REGIONAL EVALUATION,
MEASUREMENT & VERIFICATION FORUM

Request for Consultant Proposals

(RFP)

Development of REED
Regional Energy Efficiency Database

(With Design, Development and Technical Support Services)

Issued by:

Northeast Energy Efficiency Partnerships, Inc
June 9, 2011

Notice of Intent to Bid Due:
June 17, 2011, 4:00 PM (EST)

Final Questions Due:
July 1, 2011, 4:00 PM (EST)

Proposals Due
July 6, 2011, 4:00 PM (EST)

RFP website

DEVELOPMENT OF REED – A REGIONAL EE DATABASE

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EXECUTIVE SUMMARY AND PROJECT OBJECTIVES

On behalf of the Regional Evaluation, Measurement and Verification Forum ('the Forum'), Northeast Energy Efficiency Partnerships, Inc. (NEEP) is issuing this request for proposals. The Forum, established in 2008, is a regional project facilitated and managed by NEEP representing states in New England, New York and the mid-Atlantic. Its purpose is to develop common protocols to evaluate, measure, and report the impact of energy efficiency programs in the region, and to conduct joint research to support savings estimates, in order to build the credibility of energy efficiency benefits, and the transparency and understanding of supporting EM&V practices.

The Forum is undertaking a number of projects in 2011, including this effort to develop REED – a Regional Energy Efficiency Database. As background, in December 2010, the Forum Steering Committee[1], represented by commissioners from ten jurisdictions, adopted the *Common Statewide Energy Efficiency Reporting Guidelines* (see Appendix E). These Guidelines recommend common reporting templates/tables that provide basic information on the impacts of energy efficiency investments in a format that makes it straightforward to support energy and environmental planning and analyses. This unprecedented commitment from ten jurisdictions demonstrates the importance and need for common reporting of energy efficiency savings and associated impacts to support a range of energy and environmental policies.

Once REED is available, it will provide benefits to the following kinds of stakeholders:

- State energy office staff will be able to perform state-level tracking of efficiency program impacts against state energy and economic goals;
- Program administrators and regulatory review staff will be able to perform comparison/benchmarking of consistently reported energy savings and costs[2], and the relative effectiveness of energy efficiency programs to help inform more effective program and policy design;
- Regional and national non-governmental organizations will be able to aggregate state impacts to multi-state or regional levels to support analyses of efficiency as a resource;
- Air quality regulators, including climate change stakeholders, will be able to use consistently reported efficiency savings data to inform the modeling/forecasting of avoided emissions from efficiency savings, with ready access to data sources and supporting EM&V information to inform analyses at the state and regional levels; and
- System planners will be able to use consistently reported efficiency data to support regional system plan forecasts, including energy, demand and transmission planning.

This scope of work addresses the next critical phase of the Guidelines' development: *to effectively implement the Guidelines.* The Forum's 2011 project agenda, adopted by the Forum Steering Committee, includes developing such a data collection and reporting tool to support the ability for the Forum states to readily submit their statewide efficiency impacts using the formats and meanings specified in the Forum Guidelines, and to provide associated technical support to the states. The

[1] The Forum states include the New England states, New York, Maryland, Delaware and District of Columbia, each with representation on the Forum Steering Committee, along with air quality/agency representation.

[2] Consistent reporting does not necessarily mean use of consistent underlying EM&V methods/approaches, although the Forum has and continues to address this need, specifically through the development and use of consistent EM&V methods as addressed in Forum's *Regional EM&V Methods and Savings Assumptions Guidelines (May 2010)*.

Steering Committee approved such a project with the intent for states to begin using the common reporting tool to report their 2011 program year savings starting in 2012.

Such consistent reporting capabilities will help to build accessibility, transparency and the credibility of efficiency savings and associated impacts in the region, allowing interested parties to compare, aggregate, analyze, and integrate statewide data to support state and regional policies or planning needs. This project will coordinate, as appropriate and practicable, with existing and developing state, regional and national databases and reporting frameworks.

The Project involves developing REED and managing the data collection effort for the Forum states. The final deliverables for this Project are the REED components, supporting documentation and technical support for states and NEEP staff to use the system starting in 2012. Other deliverables include participation in project subcommittee teleconferences and presentations of results at one or two Forum meetings.

NEEP intends to enter into a contract with a consultant, selected on behalf of the Forum, as a result of this RFP process. The contractor will report to a NEEP project manager who will serve as the key contact for administrative purposes. A subcommittee of Forum members will provide guidance during the project.

It is intended that this work start on July 18, 2011 with development of REED to be completed by year end, and technical support to be provided through the initial data collection process in the first two quarters of 2012.

1. BACKGROUND ON THE REGIONAL EM&V FORUM

The Regional Evaluation, Measurement and Verification Forum (Forum) includes public and private sector representatives from the New England states, New York, Maryland, and the District of Columbia, as listed in Appendix A. The objective of the Forum is to support the successful expansion of demand-side resource policies and programs, by:

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

The Forum serves 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.

The three key areas of the Forum's work are:

- Protocol Development: Focus is to consider and develop a) common/consistent protocols for EM&V characteristics (e.g. EM&V methods, precision/accuracy guidelines); b) common energy

and demand savings assumptions, including stipulated values for common measures, input assumptions (e.g. measure life/persistence), and coincidence factors, and potential supporting on-line database; and c) common reporting formats for savings data and associated cost and emission reductions;

- Research & Evaluation: Focus is to undertake and support coordinated research and evaluation projects that serve as basis for protocol development (e.g. common assumptions). Examples of projects include savings load shape analyses (e.g. to inform coincidence factors); measure life and persistence studies; spillover and free-ridership approaches; and common measure cost input assumptions. Projects may include coordination of multi-state projects that involve a subset of the region; and
- Education and Information Access: Focus is to guide and help ensure Forum products and results (e.g. studies, reports, protocols, recommendations, references, etc.) are visible and readily accessible to stakeholders, while ensuring protection of any confidential information.

NEEP staff serve as facilitators, conveners, project managers and administrators for the Forum and its activities. A regionally representative Forum Steering Committee of stakeholders directs the Forum's agenda. Specific Forum projects are undertaken with the input and guidance of topical Project Committees, which recommend products to the Steering Committee for Forum adoption.

For more information on the Forum, please see: http://neep.org/emv-forum.

2. SCOPE OF WORK, DELIVERABLES AND SCHEDULE

Information in this Section is provided to assist potential bidders in developing their proposals; however, bidders are welcome to offer their own approach to meeting the Project objectives, including recommendations with respect to the tasks, project schedule and budget, given the Project objectives.

Detailed Requirements are in Appendix B.

A. Scope of Work

As summarized above, the Forum is tasked with developing REED - a Regional Energy Efficiency Database. This scope of work consists of the following tasks:

Task 1: Design: Design REED and each of its modules to meet the stated objectives, consistent with Appendix B. The design should include recommendations for specific technology components required by the proposed architecture and detailed specifications for any hardware/software platforms that are required.
Task 2: Development: Implement and test the system according to these requirements and other NEEP specifications and guidance. Provide well documented source code.
Task 3: Administration: Support the initial data collection, processing and reporting efforts.
Task 4: Training and Documentation: Train NEEP Administrators and Forum Users and develop user-friendly documentation and training materials.
Task 5: On-going Maintenance and Support: Specify rates, costs, and options associated with ongoing maintenance and support.

TASK 1: Design

This task involves designing the overall system and each of the individual components required to implement REED, as described in Appendix B.

Task 1 scope of work will begin in July 2011 and be completed by the end of September 2011.

TASK 2: Development

This task includes:

1. Implementing each component as designed in Task 1.
2. Testing each component and the system overall.
3. Incorporating changes based on testing of the tool, as reasonable and practicable;
4. Finalizing the reporting tool; and
5. Deliver well documented source code

Based on the design elements developed under Task 1, a draft version of REED will be developed and tested with a sample of users, as identified by the Project Manager and project subcommittee. Results of such tests will inform the extent to which modifications need to be made, as reasonable and practicable according to the project budget. REED will be supplemented with a report that summarizes key design considerations, test results, and will also make any recommendations for future tool modifications (based on expert and stakeholder feedback) to support improved reporting and interface with state, regional and national databases/reporting needs in the future.

TASK 3: Administration

Once REED has been implemented, the contractor will provide support to the Forum states to use the Data Collection Tool. The first reporting year is program year 2011, per agreement by the Forum Steering Committee, where it is expected that Forum states will begin to use the online reporting tool as early as January 2012.

This task involves providing general technical support to states and NEEP on use of REED (up to a specified # of hours). The contractor will support the State Users as they use the Data Collection Tool to provide their annual information. The contractor will support NEEP Administrators as they run the import tool to import all the data into the central database, and the process to export the data into a set of spreadsheet reports.

TASK 4: Training and Documentation

This task includes:

1. Addressing clarifications/inquiries and developing Frequently Asked Questions (FAQ) material to be posted on the Forum public website; and
2. Holding and recording for later replay at least 2 webinars providing demonstrations of the key features for Forum participants and other stakeholders.

TASK 5: Ongoing Maintenance and Support

It is likely that the types of data to be collected and the output reports will need to change from year to year. In addition, a number of new functional modules (reports and analyses) have already been

identified for future development. For this task, the contractor should specify rates, costs, and options associated with future development and ongoing maintenance and support.

B. Project Management, Budget and Schedule

NEEP will be the client and will enter into a contract with a consultant. NEEP will have final say on scope issues, schedule and deliverables, and a NEEP project manager will serve as key contact for administrative purposes. The project subcommittee will play a key advisory role that includes assisting in selection of the bidder, providing broader Forum participant input to the project, and reviewing/commenting on draft and final deliverables. In addition to the subcommittee, Forum participants and Steering Committee members have the opportunity to review and comment on draft deliverables. NEEP will be responsible for managing interactions between the Forum subcommittee, Forum participants, the Steering Committee that oversees the Forum, and the consultant.

Bidders should provide estimated effort for each project task, and a not-to-exceed project budget cap, per Section 4 below.

It is intended that this work be started in July 2011 and be completed by June 30, 2012, with key milestones as follows:

- Project kick-off = July 18, 2011
- REED Design = July-August, 2011
- REED Development = September-October, 2011
- Testing = November-December, 2011
- Finalize = January, 2012
- Provide Technical Support = February-June, 2012

We anticipate that to completely coordinate the development process with NEEP's requirements, the following coordination meetings will be required:

Project Kick-Off Meeting: Hold kick-off meeting with NEEP project manager and a subcommittee of Forum members. This will be a conference call meeting to review and discuss scope, schedule and approach. Review objectives and expectations for subcommittee and broader Forum participant input in project.

Subcommittee Teleconference Calls: Participate in conference calls with NEEP and project subcommittee (up to 6 calls) to review draft and final materials.

Presentation to Steering Committee: Presentation, likely by webinar, to Forum Project Committees and Steering Committee at quarterly meetings on draft/final findings and recommendations.

3. GENERAL SUBMITTAL INFORMATION

This Section of the RFP provides information for bidders concerning the submittal process, general requirements, schedule and qualifications. Specific requirements for the content and preparation of bids are contained in Section 4.

A. Contact and Communications

All communications between bidders and NEEP are to be directed to:

Julie Michals, jmichals@neep.org 781-860-9177 x135

Cecily McChalicher, cmcchalicher@neep.org 781-860-9177 x138

Any unauthorized contact may result in the disqualification of the contacting firm's proposal(s).

Potential bidders are encouraged but not required to submit **a notification of intent to submit a proposal in response to this RFP by 4pm on June 17 to NEEP contacts above**. This information helps NEEP plan and administer the RFP.

B. Bidders' Q&A

Bidders may submit questions via e-mail for this RFP. A website has been established for this Project RFP: EM&V Forum RFP Website. **All questions submitted prior to 4pm on July 1 will be posted and answered on the website**. All questions and answers will be available to all respondents.

C. RFP Submittal Format and Due Date

Bidders are required to submit electronic versions of their proposal to:

Julie Michals, jmichals@neep.org

Cecily McChalicher, cmcchalicher@neep.org

The proposals should be submitted in both Microsoft WORD (97-2003) and Adobe Acrobat format. An electronic receipt will be sent to those who submit proposals on time.

Late submittals will be rejected.

Bidders are not required to submit print copies of their proposals.

The transmittal letter contained in the proposal package must have an electronic signature and must be signed by a person who is authorized to bind the proposing firm.

NEEP reserves the right to reject as non-responsive any proposals that do not contain the information requested in this RFP. NEEP is not liable for any costs incurred by any person or firm responding to this RFP or participating in best and final interviews.

D. RFP Schedule

RFP release	June 9
Intent to bid notice	June 17
Close of RFP question period	July 1

Electronic proposals due COB	July 6
Anticipated date of bidder selection	July 13
Anticipated contract start date	July 18

The above schedule is subject to change by NEEP.

E. Minimum Qualifications

A single firm or a team of firms under a single primary contractor may submit bids.

Key staff members must have demonstrated experience delivering high-quality data collection, data processing, database and reporting applications. Changes in proposed key staff members may not be made during the execution of the work without written approval of NEEP.

F. Modifications to the RFP

NEEP may modify the RFP prior to the date fixed for submission of proposals by the issuance of an addendum to all parties who have submitted a notice of intent to bid by the required date.

G. Post Proposal Negotiation and Awarding of Contracts

NEEP reserves the right to negotiate both price and non-price factors during any post-proposal negotiations with a finalist. NEEP has no obligation to enter into an Agreement with any respondent to this RFP and may terminate or modify this RFP at any time without liability or obligation to any respondent.

H. Acceptance of Terms and Conditions

The submission of a proposal to NEEP shall constitute a Bidder's acknowledgement and acceptance of all the terms, conditions and requirements of this RFP.

NEEP will utilize its standard Services Agreement to contract for the services provided in Appendix C of this RFP. **A list of any exceptions to this document should be returned with bidder's response, see Proposal Submittal Requirements below (Section VI)**.

I. All Submitted Proposals Become Exclusive Property of NEEP

All proposals submitted to NEEP pursuant to this RFP shall become the exclusive property of NEEP and may be used for any reasonable purpose by NEEP.

4. PROPOSAL SUBMITTAL REQUIREMENTS

A. Submission of Proposals

Proposals should provide straightforward and concise descriptions of the proposer's ability to satisfy the requirements of this RFP. Omissions, inaccuracies or misstatements will be sufficient cause for rejection of a proposal. Proposals not submitted as indicated may be rejected.

NEEP and the Forum are looking for proposals demonstrating creativity, expertise and experience in how bidders approach the work scope. Once the consultant is selected, an initial task will be to review the scope and deliverables with the NEEP project manager, technical and policy advisor, and a Forum subcommittee.

Bidders are also invited to submit optional tasks and budgets if there are additional or tangential tasks that they believe would benefit the objectives of the Project.

All proposals must include the documents identified in Appendix D "Required Proposal Checklist". **Proposals not including the Checklist may be deemed non-responsive**.

