

# Northeast Energy Efficiency Partnerships, Inc.



## **Northeast Evaluation, Measurement and Verification Forum** For Demand-Side Resources

**Three-Year Plan**

**April 28, 2008**

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

**Funding by:**

**The US EPA Climate Protection Division  
The Energy Foundation  
The New York State Energy Research and Development Authority  
Conservation Services Group**

## Table of Contents

I. Executive Summary .....	3
II. Statement of Purpose .....	4
III. Evolution of a Northeast EM&V Forum Concept .....	5
IV. Forum Customers and Value Proposition .....	6
A. Customers (Users and Audience).....	6
B. The Value Proposition .....	7
C. Building on Experience from Other States and Regions .....	8
V. Forum Goals, Function and Structure.....	10
A. Forum Goals and Objectives.....	10
B. Forum Functions, Services and Products.....	11
C. Forum Governance, Organizational and Administrative Structure .....	14
VI. Proposed Three-Year Forum Agenda .....	16
A. Phase I: Six-Month Start-Up (July – December 2008).....	17
B. Phase II: Three-Year Forum Scope, Projects and Activities (2009 – 2011).....	17
C. Phase III: Evaluation/Decision to Continue/Modify Forum Elements .....	21
D. Budget and Revenue Plan .....	23
VII. Conclusion and Next Steps .....	27
Appendix A - Northeast EM&V Forum Project Advisory Committee .....	28
Appendix B - Supporting Documents and Additional Input Informing Forum Plan .....	29

### Authors' Acknowledgement

We thank the project funders - The Energy Foundation, US EPA, NYSERDA and Conservation Services Group - for their vision and support that made this project possible. We, likewise, thank the Project Advisory Committee participants for their time and thoughtful attention to guide the research that led to the proposal contained herein, and for their input and feedback that shaped the specifics of the proposed Northeast EM&V Forum. Finally, we thank Nexus Market Research for their professional services to conduct the stakeholder and interviews that informed the development of this overall proposal.

## I. Executive Summary

In the context of the current rapid expansion of energy efficiency and demand-side programs to meet Northeast state and regional climate change mitigation goals and address other energy and environmental policies, Northeast Energy Efficiency Partnerships (“NEEP”) proposes to create a Northeast Evaluation, Measurement and Verification Forum (the “Forum”) to serve Northeast states and interested stakeholders to develop and use common regional protocols<sup>1</sup> to estimate, evaluate, track and report energy-related savings, costs and emission reductions from demand-side resources. To support the successful expansion of demand-side resource policies and programs, the Forum will:

- Provide for consistent, credible and accessible savings data from demand resources to support state and regional energy, climate change and other environmental policy goals,
- Reduce the cost of evaluation, measurement and verification (EM&V) activities by leveraging resources across the region for studies of common interest, and
- Remove barriers to the participation of demand-side resources in regional markets by establishing regional protocols to be adopted by the states.

The Plan covers a three-year plan period between 2009 and 2011, with a six-month start-up period beginning in July 2008.

The Forum will serve policymakers concerned with the rapid advancement of energy efficiency as a cost-effective resource in the Northeast and related stakeholders (i.e., utilities, efficiency program administrators, service and technology providers, evaluators, etc). The Forum’s agenda and recommendations will be directed by a regionally representative *Forum Steering Committee* of stakeholders. Specific Forum projects will be undertaken with the input and guidance of topical *Project Committees* to carry out the research, development and outreach agenda set by the Steering Committee. The Forum will be a project under the 501(c)3 tax exempt status of NEEP. NEEP staff will serve as facilitator, convener, project manager and administrator for the Forum and its activities.

Initially, the Forum will cover the New England states, New York, New Jersey, Maryland, the District of Columbia and Delaware. The Forum will serve five core functions:

- 1) Provide a framework for multi-state agreement on consistent EM&V protocols;
- 2) Develop common/consistent protocols;
- 3) Coordinate multi-state research and evaluation;
- 4) Aggregate and provide access to state and regional level demand-side resource data, and
- 5) Provide access to, and visibility and technical support for Forum products and results.

Initially, the Forum will focus on energy efficiency (electric and natural gas), and demand response resources, later extending to address additional demand-side resources (e.g., combined heat and power, building integrated renewable resources).

---

<sup>1</sup> Protocols” 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.

Materials resulting from Forum projects and activities (e.g., protocols, tools, studies, reports and recommendations) will be public and accessible through electronic media (e.g., website, electronic newsletter), an annual regional meeting, and through other public presentations. The Forum’s participants will be served by a dedicated public website housing Forum materials, as well as an interactive database of common savings assumptions and reporting formats. The Forum website will also support the interactive work of the Steering and Project Committees. To support full regional participation, NEEP will engage and use facilities that support virtual meetings so that participants can effectively participate in Forum projects from remote locations.

The Forum budget will include a \$1 million to \$1.3 million annual budget for regional EM&V protocol development and related research in addition to \$450,000 to \$500,000 for operational costs to facilitate the 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 the 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 start-up funding from foundation and federal grants. The initial proposed three-year budget includes:

<b>Northeast EM&amp;V Forum Start-Up and Three-Year Budget and Revenue Plan</b>					
<b>Expenses</b>	<b>Start-up</b>	<b>Year 2009</b>	<b>Year 2010</b>	<b>Year 2011</b>	<b>Total</b>
Operational/Outreach	\$250,000	\$445,000	\$457,000	\$496,000	\$1,648,000
R&D Contractor	\$0	\$1,000,000	\$1,200,000	\$1,300,000	\$3,500,000
<b>Total Expenses</b>	<b>\$250,000</b>	<b>\$1,445,000</b>	<b>\$1,657,000</b>	<b>\$1,796,000</b>	<b>\$5,148,000</b>
<b>Revenues</b>					
Northeast States	\$0	\$1,195,000	\$1,407,000	\$1,546,000	\$4,148,000
Grants/subscriptions	\$250,000	\$250,000	\$250,000	\$250,000	\$1,000,000
<b>Total Revenues</b>	<b>\$250,000</b>	<b>\$1,445,000</b>	<b>\$1,657,000</b>	<b>\$1,796,000</b>	<b>\$5,148,000</b>

## II. Statement of Purpose

The purpose of the Northeast EM&V Forum is to support the development and use of common and/or consistent protocols to measure, verify, track and report the energy and demand savings, costs and emission impacts of energy efficiency and other demand-side resources implemented pursuant to state and regional energy and environmental policies and markets in the Northeast.<sup>2</sup>

The Forum’s overarching goal is to support the role and credibility of demand-side resources in current and emerging energy and environmental policies and markets. Specifically, the Forum will support:

<sup>2</sup> For the purposes of this Forum, the Northeast is defined as the New England states, New York, New Jersey, Delaware, the District of Columbia and Maryland.

- Participation and credibility of demand-side resources in the New England Forward Capacity Market (FCM) with potential participation in other capacity markets (PJM's Reliability Pricing Model and NY ISO's wholesale market) as they evolve;
- Assessments of demand-side resource potential contributions and actual impacts to meet environmental goals including:
  - Carbon allowance markets, including the Regional Greenhouse Gas Initiative and potential national and multi-national markets<sup>3</sup>;
  - State and regional climate change action plan goals;
  - State and regional ozone attainment program goals;
- Consistency and transparency across states in demand-side resource planning and procurement (e.g., ratepayer funded demand-side resource programs) and related state energy efficiency and demand-side resource procurement policies and programs.

### III. Evolution of a Northeast EM&V Forum Concept

More than ever, Northeast states are relying on investments in building sector demand side resources<sup>4</sup> 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 emission reductions, from these resources.

In response to this growing need, Northeast Energy Efficiency Partnerships (NEEP) conducted a study in early 2006, *The Need for and Approaches to Developing Common Protocols to Measure, Verify and Report Energy Efficiency Savings in the Northeast*, which identified important differences in EM&V practices, definitions and savings assumptions for electric energy efficiency resources across the region.<sup>5</sup>

Shortly after NEEP's 2006 study was released, ISO-New England embarked on developing the market rules for its wholesale Forward Capacity Market (FCM), including the development of M&V standards for demand side resources. NEEP responded to the New England Public Utilities Conference (NECPUC) Resolution *Supporting the Development of Common Protocols to Measure, Verify and Report Energy Efficiency Savings in New England*<sup>6</sup> by convening the

---

<sup>3</sup> While RGGI does not include off sets for electric energy efficiency savings (as it does for natural gas, and other fuels), state decisions to allocate a large percentage, if not all, of allowance proceeds to electric efficiency program investments will benefit from the regional Forum in that the Forum will ensure consistent tracking of associated electricity savings and their impact and cost to reduce carbon emissions to help meet the regional carbon cap. Importantly, while there are currently no tradable credits for electric efficiency savings under RGGI, future national and multi-national models may include electric efficiency and/or a white tag/emission credit trading system in which common M&V protocols will be needed.

