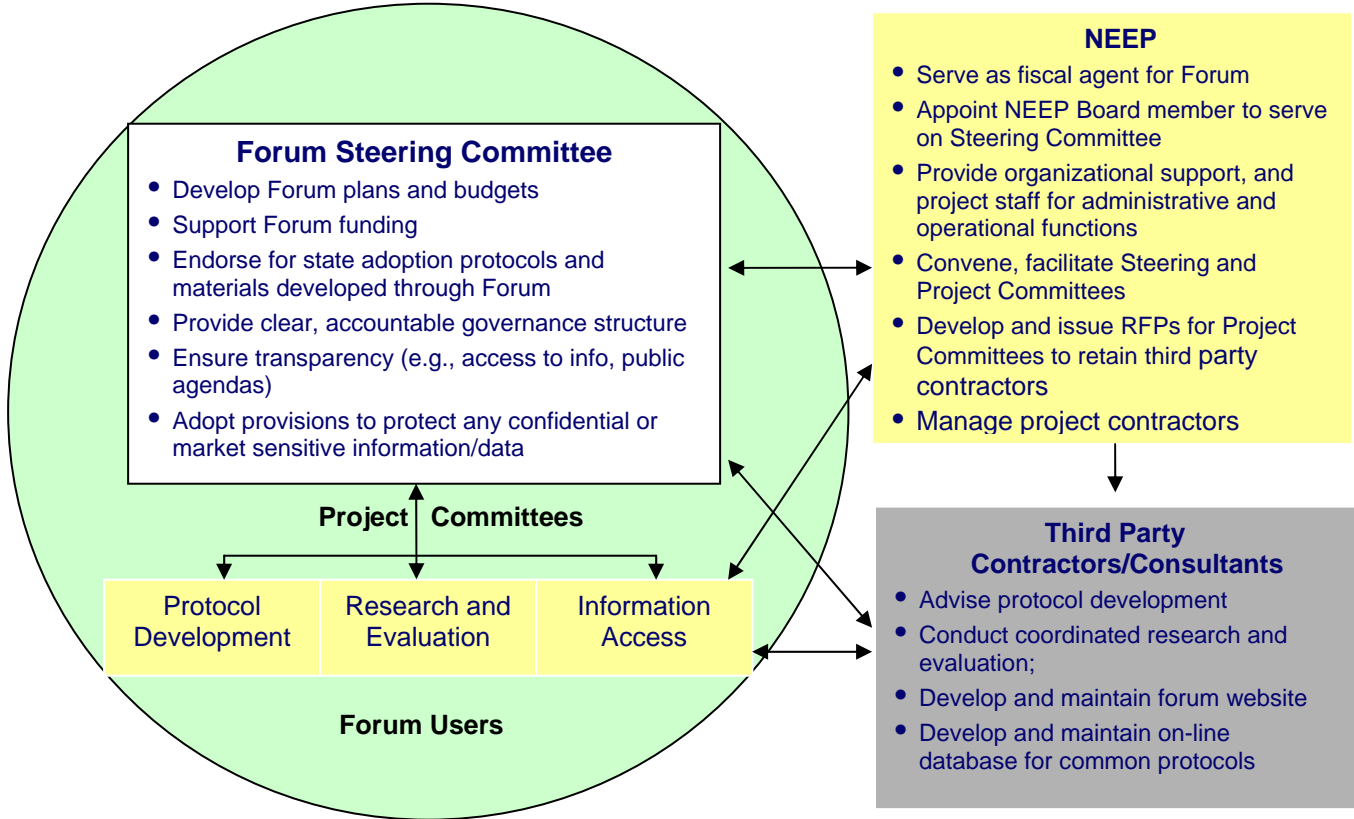
Forum Organizational and Governance Structure

The Forum's organizational structure consists of a Steering Committee, Project Committees, NEEP, third party contractors, and Forum customers and users. The Forum's governance and administrative structure is shown in Figure 1 below.