B. Proposal Format

Bidders are requested to provide a concise yet complete description of the bidder's approach and capabilities for satisfying the required services outlined in this RFP. **Excessive length is discouraged.** In addition, bidders are encouraged to proactively present additional information and responses, not specifically requested, that help demonstrate understanding of this project's objectives and needs as well as bidder's creativity, experience, and/or expertise.

Proposals must adhere to the following set format (the numbers indicated are suggested maximum page limits):

- Proposal cover;
- Signed cover/transmittal letter;
- Table of Contents (include proposal date and page numbers on each page of proposal);
- Completed proposal checklist;
- Executive Summary (2 pages);
- Work Scope and Schedule (10 pages);
- Staffing and Subcontracting Plan (2 pages);
- Firm Qualifications and Experience (10 pages);
- Budget and Billing Rates (2 pages including tables);
- Exceptions to Contract Terms (if needed);
- Conflicts of Interest (if needed); and
- Appendix - Resumes (2 pages per resume).

The proposal cover must indicate the RFP name, the proposal date, bidder's name and list of subcontractors. The transmittal letter must also state that the person signing the letter is authorized to commit the bidding organization to the proposed work scope, budget and rates; that the information in the proposal is accurate; and that the proposal is valid for 90 days from the date of submittal.

For the checklist please use the form in Appendix D.

I. Section 1: Executive Summary

Section 1 of the proposal should contain a high level summary of the proposal including the approach to the tasks, key staff assigned to the effort, and the consultant's or bidding team's qualifications to perform the services sought through this RFP.

II. Section 2: Work Scope and Schedule

Section 2 of the proposal should discuss bidder's approach to Tasks defined in Section 2 of the RFP with consideration of the objectives defined in Section 1. Describe bidder's approaches to each of the work scope tasks with sufficient detail to distinguish the strengths and unique features of the bidder's team and approach.

Section 2 must include a schedule for performing the work. The schedule should be presented graphically and supplemented with text explanations needed to provide a complete understanding of the proposed timeline.

III. Section 3: Staffing and Subcontracting Plan

In Section 3 bidders are requested to provide a staffing plan. Note that assigned staff qualifications are more critical than firm qualifications and that staffing changes for key personnel are subject to approval by NEEP. In particular, a successful proposal will indicate one or more experienced principals that will direct and commit to the Project.

- Describe the roles of each of the positions listed in bidder's staffing plan.
- Identify the lead staff member assigned to manage the work, provide a short biography, and explain why he or she is qualified for this position. Describe this person's availability for the project, and the office where he or she will be based.
- Identify the key personnel to be assigned to this project, describe their responsibilities, and provide a paragraph biography for each person. Indicate availability and length of time commitment to project.
- Specify any anticipated subcontractors who will be used, roles, responsibilities, and proposed subcontractor mark-up percentage.

Include resumes for all individuals named in the staffing plan. Resumes and bios should describe relevant responsibilities from other projects that will help NEEP evaluate the qualifications and experience of key personnel. Please limit length of resumes to **two** pages and place in an appendix.

IV. Section 4: Firm Qualifications and Experience

Use this section to address bidding team's qualifications and experience, drawing on lessons learned and best practices experience. Bidders should also provide two to four references from current (preferred) or recent clients for whom they have performed projects that are relevant to the work scope. References should include a brief synopsis of specific services provided, company name and location, contact name, contact title, telephone number and email address of the reference. In the event the bidder is forming a new organization to bid on this proposal, the bidder should provide the related references for the key staff members proposed for the project.

References should be included (two to four each) for any major subcontractors.

V. Section 5: Budget and Billing Rates

Using the two tables shown below, bidders must provide labor and other direct costs proposed for this project. Bidders should provide estimated effort for each project task, and a not-to-exceed project budget cap.

Budget Table 1. Billing Rates

Person	Title	2011 Hourly Billing Rate all inclusive)

Budget Table 2. Task by Task and Total Budget

Task	Personnel Assigned	Hours per Personnel Assigned	Labor Costs	Directs Cost (to be billed at cost to Consultant)	Per Task or Total Cost
1					
2					
3					
4					
5					
Total					

VI. Section 6: Exceptions to Contract Terms

Bidders must provide any requested exceptions to the Services Agreement included as Appendix C.

VII. Section 7: Conflicts of Interest

Bidders should identify, and address as they feel appropriate, potential situations that may be perceived as a conflict of interest in completing this work. Examples would be work performed implementing or evaluating programs in the Region. Such situations are not necessarily a conflict, and may speak to the bidder's qualifications, but should be disclosed.

VIII. Section 8 (Appendix): Resumes

Include resumes for key staff noting relevant experience and expertise.

5. SELECTION PROCESS AND EVALUATION CRITERIA

NEEP and the project subcommittee will base their evaluation of proposals on a scoring matrix below. As noted above, the qualifications of key staff (principals) assigned to lead this Project and the amount of time (commitment) they commit to the Project will be weighed heavily.

RFP Evaluation Criteria/Scoring Matrix

Part A: Technical Approach
1. Proposal quality – comprehension and clarity regarding meeting project objectives and quality of proposed approach for meeting those objectives
2. Thoroughness and practicality of approach
3. Creativity of approach
Part B: Management Approach
1. Dedicated resources
2. Demonstrated management competence of key staff
3. Approach to use and management of subcontractors (if applicable)
Part C: Qualifications and Experience
1. Demonstrated competence and experience of key staff and firm(s)
2. References
Part D: Cost
1. Total costs
2. Billing rates and direct costs/subcontractor mark-up rates (if any)

APPENDIX A: FORUM PARTICIPANTS

Connecticut
- *Department of Public Utility Control*
- *Connecticut Light & Power*
- *United Illuminating*
- *Connecticut Municipal Electric Energy Coop*

Delaware
- *Energy Office*

District of Columbia
- *DC Sustainable Energy Utility*
- *District Dept. of the Environment*

Maine
- *Public Utility Commission*
- *Efficiency Maine Trust*

Maryland
- *Maryland Energy Administration*
- *Public Service Commission*
- *Baltimore Gas & Electric*
- *Allegheny Power*
- *Pepco Holdings, Inc.*
- *Southern MD Electric Co-op*

Massachusetts
- *Dept of Public Utilities*
- *Dept. of Energy Resources*
- *Dept of Environmental Protection*
- *National Grid*
- *NSTAR*
- *Western Mass Electric Co.*
- *Cape Light Compact*
- *Unitil*

New Hampshire
- *NH Public Utilities Commission*
- *Public Service New Hampshire*
- *Unitil*
- *National Grid*
- *NH Electric Co-op*

New York
- *Dept of Public Service (Public Service Commission)*
- *Central Hudson Gas & Electric*
- *Consolidated Edison*
- *National Grid*
- *NY State Energy Research & Development Authority*
- *New York Power Authority*
- *Long Island Power Authority*
- *Rochester Gas & Electric*

Rhode Island
- *Public Utilities Commission*
- *National Grid*

Vermont
- *Department of Public Service*
- *Efficiency Vermont*

NESCAUM – Northeast States for Coordinated Air Use Management

US Environmental Protection Agency

US Department of Energy

Note: This list of Forum participants reflects those who are either Forum funders and/or participants.

APPENDIX B: REED REQUIREMENTS

INTRODUCTION

The objective of this project is to design, develop and implement a system for collecting information concerning statewide energy efficiency programs from a number of states, import that information into a central resource, and create reports that allow detailed analysis of that data.

The Regional Energy Efficiency Database (REED) should allow:

- States to easily report statewide annual impacts of their energy efficiency programs
- Key stakeholders and public users to perform analysis of data with ability to generate graphics using reported data
- Flexibility in modifying the data that is collected and stored and the analysis that is performed in the future.

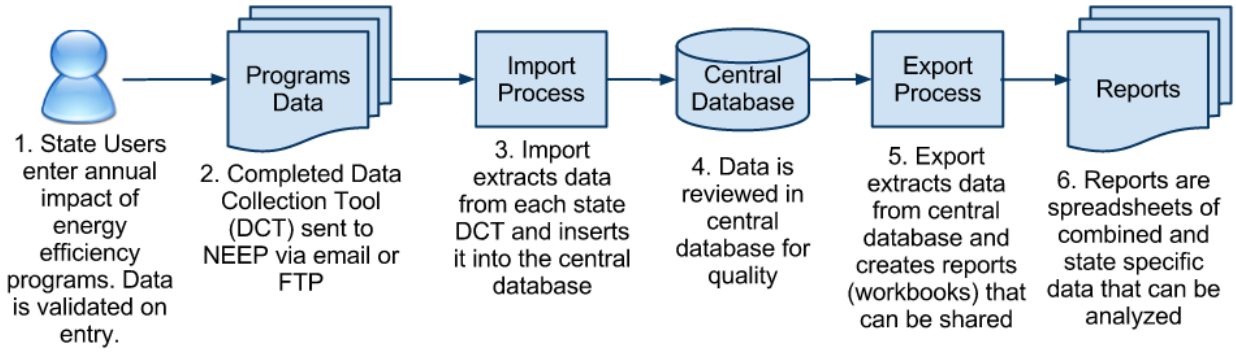
SYSTEM USERS

For more detailed information about system users, see the preface of the *Common Statewide Energy Efficiency Reporting Guidelines* in Appendix E.

State Agency **Users** use the data collection tool to provide annual state specific energy efficiency data

NEEP **Administrators** receive completed spreadsheets, run an import process to import and update the data in the central database, quality check the contents of the central database, and run an export process to create a set of output reports.

HIGH LEVEL ARCHITECTURE



SYSTEM MODULES

Data Collection Tool

The Data Collection Tool (Excel or equivalent) contains the templates, supporting definitions and specific guidance provided in the *Common Statewide EE Reporting Guidelines*. Users can download the Data Collection Tool from the designated host website or receive it directly from NEEP via email.

Users use the tool, working through the process to provide their state specific data, namely:

Table 1.0: Description of Reported Energy-Efficiency Savings (including key definitions/ descriptions, and access (hyperlinks/info) to more detailed or supporting information/ documents
Table 1.1: Incremental Annual Savings
Table 1.2: Lifetime Savings
Table 1.3: System Peak Annual Demand Savings
Table 2.1: EE Program Funding Sources
Table 2.2: EE Program Expenditures
Table 2.3: Cost of Saved Energy
Table 3.0: Avoided Air Emissions
Table 4.0: Economic/Employment Impacts

The data collection spreadsheets include data validation that can flag numbers that don't make sense, identify missing values or incomplete entries, etc.

The data collection tool incorporates a number of key values, lists and assumptions that can be modified by NEEP but not by the end users.

There are a number of defined terms in the Data Collection Tool. It should be simple for the User to view the definitions while completing the information, preferably in context.

In some cases, there will be built-in calculations for air emissions and job impacts. In those cases, the user will be able to enter their own information or use defaults factors and methodology provided by NEEP.

When the User has completely filled out the workbook, they send the completed workbook to NEEP via upload or email.

Features:

- Is easy to use by user who is not an Excel expert
- Restricts choices to one or more of a set of correct values
- Validates entered values
- Ensures that required data is entered
- Can be modified in future years as required data changes

Import Process

The import process takes one or more of the Data Collection Tool workbooks, extracts the data from it and adds or updates that data into the central database. If duplicate data is entered for a specific state/year, it should replace the data in the central database with the most current information.

There needs to be some way to turn off the updating of data for a state for a particular year. Once this is done, additional data records can be added, but existing data will not be replaced or updated.

If there is missing data or other issues with the data discovered during the import process, those issues should be clearly identified and reported to the Administrator.

Database

The Database could be created in Access (or equivalent) and will completely store all the data extracted from the Data Collection Tool that have been completed for each state for each year.

The database will also contain a set of tables that store assumptions, references and other values that will be input and maintained by NEEP.

There are a set of queries and reports on the database that an Administrator can use to identify data issues, missing data, etc.

Features:

- Stores all the information from a state-specific spreadsheet
- Can be expanded over time to store additional information

Export Process

The export process can be run on an as needed basis by the NEEP Administrator. When it is run, it creates a set of reports (workbooks), one for each state and one that combines all the states together.

Features:

- Creates a set of workbooks that contain the combined data
- The workbooks can view, extract, and sort data and generate graphics

Reports

Reports are generated by the Export Process.

Each report set includes a number of individual reports. A report can cover an individual state or all the states together. The reports contain the complete information that NEEP has collected and also any additional analysis of that data.

The reports are in a format (like a spreadsheet table) that allows the User to view, filter, extract, and sort data and generate graphics on the data.

The following Reports should be generated by the output process:

1. A workbook of reports for each state for each year, (e.g., New York Workbook for 2011). In 2012, the export process should generate 10 of these Reports (1 for each state).

   Table 1.0: Description of Reported Energy-Efficiency Savings (including key definitions/ descriptions, and access (hyperlinks/info) to more detailed or supporting information/ documents
   Table 1.1: Incremental Annual Savings
   Table 1.2: Lifetime Savings
   Table 1.3: System Peak Annual Demand Savings

Table 2.1: EE Program Funding Sources
Table 2.2: EE Program Expenditures
Table 2.3: Cost of Saved Energy
Table 3.0: Avoided Air Emissions
Table 4.0: Economic/Employment Impacts

11. A Combined Workbook for 2011 (show all state data together, breakout by state)

12. Total (show all results together, no breakout)

13. Regional: (show results grouped by regions (ISO-NE, NYISO, Mid-Atlantic states))

14. Combined Workbook for all years

APPENDIX C: NEEP PROFESSIONAL SERVICES AGREEMENT

REGIONAL EVALUATION, MEASUREMENT AND

VERIFICATION FORUM ("EM&V FORUM")

CONTRACTOR TERMS & CONDITIONS (6/9/11 Version)

1. DEFINITION OF TERMS

Defined Terms. For purposes of these Terms and Conditions and as used in this Agreement and all related Purchase Orders issued hereunder incorporating these Terms and Conditions, the following commonly used terms are defined as follows:

1.1 *"Forum Participant"* for the purpose of this Agreement means entities or organizations providing funding to this Forum Project (the 'Project'), as described in Attachment A – Forum Participants

1.2 "*Company* " shall mean "NEEP" or one of the "Forum Participants" that will contract directly with the Contractor for the Project.

1.3 *"Site"* means office or other location as designated by Company for which the Project is intended, to which the Project is to be delivered, or the Project is to be carried out (if not performed at the facility of the Contractor or others).

1.4 "*Purchase Order"* – Purchase Orders may be issued by Company for services from Contractor including all documents therein designated as being a part of this Agreement and all amendments thereto ("Amendments"). This Agreement and all related Purchase Orders issued hereunder constitutes the entire agreement between Company and Contractor. The Purchase Order shall reference the terms and conditions of this Agreement and any Supplemental Conditions between the parties.

1.5 "*Contractor"* – The business entity (firm or individual) identified as such in this Agreement and all related Purchase Orders issued hereunder and their legally appointed representatives, to the extent such representation is approved by Company. Contractor shall also be responsible for cascading all requirements of this Agreement to their subcontractors performing under the provisions of this Agreement.