<sup>4</sup> Specifically electric and natural gas energy efficiency, demand response, combined heat power, and integrated building renewables that reduce energy demand and use in homes, buildings and industry.

<sup>5</sup> A copy of this report is available at [http://www.neep.org/files/Protocols\\_report.pdf](http://www.neep.org/files/Protocols_report.pdf)

<sup>6</sup> June 2006. The NECPUC resolution resolved that "the NECPUC commits its staff energy policy group to the development of common protocols to measure, verify and report energy efficiency savings derived from the publicly

New England State Program Working Group (SPWG). The SPWG is represented by energy regulators, energy efficiency program administrators and M&V experts, to: a) provide coordinated input into ISO-New England's development of the FCM Measurement and Verification (M&V) Manual for demand resources; b) facilitate coordinated research and evaluation studies to support FCM M&V Plans; and c) convene a forum for regular information exchange on a range of M&V activities. This effort was critical to informing the development of protocols for the measurement and verification of peak capacity savings from demand resources supported by New England states and adopted by ISO New England in its Forward Capacity Market Rules approved by the U.S. Federal Energy Regulatory Commission (FERC).

Building from this experience, NEEP launched a project in Fall 2007 to explore the feasibility of developing a regional resource to develop and support the implementation of consistent protocols for the evaluation, measurement, verification and reporting of energy and capacity savings across the Northeast region.<sup>7</sup> Guided by an Advisory Committee of stakeholders from across the region<sup>8</sup>, NEEP contracted with Nexus Market Research (NMR) to conduct in-depth, confidential stakeholder interviews to test concepts regarding the scope and functions of a regional resource to support the development and use of EM&V protocols. Based on that research, and supplemented by additional stakeholder outreach to inform priority projects, NEEP prepared this three-year plan for a regional Forum. The Forum involves a multi-state process to address the broader range of public policy goals across the Northeast i.e., New York, New Jersey and other mid-Atlantic states which are adopting energy and environmental policies that call for cost-effective demand-side resource investments to reduce the inefficient use of electricity, gas and heating oil. Appendix B includes links to NMR Feasibility Study and supplementary input from key stakeholders.

## **IV. Forum Customers and Value Proposition**

### ***A. Customers (Users and Audience)***

The specific targeted audiences include:

#### **1. State Policymakers and Associated Regional Organizations**

This group includes energy and environmental regulators concerned with the role of demand-side resources to provide least-cost energy resources including power system reliability, and cost-effective air emission reductions associated with building sector energy use. Associated with this primary audience is the range of regional organizations that assist these states regarding energy and environmental policy development and implementation involving demand-side resources (e.g., the Conference of Northeast Governors (CONEG), the Northeast States for

---

funded energy efficiency programs operated by the various program implementation organizations operating within New England whose expenditures and accomplishments are subject to utility commission review.”

<sup>7</sup> This project is funded by the US EPA, the Energy Foundation, the New York State Energy Research and Development Authority, and Conservation Services Group.

<sup>8</sup> The Advisory Committee includes 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, independent system operators, regional air organizations, and national energy service company associations. See list of members in Appendix A.

Coordinated Air Use Management (NESCAUM), the New England Conference of Public Utility Commissioners (NECPUC), the New England Governor's Conference (NEGEC), the Mid-Atlantic Conference of Public Utility Commissioners, the New England States Committee on Electricity (NESCOE), the Mid-Atlantic Distributed Resources Initiative (MADRI), etc.).

## **2. Demand-Side Resource Program Administrators**

These include distribution utilities and state agencies and authorities, including any supporting independent contractors (e.g., energy service companies) responsible for the development, performance, evaluation and reporting of publicly and ratepayer-funded demand-side resource programs and policies.

## **3. Merchant Demand-Side Resource Providers and Practitioners**

These include energy efficiency and demand response providers that do not participate or work through state funded demand resource programs.

## **4. Independent System Operators/Regional Transmission Owners**

This includes the electric grid system managers regulated by FERC to deliver reliable and economic electricity in New England, New York and the mid-Atlantic region (i.e., ISO New England, ISO New York and PJM).

## **5. Federal Agencies**

This includes those federal agencies that develop and implement policies that promote or regulate demand-side resources to meet federal energy and environmental policy goals including FERC, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE).

### ***B. The Value Proposition***

The critical value of the Forum is to support the successful implementation and evaluation of state and regional policies that promote demand-side resources to meet public policy goals for energy, the environment and the economy. Key to this is standardized and credible EM&V that is accessible to multiple parties. Specifically, the Forum will:

- **Increase the credibility of demand resources** as states invest more dollars into cost-effective demand resources as a top strategy to meet energy, environmental and economic goals, including procurement policies, participating in wholesale capacity markets (and reinvestment of FCM revenues back into programs), allocating RGGI allowance proceeds to demand resources, and so on. The Forum would increase credibility of energy and demand savings by providing: a) greater consistency of savings values for similar measures and programs; b) increased transparency and accessibility of EM&V protocols and inputs; and c) a direct link/bridge between energy and air regulator estimates of savings, cost and emission impacts.
- **Reduce evaluation and other research costs** by leveraging funds across a range of interested parties through collaborative research and analysis that spends research and evaluation budgets more efficiently. Successful demand-side resource programs and policies require studies that provide input data to inform estimates of energy savings (e.g., market characterizations and baseline assumptions regarding current energy usage,

load shapes that characterize the timing of energy usage, field-based assessments of demand-side program impacts). Currently, Northeast states spend nearly \$14 million a year on such research<sup>9</sup> with many studies delayed due to lack of resources. Over the years, and currently through the New England SPWG, NEEP has assisted states to define and jointly sponsor needed studies. This collaboration reduces the cost to individual states of studies they would have undertake otherwise, and in some cases offers opportunities for more robust or insightful results (e.g., through larger sample sizes).

- **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.
- **Improve state, regional and local demand-side resource and energy planning, implementation and evaluation** by having readily available and consistent inputs, protocols and reporting format and tools. Readily available and regionally vetted data and requirements for demand-side resources will simplify planning and reporting processes, and allow for comparative analyses across the region to assess the effectiveness of various policies and their implementation.
- **Inform the likely development of national standards and protocols** for demand side-side resources. FERC is encouraging the development of common M&V protocols to assess the impacts of demand-response for regional power pool planning and resource acquisition. Supporting this need is a project currently underway by the North American Energy Standards Board (NAESB) focusing on M&V protocols for wholesale and retail demand response. This process may also develop national model best practices for M&V for energy efficiency resources. The development of regional protocols for the Northeast will likely inform and may possibly influence such efforts. Additionally, anecdotal information suggests that stakeholders in California are interested in 1) observing the developments of a Northeast Forum, and 2) potential coordination on M&V in the future should national carbon policies be adopted.

Figure 1 illustrates how the Forum's coordinated research, development of consistent EM&V protocols and reporting formats will help implement energy and environmental policies that call for increased building energy efficiency.