The Forum Steering Committee will include decision makers and leaders in providing demand-side resources in the region, and will be served by Project Committees and supported by NEEP, including representation of a NEEP Board member. The Project Committees will likely include program administrators, merchant providers, ISO and RTO staff, PUC staff, and subcommittees within each Project Committee will guide specific projects. It is likely, given limited staff resources, Committee members will serve on more than one project committee.

NEEP will lend its 501 c3 non-profit status to the Forum as organizational support. In addition, NEEP would facilitate revenue generation to support Forum activities including the preparation of grants and implementation of other funding mechanisms recommended by the Forum Steering Committee; retain the services of contractors and consultants selected with Project Committees' input to undertake research and development projects; coordinate Forum activities with relevant state, regional and national forums; disseminate and make Forum results, products and recommendations accessible to target audiences; and conduct outreach and education to support understanding and use of Forum results, materials and recommendations.

Figure 1. Northeast EM&V Forum Operational Structure



The composition of the Committees and the governance structure of the EM&V Forum will be intentionally designed to address concerns about any perception or possibility of actual conflict of interest associated with NEEP as the organizational home of the Forum. Furthermore, since NEEP staff are regional facilitators but do not directly implement or evaluate the energy efficiency programs that would be affected by the Forum, their responsibility is to remain unbiased in the process of protocol development.

Forum Three-year Agenda (Phases I-III)

The EM&V Forum Plan proposes a three-phase process that includes a six month start-up period from July-December 2008 (Phase I), a three-year Forum agenda for 2009-2011 (Phase II), and an evaluation to determine whether to continue the Forum or modify certain Forum elements in 2011 (Phase III).

Phase I: start-up activities (2008). To support Phase I start-up activities, NEEP is seeking “seed” funding from federal and foundation sources to undertake the following activities: 1) convene the Forum Steering Committee; 2) convene three Project Committees (Protocols Development, Research and Evaluation, and Information Access Project Committees); 3) establish the Forum’s governance and operational structure including setting guidelines

regarding confidentiality and public availability of Forum meetings, processes and materials; 4) establish initial project staffing and operational structure (Project Director, Technical Manager, Administrative Support, office set-up); 5) adopt a Steering Committee plan that includes a final agenda, budget and revenue plan for 2009 as the first year of operation; 6) secure funding commitments for 2009 operations; and 7) lay groundwork to begin work for 2009 projects including finalizing a multi-year joint research and evaluation plan to refine priority projects for 2009, and developing work scopes for third party contracted projects. NEEP is currently facilitating a process with New England, New York and New Jersey evaluators to identify priority regional research and evaluation activities, and this on-going dialog is expected to feed into the Forum's activities as part of the Research and Evaluation Committee

Phase II: forum implementation (2009-2011). In Phase II of the Forum's activities, the initial scope will focus on energy efficiency (electric and natural gas) and demand response measures, with consideration of expanding to other demand-side resources in later years. The timing of expanding the Forum's scope will be determined by the Steering Committee, and may evolve more quickly or slowly depending on regional need, interest and funding.

Important to the success of the Forum in the first year is undertaking projects and activities that are top priority for the region. These include, as identified through the NMR scoping study and subsequent input from key stakeholders through NEEP outreach efforts, the projects identified in Table 1 below.

A number of projects will begin in 2009 as an initial phase or scope, followed by subsequent research or development in 2010 and thereafter, based on project outcomes in 2009. For example, in the case of protocol development, an initial survey of existing electric energy efficiency savings assumption values (deemed values), algorithms and input assumptions across states will be conducted to serve as basis for commons savings assumption protocol development in 2010. Similarly, a regional EM&V protocols database scoping project may be conducted in 2009 which, based on its results and recommendation from the Project Committee to the Steering Committee, will ultimately guide the next phase of this project (i.e., whether or not to develop an on-line savings database). In the case of coordinated research and evaluation activities, certain projects like load shape analysis and measure life/persistence studies will likely be phased to address first, and then second priority measures given the substantial cost and effort involved in conducting primary research.