1.6 "*Project"* – In its totality, the complete scope of work to be performed and provided as defined by Company and agreed to by Contractor for a specified period of time and cost.

1.7 "*Subcontractor*" – Any business entity (firm or individual) regardless of tier, which the Contractor may retain during the term of this Agreement to provide services in support of the project. Contractor shall remain fully responsible for all such services provided by its Subcontractor(s) of any tier.

1.8 "Agreement" - The "Agreement" consists of a binding document between Company and Contractor encompassing the terms and conditions set forth herein and agreed to by the parties executed under separate cover. These terms and conditions will apply to either NEEP, acting on behalf of the Forum Participants, or the Forum Participant(s) contracting directly with the Contractor.

2. PURCHASE ORDERS

2.1 Company shall provide and Contractor shall accept compensation for the Project in accordance with the terms of this Agreement and all related Purchase Orders that may be issued by the Company, and any changes thereto.

2.2 Any changes in the Price, either to adjust for changes in the estimated costs or for other cost elements applicable to the Project, shall be incorporated into the Purchase Order, and this Agreement. Company will not compensate the Contractor for amounts in excess of the Agreement Price.

2.3 Contractor shall be liable for and pay all taxes, contributions and penalties, including interest thereon, that are required or imposed by law in connection with the Project, including, but not limited to, federal, state or local sales, use, excise, consumer, employment (including, but not limited to, FICA, pension obligations and fees), unemployment compensation, workers' compensation, old age retirement benefits, life pensions, annuities and similar taxes or benefits, which may now or hereafter be imposed by law or collective bargaining agreements applicable to labor, services, goods or materials with respect to performance of the Project.

2.3.1 Contractor shall indemnify, defend and save harmless Company, its affiliates, officers, directors, employees, agents, successors and assigns, from and against any and all liability for taxes, contributions and penalties, including the interest thereon, resulting from any Purchase Order(s) issued in accordance with this Agreement, for the services performed thereunder.

2.3.2 If Contractor fails to pay said taxes, contributions and penalties, and interest thereon, Company shall have the right, but shall not be obligated, to pay the same. Contractor agrees to reimburse Company for all taxes, contributions and penalties, including interest thereon, assessed against Contractor and paid by Company upon demand or at the same time that final payment is due, at the Company sole option, in accordance with this Agreement.

3. **INVOICING**

3.1 Contractor shall submit invoice(s) in accordance with the Agreement Price and all related Purchase Orders issued under this Agreement issued by Company, and shall include and be supported by documentation, explanation and any other information necessary to substantiate, to Company satisfaction, all amounts being invoiced.

3.2 Each invoice shall reference Company Purchase Order Number if one is issued.

3.3 For Professional Hourly Rate Purchase Orders, Contractor shall submit, on a monthly basis, its invoice applicable to reimbursable costs, in accordance with the Scope of Work and Purchase Order(s), for services satisfactorily performed during the previous month.

3.4 Fixed price Agreements, or Agreements on which fixed amounts of compensation are due based on milestone achievements or deliverables, shall be invoiced by the Contractor upon completion of such Services satisfactory to Company.

3.5 Company will pay the Contractor Net Sixty (60) days from receipt of an acceptable invoice. Unacceptable invoices may, at Company option, be adjusted and paid as adjusted, or returned to the Contractor for correction and re-submittal.

3.6 Upon completion of the Contractor's Services to Company satisfaction pursuant to the "Schedules" established by Company, Contractor shall submit its final invoice marked "Final Invoice" for all Project work performed. The final invoice, in addition to billing for any and all final period costs, shall summarize all previous invoices and payments made for the Project and indicate the total final Project amount. Company will pay Contractor for all final approved costs not in excess of the prices established in this Agreement.

4. **TERMINATION**

4.1 **Termination Without Cause.** Company may, at any time for any reason, by written notice to the Contractor, terminate, in whole or in part, of this Agreement regarding Contractor's performance hereunder. Such termination shall be effective upon the date set forth in the written notice and, upon receipt of said notice, the Contractor immediately shall turn over and deliver to Company all technical data and other information and materials related to the terminated Project which are within the Contractor's possession or control. The Contractor understands and agrees that, in the event it fails or refuses to comply with the turnover and delivery obligations set forth herein, the Contractor shall not be entitled to any amounts due and owing as of the date of termination for services previously rendered under this Agreement, as well as any amounts otherwise payable hereunder for termination costs until such turnover has been fully complied with by the Contractor.

4.2 Upon termination hereunder, Company shall pay 1) all amounts due and owing up to the effective date of termination, and 2) a reasonable amount, mutually agreed upon between Company and the Contractor, representing the Contractor's costs and expenses incurred as a result of the termination. Such amounts shall in no event include an item or claim for loss of anticipated profit. Further, in no event shall the aggregate payments to Contractor exceed the Agreement Price.

4.3 **Termination With Cause.** Either Party may terminate the Agreement upon breach by the other Party of any material provision under the Agreement. For any termination with cause, the terminating Party shall notify the other Party in writing stating with appropriate specificity the grounds for such termination. If the non-terminating Party cures the problem within thirty (30) days of the provision of such notice, termination shall not take effect and the Agreement shall remain in effect.

4.4 If the Project to be done shall be abandoned by the Contractor, or if the Contractor assigns or subcontracts all or any part of this Agreement without Company's previously

obtained written consent, or if the Contractor loses control of the Project from any cause, except for force majeure events, or if the Contractor refuses, or neglects to provide sufficient and properly skilled or other labor, or fails in any respect to prosecute the Project with diligence, or if the Contractor is violating any of the conditions or covenants of this Agreement, or it is not executing the Project in good faith, or is not executing or performing the Project on schedule, or should Contractor become insolvent, Company may, by written notice to the Contractor, terminate, in whole or in part, this Agreement, or the Contractor's performance of Project hereunder, or both. Such termination will be effective upon the date set forth in the written notice and, upon receipt of said notice, the Contractor immediately shall turn over and deliver to Company all technical data and other information and material relating to the terminated Project which are within the Contractor's possession or control. The Contractor understands and agrees that, in the event the Contractor fails or refuses to comply with the turnover and delivery obligations set forth herein, the Contractor shall not be entitled to any amounts due and owing as of the date of termination for services previously rendered under this Agreement until such turnover has been fully complied with, as determined solely by Company.

4.5 Upon termination for default, Company may take over the terminated Project and prosecute the same to completion. In such event, the Contractor and its insurers shall be liable to Company for all direct transitional administrative costs and expenses incurred by Company to engage another Contractor and for all costs to complete the said terminated Project.

4.6 The Contractor's compensation in the event of termination for default shall be limited to the amounts for services rendered up to the date of termination. No amount shall be paid or payable by Company for the Contractor's termination costs, including but not limited to demobilization costs, costs associated with the transfer or termination of personnel, or loss of anticipated profit.

4.7 **Funding Contingency.** Company reserves the right to rescind, cancel, or suspend the Agreement if funding is withdrawn by Company's funding sources for the services being provided under the Agreement. Any such rescission, cancellation, or suspension shall be effective immediately upon the Contractor's receipt of written notice from Company and the Company will have no further obligation to the Contractor.

5. OBLIGATIONS IN THE EVENT OF TERMINATION

5.1 Upon termination, all Projects, materials, information, protocols, processes, data, results, Project product, and other items conceived, created, developed, or produced by Contractor, whether finished or unfinished, under this Agreement ("Projects and Materials") shall become the joint property of Company and the Contractor, and Contractor shall deliver copies of all such materials to Company immediately. Company shall compensate Contractor for the value of all unpaid services that have been satisfactorily performed and reasonable reimbursable expenses properly incurred by Contractor by the effective date of termination. Contractor shall submit a final summary report as described in this Agreements Scope of Project to Company within 60 days after the termination date.

6. RELATIONSHIP BETWEEN COMPANY AND CONTRACTOR

6.1 Contractor shall at all times be deemed to be an independent Contractor. Neither Contractor nor its Subcontractor, nor the employees of either, shall be deemed to be the servants, employees, or agents of Company. Nothing contained in this Agreement shall be deemed to create any association, partnership, joint venture, or relationship of principal and agent or employer and employee between Company and Contractor. Contractor acknowledges and agrees neither it nor any of its officers, directors or employees is an employee of Company and that Contractor is responsible for all federal and/or state, and Social Security liability that may result from performance of and compensation for services under this Agreement. Company assumes no responsibility for the payment of any wages, benefits, or taxes by, or on behalf of Contractor by reason of this Agreement.

7. ASSIGNMENT AND SUBCONTRACTING

7.1 Contractor shall not assign any part of this Agreement, nor subcontract any portion of this Project, nor assign any moneys payable under this Agreement, without first obtaining the written consent of Company. Any assignment or subcontracting by Contractor or its Subcontractor without written consent of Company shall be considered null and void from inception. Company authorized assignments or subcontracting shall not relieve Contractor of the responsibility for full compliance with the requirements of this Agreement.

8. AUDIT AND MAINTENANCE OF RECORDS

8.1 Company reserve the right at any time, and at Company expense, to audit the Contractor's books and records at the locations where such books and records are maintained insofar as they pertain to charges invoiced to Company, as a basis for any claim, or any other costs pertinent to Services provided under this Agreement. Such audits may be performed by Company employees or by professional auditing firms or both. Audits of charges invoiced may include, but shall not be limited to, verification of hours and the position job titles and pay levels of Contractor's employee charges, subcontractor and materials invoices and evidence of business expenses reimbursed. Any discrepancy, which Company alleges to exist will be brought to Contractor's attention in order to enable Contractor to investigate the facts. If Company agrees that a discrepancy exists, an adjustment will be made on the next applicable invoice issued, or if no further invoice is likely, Contractor will issue a refund to Company within thirty (30) days thereafter.

9. REPRESENTATIONS AND WARRANTIES

9.1 Contractor represents and warrants that it has the legal right and authority to enter into this Agreement and that its performance hereunder will not conflict with or violate any commitment, agreement, or understanding it has to or with any other person or entity. Contractor further warrants the suitability of the services provided hereunder for the uses intended under the Agreement.

9.2 The Contractor shall ensure that all services meet or exceed the level of quality specified in this Agreement or if not specified of the best quality appropriate for the intended purpose. As requested, the Contractor shall demonstrate to Company that the Project

performed is in compliance with the requirements specified in this Agreement. The Contractor shall make records available for Company's verification of this compliance.

9.3 The Contractor shall use its best efforts and ensure that all services are performed with the highest degree of skill and care required by customarily accepted good and sound professional practices and procedures. The Contractor, in supplying such services under this Agreement, guarantees that the Project will be as required by this Agreement; will be accurate, correct and fit to serve its intended function as stated in this Agreement, or as may be reasonably implied. The Contractor further guarantees its performance of services will comply with applicable codes, standards and governmental regulations having jurisdiction over such Project.

9.4 In the event the Contractor fails to meet the foregoing requirements, the Contractor shall be liable to Company to:

- correctly re-perform, at its sole cost and expense, those services which failed to meet such degree of skill and care;
- assume the cost of repairing, replacing or correcting defective or damaged equipment, materials or structures purchased or built in reliance upon designs, plans, drawings or specifications which fail to meet such degree of skill and care or perform its/their intended function.

10. TITLE TO PLANS AND SPECIFICATIONS

10.1 Any information, analyses, conclusions, reports, drawings, and specifications prepared by Contractor pursuant to this Agreement shall be the sole property of Company. Company may use information contained therein for any purpose whatsoever, including construction, maintenance, operation, modification, replacement, and repair. Contractor may retain a copy of such documents for its internal use only, but may not release any information contained therein without prior written consent of Company.

11. PATENT INFRINGEMENT AND INDEMNIFICATION

11.1 All royalties and fees for patents covering materials, articles, apparatus, devices, equipment or processes used in the Project shall be included in the Agreement Price. Contractor shall satisfy all demands that may be made at any time for such royalties or fees.

11.2 The Contractor guarantees that all Project information and material provided by the Contractor under this Agreement shall be free from claims of patent, copyright, and/or trademark infringement.

11.3 The Contractor shall indemnify, hold harmless, and, at Company's option, defend Company and its affiliates and their officers, directors, employees, agents, servants, and assigns from and against all claims, losses, costs, damages, suits, actions, and proceedings for actual or alleged infringement of any patent, copyright, or trademark resulting from any sale, use, or manufacture of any item delivered hereunder, and pay and discharge all

judgments, decrees, and awards rendered therein and bear all expenses and legal fees associated therewith.

11.4 In the event of any adjudication that this Agreement, or any part thereof, infringes any patent, copyright, or trademark or in the event that the use of any part of the Project is enjoined as a result of any claim that the Project infringes any patent, copyright, or trademark the Contractor shall, at its sole expense, either: a) procure for Company the right to continued use, or b) without impairing performance capability, replace the infringed Project with substantially equivalent noninfringing Project, or modify such Project so it can become noninfringing.

11.5 The Contractor shall obtain from its Subcontractor, for Company's benefit, agreements similar to those contained in this Section 11.0.

11.6 Notwithstanding any other provision of this Agreement, this Section 11.0 shall survive the termination or expiration of this Agreement.

12. INVENTIONS, PATENTS AND COPYRIGHTS

12.1 Any and all Project materials, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by the Contractor or Contractor's partner(s), employee(s), agent(s), vendor(s), Contractor(s), supplier(s) or any other party employed by Contractor, or Subcontractor to Contractor of any tier, to satisfy its obligation under this Agreement shall be Project made for hire and shall be deemed the property of Company. All such Project materials, expressions, inventions, ideas, discoveries, improvements or developments, as well as all copyrightable expressions thereof, shall be deemed to fit into one or more of the specifically enumerated categories of Projects contained in 17 U.S.C. Section 101 *et sea,* and any subsequent revisions thereof. The Contractor and/or Contractor's partner(s), employee(s), agent(s), vendor(s), Contractor(s), supplier(s), or any other party employed by Contractor, or Subcontractor to Contractor of any tier, to satisfy its obligation under this Agreement shall promptly furnish Company with complete information, including, without limitation, a written description thereof giving the date of the Project, invention or expression and naming the inventors or authors and others involved in the development or writing of the Project, invention or expression. Company shall have the sole power to determine whether or not and in which countries and jurisdictions patent application shall be filed or copyrights registered and to determine the disposition of title to and rights in any Projects, expressions, inventions, ideas, discoveries, improvements or developments and in any United States and foreign patent applications, patents or copyrights that may result. Memoranda, notes and experimental Projects, descriptions, diagrams and other data generated in performance of the Project pertaining to any and all Projects, expressions, inventions, ideas, discoveries, improvements and developments covered by this Agreement shall be available at reasonable times to Company.

12.2 Contractor shall assist Company in the implementation of this Section 12.0 by obtaining and providing detailed written descriptions of each invention, idea, discovery or expression sufficient for filing patent or copyright applications, by providing an evaluation of the patentability or copyrightability of each disclosure, by assisting Company in the prosecution

of patent and copyright applications, and by executing or having executed by appropriate persons any and all documents which may be necessary or desirable to cause title in such inventions, ideas, discoveries, or expressions to vest with Company. The cost of such assistance shall be considered separate and distinct and shall be mutually agreed upon between Company and Contractor.