### ***C. Building on Experience from Other States and Regions***

Growing interest in the concept of a Northeast EM&V Forum has largely pointed to 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:

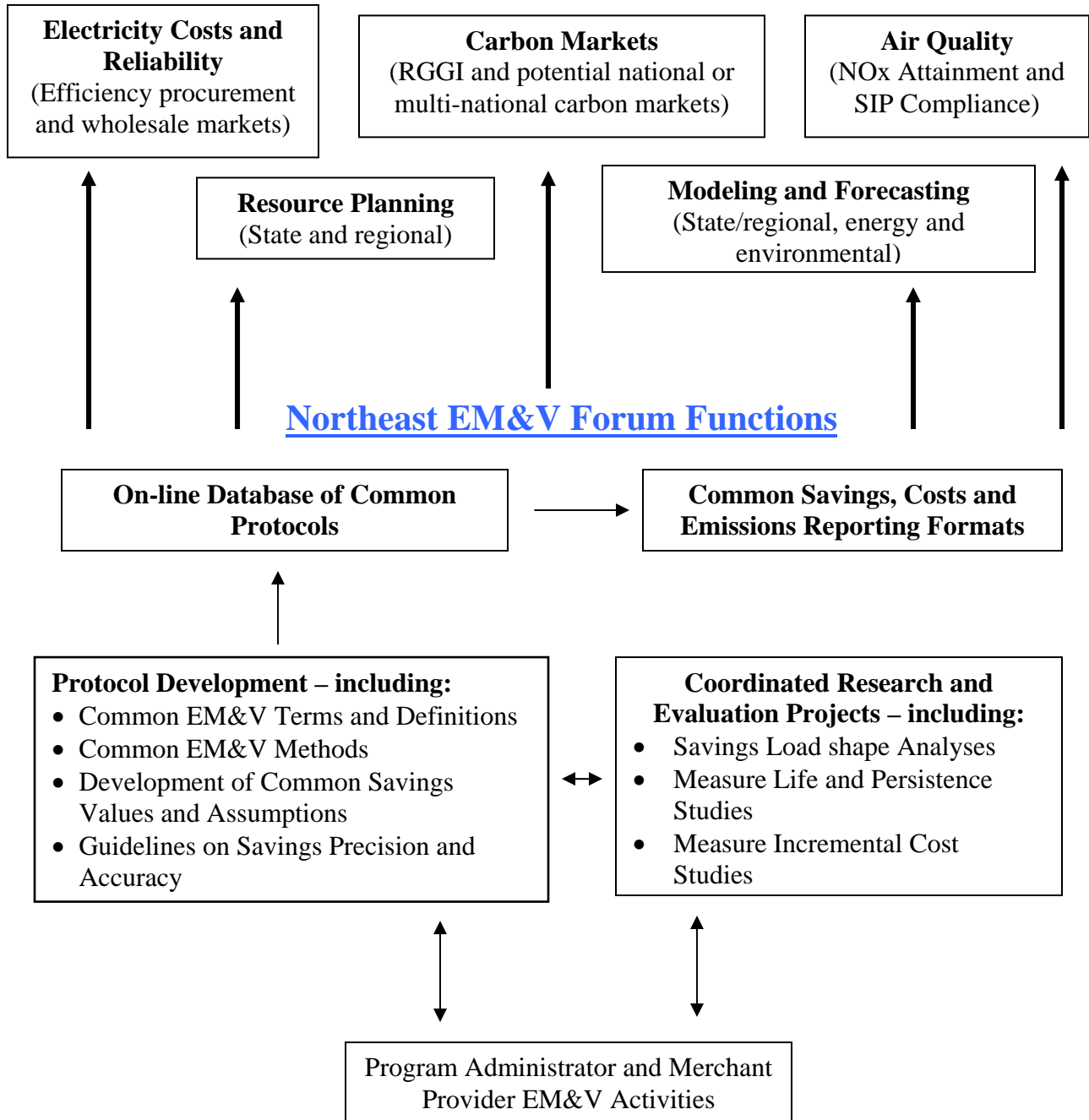
- *California CALMAC and DEER databases*: the California CALMAC on-line database for evaluation plans and studies, and the DEER deemed savings values on-line database are searchable tools that allow users to download studies and data. Both databases are used by program administrators to inform program planning and the development of program savings. The databases were developed and are maintained by third-party contractors. See [www.calmac.org](http://www.calmac.org) and [www.energy.ca.gov/deer](http://www.energy.ca.gov/deer).

---

<sup>9</sup> See Table 4.

**Figure 1 – Relationship of Northeast EM&V Forum to Demand-Side Resource Policies**

**Policies and Markets Served by the Northeast EM&V Forum**



*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](http://www.nwcouncil.org/energy/rtf/charter.htm)

- *Consortium for Energy Efficiency's Evaluation Clearinghouse Database:* This searchable database 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](http://www.cee1.org/search/search.php)

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

## V. Forum Goals, Function and Structure

The Forum is envisioned as an ongoing resource to serve the Northeast States. To establish the Forum to serve the multiple audiences described above, we propose an initial three-year plan with specific objectives, functions, services and projects.

### A. Forum Goals and Objectives

The overall goal of the Forum in its first three years is to provide outstanding value to Northeast states by successfully developing consistent regional EM&V protocols and completing needed regional research projects that increase the role and credibility of demand-side resources to meet state and federal energy, environmental and economic policy goals. To achieve that goal, the initial three-year objectives of the Forum include:

1. **Structure and Governance:** Establish and implement a functional governance and operating structure that engages the support and participation of energy and environmental policy leaders, demand-side program administrators and service providers from New England, New York and the Mid-Atlantic States.
2. **Projects:** Undertake and complete several major projects that provide:
  - a. Regional EM&V protocols that are broadly recommended by key stakeholders for state adoption and use.
  - b. Valuable data and information that support the development, implementation and evaluation of demand-side resource policies and programs to meet state and regional public policy goals.
3. **Visibility and Accessibility:** Make the projects and results of Forum activities visible, accessible to and useful for the target audiences across the region.

4. **Funding:** Establish an adequate and diversified funding base to support Forum operations and projects.
5. **Evaluate and Plan:** Assess the initial performance of the Forum and the need for it going forward, and, as appropriate, complete a multi-year strategic plan to provide high value to the region's policy makers and other target audiences beyond the initial three-years.

### **B. Forum Functions, Services and Products**

To meet the Forum goals and objectives, NEEP will implement the project to provide five main functions:

#### **1. Provide a Framework for Northeast States and Stakeholders to Agree on Common EM&V Protocols**

The development of common EM&V protocols to meet the needs of state energy and environmental policies requires a framework for stakeholders to work together to set priorities for and agree on protocols and definitions, as well as to undertake related coordinated research, and evaluation, and conduct outreach to support the widespread use and development of the regional protocols and related products.

**Services/Products:** The framework to reach agreement on protocols and set priorities for Forum activities is based on the formation of a *Forum Steering Committee* that is regionally representative and reflective of the range of perspectives of key stakeholders. The Forum Steering Committee will include decision makers and leaders in providing demand-side resources, and will be served by three Project Committees (described below) that include individuals experienced in demand-side resource planning, implementation and evaluation.

#### **2. Facilitate Development of Common EM&V Protocols and Guidelines**

A core function of the Forum is to build regional support for common EM&V protocols that support demand-side resource planning, implementation, tracking, evaluation and reporting to meet state and regional energy and environmental policy goals.

**Services/Products:** Common protocols and guidelines selected by the Forum Steering Committee for development will be prepared by a regionally representative *Protocols Project Committee* that will respond to drafts prepared by NEEP and/or third party contractors retained with Project Committee input and guidance. The development of common protocols and supporting tools will consider state, regional and national M&V protocols and tools. The resulting products will be presented in the form of technically supported documents recommended by the Project Committee for adoption by the Forum Steering Committee as best practices for states to follow. Examples of potential products include:

- EM&V methods protocols;
- Common energy and demand savings assumptions, including stipulated values for common measures, input assumptions (e.g., measure life/persistence), coincidence factors;
- Common assumptions online database;

- Common reporting format guidelines for savings data and associated cost and emission reductions;
- Savings precision and accuracy guidelines.

### **3. Facilitate Coordinated Research and Evaluation Activities**

The development and use of common EM&V protocols for demand-side resource planning, implementation, tracking and reporting requires research and evaluation to inform input assumptions, as well as to check results (e.g., to assess the accuracy of demand-side resource impacts and costs estimated through the use of common protocols). In many cases, regionally-coordinated research involving multiple states can provide cost-efficiencies as well as more robust results (e.g., through the use larger sample designs). In general, the Northeast region has had minimal resources for research and evaluation in recent years. In some cases, research and evaluation have involved regionally coordinated projects – many of them facilitated by NEEP. With increased priority and funding for demand-side resources, the need and resources for strategic research and evaluation will likely expand. To address this need the Forum will undertake and support coordinated research and evaluation projects based on priorities set by the Forum Steering Committee and informed by the Project Committees. In addition to a research agenda involving all participating states, the Forum may include coordination of multi-state projects that involve a subset of the region.