Table 1. 2009 Northeast EM&V Forum Agenda

Steering Committee
Steering 1 – Direct and review Project Committee work products (e.g., definitions, protocols, research results and recommendations, public forum, website).
Steering 2 – Endorse and recommend first set of regional definitions and protocols for state adoption.
Steering 3 – Implement guidelines regarding confidentiality and public availability of Forum materials
Steering 4 – Adopt 2009 Project Priorities and Budget.
A. Protocols Project Committee: Develop common protocols and/or guidelines for estimating and reporting savings, costs and emission data
Top Priority Projects
A1. Develop common protocols/guidelines for EM&V methods.
A2. Survey and compare existing electric energy efficiency savings assumption values, algorithms and input assumptions across states to identify priority areas for common assumption development.
A3. Scope development of on-line common savings/assumptions and reporting database.
B. Research & Evaluation Project Committee: Coordinate regional R&E activities to support development of common savings assumptions
Top Priority Projects
B1. Update regional 3-yr coordinated research and evaluation plan (annual update).
B2. Develop glossary of common EM&V terms and definitions.
B3. Savings load shape study (Phase I). Primary and secondary research to create representative load-shapes and coincidence (based on scoping study to be conducted in 2008 to determine availability and appropriateness of secondary load-shape data).
B4. Commercial Lighting Measure Life Study. Develop common assumptions including persistence.
Other Possible Projects: (estimated costs not included in Forum budget)
B5. Free-ridership and spillover approaches project (Phase I). May be a national effort.
B6. Common Measure Cost Assumptions study – determine/update common cost inputs for key selected measures.
B7. Equipment Metering Standards – develop and update list of meters compliant with demand-side resource programs in the Northeast (e.g., extension of 2008 New England states metering project).
B8. Commercial Program Planning (Phase I) - Complete market characterization/analysis for selected cases.
C. Information Access Committee: Provide access to EM&V data and protocols, education on Forum topics, and technical support
C1. Plan and hold Annual Regional EM&V Public Forum open to all interested parties to provide overview, status and developments of EMV Forum. <i>NEEP staff + logistics contractor</i>
C2. Guide development of Forum website to post, update and maintain evaluation and research studies and other public data (or link to existing public websites).
C3. Provide public presentations and educational workshops on Forum projects and results.
C4. Guide media outreach and development and distribution of two Forum electronic newsletters.
C5. Provide technical support on user interface with Forum on-line resources etc.

Phase III: forum evaluation (2011). Finally, Phase III will involve an evaluation and decision process to assess whether to continue the Forum, and if so, determine what modifications of certain Forum elements may be needed. The EM&V Forum Plan proposes process by which in 2011 the Steering Committee would evaluate the Forum relative to the goals and objectives, including an assessment of key accomplishments.

Forum Budget and Revenue Plan

The proposed EM&V Forum budget is \$1.5 million in 2009, increasing to \$1.8 million in 2011, for a total of \$5.1 million over the three year period. Of this amount, \$3.5 million would support third party contracted projects, with the balance for operational costs to facilitate the Steering and Project Committees, manage contractors, establish and manage the Forum website, hold an annual regional workshop and conduct other strategic outreach.

The Forum will be funded by participating states on an annual basis to leverage federal and foundation funding targeted to operations and Forum outreach with supplemental funding from Forum subscribers and user fees. With support from state energy and environmental policymakers, NEEP will seek initial 2008 start-up funding from foundation and federal grants in the amount of \$250,000.

To put the Forum budget in perspective, ratepayer-funded programs implemented in New York, New England, and New Jersey in 2007 spent roughly \$14 million on evaluation and M&V. The proposed portion of Forum revenues to be provided by the states would represent about 10% of current evaluation budgets, with the value proposition that the Forum projects would supplant and/or complement state research and evaluation activities to reduce individual state costs by leveraging dollars across a broader group of stakeholders.