12.3 In order to further effectuate the provisions of this Section 12.0, Contractor agrees to deliver to Company either 1) agreements in the form of Appendix "A" hereto, "Non-Disclosure Agreement", executed by Contractor and each partner, agent, employee, vendor, Contractor, Subcontractor and any other party employed by Contractor to satisfy its obligations under this Agreement, and any employee of any of the foregoing Company, or 2) a written statement from Contractor representing and warranting that it has in place written, binding agreements in the form of Attachment B (Non Disclosure) for any and all entities and persons it will utilize to satisfy its obligations under this Agreement.

13. INSURANCE

13.1 Prior to the commencement of Project under the Contract Documents, Contractor shall provide Company with certificates of insurance as evidence of the insurance requirements below. Such certificates shall name Company as an additional insured party, including its affiliates and subsidiaries.

13.2 Such certificates, and any renewals or extensions thereof, shall provide that at least thirty (30) days prior written notice shall be given to Company in the event of any cancellation on diminution of coverage and shall outline the amount of deductibles or self-insured retentions which shall be for the account of Contractor. Such deductibles or self-insured retentions shall not exceed $100,000 unless agreed to in writing by Company.

13.3 Unless otherwise specified in this Agreement, minimum insurance requirements are as follows:

13.4 Workers' Compensation and Employer's Liability insurance coverage shall be provided in accordance with the Workers' Compensation laws of the states wherein operations under this Agreement are to be carried on. Minimum limit for Employer's Liability coverage is $500,000 each accident. Wherever the exposure is present, coverage under the U.S. Longshoremen's and Harbor Workers' Compensation Act or Jones Act shall be required.

13.5 Commercial General Liability, covering all operations to be performed under this Agreement, with minimum limits of:

Bodily Injury
and
Property Damage combined single limit $1,000,000 per occurrence.

This policy shall include Contractual Liability and shall include the Company as an additional insured for all coverages therein.

13.6 Automobile Liability, covering all owned, non-owned and hired vehicles used in connection with the Services provided under this Agreement with minimum limits of:

Bodily Injury
and
Property Damage combined single limit $1,000,000

13.7 Umbrella Liability Insurance with coverage for Commercial General Liability, Commercial Automobile Liability and Employer's Liability with a minimum liability limit of in the amount of $1,000,000 per occurrence.

13.8 Contractor shall provide Professional Liability coverage with a limit of liability of the greater of $500,000 or the value of this Agreement.

13.9 Self-Insurance: Proof of qualification as a qualified self-insurer, if approved in advance in writing by Company, will be acceptable in lieu of securing and maintaining one or more of the coverage's required in this Insurance Section.

13.10 Contractor shall waive all rights of recovery against Company and its affiliates and subsidiaries for any loss or damage covered under those policies referenced in this insurance provision, or for any required coverage that may be self-insured by Contractor.

13.11 Reservation of Rights – If any policy should be canceled before Final Payment by Company to the Contractor and the Contractor fails immediately to procure other insurance as specified, Company reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor under this Agreement.

13.12 Contractor shall furnish Company with copies of any incident report(s), including those sent to Contractor's insurance carrier(s), covering incidents or accidents occurring in connection with or as a result of the performance of the Project performed under this Agreement.

13.13 Contractor represents that it has full policy limits available and shall notify Company in writing when coverage's required herein have been reduced as a result of claim payments, expenses, or both.

13.14 Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its services under this Agreement, or limiting, diminishing, or waiving Contractor's obligation to indemnify, defend and save harmless Company in accordance with this Agreement.

14. INDEMNIFICATION

14.1 To the fullest extent allowed by law, the Contractor shall indemnify, defend, and save harmless Company, its affiliates, officers, directors, employees, agents, successors and assigns (collectively, the "Indemnified Company"), from any loss, damage, liability, cost, suit, charge, expense, or cause of action, whether unconditionally certain or otherwise, as they exist on the effective date of this Agreement, or arise at any time thereafter, (including but not limited to fees and disbursements of counsel incurred by an Indemnified Party in any action or proceeding between Contractor and an Indemnified Party or between an Indemnified Party and any third party or otherwise) arising out of any damage or injury to property of Company, Contractor and/or third party (including real property, personal property and environmental damages), persons (including injuries resulting in death), or

economic damages, directly or indirectly caused by or arising out of or in any way connected with this Agreement, or the Project performed thereunder, or any equipment, property or facilities used by the Contractor, its agents, employees, Subcontractors and suppliers. Company shall not be indemnified or held harmless against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of Company.

14.2 Contractor shall take prompt action to defend and indemnify the Indemnified Company against claims, actual or threatened, but in no event later than notice by Company to Contractor of the service of summons, complaint, petition or other service of process against Company alleging damage, injury, liability, or expenses attributed in any way to this Agreement, the Project, or the acts, fault, negligence, equipment, facilities, personnel, or property of the Contractor, its agents, employees, Subcontractors or suppliers. Contractor shall defend any such claim or threatened claim, including as applicable, engagement of legal counsel, to respond to, defend, settle, or compromise any claim or threatened claim. Furthermore, Contractor understands and agrees it is responsible for any and all costs and expenses incurred by Company to enforce this indemnification provision. The obligations set forth herein shall survive completion of the Project and termination of this Agreement for any reason.

14.3 Contractor intends that its indemnity obligation to each party indemnified herein for claims related to or brought by anyone directly or indirectly employed by Contractor or Contractor's subcontractors shall not be limited in any way by any provision of any workers' compensation act, disability benefits act or other employee benefit act, and Contractor hereby waives immunity under such acts to the extent such acts would bar recovery under, or full enforcement of, Contractor's indemnity obligation.

15. BACKGROUND CHECKS

15.1 Contractor shall be wholly and solely responsible for all acts of its personnel while engaged in the Project. Any illegal acts, including but not limited to terrorism affecting the property and personnel of the Company, by Contractor or Subcontractor shall be considered grounds for finding the Contractor in default and terminating this Agreement and all affected Purchases Orders issued by Company in accordance with Article 4, in addition to other rights or remedies available Company under applicable law.

15.2 Additional Background Check requirements may be required by the Forum Participants as outlined under separate cover.

16. NOTICE OF COMPLETION – VERIFICATION

16.1 Contractor shall notify Company when it has completed the Project. Company will inspect and accept or reject the Project as promptly as practicable after delivery, except as otherwise provided in the Contract Documents. Company shall inspect the Project and notify Contractor in writing either that: (1) the Project is satisfactory and Contractor has achieved Final Acceptance; or (2) all or parts of the Project do not conform to the Contract Documents. Contractor shall correct such non-conforming Project to suit Company schedule, at Contractor's expense. Company failure to inspect and accept or reject the

Project shall not relieve Contractor from responsibility for Project which does not comply with the Contract Documents.

17. FORCE MAJEURE

17.1 Any delay of either party in the performance of its required obligations hereunder shall be excused if and to the extent caused by unprecedented weather conditions, fire, explosion, riot, war, strike by Company or its affiliates' employees, court injunction or order, federal and/or state law or regulation, or order by any federal or state regulatory agency, but only to the extent that: 1) such events are beyond the reasonable control of the party affected, 2) such events were unforeseeable by the affected party and the effects were beyond its reasonable efforts to prevent, avoid or mitigate, 3) said affected party uses every reasonable effort to prevent, avoid or mitigate the effects, 4) prompt written notice of such delay be given by such affected party to the other; and 5) the party affected uses its best efforts to remedy the resulting effects in the shortest practicable time. Upon receipt of said notice, if necessary, the time for performing the affected activities shall be extended for a period of time reasonably necessary to overcome the effect of such delays, such extension shall be the sole remedy and compensation for each force majeure event. Notwithstanding the foregoing, Company shall have the right to terminate this Agreement and all related Purchase Orders issued hereunder.

18. RIGHTS, CLAIMS AND DISPUTES

18.1 Any claim which Contractor may have against Company arising out of this Agreement shall be presented in writing to Company not later than fifteen (15) days after the first occurrence of the circumstance which gave rise to the claim. The claim shall contain a concise statement of the question or dispute and the relevant fact and data (including any applicable Purchase Order or Agreement provision) which support the claim. Contractor shall furnish any additional information, which Company may require to enable it to evaluate and decide the claim.

18.2 FAILURE TO SUBMIT ANY CLAIM IN THE SAID 15-DAY PERIOD SHALL CONSTITUTE A WAIVER ON THE CONTRACTOR'S PART FOR ENTITLEMENT TO EITHER ADDITIONAL REIMBURSEMENT OR AN EXTENSION OF TIME.

18.3 Any dispute between Company and the Contractor with respect to this Agreement, or the Services to be provided thereunder, or both, which cannot be resolved in the normal course by the respective representatives of Company, shall be referred to the responsible officers of Company and Contractor for resolution. Notwithstanding the existence of a dispute or dissatisfaction with the manner in which it was resolved or the lack of any such resolution, Company shall be obligated to maintain payments not in dispute to the Contractor and the Contractor shall be obligated to proceed with its performance of this Agreement (including any such disputed Project), unless otherwise directed by Company.

19. CONFIDENTIALITY

19.1 The provisions of the Non-Disclosure Agreement, dated _____ 2011, are incorporated herein and executed under separate cover.

19.2 Contractor has provided a written binding representation and warranty as stated above. If Contractor has any question about whether information is proprietary, it shall contact Company prior to disclosing such information for a determination as to its proprietary status. Contractor will require any permitted subcontractors it engages in order to carry out its Project under the Agreement to sign an identical Non-Disclosure Agreement to the one in Attachment B.

19.3 The obligations of Contractor regarding any of the above terms and conditions shall survive the completion or termination of this Agreement.

20. EQUAL EMPLOYMENT OPPORTUNITY

20.1 Contractor shall comply with all applicable federal, state and local anti-discrimination laws, the standards and regulations issued thereunder and the amendments thereto.

20.2 The Contractor agrees to fully comply with such provisions, and any amendments thereof. In addition, all subcontracts and agreements that the Contractor enters into to accomplish the Project under the terms of this Agreement shall obligate such subcontractors to comply with such provisions.

21.0 THIRD PARTY ITEMS

21.1 In the event that Contractor employs Subcontractor (s) (with Company's prior written approval) for any services associated with this Agreement or directly purchases equipment or materials to be used in the Project, the Contractor shall: 1) ensure that the appropriate provisions of this Agreement are applied in such subcontract(s) in the best interests and protection of Company and Forum Participants' and, 2) ensure that Company, via Contractor's billings, receives full benefit of commercial discounts, favorable rates and all guarantees made available by its vendors and/or Subcontractors of any tier.

21.2 It is understood that Company shall have full rights of ownership of all equipment and materials purchased by the Contractor for the prosecution of the Project. At the request of Company, Contractor shall provide, or cause to be provided, appropriate bills of sale, assignments or other documents to ensure the vesting of rights of title and ownership in Company.

21.3 Following completion of Project under this Agreement, Company may direct the Contractor to deliver all equipment, appliances and materials not previously incorporated in the Project or otherwise disposed of (with Company's approval) to the Company's facility

22.0 COMPLIANCE WITH LAWS

22.1 Contractor shall comply with all applicable federal, state and local laws, ordinances, rules, regulations, permits, licenses, or requirements thereunder in connection with the performance of the Project.

22.2 In connection with any performance under or in connection with this Agreement, Contractor, its Subcontractors, agents, and representatives shall, at all times: 1) strictly

comply with Forum Participants safety and environmental standards, rules, regulations, directives, and procedures, including, without limitation, Forum Participants Contractor Safety Requirements and Contractor Environmental Requirements, (if incorporated as Purchase Order Documents by Company) and with any and all applicable federal, state, municipal, and local laws, rules, regulations, codes, and ordinances related to employee and public health, safety, and/or the environment (as in force upon the date of this Agreement and as in the future passed, enacted, directed, or amended), collectively, "Standards", and 2) conduct all operations in a manner to ensure the safety of all personnel, the general public, and the protection of the environment and so as to avoid the risk of injury, death, loss, theft, or damage by accident, vandalism, sabotage, or any other means. In cases where one or more conflicting Standards may be applicable, Contractor shall comply with the most stringent applicable Standard.

22.3 In the event of any emergency endangering life, health, property, or the environment, Contractor shall take such prompt action as may be reasonable and necessary to prevent, avoid, or mitigate injury, damage, or loss and shall, as soon as possible, report any such incidents, including Contractor's response thereto, to Company. In the event that Contractor becomes aware of any non-compliance with such Standards, Contractor shall, in each case, immediately notify Company and shall take prompt corrective action; provided, however, that such notice and action shall in no event relieve Contractor of any liability for, or in connection with, such non-compliance.

22.4 Contractor shall continually inspect, where applicable, all Project sites, facilities, materials, and equipment to discover and determine any conditions that might involve safety or environmental risks, and supervise its personnel to determine and enforce compliance with all Standards, and shall be solely responsible for discovery, determination, and correction of any non-compliance. Contractor shall be solely responsible and assume all liability for the safety and supervision of its personnel engaged in any performance in connection with this Agreement. Contractor shall designate a representative to insure compliance with all Standards and direct its personnel to take all precautions necessary to protect against and prevent injury or damage to persons, property, and/or the environment. Contractor shall instruct all such personnel on safety and environmental practices and the requirements of the Standards and shall inform such personnel of all modifications or additions thereto. Contractor shall furnish all appropriate safety equipment and enforce the use of such equipment.

22.5 In addition to any other warranties contained in this Agreement, Contractor warrants that its performance in connection with this Agreement shall comply with all applicable Standards.

22.6 Contractor shall save Company harmless from and against all liability resulting from violations by Contractor of said laws, ordinances, rules regulations, permits and licenses. Any and all costs related to Company's enforcement of this hold-harmless provision shall be borne by Contractor.

22.7 If Contractor observes that any requirement specified in the Contract is at variance with any governing laws, ordinances, rules, regulations, permits and licenses, Contractor shall promptly notify Company in writing before incurring any further liability, expense, or obligation for Contractor or Company

23. AMENDMENT

23.1 No amendment, modification, extension, or rescission of any term or provision of the Agreement shall be effective unless agreed upon in writing by the Company.

24. JURISDICTION AND GOVERNING LAWS

24.1 Unless other governing laws and/or other jurisdictions are specifically established in this Agreement shall be deemed to be executed in the Commonwealth of Massachusetts and this Agreement shall be interpreted and enforced according to the Laws of the Commonwealth of Massachusetts; provided, however, that in the event that the Project is to be performed solely in other States then this Agreement shall be deemed to be executed in that States Laws and shall be interpreted and enforced according to the Laws of that State.

24.2 Only the courts in the State shall have jurisdiction over this Agreement and all related Purchase Orders issued hereunder and any controversies arising out of this Agreement. Any controversies arising out of this Agreement shall be submitted only to the courts of such State.