**Services/Products:** Research and evaluation projects will be selected by the Forum Steering Committee for development and will be undertaken through *Research and Evaluation Project Committee* that will recommend, scope and guide studies and materials prepared by NEEP staff (e.g., plans, draft requests for proposal) and/or by contractors retained with Project Committee input and guidance. The resulting products will be presented in the form of technically supported reports presented with recommendations from the Project Committee to the Forum Steering Committee. Examples of potential research and evaluation projects include:

- Common EM&V definitions and terms;
- Savings load shape analyses (e.g., to inform coincidence factors);
- Measure life and persistence studies;
- Spillover and free-ridership approaches;
- Common measure cost input assumptions;
- Market characterization studies.

### **4. Aggregate, Report and Provide Access to State and Regional-level Demand-Side Resource Data**

To support the development and implementation of state energy and environmental policies that promote or rely on demand-side resources, the Forum will provide ready access (e.g., web-based) to information about state and regional-level demand side resource data (e.g., studies, results and reports). In addition, the Forum will create consistent protocols and formats for data reporting that will allow demand-side resource information (e.g., savings, costs) to be reviewed, compared and aggregated across states. Where possible, and of value, the Forum will analyze state and regional-level data relative to public policy goals.

**Services/Products:** Priorities for the development of common protocols and guidelines to report data at the state and regional level will be selected by the Forum Steering Committee and

prepared by the *Protocols Project Committee*, which will respond to drafts prepared by NEEP and/or third party contractors with Project Committee input and guidance. This may include the development of a web-based resource with standard reporting formats, similar to that offered by the NW Regional Technical Forum (see Section IV C.).

In addition, as directed by the Steering Committee and guided by the *Research and Evaluation Project Committee*, NEEP will prepare for the Forum public reports based on the collection, aggregation and analysis of state and regional data relative to public policy goals. The development and use of consistent reporting protocols is essential to the creation of such reports. Protocols, guidelines and reports will be developed by NEEP and/or third-party contractors. Examples of potential work products include:

- Protocols and formats for reporting energy, capacity and cost impacts of demand-side resources;
- Development of web-based reporting database;
- Annual regional report of energy and demand savings, costs and emission impacts from public policy initiatives.

### **5. Provide Visibility, Public Access and Technical Support for Forum Products**

To support the development and implementation of state energy and environmental policies that promote or rely on demand-side resources, the Forum will make its products and results (e.g., studies, reports, protocols, recommendations, references, etc.) visible and readily accessible to stakeholders. This will require a dissemination process that uses multiple strategies. In addition, the Forum will provide education on its activities and technical support for users of its materials.

**Services/Products:** Priorities for and processes to disseminate and provide access to Forum plans and materials will be directed by the Forum Steering Committee based on the input and recommendations of a *Information Access Project Committee* staffed by NEEP and assisted by contractors as needed. Products associated with this function might include:

- Briefings and presentations to meetings of stakeholder groups regarding Forum goals, activities, results and services;
- An Annual Regional EM&V Public Meeting open to all interested parties to review and discuss Forum plans, projects, and results and their application across the region;
- A public website with access to Forum products evaluation and research studies and other publicly available data used as basis for common protocols (with links to other relevant public websites);
- A central web-based database of savings assumptions/stipulated values (based on development of common protocols) and supporting technical support;
- A web-based service to monitor and post information regarding state/regional policies and proceedings regarding the adoption and use of EM&V protocols and other products;
- A quarterly or bi-annual electronic newsletter that reports the status of Forum projects and activities and Committee membership as well as relevant national developments;

- Press releases regarding Forum projects and results.

Education and technical training elements of this function may include:

- Topical web-based courses and answers to frequently asked questions (FAQs);
- On-line service to ask questions, request assistance or provide feedback;
- Maintenance of a technical issues section of the Forum newsletter;
- Presentations and briefings at meetings and events of targeted audiences;
- Educational workshops;
- Surveys and reports regarding the use of and feedback regarding Forum products, processes and materials.

### ***C. Forum Governance, Organizational and Administrative Structure***

The Forum's organizational structure consists of a Steering Committee, Project Committees, NEEP, 3<sup>rd</sup> party contractors, and Forum customers/users. The Forum's governance and administrative structure is described below according to the respective roles of the Forum's players.

**1) Steering Committee:** 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. To support Forum activities, the Steering Committee will:

- Adopt an annual plan and budget, subject to NEEP Board approval, that sets priorities and schedules for Forum activities implemented with the input and guidance of the Project Committees;
- Meet on a regular schedule (e.g., quarterly) to act on Forum materials and recommendations;
- Establish a process for reaching agreement on Forum recommendations to states and stakeholders, and provide a clear, accountable governance structure;
- Publicly support the Forum as a regional resource to assist implementation of demand-side resource policies and programs and build support for Forum funding;
- Endorse for state adoption protocols and materials developed through Forum
- Encourage transparency (e.g., access to info, public agendas);
- Adopt provisions to protect confidential or market sensitive information.

**2) Project Committees:** The Project Committees will include individuals experienced in demand-side resource planning, implementation and evaluation. To support Forum activities, the Project Committees will:

- Guide and inform priority Forum projects and make recommendations to the Steering Committee;
- Provide input on draft project reports/studies prepared by NEEP and/or third party contractors;

- Bring recommendations to Steering Committee for adoption/support of common regional protocols;
- Participate in regular Project Committee meetings/conf calls (e.g., monthly).

**3) NEEP's Role:** NEEP will serve the Forum by providing professional staff to:

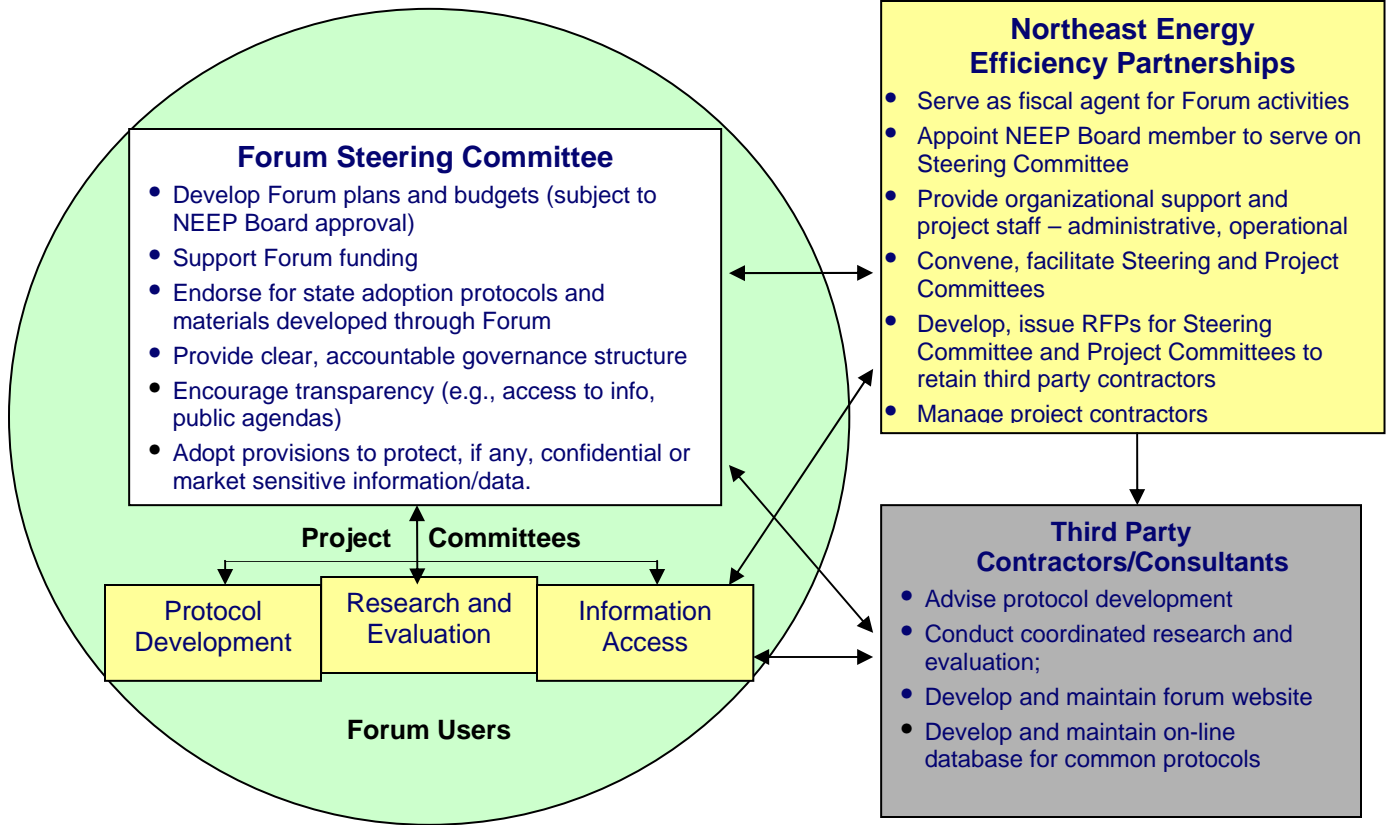
- Convene and facilitate the Steering Committee and the Project Committees;
- Provide technical and administrative support for Forum projects including planning and overall project management for selected priority projects;
- Serve as fiscal manager for the Forum;
- Facilitate revenue generation to support 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;
- Conduct outreach and education to support understanding and use of Forum results, materials and recommendations