Conclusion and Next Steps

NEEP's research found strong support in the Northeast for the development of consistent regional EM&V protocols and related research to support the ramp-up of demand-side resources to serve climate change mitigation, expanding participation in wholesale electricity markets, and other urgent energy and environmental policies. With the input of a regional project Advisory Committee, the Northeast EM&V Forum is a practical and responsive vehicle to bring states together to meet that need and provide near-term results. Many states and stakeholders believe the need is urgent and encourage NEEP to undertake this project as soon as possible.

With its Board's support, NEEP is currently moving forward to seek funding for start-up activities from various foundations and federal grants. It is also building necessary support from key stakeholders by seeking endorsements from key organizations. This includes the New England Conference of Public Utilities Commissioners (NECPUC), which is currently considering a new resolution to support the Northeast EM&V Forum through staff participation and funding resources. NEEP will also be meeting with equivalent organizations in the mid-Atlantic region, as well as with individual state utility and air regulatory commissions and other key stakeholders.

Several challenges remain to implementing the Forum. The primary one will be to secure the needed operational funding (starting in 2009) from the largest states. If, as provided as an example in the Forum Plan, the Forum budget is allocated across Northeast states according to MWh sales, over 50% of the costs would be allocated to New York, New Jersey and Maryland (the balance to New England and Delaware). Decisions and regional agreements will be needed about how the costs ultimately get allocated. Experience suggests that this will be a fluid, challenging and interesting process.

A second challenge will be for NEEP to convene and facilitate the Forum committees in an efficient, timely and effective manner to ensure success in the Forum's first year. While the New England states have worked closely together in the past years on various coordinated research and evaluation efforts (and in some cases with New York and New Jersey), there has been little, if any, collaboration across the broader Northeast region.

But there are important and encouraging reasons for optimism that the proposed Forum can be successfully implemented. First, funding for energy efficiency programs in the region currently exceeds \$750 million per year, and could potentially increase to over \$1.5 billion by 2011 with the expected additional revenues from the allocation of proceeds from RGGI carbon allowance sales to energy efficiency; capacity market payments from the delivery of demand-side resources to meet peak electric system needs; and state least cost energy procurement requirements that greatly expand gas and electric energy efficiency program activities. With these additional funds, there will be greater support for increased evaluation and M&V activities, which currently represent 2-5% of program budgets.

A second reason for optimism is the successful experience of the New England states working together to inform the development of the New England ISO's FCM M&V Manual, which has built momentum for EM&V coordination and is already expanding to include other Northeast states.

Finally, the EM&V Forum has the benefit of building from successful M&V protocols experience and resources developed in the region as well as elsewhere in the country, including in California and the Northwest. These models will be carefully considered as the Northeast moves forward to create a common currency for energy efficiency and other demand resources to support the increasing reliance on demand resources to meet important public policies.

References

Michals, J. and E. Titus. 2006. "The Need for and Approach to Common Protocols to Measure, Track, and Report Energy Efficiency Savings in the Northeast." In Proceedings of the ACEEE 2006 Summer Study on Energy Efficiency in Buildings, 8:179-190. Washington, D.C.: American Council for an Energy-Efficient Economy. A copy of this report is available at http://www.neep.org/files/Protocols_report.pdf

ISO New England Inc. 2007. ISO New England Measurement and Verification of Demand Reduction Value from Demand Resources Manual M-MVDR. See http://www.iso-ne.com/rules_proceeds/isonel_mnls/index.html.

Nexus Market Research, 2007, in association with Dorothy Conant. "Analysis of Confidential Interviews on the Feasibility of a Regional NEEP EM&V Center", February 21, 2008.

http://www.neep.org/policy_and_outreach/EMV.html.

Coakley, Michals and Titus, 2008. "Northeast Evaluation, Measurement and Verification Forum for Demand Resources – Three Year Plan", April 28, 2008. Plan can be downloaded at http://www.neep.org/policy_and_outreach/EMV.html