24.3 Contractor hereby submits to the jurisdiction of the courts in the State for the purposes of interpretation and enforcement of this Agreement. Contractor hereby waives personal service by manual delivery and agrees that service of process on Contractor in any action arising out of this Agreement may be made by registered or certified mail, return receipt requested, directed to Contractor at its address set forth in this Agreement.

25. NOTICES

25.1 Any notice required to be given or otherwise given pursuant to the Agreement shall be in writing and shall be hand delivered, mailed by U.S. mail, or sent by recognized overnight courier service to:

To the Company: Bob McTighe
Director of Financial and Administrative Services
Northeast Energy Efficiency Partnerships, Inc
91 Hartwell Avenue
Lexington, MA 02421

To Contractor: CONTRACTOR NAME OR COMPANY NAME
[STREET ADDRESS]
CITY, STATE ZIP CODE

26. SEVERABILITY

26.1 If any term of the Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, then the Agreement, including all of the remaining terms, will remain in full force and effect as if such invalid or unenforceable term had never been included.

27. WAIVER

27.1 The failure of either Party to enforce any provision of the Agreement shall not be construed as a waiver or limitation of that Party's right to subsequently enforce and compel strict compliance with every provision of the Agreement.

27.2 Neither Company payment of Contractor's final invoice issued in respect of the Project nor its verification that the Project has been completed shall be construed as a waiver of any of Contractor's warranty obligations or as acceptance of any deficient Project not discovered prior to such payment or during such verification.

27.3 No waiver, consent or modification of any of the provisions of this Agreement shall be binding unless in writing and signed by Company and the Contractor.

27.4 Company rights and remedies hereunder shall be cumulative and not exclusive of each other and may be pursued separately or concurrently as Company determines.

28. ENTIRE AGREEMENT

28.1 This Agreement and all attachments hereto contain the entire agreement of Company with respect to the matters covered herein and cannot be modified, except in writing signed by Company.

Attachment A
Forum Participants*

Connecticut *Department of Public Utility Control* *Connecticut Light & Power* *United Illuminating* *Connecticut Municipal Electric Energy Coop* *Delaware* *Energy Office* *District of Columbia* *DC Sustainable Energy Utility* *District Dept. of the Environment* *Maine* *Public Utility Commission* *Efficiency Maine Trust* *Maryland* *Maryland Energy Administration* *Public Service Commission* *Baltimore Gas & Electric* *Allegheny Power* *Pepco Holdings, Inc.* *Southern MD Electric Co-op* *Massachusetts* *Department of Public Utilities* *Department of Energy Resources* *Department of Environmental Protection* *National Grid* *NSTAR* *Western Mass Electric Co.* *Cape Light Compact* *Unitil*	*New Hampshire* *Public Utilities Commission* *Public Service New Hampshire* *Unitil* *National Grid* *NH Electric Co-op* *New York* *Dept of Public Service (Public Service Commission)* *Central Hudson Gas & Electric* *Consolidated Edison* *National Grid* *NY State Energy Research & Development Authority* *New York Power Authority* *Long Island Power Authority* *Rochester Gas & Electric* *Rhode Island* *Public Utilities Commission* *National Grid* *Vermont* *Department of Public Service* *Efficiency Vermont* *NESCAUM – Northeast States for Coordinated Air Use Management* *US Environmental Protection Agency* *US Department of Energy*

* This list of Forum participants reflects those participants who are either Forum funders and/or participants from which data may need to be collected to support an EM&V Forum project.

Attachment B
NON-DISCLOSURE AGREEMENT

AGREEMENT dated as of _____, 2011 ("Execution Date"), between _____ (the "Recipient") and Northeast Energy Efficiency Partnerships, with offices at 91 Hartwell Avenue, Lexington, MA 02421 ("NEEP" or the "Company"), each, individually, a "Party" and, collectively, the "Parties".

WHEREAS, the Company and its affiliates possess certain confidential and proprietary Information (as such term is defined below); and

[WHEREAS, subject to the prior written consent of Company and its affected affiliates and with the presence of an authorized Company or affiliate representative, the Recipient may be permitted access to certain facilities ("Facilities"); and]

WHEREAS, the Recipient desires the Company to disclose Information in connection with _____ ("Purpose"); and

WHEREAS, the Company is willing to disclose Information to the Recipient subject to the terms and conditions of this Agreement;

NOW, THEREFORE, the Parties mutually agree as follows:

1. The term "Information" means

(a) all business, financial, strategic, technical and other information which is (i) directly or indirectly furnished or disclosed by the Company or its affiliates (or its or its affiliates' agents, servants, representatives, or employees) to Recipient or its representatives, whether provided orally, in writing, by electronic means or otherwise, or (ii) discovered or derived from Recipient's or its representative's presence at, or access to, any of Company's or its affiliate's facilities; and

(b) strategies, techniques, ideas, memoranda, notes, reports, files, copies, extracts, inventions, discoveries, improvements, or anything else prepared or derived, in whole or in part, from the information described in 1(a), above; and

(c) the fact that the Information is being disclosed hereunder or that discussions or negotiations may take place or have taken place concerning the Purpose, or any of the terms, conditions or other facts with respect to any possible transaction relating to the Purpose, including the status thereof.

2. Recipient shall receive all Information in strict confidence, shall maintain the confidentiality and secrecy of the Information, and shall not divulge Information to any third party without the prior written consent of the Company. The Recipient may disclose Information to its employees ("Representatives") to the extent each such Representative has a need to know such Information for the purpose contemplated by this Agreement and provided that each such Representative agrees in writing to maintain the confidentiality of such Information and to be bound to observe all other obligations of the Recipient under this Agreement for the benefit of the Company and its affiliates. The Recipient's liability hereunder shall include, without limitation, liability for any breach of the terms of this Agreement to the extent caused by its Representative(s).

Recipient shall not acquire any rights in Information by virtue of its disclosure hereunder. No license to Recipient, under any trademark, patent, or other intellectual property right, is either granted or implied by the conveying of Information to the Recipient. None of the Information which may be disclosed to Recipient shall constitute any representation, warranty, assurance, guaranty or inducement by the Company to the Recipient of any kind. The Company (including its affiliates) shall not have any liability or responsibility for errors or omissions in, or any business decisions made by Recipient in reliance on, any Information disclosed under this Agreement.

3. Except as provided in Section 14, below, this Agreement shall not apply to Information which, at the time of disclosure to the Recipient, is in the public domain, or thereafter enters the public domain without any breach of this Agreement by the Recipient or any of its Representatives.

4. Recipient and its Representatives shall use Information solely in connection with the Purpose and shall not use, directly or indirectly, any Information for any other purpose without the Company's and any of its affected affiliate's prior written consent.

5. Recipient shall return and deliver, or cause to be returned and delivered, to the Company all tangible Information, including copies and abstracts thereof, within 30 days of a written request by the Company.

6. Nothing contained herein shall require or commit a Party to undertake or proceed with a transaction of or with the other Party, including, without limitation, the purchase of goods or services; any such transaction shall be the subject of a separate written agreement between the Parties.

7. Either Party may terminate this Agreement by written notice to the other Party; notwithstanding any such termination, all rights and obligations hereunder with respect to confidentiality and restrictions on use of Information shall survive with respect to Information disclosed prior to such termination.

8. The Parties acknowledge that a breach of this Agreement would cause irreparable harm to the Company and/or its affiliates for which money damages would be inadequate and would entitle the Company to injunctive relief and to such other remedies as may be provided by law.

9. This Agreement shall be governed and construed in accordance with the laws of The Commonwealth of Massachusetts, United States of America, without regard to the principles of the conflict of laws contained therein. Both Parties hereby submit to the personal and subject matter jurisdiction of the courts of the Commonwealth of Massachusetts for the purpose of interpretation and enforcement of this Agreement. All lawsuits filed to enforce any provisions of the Agreement, or to litigate any claims arising in connection with this Agreement, shall be filed in the Superior Court, Worcester, Massachusetts, which shall be the sole and exclusive venue for all litigation related to this Agreement.

10. This Agreement may be modified only by an instrument in writing signed by authorized representatives of both Parties to this Agreement.

11. This Agreement may not be assigned without the express written consent of both Parties hereto; provided, however, that the Company may assign this Agreement to an affiliate of the Company without the consent of the Recipient.

12. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision hereof shall be prohibited by, or determined to be invalid under, applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement. All obligations and rights of the Parties expressed herein shall be in addition to, and not in limitation of, those provided by applicable law.

13. This Agreement constitutes the entire agreement between Company and Recipient with respect to the subject matter hereof, and any and all previous representations with respect to such subject matter, either oral or written, are hereby annulled and superseded.

14. The Recipient acknowledges that Information and/or data regarding the Facilities may be deemed "critical energy infrastructure information" ("CEII") under applicable Federal Energy Regulatory Commission ("FERC") rules and policies. Without limiting any other term of this Agreement, Recipient shall, and shall cause its representatives to, strictly comply with any and all laws and regulations (including, without limitation, FERC rules and policies) applicable to such CEII relating to any of Company's or its affiliates' facilities. The Recipient and its representatives shall not divulge any such information to any person or entity, directly or indirectly, unless permitted to do so by law and unless it has first obtained, in each case, the express specific written consent of the Company and any affected Company affiliate. In any event, to the extent that Recipient or any of its Representatives seeks or is ordered to submit Information to FERC, a state regulatory agency, court or other governmental body, whether in connection with the Purpose or otherwise, Recipient shall, in addition to obtaining Company's prior written consent, seek a protective order or other procedural protections to ensure that such Information is accorded CEII status or is otherwise treated as confidential or proprietary.]

15. Any consent or waiver of compliance with any provision of this Agreement shall be effective only if in writing and signed by an authorized representative of the Party purported to be bound thereby, and then such consent or waiver shall be effective only in the specific instance and for the specific purpose for which given. No failure or delay by the either Party in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial waiver thereof preclude any other exercise of any other right, power or privilege hereunder.

16. This Agreement may be executed in multiple counterparts, each of which shall be considered an original.

IN WITNESS WHEREOF, this Agreement has been executed by authorized representatives of the Parties as of the date first above written.

_____

By:_____
Name:
Title:

Northeast Energy Efficiency Partnerships, Inc

By:_____
Name:
Title:

APPENDIX D: REQUIRED PROPOSAL CHECKLIST

REQUIRED PROPOSAL CHECKLIST

Bidder Information		
Name of Bidder:		
Contact Name:		
Contact Phone:		
Contact Email:		
Subcontractors:		
Evaluation Scope		
Proposal Checklist & Locator	Included	Section/Page
Proposal Cover		
Transmittal Letter – signed original		
1. Executive Summary		
2. Work Scope and Schedule		
Schedule Figure		
3. Staffing and Subcontracting Plan		
4. Firm Qualifications and Experience		
References		
5. Budget and Billing Rates		
Budget Tables		
6. Exceptions to Contract Terms		
7. Conflicts of Interest		
8. Resumes (Appendix)		

APPENDIX E: COMMON STATEWIDE ENERGY EFFICIENCY REPORTING GUIDELINES

COMMON STATEWIDE ENERGY EFFICIENCY REPORTING GUIDELINES

Version 1.0

A project of the Regional Evaluation, Measurement and Verification Forum

DECEMBER 2010

Facilitated and Managed by Northeast Energy Efficiency Partnerships

Northeast Energy Efficiency Partnerships 91 Hartwell Avenue Lexington, MA 02421 P: 781.860.9177 www.neep.org

Table of Contents

PREFACE

1. Background: These *Common Statewide Energy Efficiency Reporting Guidelines* ('the Guidelines') were prepared by the Regional Evaluation, Measurement and Verification Forum ('the Forum'). The Forum, established in 2008, is a regional project facilitated and managed by Northeast Energy Efficiency Partnerships (NEEP) that represents states in New England[1], New York, New Jersey, Maryland, Delaware, and the District of Columbia.

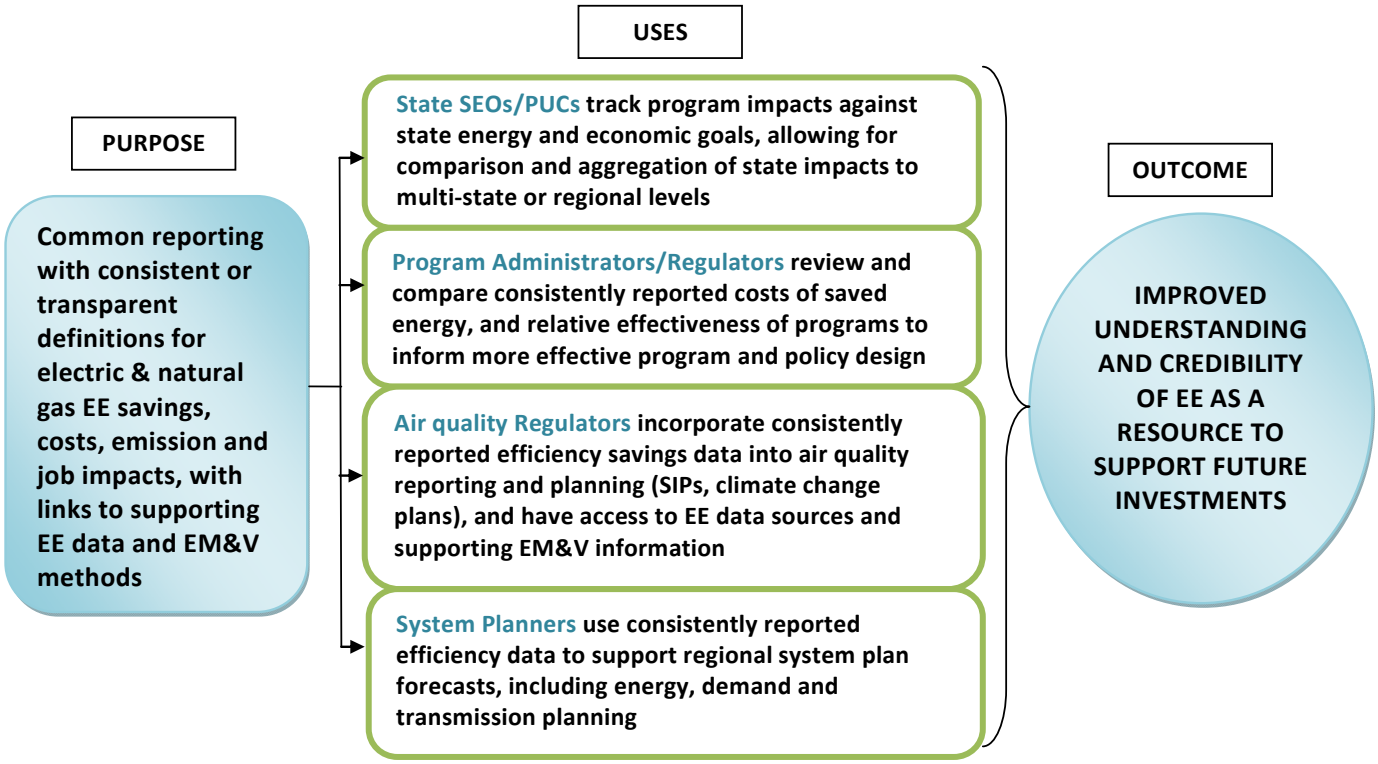
At a time when states in the Forum region are making unprecedented investments in energy efficiency to meet a range of policy objectives, the need for consistency and transparency for energy efficiency is more important than ever in order to build understanding and credibility of efficiency as a resource. The intent of these Guidelines, which include recommended state-level reporting templates and several process recommendations, is to provide for consistent definitions and the reporting of electric and natural gas energy-efficiency program energy and demand savings and associated costs, and their emission and job impacts across the region. If the Forum states can collectively successfully implement these Guidelines, the region would benefit from a common "currency" of reported energy efficiency data to support multiple state and regional energy and environmental policies/objectives.