**4) Third Party Contractors:** Independent third-party contractors will be retained through competitive RFP processes to support the Forum's projects, will report to the Project Committee(s) and be managed by NEEP. To support the Forum's activities, the contractors will:

- Conduct research to inform, and advise on, protocol development;
- Conduct coordinated research and evaluation projects;
- Develop and maintain Forum website;
- Develop and maintain on-line database for common protocols;
- Provide technical support for Forum on-line resources.

Figure 2 summarizes the Forum structure and roles of the respective players.

**Figure 2 - Northeast EM&V Forum Operational Structure**



## VI. Proposed Three-Year Forum Agenda

In delivering value to Northeast states and the Forum’s stakeholders, it is necessary and important that Forum activities and products build a track record of positive results. With the input of Project Advisory Committee and other stakeholders (see Appendix A), NEEP identified the specific projects and activities for the initial three years to meet the Forum’s objectives. In establishing the Forum, the Steering Committee will review this agenda and, with input from the Project Committees, set priorities to direct the Forum activities with a particular focus on the first year plan and budget.

Assuming that funding can be secured, the Forum will begin with an initial formative six-month start-up period to establish the Forum structure, agenda, budget and staffing, followed by a three-year plan with an evolving scope as directed by the Forum Steering Committee. At the conclusion of the first three-years, the Forum Steering Committee will assess the value and need for the Forum going forward, and set the future direction.

In summary, we recommend that the Forum proceed through a three-phase process that includes:

- |           |   |
|-----------|---|
| Phase I   | Six Month Start-up                                    |
| Phase II  | Three-Year Forum Plan                                 |
| Phase III | Evaluation/Decision to Continue/Modify Forum elements |

**A. Phase I: Six-Month Start-Up (July – December 2008)**

To establish the Forum, NEEP will seek the support of Northeast states and key stakeholders, as well as “seed” funding from federal and foundation sources to undertake a six-month start-up project beginning in July 2008 with the following objectives:

1. Convene the Forum Steering Committee;
2. Convene three Project Committees:
  - a. Regional EM&V Protocols Project Committee
  - b. Research and Evaluation Project Committee
  - c. Information Access Project Committee
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 an agenda, budget and revenue plan for 2009 as the first year of operation;
6. Secure funding commitments for 2009 operations;
7. Lay groundwork to begin work for 2009 projects including developing a multi-year joint research and evaluation plan to refine priority projects for 2009, and developing work scopes for contracted assistance.<sup>10</sup>

**B. Phase II: Three-Year Forum Scope, Projects and Activities (2009 – 2011)**

To begin, the Forum’s initial scope will focus on energy efficiency (electric and natural gas) and demand response measures/technologies, with consideration of expanding to other demand-side resources in later years as shown in Table 1.

**Table 1 - The Evolving Scope of the M&V Forum**

	Technology	Fuel	States Served
<b>Years 1-3</b>	<ul style="list-style-type: none"> <li>• Energy efficiency products and services</li> <li>• Demand Response</li> </ul>	<ul style="list-style-type: none"> <li>• Electricity (Yrs 1-2)</li> <li>• Natural Gas (Yrs 2-3)</li> </ul>	<ul style="list-style-type: none"> <li>• New England</li> <li>• New York</li> <li>• New Jersey</li> <li>• Maryland</li> <li>• Delaware</li> </ul>
<b>Later</b>	<ul style="list-style-type: none"> <li>• Combined Heat Power</li> <li>• Building Integrated Renewables</li> </ul>	<ul style="list-style-type: none"> <li>• Fuel Oil</li> </ul>	Other Mid-Atlantic States

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.

<sup>10</sup> NEEP is currently facilitating a discussion/process with New England, New York and New Jersey evaluators to identify priority regional research/evaluation activities. This on-going dialog is expected to feed into the Forum’s activities as part of the Research and Evaluation Committee.

## 1. Three-Year Project Agenda

Relative to this evolving scope and the Forum functions described above, Table 2 provides a recommended agenda of activities for the Forum in the first three years, including estimated budgets to retain third party contractors. The three-year agenda provides a look at suggested priorities for Forum activities as well as sequencing of projects that reflects the input we received from the Project Advisory Committee and other stakeholders, coupled with NEEP's judgment about what is achievable and will build on existing momentum and activities in the region. This draft agenda will be reviewed by the Project Committees and ultimately set by the Forum Steering Committee and will depend on the availability of funding.

Not reflected in Table 2 are the specific on-going annual activities of the Forum Steering Committee and NEEP, including:

### **Steering Committee on-going activities:**

- (1) Adopt and implement governance structure,
- (2) Adopt annual plans and budgets for NEEP Board approval;
- (3) Support Forum funding efforts;
- (4) Review and respond to Project Committee recommendations; and
- (4) Adopt and recommend Forum products for use in Northeast states.

### **NEEP Staff on-going activities:**

- (1) Establish Forum staffing and operations,
- (2) Convene/facilitate the Forum Steering Committee and Project Committees;
- (3) Facilitate Forum communications and decision making;
- (4) Solicit, retain and manage contractors;
- (5) Prepare draft plan, works products and conduct outreach; and
- (6) Manage budget/revenue generation.

## 2. First-Year Project Agenda (2009)

Important to the success of the Forum in the first year is undertaking projects and activities that are top priority for the region relative to public policy goals and developments. Relative to the overall three-year objectives discussed above, NEEP recommends that in the first year of operation (i.e., 2009), the Forum undertake projects that address the most pressing public policy needs for consistent protocols, and research and evaluation including:

- Expansion of demand-side resource policies and programs to meet regional Climate Change goals;
- Updating of demand-side resource impacts in state and regional energy plans; and
- Inclusion of additional demand-side resources in evolving regional and national markets (e.g., wholesale electricity and capacity markets, and carbon markets);

**Table 2 - Proposed Three-Year M&V Forum Project Agenda**

(Note: Contractor costs are intended to serve as estimates of research effort, and do not include NEEP staff costs, and therefore do not match the total annual Forum budget.)