The Guidelines recommend common reporting templates that provide basic information in a format that makes it straightforward to support energy and environmental planning or analyses. The specific uses and users of these Guidelines and reporting templates include:

- State-level tracking of efficiency program impacts against state energy and economic goals, and allowing for the comparison and aggregation of state impacts to multi-state or regional levels;
- Program administrator and regulatory review and comparison of consistently[2] reported costs of saved energy, and the relative effectiveness of energy efficiency programs to help inform more effective program and policy design;
- Air quality regulators, including climate change stakeholders, use of consistently reported efficiency savings data, and access to data sources and supporting EM&V information to inform calculations of avoided emission at state/regional levels; and
- System planner use of consistently reported efficiency data to support regional system plan forecasts, including energy, demand and transmission planning.

[1] Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont.
[2] Consistent reporting does not necessarily mean use of consistent underlying EM&V methods/approaches. Development and use of consistent EM&V methods is addressed in a separate set of guidelines developed by the Regional EM&V Forum: *Common EM&V Methods and Savings Assumptions Guidelines (May 2010)*

Figure 1. Common Statewide Energy Efficiency Reporting Guidelines Purpose, Uses and Outcome



2. Basis for Guidelines: The Guidelines are informed by a gap analysis which identified discrepancies in available energy efficiency data relative to information needed to support multiple policy objectives.[3] The research catalogued current and planned reporting practices from available energy-efficiency documents and compared these to reporting parameters and data needs identified as important to support multiple energy, economic and environmental policies or market drivers. The reporting templates build largely from data that are already reported and/or collected by energy efficiency program administrators in the region, and were informed by the Forum stakeholder process, including extensive review and input by the project subcommittee, Forum participants, and peer review. As such, the recommendations herein represent the collective input, ideas, and considerations of the Forum participants.

3. *Scope of the Guidelines:* The scope of the Guidelines focuses on electric and gas energy efficiency savings, impacts and program expenditures, where such investments are funded by gas and electric service ratepayers. The Guidelines may evolve in the future to include the broader range of public policy driven energy efficiency investments as well as demand resources, as discussed further below.

[3] These Guidelines are based on the EM&V Forum project *Develop Common Energy Efficiency Reporting Guidelines*, conducted by the NMR Group, Dorothy Conant, and Cadmus Group. To view full report, see http://neep.org/emv-forum/forum-products-and-guidelines.

a) Balancing Consistency with Transparency: The Guidelines reflect what most Forum jurisdictions will find feasible to report without having to make significant changes in current practices. In many cases the data fields in the reporting template can be populated with data extracted from current annual energy efficiency reports, or data currently collected by program administrators but not currently reported. For each reporting table, supporting definitions are provided. Where definitions for certain reporting parameters vary significantly across jurisdictions (e.g. adjusted gross savings, net savings), the Guidelines offer some flexibility by providing check boxes that allow reporters to identify underlying definitions. While we hope that in the future the Forum will move towards greater consistency in definitions of key reporting parameters, at this juncture, the Guidelines strive to balance reporting consistency and transparency of underlying definitions.

To help support access to and the understanding of efficiency data and information, the Guidelines also include placeholders for direct links to supporting efficiency data (e.g. technical reference manuals, program administrator efficiency plans and reports) and descriptions of EM&V processes and regulatory approval of reported data.

b) Reporting Energy and Demand Savings: The reporting categories are relatively high level, where savings are reported at the customer sector level for electric, gas and other fuel savings. While consideration was given to reporting savings by specific program types (e.g., retrofit, lost opportunity), defining such categories proved to be a challenge given variations in definitions and because some efficiency programs can fall into both categories, in particular C&I custom projects. As such, in the interest of achieving transparency, we recommend that states submit program level savings at the customer sector, with an option to list program administrator specific program types/levels within each customer sector.

c) Reporting Program Expenditures and Cost of Saved Energy: As with savings data, the Guidelines provide high level reporting categories for program expenditures, recognizing that current definitions vary considerably across the region. While the Guidelines encourage states to adopt consistent definitions to report program expenditures (e.g., for marketing costs versus administrative costs), they allow states to use their current definitions for expenditure categories accompanied by an explanation of what is included. Nonetheless, the Guidelines provide a useful starting point that enables basic comparison and aggregation of expenditure data across the region.

In terms of reporting cost of saved energy, while there are reasons for reporting lifetime (or lifecycle) cost of saved energy, the Guidelines recommend that states move towards using a levelized cost of saved energy over time as the most appropriate methodology. To support comparison analyses and averaging, this would require that the states ideally use a consistent discount rate definition, but a second option is for states to disclose the discount rate used. We recommend this issue be addressed by the Steering Committee.

d) Reporting Avoided Emissions: With the increasingly important role of energy efficiency as a primary strategy to meet state and regional air quality and climate change goals, the Guidelines provide basic information on avoided emissions associated with efficiency programs. Per the process recommendations below, increased effort is needed in most Forum states to coordinate air agency, program administrator and utility regulator

coordination to develop estimated avoided emissions, and ensure access to additional efficiency data needs for air regulators to incorporate into their emissions forecasts.

e) Reporting Job Impacts: Given many state agencies are recipients of American Recovery and Reinvestment Act (ARRA) funding and are familiar with ARRA reporting requirements, these Guidelines recommend that in the interest of consistency, states report the annual direct full-time equivalent (FTE) number of jobs funded through energy efficiency programs in accordance with ARRA guidelines. The Guidelines also recommend that states report indirect and net job impacts, and provide information and links to resources to support such calculations (e.g., calculators, models) but do not make specific recommendations regarding specific tools/approaches to be used.

f) Future Modifications to Guidelines: Particular areas where the Guidelines could evolve in the future, based on suggestions made by Forum participants during the course of developing these Guidelines, include:

1) Include All State Efficiency Impacts: The Guidelines focus on reporting efficiency program impacts funded by utility ratepayers. Recognizing, however, that some efficiency programs are supported or co-funded in part by other sources of funding, states can use check boxes to indicate other sources of funding such as: State Energy Program (SEP) funds, Regional Greenhouse Gas Initiative (RGGI) Allowance Proceeds, American Recovery and Reinvestment Act (ARRA) funds, Weatherization Assistance Programs (WAP), Wholesale Capacity Market Revenues, or Other. Going forward, the Forum should consider expanding the Guidelines' scope to include discrete reporting of all efficiency activities in a state (e.g. all Weatherization Assistance Program impacts, all state public building efficiency projects, etc.). From a state and regional energy planning perspective, reporting total efficiency savings would be ideal.

2) Report Forecasted Energy Efficiency Data: The Guidelines address program impacts retrospectively (what were savings in previous year) and over the lifetime of the efficiency measures installed in the previous year. The Guidelines do not include the reporting of forecasted energy efficiency impacts due to estimated future investments in energy efficiency (e.g., in next 10-15 years). This is particularly important for state and regional system planning and air quality/climate change planning. The Forum should consider broadening the Guidelines to include consistent reporting of forecasted data, focusing on data from state efficiency potential studies and other sources, and transparency of assumed policy drivers.

3) Report More Detail on Energy Savings and Costs Categories: The Guidelines provide for consistent reporting of savings and expenditures at a high level. Going forward, improved reporting consistency of more detailed information may be desirable, such as reporting savings by more specific: fuel type (e.g., propane, fuel oil); end-use data (e.g. Lighting, Appliances, HVAC, Motors/Drives, Refrigeration, etc.), and program sector and/or program type (e.g., prescriptive/custom programs, multi-family retrofit, Large C&I, Small C&I, etc.). The Guidelines also recommend that the states move towards consistently reporting a levelized cost of saved energy, as opposed to a lifetime cost of saved energy.

4) Address Issues of Timing: Some Forum jurisdictions currently report energy efficiency programs savings data in the first quarter following the program year, where such reported savings are based on tracking data (i.e., data used to estimate savings for planning purposes, and informed by impact factors from prior program year evaluations – often referred to as *ex-ante* savings). Other jurisdictions issue reports in the third or fourth quarter following the program year, which incorporate results of program year evaluations and/or independent third party reviews, to the extent evaluation studies are conducted (i.e., *ex-post* savings). Some jurisdictions report both planned and actual savings data. In the interest of providing consistency in reported data across the region, and ensuring availability of reported data in consistent timeframes, we recommend that policymakers address these reporting timing issues. A related timing issue is that while most states report energy-efficiency results on a calendar year basis, some report on a fiscal year basis. We recommend consideration by the Steering Committee of whether/how to better align reporting periods.

With the above considerations, the Guidelines should be viewed as a starting point and a living document. As jurisdictions adopt and become comfortable with these Guidelines, additional reporting elements can be added or modified as they become more commonly reported or deemed valuable for state, regional and/or national reporting needs. We recommend that the Guidelines' scope be reviewed periodically by the Forum Steering Committee to review, discuss and consider possible modifications to the Guidelines' scope.

4. Process Recommendations. The Guidelines also include several *process* recommendations needed to: a) Support the effective integration of energy efficiency into state and regional air quality and climate change analyses and planning; b) Coordinate these Guidelines with national efforts to develop common energy efficiency reporting templates; and c) Coordinate with regional system planners to build common approaches, and associated data needs, to effectively incorporate energy efficiency into system planning processes.

5. Implementation of Guidelines. The Guidelines are not intended to lead to the filing or reporting of duplicative statewide reports, by either program administrators or state agencies. Rather, we recommend that these reporting templates serve as the statewide annual report for Forum participating states, recognizing that states may opt to collect and report data in addition to the Guidelines' reporting parameters. As such, the Guidelines serve as a basic level of reporting.

Entity Responsible for Completing Statewide Annual Report: A key step to state implementation of the Guidelines is to identify the responsible agency/entity that will complete the Statewide Annual Report, consistent with these reporting Guidelines. Such an agency/entity could be the state energy office, the public utility commission, efficiency program administrator(s) or other entity. These Guidelines do not provide specific recommendations in this regard, however, we encourage state energy offices or agencies responsible for energy planning and forecasting for the state to engage and play a key role in guiding and completing the Statewide Annual Report, and to coordinate this effort with other agencies needing such information (e.g., air regulators, etc.).

6. Recommended Next Steps

a) Forum States to Adopt and Implement the Guidelines. A key first step to the success of common statewide energy efficiency reporting is for the Forum jurisdictions to adopt these Guidelines as their respective statewide reporting template. Commensurate with such adoption is to identify the entity that will be responsible for completing the Statewide Annual Report, as discussed above. Starting in 2011, Forum resources should provide technical support for state implementation of the Guidelines, including: 1) developing an on-line, user-friendly spreadsheet tool for the reporting templates; and 2) providing Forum staff resources to assist with state implementation where needed/requested (e.g., training, education and technical support to use the Guidelines and on-line tools).

b) Common State Annual Reports to be Accessible: We recommend that common State Annual Reports be posted to the Forum website to give interested stakeholders easy and ready access to view consistent state- and regional-level energy efficiency data (where NEEP's activities will include aggregating and analyzing statewide data to regional levels). To accomplish this, we recommend that states provide their annual report for posting to the EM&V Forum with a link to relevant state and efficiency program administrator websites. Ideally, as noted above, moving towards a consistent reporting timeframe across the region would support timely accessibility to statewide reports and the ability to aggregate statewide efficiency data across the region.

c) Coordinate Guidelines with National Energy Efficiency Reporting Efforts: Finally, as efficiency becomes an increasingly greater strategy in energy policy and climate change mitigation efforts across the country, we encourage other states and federal agencies to refer to these Guidelines to inform similar efforts in other regions and nationally.

Acknowledgements: A special thanks is noted to this project's subcommittee members, the project technical advisor, and the Project Committees co-chairs for their input and guidance in the development of these Guidelines: Gail Azulay, Mary Cahill, Alexey Cherniack, Dan Cleverdon, Elizabeth Crabtree, Niko Dietsch, Helen Eisenfeld, Victoria Engel-Fowles, Frank Felder, Gene Fry, Don Gilligan, Dennis Hartline, Crissy Godfrey, Colin High, Dave Jacobson, Chris James, Robyn Kenney, Jeff King, Huilan Li, Teri Lutz, Laura Magee, Erin Malone, Jennifer Meissner, John Moskal, Chris Neme, Julie Niedzialkowski, Kim Oswald, Larry Pakenas, Allison Reilly-Guerette, Rick Rodrigue, Jeff Roman, Marilyn Ross, Bill Saxonis, Jeff Schlegel, Nancy Seidman, Mike Sherman, Stacy Sherwood, Pam Stonier, Mary Straub, Sheldon Switzer, Tim Vrabel, and John Zabliski. The Project was managed by Julie Michals, Director of the Regional EM&V Forum at Northeast Energy Efficiency Partnerships.

COMMON STATEWIDE ENERGY EFFICIENCY REPORTING GUIDELINES

These Guidelines include recommended reporting templates for:

Tables 1.0-1.3: Electric and gas energy efficiency program energy and demand savings;

Tables 2.1-2.3: Electric and gas energy efficiency program expenditures, and cost of saved energy;

Table 3.0: Air Emission Data from electric and gas energy efficiency program impacts, and associated process recommendations for improved data exchange between key stakeholders; and

Table 4.0: Job Impacts Data from electric and gas energy efficiency program impacts.

Definitions – General Guideline

To encourage increasing consistency in reported elements over time and to inform readers of specifically what each reporting element represents, each jurisdiction should indicate or include a clear definition for each reported element. Ideally, the definitions used by jurisdictions will be consistent with the definitions in the **Regional EM&V Forum - Glossary of Terms and Acronyms** ("Forum Glossary") which is a living document that is updated annually. Each table is followed by a list of supporting definitions, consistent with the Forum Glossary. Each table also includes, however, flexibility in certain definitions recognizing that important differences in definitions may exist across jurisdictions for which consistency will not be achieved for this first version of *Common Statewide Energy Efficiency Reporting Guidelines,* if at all. In these cases, a simple checklist format is provided to describe various terms/categories, with space provided for further description in some places.

A note on Natural Gas Energy Efficiency Savings and Expenditures: The inherent conflict for jurisdictions reporting a combination of gas savings from energy-efficiency programs sponsored by gas utilities, and gas savings from electric programs that offset use of gas, may lead to a situation of double counting. In the reporting tables, it is important for each state to define the source of reported gas savings—either from an electric or gas efficiency program. As for associated expenditures, in cases where programs provide both electric and gas savings, guidance is provided herein on options for allocating such costs to either electric or gas programs.

1. Reporting of Electric and Gas Energy and Demand Savings

Table 1 series includes various tables that report electric and gas energy and demand savings, and associated supporting data. The tables include:

Table 1.0: Description of Reported Energy Efficiency Savings

Table 1.1: Incremental Annual Energy Savings

Table 1.2: Lifetime Energy Savings

Table 1.3: Electric System Demand Savings
Table 1.3.1: Summer Peak Demand Savings
Table 1.3.2: Winter Peak Demand Savings

Each table is followed by a list of supporting definitions.

The reporting categories are relatively high level, where savings are reported at the customer sector level. The tables do not prescribe specific program types/categories. Rather, states can and are encouraged to report program level savings according to their program administrator(s) specific program types/levels.

Table 1.0: Description of Reported Energy Efficiency Savings

Jurisdiction/State: XXXXX	**Program Year:** 20YY
1. General Information on Reported Data	
1.1 Final annual savings data reported in what quarter of the following program year.	☐ 1st Qtr. ☐ 2nd Qtr. ☐ 3rd Qtr. ☐ 4th Qtr.
1.2 Link(s) to supporting Program Administrator or State Annual Reports	www.providelink.com

1.3 Reported data can be characterized as:

- ☐ **Tracking Estimates.** Where reported savings are based on year-end tracking data that incorporate impact factors from previous year evaluation studies, but where impact factors are the same ones used to project savings in the program year Energy Efficiency Plan filings.
- ☐ **Savings Estimates Informed by Program Year Evaluation**. Where adjustments are made to Tracking Estimates based on program year evaluation activities (e.g., third party review such as verification of installations, impact evaluations, etc. Please generally describe types of EM&V activities:

  _____

Are evaluation results systematically incorporated into following year Savings Tracking Estimates?

☐ Yes or ☐ No

2. Gross Savings		**Applied to Some or All Programs?**
2.1 Adjusted Gross Energy Savings Please indicate types of adjustments made to Gross Energy Savings (or that are included in Realization Rate). Indicate if adjustments are made to some or all programs/measures. (Check all that apply)	Adjustments include: ☐ Data Errors ☐ Measure Persistence Factor ☐ Savings Persistence Factor ☐ In-Service Rate ☐ Interactive Effects ☐ Other _____ ☐ Other _____	 ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs
3. Net Savings		**Applied to Some or All Programs?**
3.1 Net Savings Indicate types of adjustment incorporated in reported net savings. (Check all that apply.)	Adjustments include: ☐ Free Ridership ☐ Participant Spillover ☐ Non-Participant Spillover ☐ Other _____	 ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs

4. Generation and Meter Level Savings

4.1 Generation Level Savings

Definition: Meter or premise level savings adjusted upward for T&D line losses. Generation level savings are also known as wholesale level savings.

If reported definition differs from definition to the left, please describe:

_____

4.2 Meter Level Savings

Definition: Savings at the customer meter or premise level. Indicate types of adjustments to Generation Level Savings

Adjustments include:

☐ T&D Adjustments - Utility specific values (or weighted avg): _____

☐ T&D Adjustments - Other source(s), please describe: _____

5. Supporting State Energy Savings Assumptions and EM&V Process Information

5.1 Supporting Savings Data and Assumptions. For more detailed information regarding supporting data, refer to:

a) [STATE] Program savings documents (or technical reference manuals): www.providelink.com
b) [STATE] or [PA] Energy efficiency program plans: www.providelink.com
c) Program administrator annual reported data, where applicable: www.providelink.com
d) [STATE] achievable potential studies: www.providelink.com
e) Other

5.2 Review and Approval of Reported Data. The savings and cost information reported have been reviewed and/or approved by (check those that apply):

☐ [STATE PUC]

☐ [STATE ENERGY OFFICE]

☐ Other _____

5.3 Evaluation, Measurement and Verification (EM&V) Protocols/Methods. The EM&V protocols or methods used to support the reported savings are based on and/or include (check those that apply):

☐ State PUC prescribed guidelines/methods: www.providelink.com

☐ Energy Efficiency M&V standards required by regional system operator [ISO New England] OR [PJM] for demand resources participating in the wholesale electricity forward capacity markets: www.providelink.com

☐ The Regional EM&V Forum Methods and Savings Assumptions Guidelines: www.providelink.com

☐ Other (Describe) _____

6. Sources of Funding For Reported Energy Efficiency Activities (check all that apply):

☐ Electric Ratepayer Funded Programs
☐ Natural Gas Ratepayer Funded Programs
☐ Regional Greenhouse Gas Initiative (RGGI) Allowance Proceeds
☐ Wholesale capacity market revenues (ISO NE Forward Capacity Market/PJM Reliability Pricing Model)
☐ Weatherization Assistance Programs (WAP)
☐ American Recovery and Reinvestment Act (ARRA) Funds
☐ Other (Describe): _____

Table 1.0 Supporting Definitions:

Adjusted Gross Savings: Gross Savings that are adjusted to include what can be physically counted and reliably measured, such as installation/in-service rates, breakage of equipment, data errors, hours of use, measure persistence rates, etc. Adjusted Gross Savings can also be calculated by applying a Realization Rate to Gross Savings estimates (see Realization Rate definition below).

Energy Savings: Reduction in electricity use (kWh) or in fossil fuel use in thermal unit(s).

Free Rider: A program participant who would have implemented the program measure or practice in the absence of the program. Free riders can be 1) total, in which the participant's activity would have completely replicated the program measure; 2) partial, in which the participant's activity would have partially replicated the program measure; or 3) deferred, in which the participant's activity would have completely replicated the program measure, but at a future time rather than the program's timeframe.

Free Ridership Rate: The percent of savings attributable to free riders.

Generator Level Savings: Meter or premise level savings adjusted upward to include T&D line losses. Generator level savings are also known as wholesale level savings.

Gross Savings: The change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated.

In-Service Rate: Percentage of incentivized measures in service.

Installation Rate: Percentage of incentivized measures installed.

Interactive Effects: The impact of an energy efficient measure on the operation of other electrical or gas-fired equipment at the facility in which the measure is installed.

Measure Persistence Factor: The duration of an energy consuming measure, taking into account business turnover, early retirement of installed equipment, and other reasons measures might be removed or discontinued.

Meter Level Savings: Savings at the customer meter or premise level.

Net Savings: The total change in energy consumption or demand that is attributable to an energy efficiency program. This change in energy consumption and/or demand may include, implicitly or explicitly, the effects of free drivers, free riders, energy efficiency standards, changes in the level of energy service, and other causes of changes in energy consumption or demand.

Realization Rate: A comparison of observed or measured (or evaluated) information to original estimated savings. Evaluations may include multiple realization rates (e.g., energy realization rate, demand realization rate, etc…). A Realization Rate is typically used to adjust Gross Savings to Adjusted Gross Savings, and reflects adjustments such as: data errors, persistent factors, in-service rate, interactive effects, etc.

Savings Persistence Factor: A factor that reflects changes in program impacts over time (e.g. retention and degradation of measures).

Spillover: Additional energy-efficient equipment installed by a customer due to program influences, but without any financial or technical assistance from the program.

- *Non-Participant Spillover*: Non-participant spillover refers to energy efficient measures installed by program non-participants due to the program's influence. The *non-participant spillover rate* is savings from spillover measures expressed as a percentage of savings installed by non-participants through an energy efficiency program.
- *Participant Spillover*: The situation where a customer installed equipment through the program and then installed additional equipment of the same type due to program influences, but without any financial or technical assistance from the program. The *participant spillover rate* is savings from spillover measures expressed as a percentage of savings installed by participants through an energy efficiency program.

Third Party Review: Review of program savings by an independent third party.

Transmission & Distribution Adjustments: Adjustments made to gross savings to adjust for T&D line losses.

Table 1.1: Incremental Annual Energy Savings

Table 1.1 provides the reporting template for electric, gas and other fuel incremental annual energy savings from energy efficiency programs (and demand response programs, if relevant). These savings reflect changes in energy use (measured in megawatt hours or therms) caused in the current reporting year by new program participants in existing energy efficiency programs, and all participants in new energy efficiency programs (i.e., programs begun during the current reporting year). Reported Annual Incremental Savings should be annualized.

Table 1.1: Incremental Annual Energy Savings

Jurisdiction: XX	Program Year: 20YY	Adjusted Gross Annual Energy Savings				Net Annual Energy Savings			
Savings By Sector and Program		Electric (MWH)		Gas Meter Level (Therms)	Other Fuel Savings* (MMBTU)	Electric (MWH)		Gas Meter Level (Therms)	Other Fuel Savings* (MMBTU)
		Gen. Level	Meter Level			Gen. Level	Meter Level		
ENERGY EFFICIENCY PROGRAM SAVINGS:									
Residential Non-Low Income Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
Residential Low Income Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
Commercial & Industrial Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
Other Customer Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
TOTAL ENERGY EFFICIENCY SAVINGS:									
DEMAND RESPONSE PROGRAM SAVINGS:									
Demand Response Program 1									
Demand Response Program 2 etc.									
TOTAL DEMAND RESPONSE SAVINGS:									
TOTAL INCREMENTAL ANNUAL ENERGY SAVINGS:									

***Other fuels can include propane, fuel oil, etc.**

Table 1.1 Supporting Definitions:

Adjusted Gross Savings: Gross Savings that are adjusted to include what can be physically counted and reliably measured, such as installation/ in-service rates, breakage of equipment, data errors, hours of use, measure persistence rates, etc. Adjusted Gross Savings can also be calculated by applying a Realization Rate to Gross Savings estimates (see Realization Rate definition below).

Annualized Energy Savings: The savings associated with an energy saving measure, project, or program calculated based on a full year's installation and operation.

Energy Savings: Reduction in electricity use (kWh) or in fossil fuel use in thermal unit(s).

Generator Level Savings: Meter or premise level savings adjusted upward to include T&D line losses. Generator level savings are also known as wholesale level savings.

Incremental Annual Savings: These savings reflect changes in energy use (measured in megawatt hours or therms) caused in the current reporting year by new program participants in existing energy efficiency programs and all participants in new energy efficiency programs (i.e., programs begun during the current reporting year). Reported Annual Incremental Savings should be annualized.

Low Income: Households with income not more than a stated percentage of state or area median income or meeting low income requirements based on the number of family members in the household. (*Note that "low income" housing is different from "affordable" housing. For purposes of common reporting guidelines, respondents are asked to clarify whether affordable housing is included in the low income program sector or otherwise.*)

Meter Level Savings: Savings at the customer meter or premise level.

Net Savings: The total change in energy consumption and/or demand that is attributable to an energy efficiency program. This change in energy consumption and/or demand may include, implicitly or explicitly, the effects of free drivers, free riders, energy efficiency standards, changes in the level of energy service, and other causes of changes in energy consumption or demand.

Non-Low Income: Households with incomes that exceed the level required to qualify for participation in low income programs. (*Note that qualifying low income levels may vary across states/jurisdictions.*)

Realization Rate: A comparison of observed or measured (or evaluated) information to original estimated savings. Evaluations may include multiple realization rates (e.g., energy realization rate, demand realization rate, etc.). A Realization Rate is typically used to adjust Gross Savings to Adjusted Gross Savings, and reflects adjustments such as: data errors, persistent factors, in-service rate, interactive effects, etc.

Table 1.2: Lifetime Energy Savings

Table 1.2 provides the reporting template for electric, gas, other fuel lifetime energy savings from energy efficiency programs (and demand response programs, if relevant). These savings reflect changes in energy use (in megawatt hours or therms) caused over the lifetime of installed measures, calculated by multiplying the annual MWH or therm reduction associated with the measures by the expected lifetime of the measures.

Table 1.2: Energy Efficiency Program Lifetime Energy Savings

Jurisdiction: XX	**Program Year:** Year 20YY	**Adjusted Gross Lifetime Energy Savings**				**Net Lifetime Energy Savings**				**Weighted Average Measure Life**		
Savings By Sector and Program		**Electric (MWH)**		**Natural Gas (Therms)**	**Other Fuel Savings* (MMBTU)**	**Electric (MWH)**		**Natural Gas (Therms)**	**Other Fuel Savings* (MMBTU)**	**Electric**	**Natural Gas**	**Other Fuels**
		Gen. Level	**Meter Level**			**Gen. Level**	**Meter Level**					
ENERGY EFFICIENCY PROGRAM SAVINGS:												
Residential Non-Low Income Energy Savings by Program												
Electric Programs 1, 2, 3 etc. (list)												
Nat. Gas Programs 1, 2, 3 etc. (list)												
Subtotal Residential Non-Low Income:												
Residential Low Income Energy Savings by Program												
Electric Programs 1, 2, 3 etc. (list)												
Nat. Gas Programs 1, 2, 3 etc. (list)												
Subtotal Residential Low Income:												
Commercial & Industrial Energy Savings by Program												
Electric Programs 1, 2, 3 etc. (list)												
Nat. Gas Programs 1, 2, 3 etc. (list)												
Subtotal Commercial & Industrial:												
Other Customer Sector Energy Savings by Program												
Electric Programs 1, 2, 3 etc. (list)												
Nat. Gas Programs 1, 2, 3 etc. (list)												
Subtotal Other Sector:												
TOTAL ENERGY EFFICIENCY SAVINGS:												
DEMAND RESPONSE PROGRAM SAVINGS:												
Demand Response Program 1, 2, 3 etc. (list)												
TOTAL DEMAND RESPONSE SAVINGS:												
TOTAL LIFETIME ENERGY SAVINGS:												

*Other fuel savings can include propane, fuel oil, etc.

Table 1.2 Supporting Definitions:

Adjusted Gross Savings: Gross Savings that are adjusted to include what can be physically counted and reliably measured, such as installation/ in-service rates, breakage of equipment, data errors, hours of use, measure persistence rates, etc. Adjusted Gross Savings can also be calculated by applying a Realization Rate to Gross Savings estimates (see Realization Rate definition below).

Energy Savings: Reduction in electricity use (kWh) or in fossil fuel use in thermal unit(s).

Generator Level Savings: Meter or premise level savings adjusted upward to include T&D line losses. Generator level savings are also known as wholesale level savings.

Lifetime Energy Savings: The expected electric or gas energy savings over the lifetime of an installed measure(s), calculated by multiplying the annual MWh or therm reduction associated with a measure(s) by the expected lifetime of that measure(s).

Low Income: Households with income not more than a stated percentage of state or area median income or meeting low income requirements based on the number of family members in the household. (*Note that "low income" housing is different from "affordable" housing. For purposes of common reporting guidelines, respondents are asked to clarify whether affordable housing is included in the low income program sector.*)

Meter Level Savings: Savings at the customer meter or premise level

Net Savings: The total change in energy consumption and/or demand that is attributable to an energy efficiency program. This change in energy consumption and/or demand may include, implicitly or explicitly, the effects of free drivers, free riders, energy efficiency standards, changes in the level of energy service, and other causes of changes in energy consumption or demand.