2009	2010	2011
<b>A. Protocols Project Committee: Develop common protocols and/or guidelines for estimating and reporting savings, costs and emission data</b>		
<b>Top Priority Projects</b>	<b>Top Priority Projects</b>	<b>Top Priority Projects</b>
2009-A1. Develop common protocols/guidelines for EM&V methods. (\$75,000)	2010-A1. Develop common savings values and assumptions (Phase I) building from 2009-A2 (\$200,000)	2011-A1. Develop common savings values and assumptions (Phase II). Continue from 2010-A1. (\$200,000)
2009-A2. Survey and compare existing electric energy efficiency savings assumption values, algorithms and input assumptions across states. (\$150,000)	2010-A2. Design and create (or purchase license for existing software and modify) on-line database based on results from 2009-A3 and provide training sessions (\$600,000).	2011-A2. Maintain and update on-line database and provide technical support. (\$200,000)
2009-A3. Scope development of on-line common savings/assumptions and reporting database (\$125,000)		2011-A3. Develop guidelines for application of savings precision and accuracy levels. (\$100,000)
<b>B. Research &amp; Evaluation Project Committee: Coordinate regional R&amp;E activities to support development of common savings assumptions</b>		
<b>Top Priority Projects</b>	<b>Top Priority Projects</b>	<b>Top Priority Projects</b>
2009-B1. Update regional 3-yr coordinated research and evaluation plan (annually - NEEP staff)	2010-B1. Measure Life Study (Phase II). Develop common assumptions for selected measures, including persistence (\$200,000)	2011-B1. Conduct studies to meet gas program information needs (\$300,000)
2009-B2. Develop glossary of common EM&V terms and definitions. (\$30,000)	2010-B2. Savings Load shape Study (Phase II). Continuation from previous year, focusing on second priority end uses (\$200,000)	2011-B2. Savings Load shape Study (Phase III). Continuation from previous year, focusing on third priority end uses (\$200,000)
2009-B3. Savings load shape study (Phase I). Primary and secondary research focusing on priority end-uses (\$400,000)	2010-B3. Update Metering Compliance List. Continued from 2009 equipment standard list. (\$10,000)	2011-B3. Emerging Technology and Behavioral Research. (\$300,000)
2009-B4. C&I Lighting Measure Life Study. Develop common assumptions including persistence (\$200,000)		2011-B4. Update equipment metering compliance list. Continued from previous year (\$10,000)
<b>Other Possible Projects:</b>	<b>Other Possible Projects:</b>	<b>Other Possible Projects:</b>
2009-B5. Free-ridership and spillover approaches project (Phase I) - may be a national project	2010-B4. Free-ridership and spillover study (Phase II). Continuation from 2009 activities	2011-B5. Process Evaluation of expanded programs
2009-B6. Common Measure Cost Assumptions study to determine/update common cost inputs for key measures	2010-B5. Commercial Program Planning (Phase II): Market characterization/analysis for other sectors	2011-B6. Residential Program Planning (Phase II). Research existing buildings baseline and analysis to inform program expansion
2009-B7. Equipment Metering Standards - develop and update list of meters compliant with demand-side resource programs in the Northeast	2010-B6. Residential Program Planning (Phase I). Research on existing buildings baseline and analysis to inform program expansion	
2009-B8. Commercial Program Planning (Phase I). Market characterization/analysis for selected cases		
<b>C. Information Access Committee: Provide access to EM&amp;V data and protocols, education on Forum topics, and technical support</b>		
Functions include: 1) Hold Annual Regional EM&V Public Forum. Open to all interested parties to provide overview, status and developments of EMV Forum (\$25,000) 2) Post, update and maintain evaluation and research studies and other public data to Forum website (or link to existing public websites) 3) Provide public presentations and educational workshops. Periodic or as needed on protocols supported by Forum. 4) Provide technical support on user interface with Forum on-line resources etc.		

To address these, we recommend that in the first year the Forum:

1. Engage energy and environmental regulators, program administrators, merchant service providers and ISOs/RTOs in New England, New York, and New Jersey (and other mid-Atlantic States to the extent they express interest) to support and participate in the EM&V Forum as solution to support expansion of demand-side resource policies and programs.
2. Undertake and complete the following priority research and development projects:

**a. Protocols Committee Projects:**

- *2009-A1: Develop common protocols/guidelines for EM&V methods.* This project would build from and/or coordinate with existing EM&V protocols developed at state, regional and national level (e.g., existing state methods, U.S EPA NAPEE Impact Evaluation Guidelines, ISO/RTO M&V protocols, potential NAESB M&V model best practices/standards, etc.). Project will address primarily energy efficiency, but also demand response as directed by Forum Steering and Project Committee based on progress/status of NAESB national M&V project.
- *2009-A2: Survey of Existing EM&V Protocols.* This project would survey and compare existing electric energy efficiency savings assumption values (deemed values), algorithms and input assumptions across states to serve as basis for common savings/assumption protocol development in 2010. Contractor scope likely to focus on priority areas (measures, sectors, etc).
- *2009-A3: Scope development of central on-line, common savings/assumptions and reporting database:* Scoping project would include: a) identifying primary database users; b) determine data field/parameter needs for savings, cost and emissions data; c) coordinating/interfacing database with existing savings tracking systems and cost effectiveness models; d) identifying data reporting format needs to serve policymaker needs; and e) researching applicability and costs of adopting/purchasing existing databases and tools (e.g., NW RTF, CA DEER etc.) and modifying to meet Forum's needs.

**b. Coordinated Research and Evaluation Committee Projects:**

- *2009-B1.* Update regional 3-year coordinated research and evaluation plan. Working from 3-year plan developed in 2008, NEEP staff to facilitate discussion with Committee to update and refine/modify coordinated research and evaluation activities.
- *2009-B2. Develop common glossary of EM&V terms and definitions.* Review/survey existing terms and definitions used by Northeast states to identify areas of greatest inconsistencies, compare with other glossary sources (e.g., EPA NAPEE documents, CA, NW) and develop common set of terms/definitions.
- *2009-B3. Savings load shape study (Phase I).* Primary and secondary research to create representative load shapes and coincidence factors for priority end use measures to inform development of common assumptions/inputs. Project will be informed by initial scoping effort in 2008 to identify available and applicable secondary data.

- *2009-B4. C&I Lighting Measure Life Study.* Develop common measure life assumptions including measure persistence for C&I lighting, using primary and secondary data collection.
2. Develop and implement certain information access capabilities and undertake various educational activities:
    - Establish a stand alone website that supports Forum operations as well as public access to the Forum and its products
    - Conduct outreach to build visibility for Forum activities and products including:
      - Hold Regional EM&V Forum – kick-off forum – 2009 Annual Meeting
      - Announce Forum through press releases and related outreach
      - Develop and use presentation materials regarding the Forum to brief stakeholders and target audiences about Forum goals, objectives, projects, process and results.
      - Prepare and distribute two electronic newsletters that link to the Forum website
  3. Adopt and recommend state adoption and use of an initial set of common protocols and guidelines based on completed research and development.
  4. Adopt guidelines regarding confidentiality and public availability of Forum materials (subject to NEEP Board approval).
  5. Adopt plan and budget and secure funding for the second year of operations.

These activities are summarized below in Table 3.

### ***C. Phase III: Evaluation/Decision to Continue/Modify Forum Elements***

To guide the future of the Forum beyond the first three years, we recommend that in the third year, the Steering Committee oversee an evaluation of the Forum relative to the goals and objectives including an assessment of key accomplishments. Central to this is consideration of:

1. The extent to which Northeast states have adopted and are using protocols recommended by the Forum to estimate, track and report energy savings and related information for demand-side resources.
2. The success of the Forum to complete necessary research and evaluation projects at a cost-savings to Northeast states.
3. How the Forum products, process and resources have helped to overcome barriers to the procurement of cost-effective energy efficiency and other demand-side resources to meet public policy goals and objectives, including participation in evolving markets (e.g., FCM).
4. How Forum products, tools and recommendations are being used by the full range of stakeholders in the Northeast
5. How the Forum has informed or shaped the development of national standards.

<b>Table 3 - 2009 Northeast EM&amp;V Forum Agenda</b>	<b>Contractor Costs</b>
<b>Steering Committee</b>	
Steering 1 – Direct and review Project Committee work products (e.g., definitions, protocols, research results and recommendations, public forum, website).	<i>NEEP staff</i>
Steering 2 – Endorse and recommend first set of regional definitions and protocols for state adoption.	<i>NEEP staff</i>
Steering 3 – Implement guidelines regarding confidentiality and public availability of Forum materials	<i>NEEP staff</i>
Steering 4 – Adopt 2009 Project Priorities and Budget.	<i>NEEP staff</i>
<b>A. Protocols Project Committee: Develop common protocols and/or guidelines for estimating and reporting savings, costs and emission data</b>	
<b>Top Priority Projects</b>	
A1. Develop common protocols/guidelines for EM&V methods.	\$75,000
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.	\$150,000
A3. Scope development of on-line common savings/assumptions and reporting database.	\$125,000
<b>B. Research &amp; Evaluation Project Committee: Coordinate regional R&amp;E activities to support development of common savings assumptions</b>	
<b>Top Priority Projects</b>	
B1. Update regional 3-yr coordinated research and evaluation plan (annual update).	<i>NEEP staff</i>
B2. Develop glossary of common EM&V terms and definitions.	\$30,000
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).	\$400,000
B4. Commercial Lighting Measure Life Study. Develop common assumptions including persistence.	\$200,000
<b>Other Possible Projects: (estimated costs not included in Forum budget)</b>	
B5. Free-ridership and spillover approaches project (Phase I). May be a national effort.	\$50,000
B6. Common Measure Cost Assumptions study – determine/update common cost inputs for key selected measures.	\$70,000
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).	\$15,000
B8. Commercial Program Planning (Phase I) - Complete market characterization/analysis for selected cases.	\$100,000
<b>C. Information Access Committee: Provide access to EM&amp;V data and protocols, education on Forum topics, and technical support</b>	
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>	\$25,000
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).	<i>NEEP staff</i>
C3. Provide public presentations and educational workshops on Forum projects and results.	<i>NEEP staff</i>
C4. Guide media outreach and development and distribution of two Forum electronic newsletters.	<i>NEEP staff</i>
C5. Provide technical support on user interface with Forum on-line resources etc.	<i>NEEP staff</i>

## D. Budget and Revenue Plan

### 1. Overview

The Northeast EM&V Forum will support states to implement public policies in Northeast states to promote demand-side resources to address climate change mitigation, energy, economic and other environmental policy goals. In serving that purpose, the Northeast states we recommend that states serve as the primary governance and financial support for the Forum’s operations and project agenda through a structure that leverages federal and foundation funding for project operations (e.g., to manage the Forum agenda, contractors, communications and outreach). We recommend that a small percentage of the revenues (2%) be based funds from general subscribers, registration fees for the Annual Public Forum Conference and user fees for customized services (e.g., customized reports, etc.). We recommend that federal and foundation sources provide the start-up funding for the first six months.

To support an annual budget of \$1.4 million to \$1.8 million for the Northeast EM&V Forum operations and projects, we recommend the following funding structure:

Northeast States	81%
Federal and Foundation Grants	17%
Forum Subscribers	1%
User Fees/Workshop Registration	1%

Table 4 summarizes the proposed start-up and three-year annual budget and revenue plan to carry out the Forums goals, objectives and agenda:

**Table 4 – Three Year Forum Budget and Revenues**

Expenses	Start-up	Year 2009	Year 2010	Year 2011	Total	Percent
Personnel	\$150,000	\$290,000	\$300,000	\$310,000	\$1,050,000	20%
Travel	\$8,000	\$16,000	\$17,000	\$17,000	\$58,000	1%
Meetings/Workshops	\$2,000	\$28,000	\$29,000	\$30,000	\$89,000	2%
Communication	\$5,000	\$9,000	\$9,000	\$9,000	\$32,000	1%
Supplies	\$2,000	\$2,000	\$2,000	\$20,000	\$26,000	1%
<b>Total Direct</b>	<b>\$167,000</b>	<b>\$345,000</b>	<b>\$357,000</b>	<b>\$386,000</b>	<b>\$1,255,000</b>	<b>24%</b>
Overhead	\$50,000	\$100,000	\$100,000	\$110,000	\$393,000	8%
Contractors (Note 1)	\$33,000	\$1,000,000	\$1,200,000	\$1,300,000	\$3,500,000	68%
<b>Total Costs</b>	<b>\$250,000</b>	<b>\$1,445,000</b>	<b>\$1,657,000</b>	<b>\$1,796,000</b>	<b>\$5,148,000</b>	<b>100%</b>
Revenues						
State Funding	\$0	\$1,195,000	\$1,407,000	\$1,546,000	\$4,148,000	81%
Grants	\$250,000	\$200,000	\$200,000	\$200,000	\$850,000	17%
Subscriptions		\$25,000	\$25,000	\$25,000	\$75,000	1%
Workshop/User Fees	\$0	\$25,000	\$25,000	\$25,000	\$75,000	1%
<b>Total Income</b>	<b>\$250,000</b>	<b>\$1,445,000</b>	<b>\$1,657,000</b>	<b>\$1,796,000</b>	<b>\$5,148,000</b>	<b>100%</b>

Note 1: For start up, contractor costs are legal, accounting and insurance costs for NEEP to serve as fiscal agent.

To put this 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.

<b>Table 5 – 2007 Ratepayer-Funded Evaluation Budgets</b>	
<b>Connecticut</b>	\$1,400,000
<b>Massachusetts</b>	\$3,700,000
<b>Maine</b>	\$200,000
<b>New Hampshire</b>	\$900,000
<b>New Jersey</b>	\$2,300,000
<b>New York</b>	\$4,300,000
<b>Rhode Island</b>	\$400,000
<b>Vermont</b>	\$700,000
<b>Total</b>	<b>\$13,900,000</b>

## 2. Forum Budget

The Forum budget includes two main components 1) the operational cost of managing the Forum and its contractors, and 2) the budget for research and development projects undertaken by third-part contractors.

**Operational Costs:** The operational costs support:

**Personnel:** The Forum will be served by 2.7 full-time equivalent (FTE) Project Staff including a full-time Project Director, a three-quarter time Technical Manager, and additional part-time staff to provide administrative services, website support, workshop management, and outreach and development services.

**Travel:** This provides for the Project Staff to attend Forum meetings, meet with Forum participants and funders, and attend relevant national and regional forums and events (e.g., NESCAUM, NECPUC, MACRUC, NAESB, etc.) to coordinate Forum activities and projects.

**Meetings/Workshops:** This supports the cost of holding Forum committee meetings (e.g., rooms, refreshments). Beginning in 2009, this includes the cost of holding a one-day regional conference or workshop to discuss the Forum projects with stakeholders beyond those participating directly in Forum Committees.

**Communications:** This supports the use of teleconferences and web-based meeting tools that will allow Steering and Project Committee members to effectively participate without attending meetings in person.

**Overhead:** This supports the cost of equipment and facilities used by Project Staff, as well as related accounting and legal costs. The overhead rate is based on NEEP's overhead rate approved for federal grants.

**Contractor Budget:** The Forum budget in 2009 through 2011 expands to include the cost of third-part contractors retained to implement the projects selected by the Steering Committee as priorities. While the actual project budgets may vary from the projected, we expect the level of activity to begin at \$1 million and grow from there (e.g., to \$1.3 million in 2011). The Contractor costs are not subject to NEEP's overhead fee, but do include a small administrative fee (e.g., three percent) to recover NEEP's costs to financially manage these contracts.

**Initial Six Month Budget:** The six-month start up budget assumes a July 1, 2008 launch and includes the operational costs only to establish the Forum (e.g., to set-up operations, convene the Steering and Project Committees to prepare project priorities, plans and funding for 2009, secure funding for 2009, undertake strategic outreach, coordinate with relevant national and regional projects, etc.). It does not include any contractor costs for research and development. NEEP will seek grants from federal and foundation sources to establish the forum operations in 2008.

### 3. Revenue

The revenue plan assumes that participating states will fund the large majority of the Forum's costs, and that these costs will be shared based on each state's annual electricity sales. In addition, we recommend that a portion of the Forum costs (e.g., operational costs) be funded by federal or foundation grants and by a subscription services that would allow a broader range of stakeholders (e.g., demand-side service providers) to support Forum operations and receive a Forum notices and newsletters.

#### a) State Funding for Forum Research and Outreach

We recommend that the Northeast states provide the large majority of funding for Forum activities (i.e., eighty percent). Currently, ratepayer-funding for energy efficiency in the Northeast exceeds \$750 million per year and is growing. Such funding could potentially increase to \$1.5 billion by 2010 with the expected additional revenues from:

- The allocation of proceeds from the sale of RGGI carbon allowances allocated to support energy efficiency (New Jersey, Maryland, New York, New England);
- Capacity market payments from the delivery of demand-side resources to meet peak electric system needs (New England,);
- State least cost energy procurement requirements that greatly expand gas and electric energy efficiency program activities (Vermont, New York, Connecticut, Rhode Island, Massachusetts, New Jersey).

Each state has its own policies and mechanisms for allocating such revenues to implement programs and conduct related research and evaluation. NEEP will work with the appropriate entities in each state to secure participation in and funding for the Northeast EM&V Forum. We expect that public utility commissions along with energy offices, environmental regulators and energy efficiency program administrators will be primary contacts in each state for this outreach and participation.

This sharing of state costs by electricity sales is a typical strategy used for other NEEP research and evaluation projects. Table 6 provides an example of how the Forum costs may be shared by the states:

**Table 6 – Sample Allocation of Forum Costs by Participating State**

<b>Funding Source</b>	<b>6-Month Start-up</b>	<b>First Year 2009</b>	<b>Total Costs 3.5 Years</b>	<b>Percent</b>
New York	\$0	\$399,566	\$1,386,944	27%
New Jersey	\$0	\$227,505	\$789,698	15%
Maryland	\$0	\$179,653	\$623,599	12%
Massachusetts	\$0	\$158,941	\$551,706	11%
Connecticut	\$0	\$90,270	\$313,339	6%
Maine	\$0	\$35,204	\$122,198	2%
Delaware	\$0	\$33,112	\$114,936	2%
New Hampshire	\$0	\$31,793	\$110,357	2%
Rhode Island	\$0	\$22,350	\$77,579	2%
Vermont	\$0	\$16,607	\$57,644	1%
<b>State Total</b>	<b>\$0</b>	<b>\$1,195,000</b>	<b>\$4,148,000</b>	<b>81%</b>
<b>Other Revenue</b>				
Grants	\$250,000	\$200,000	\$850,000	17%
Subscriptions	\$0	\$25,000	\$75,000	1%
Workshop/User Fees	\$0	\$25,000	\$75,000	1%
<b>Total</b>	<b>\$250,000</b>	<b>\$1,445,000</b>	<b>\$5,148,000</b>	<b>100%</b>

Note: These allocations are based on state 2006 electricity sales (MWH) as reported by the U.S. Energy Information Administration (EIA).

**b) Federal and Foundation Funding for Forum Operational Costs**

Implementation of the Northeast EM&V Forum will offer a valuable service for federal agencies as well as foundations concerned with advancing energy efficiency as a top Climate Change Mitigation strategy as well as a cost-effective means to reduce dependence on imported fossil fuels and meet other energy, environmental and economic goals. In addition, the success of the Forum to develop common protocols can provide important input into national efforts to develop consistent protocols to assess the impact and cost of demand-side resources.

In light of that value, we recommend seeking initial start-up funding (\$250,000) from federal and foundation sources for July – December 2008.<sup>11</sup> Beyond that, to leverage state funding for research and development projects, we recommend that federal and foundation grants cover roughly fifty percent of the annual operating costs (approximately \$200,000 per year) or twelve to fifteen percent of total costs. The contribution of grant funding for Forum operations may grow in future years as limited federal funds currently available to support demand-side resources expands.

Potential federal sources of funding include EPA, DOE and possibly FERC. Potential foundation sources include national, regional and state foundations such as The Energy Foundation, Pew Center for the States, the Henry P. Kendall Foundation, The John Merck Fund, The Tremaine Foundation, the Merck Family Fund, the Sea Change Foundation and others. Additional outreach

<sup>11</sup> The EPA Climate Protection Division and the Energy Foundation helped fund the initial research and development of a plan for the Northeast EM&V Forum. NEEP has approached both to assist with 2008 start-up funding for the Fund this year (i.e., for July – December 2008).

to potential federal and foundation funding sources is needed to clarify interest in providing grants for the Forum.

### **c) Forum Subscriptions to Support Outreach**

The Forum is intended to serve a wide range of stakeholders that would benefit from consistent regional EM&V protocols and related tools, research and reports. While the Forum products and results are intended to be available to the public, a subscription service can help generate revenues to support the Forum activities while giving stakeholders the opportunity to be formally affiliated with the Forum as well as stay informed of relevant developments. Subscription service offerings will include:

- Listing on the Forum website, newsletter and materials as a Subscriber affiliated with the Forum.
- Guaranteed listing in the Forum's directory of demand-side product and service providers used to support Forum communications and issuances of requests for proposals.
- Receipt of the Forum newsletter, press releases and other special notices issues about Forum events and activities.

NEEP will offer special services to Subscribers to expand Forum outreach while imposing little additional costs or requirements on the Forum. To keep the focus on Forum projects and activities, only a small portion of the three-year budget is based on subscription revenues (e.g., less than two percent).

### **d) User Fees: Annual Meeting Registration and Custom Services**

In addition, the Forum revenues include a small contribution from user fees to (1) offset the cost of holding the Annual Regional EM&V Public Meeting (i.e., through registration fees and workshop sponsorship) and (2) to cover the costs for requested services (e.g., to generate specialized reports requested by stakeholders based on the Forum's database, to cover travel costs to attend meetings beyond the scope of annual plans). Here again, the projected revenues are modest – less than two percent per year – with the intent that the Forum personnel keep the focus on Forum projects and activities selected by the Steering Committee.

## **VII. 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, we recommend that 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. NEEP is in a strategic position with staff capacities to move this forward. With NEEP Board support, we will move forward to seek funding and participation to implement this plan and establish the Forum with a start-up beginning July 2008.

**Appendix A - Northeast EM&V Forum Project Advisory Committee  
 Fall 2007 – Winter 2008**

<b>Committee Member</b>	<b>Organization/Agency/Company</b>
Mike Ambrosio	Consultant to New Jersey Board of Public Utilities
Cindy Arcate, Bob Bress	Comverge
Dan Beckley	US DOE
Clifton Below	New Hampshire Public Utilities Commission
Steve Cowell, David Weitz	Conservation Services Group
Niko Dietsch	US EPA
Don Flynn	Northeast Utilities (CL&P)
Don Gilligan, Scott Serota	National Association of Energy Service Companies
Elliot Jacobson	Community Action Inc., Weatherization Asst. Program
Cheryl Jenkins	Vermont Investment Energy Corporation
Michelle Manion	Northeast States Coordinated Air Use Management
Gina McCarthy, Tracy Babbidge, Rick Rodrigue	CT Department of Environmental Protection
Penni McLean-Conner, Lisa Shea	NSTAR
John Moskal	US EPA Region 1
Monica Nevius (observer)	Consortium for Energy Efficiency
Ed Osann	Potomac Resources, Inc for ACEEE
Larry Pakenas, Jennifer Meissner	NY State Energy Research and Development Authority
Sharon Reishus	Maine Public Utilities Commission
Jeff Schlegel	For MA Non Utility Parties and CT ECMB
Mike Sherman	Massachusetts Division of Energy Resources
Chris Sherry	RGGI Stakeholder Process
Rich Steeves	CT Office of Consumer Counsel
Sandra Waldstein, Pam Stonier	Vermont Public Service Board
Carole Welch (Fall 2007)	Vermont Department of Public Service
Carol White	National Grid
Tim Woolf	Massachusetts Department of Public Utilities
Henry Yoshimura	ISO New England

## ***Appendix B - Supporting Documents and Additional Input Informing Forum Plan***

The key sources of stakeholder input informing this Forum Plan include:

1. A feasibility study conducted by Nexus Market Research. This report presents findings from confidential in-depth stakeholder interviews with key stakeholders to test concepts, functions and structure of a potential EMV forum. To view this report, go to [http://www.neep.org/policy\\_and\\_outreach/EMV.html](http://www.neep.org/policy_and_outreach/EMV.html). Supplementary input from several Advisory Committee members was also provided through written responses to the feasibility study interview guide.
2. Project Advisory Committee input, including feedback at three meetings held on October 22, 2007, January 18, 2008, and April 4, 2008.
3. Additional stakeholder input to fill various small gaps identified through the NMR feasibility study and in discussions with Advisory Committee members. During the February-March timeframe, NEEP contacted several individuals to better inform certain aspects of this plan. These outreach efforts includes input provided by:
  - **Merchant Demand Response Providers.** NEEP held conversations with staff from range of companies to characterize information needs, firms' interactions with utility programs, and firm's level of involvement in some national protocol-related activities relevant to demand response.
  - **NY ISO.** NEEP briefed NY ISO staff on the regional Forum concept, potential functions and structure, and received NY ISO's feedback/interest in the regional Forum as to its potential value to meet NY ISO's modeling/forecasting and market needs.
  - **Nationally recognized expert evaluators.** This included discussions with experts familiar with protocols development, the California DEER and CALMAC databases, and the Northwest Regional Technical Forum database development and maintenance. NEEP interviewed key individuals responsible for protocols development as well as with development and or maintenance of these databases to better understand their history and whether and how they may serve as an example for the Northeast to follow. The stakeholder process, the level of investment, the timeline, the features, and lessons learned were among items discussed.
  - **Northeast evaluators and consultants to regulators overseeing evaluation activities.** NEEP developed and prioritized a list of possible research and evaluation activities to include in a multiyear plan, preliminary cost estimates, for inclusion in the plan, based on conversations with individuals representing New England, New York and New Jersey energy efficiency program evaluation interests.