Non-Low Income: Households with incomes that exceed the level required to qualify for participation in low income programs. (*Note that qualifying low income levels may vary across states/jurisdictions.*)

Realization Rate: A comparison of observed or measured (or evaluated) information to original estimated savings. Evaluations may include multiple realization rates (e.g., energy realization rate, demand realization rate, etc…). A Realization Rate is typically used to adjust Gross Savings to Adjusted Gross Savings, and reflects adjustments such as: data errors, persistent factors, in-service rate, interactive effects, etc.

Weighted Average Measure Life: Reflects the average life of the installed measures that takes into account the proportional relevance of each measure/program measure life, weighted by annual savings. Weighting by annual savings is also the same as simply dividing lifetime savings by annual savings. For example, if there is a portfolio with two measures, each saving 100 kWh/year but with measure lives of 5 and 15 years respectively, they get equal weight and the weighted average measure life is 10 years. If the 15 year measure savings is 200 kWh instead, its life would get twice the weight and the weighted average life would be 11.7 years.

Table 1.3: Electric System Demand Savings

Tables 1.3.1 and 1.3.2 provide the reporting template for summer peak and winter peak savings, respectively, for electric system demand savings from energy efficiency and demand response programs. Reporters may complete one or both tables, as they apply.

Table 1.3.1: Summer Peak Annual Demand Savings

Jurisdiction XX	Program Year 20YY	Adjusted Gross Demand Savings		Net Demand Savings	
Summer Peak Demand Savings By Sector and Program		**Generation Level (MW)**	**Meter Level (MW)**	**Generation Level (MW)**	**Meter Level (MW)**
ENERGY EFFICIENCY PROGRAM SAVINGS					
Residential Non-Low Income Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
Residential Low Income Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
Commercial & Industrial Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
TOTAL ENERGY EFFICIENCY PROGRAM SAVINGS					
DEMAND RESPONSE PROGRAM SAVINGS					
Program 1					
Program 2 etc.					
TOTAL DEMAND RESPONSE PROGRAM SAVINGS					
TOTAL SUMMER PEAK DEMAND SAVINGS					

Summer Annual Demand Savings - coincident with:

☐ Utility Peak Demand or ☐ ISO/RTO System Peak or ☐ Other

Provide description of peak coincidence hours (e.g., average hours, maximum hours during peak):

_____

Table 1.3.2: Winter Peak Annual Demand Savings

Jurisdiction	Program Year	Adjusted Gross Demand Savings		Net Demand Savings	
XX	20YY				
Winter Peak Demand Savings By Sector and Program		**Generation Level (MW)**	**Meter Level (MW)**	**Generation Level (MW)**	**Meter Level (MW)**
ENERGY EFFICIENCY PROGRAM SAVINGS					
Residential Non-Low Income Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
Residential Low Income Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
Commercial & Industrial Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
TOTAL ENERGY EFFICIENCY PROGRAM SAVINGS					
DEMAND RESPONSE PROGRAM SAVINGS					
Program 1					
Program 2 etc.					
TOTAL DEMAND RESPONSE PROGRAM SAVINGS					
TOTAL WINTER PEAK DEMAND SAVINGS					

Winter Annual Demand Savings - coincident with:

☐ Utility Peak Demand or ☐ ISO/RTO System Peak or ☐ Other

Provide description of peak coincidence hours (e.g., average hours, maximum hours during peak):

_____

Table 1.3 Supporting Definitions:

Adjusted Gross Savings: Gross Savings that are adjusted to include what can be physically counted and reliably measured, such as installation/ in-service rates, breakage of equipment, data errors, hours of use, measure persistence rates, etc. Adjusted Gross Savings can also be calculated by applying a Realization Rate to Gross Savings estimates.

Annual Demand Savings: The expected reduction in demand associated with the higher efficiency equipment or installation in a given year coincident with a specific peak period(s).

Coincident Demand: The demand of a device, circuit, or building that occurs at the same time as the peak demand of a utility's system load or at the same time as some other peak of

interest, such as building or facility peak demand. Because jurisdictions currently report a mix of summer/winter/annual demand impacts in annual energy-efficiency reports, in order to be useful from a regional perspective, it is recommended that all reported peak demand impacts be clearly defined. Examples of peak demand definitions include the following:

- Demand coincident with utility system peak load
- Demand coincident with ISO/RTO summer or winter peak, or according to performance hours defined by wholesale capacity markets
- Demand coincident with high electricity demand days

Coincidence Factors: Coincidence factors are defined as the ratio of the average hourly demand reductions that actually occur during seasonal coincident peak periods (e.g., summer, winter) to the average connected load reductions. They account for both the portion of connected load that is used in individual buildings during peak periods and the diversity of usage patterns across populations of buildings during peak periods. As such, a coincident demand reduction is simply the product of the coincidence factor and the connected equipment load reduction.

Generator Level Savings: Meter or premise level savings adjusted upward to include T&D line losses. Generator level savings are also known as wholesale level savings.

Low Income: Households with income not more than a stated percentage of state or area median income or meeting low income requirements based on the number of family members in the household. (*Note that "low income" housing is different from "affordable" housing. For purposes of common reporting guidelines, respondents are asked to clarify whether affordable housing is included in the low income program sector.*)

Meter Level Savings: Savings at the customer meter or premise level.

Net Savings: The total change in energy consumption and/or demand that is attributable to an energy efficiency program. This change in energy consumption and/or demand may include, implicitly or explicitly, the effects of free drivers, free riders, energy efficiency standards, changes in the level of energy service, and other causes of changes in energy consumption or demand.

Non-Low Income: Households with incomes that exceed the level required to qualify for participation in low income programs. (*Note that qualifying low income levels may vary across states/jurisdictions.*)

2. Reporting of Electric and Gas Energy Efficiency Expenditures

Table 2 series provides information regarding efficiency program funding sources, electric and gas energy efficiency program expenditures, and associated costs of saved energy.

Table 2.1 Efficiency Program Funding Sources provides a list of possible funding sources from which to identify the percentage that applies to both efficiency expenditures and efficiency reported energy savings (as reported in Table 1.1)

Table 2.2 Electric and Gas Energy Efficiency Program Expenditures provides a summary of program expenditures according to the following five expenditure categories:

- **Administration/Marketing/Other Costs:** Program administration and marketing costs, and other costs associated with implementation of programs, including direct installation costs, program implementation contractor services, etc.
- **Customer Rebates/Incentives:** Direct financial rebates/incentives paid to customers to support investment in energy efficiency (i.e., incremental cost of higher efficiency equipment, or portion thereof). Financial rebates do *not* include direct installation costs – these should be reported under Administration/ Marketing/Other costs.
- **Performance Incentive Costs:** Utility shareholder or program administrator incentives earned for achieving specific performance metrics.
- **Research & Evaluation Costs:** Costs related to evaluation, measurement and verification (EM&V) activities, and research or studies to support EM&V activities.
- **Other:** Includes other costs not identified or included in the above categories.

The expenditure categories "Administration/Marketing/Other" and "Customer Rebates/Incentives" represent direct program costs. While it would be informative to break these cost categories down further, the Guidelines do not provide such detail given current inconsistencies in how "Administration," "Marketing," and other implementation costs are defined by program administrators in the region (and which are often embedded in program tracking systems). It is recommended, however, that the Forum work to develop more consistent definitions for these cost categories going forward.

Table 2.3 Cost of Saved Energy Reporting provides reporting of cost of saved energy in terms of both *Levelized Cost per kWh* (or therm) and *Lifetime Cost per kWh*[4] (or therm). The underlying calculations differ in that a Lifetime Cost of Saved Energy is a simpler calculation that does not discount costs to a net present value. A Levelized Cost of Saved Energy is a more complex, economically accurate calculation that captures the cost of efficiency as a resource, and provides a comparable value to the cost of new supply-side resources. The

[4] Lifetime costs are also sometimes referred to as *lifecycle* costs, although the latter has varied definitions and can be expressed as a levelized cost. Lifecycle costs can include costs that go beyond measure installation and program administration/operation, such as disposal of efficiency measures (e.g., CFLs). For purposes of these Guidelines, both Levelized and Lifetime Cost of Saved Energy include costs associated with disposal of efficiency measures where such costs are covered under the efficiency program.

levelized cost represents the level of payment needed each year to recover the total investment and interest payments (at a specified interest rate) over the life of the measure(s).

It is recommended that the primary cost of savings value reported be a Levelized Cost where possible.[5] However, Table 2.2 also includes a Lifetime Cost of Saved Energy, recognizing that inconsistencies currently exist within some jurisdictions in the variables used by program administrators/utilities to calculate capital recovery factors and discount rates. Until states are able to address such inconsistencies, Table 2.2 supports the reporting of both a Levelized and Lifetime Cost of Saved Energy. It is also recommended that the cost of saved energy be reported as *With Participant Costs* (not only utility or program administrator costs); and *Without Participant Costs*. Recognizing not all Forum states currently collect participant cost, some states may be able to report only a cost of saved energy without participant costs. It is encouraged that such information be collected given the value of reporting the full incremental cost of energy efficiency investments.

Lifetime Cost per KWh (or Therm) is calculated as follows:

(1) *Lifetime Cost of Electric Energy Savings* = $\frac{\text{Total Program}^6 \text{ Expenses}}{\text{Lifetime Net kWh Savings}}$

(2) *Lifetime Cost of Natural Gas Energy Savings* = $\frac{\text{Total Program Expenses}}{\text{Lifetime Net Therm Savings}}$

Levelized Cost per kWh (or Therm) is calculated as follows:

(1) *Levelized Cost of Electric Energy Savings* = $\frac{\text{Total Program Costs x CRF}}{\text{Incremental Annual Net kWh Savings}}$

(2) *Levelized Cost of Gas Energy Savings* = $\frac{\text{Total Program Costs x CRF}}{\text{Incremental Annual Net Therm Savings}}$

Where: Capital Recovery Factor (CRF) = $\frac{i(1+i)^n}{(1+i)^n - 1}$

i = real discount rate

n = weighted average measure life for portfolio of programs

In reporting the levelized cost per kWh or therm, it is recommended that key underlying assumptions be noted, specifically for the weighted average measure life (for portfolio of

[5] See also recommendations on use of levelized cost by ACEEE at: Friedrich Katherine, et al. *Saving Energy Cost-Effectively: A National Review of the Cost of Energy Saved Through Utility Sector Energy Efficiency Programs.* American Council for an Energy Efficient Economy. September 2009, Report No. U092.

[6] In some cases, Total Program Expenses for electric programs may include gas program expenses, where gas programs provide electric savings. Table 2 provides space to indicate/estimate cost allocation in these cases.

programs) and the real discount rate used. There is a range of discount rates that can be used to determine levelized cost of savings, including:

- a utility's weighted average cost of capital or weighted cost of debt and equity;
- a 12-month rolling average rate on the 10-year T-note;
- an average homeowner's discount rate; and/or
- some average of all of these.[7]

It is recommended that states and the region move toward greater consistency in the definition of discount rate used.

NET Levelized Cost per kWh (or therm or MMBTU): Net levelized cost calculations capture the fact that energy efficiency provides numerous and diverse benefits, and yet is often compared to a total cost with just one type of benefit (e.g., comparing levelized cost of energy efficiency to market clearing prices for energy on the supply side). As such, when calculating a levelized cost per kWh, a state may opt to first subtract the Net Present Value (NPV) of benefits of certain savings e.g., fossil fuel savings (gas and/or oil), water savings, O&M savings, in order to determine the net levelized cost value. Calculating the cost of saved energy also typically ignores the impact of peak demand savings, and therefore makes portfolios of programs targeting peak savings measures look worse than those just promoting energy savings (e.g., CFLs). Net levelized cost per kWh (or Therm, MMBTU) can therefore subtract the benefits of peak demand savings.

The challenges of reporting Net Levelized cost per kWh (or Therm, MMBTU) often lies in developing estimates for the value of benefits, which are either difficult or costly to determine. As such, these Guidelines do not necessarily recommended reporting Net Levelized Cost per KWh, but to the extent a state is able to do so, providing this type of cost information is useful and informative.

The recommended formula for calculating Net Levelized Cost per kWh (or Therm, MMBTU) is as follows:

$$\textit{Net Levelized Cost of Saved Energy} = \frac{(\text{Net Electric or Gas or Other Energy Costs}) \times (\text{CRF})}{\text{Incremental Annual Net kWh, Therms or MMBTUs}}$$

Where Net Electric or Gas or Other Energy Costs = *NPV Total Program Costs – NPV Total Benefits of other Fuels – NVP Water Savings – NVP O&M benefits*[8]

If the Net Levelized Cost is reported in Table 2, a description should be provided that identifies parameters that are "netted" out of the total cost.

[7] The ISO New England Market Monitor requires Market Participants seeking to submit Demand Resource offers below 0.75 times Cost of New Entry in the Forward Capacity Market to report costs as part of their offer justification using a discount rate that reflects corporate and consumer credit risks. See http://www.iso-ne.com/markets/othrmkts_data/fcm/qual/forms/index.html

[8] As discussed above, for net electric costs one could also subtract the NPV of value of coincident peak demand savings.

Table 2.1 Efficiency Program Funding Sources

Percent of Program Expenditures Funded by:	**Electric**	**Gas**
☐ Ratepayer Funded Programs	%	%
☐ Regional Greenhouse Gas Initiative (RGGI) Proceeds	%	%
☐ Wholesale Capacity Market Revenues	%	%
☐ Weatherization Assistance Programs (WAP)	%	%
☐ American Recovery & Reinvestment Act (ARRA) Funds	%	%
☐ Other (Describe: _____)	%	%
Percent of Program Incremental Annual Savings (per Table 1.1) Funded by:	**Electric**	**Gas**
☐ Ratepayer Funded Programs	%	%
☐ Regional Greenhouse Gas Initiative (RGGI) Proceeds	%	%
☐ Wholesale Capacity Market Revenues	%	%
☐ Weatherization Assistance Programs (WAP)	%	%
☐ American Recovery & Reinvestment Act (ARRA) Funds	%	%
☐ Other (Describe: _____)	%	%

Table 2.2: Electric and Gas Energy Efficiency Program Expenditures

(Supporting definitions provided further below)

Jurisdiction/State XX	Program Year 20YY	Energy Efficiency Program Expenditures*	
Expenditure Category		**Electric (dollars)**	**Gas (dollars)**
ENERGY EFFICIENCY PROGRAMS			
Residential Non-Low Income Sector			
Customer Rebates/Incentives:		$	$
Administration/Marketing/Other:		$	$
Performance Incentives:		$	$
Research and Evaluation:		$	$
Other (Describe: _____)		$	$
Subtotal Residential Non-Low Income Sector			
Residential Low Income Sector			
Customer Rebates/Incentives:		$	$
Administration/Marketing/Other:		$	$
Performance Incentives:		$	$
Research and Evaluation:		$	$
Other (Describe: _____)		$	$
Subtotal Residential Low Income Sector			
Commercial & Industrial Sector			
Customer Rebates/Incentives:		$	$
Administration/Marketing/Other:		$	$
Performance Incentives:		$	$
Research and Evaluation:		$	$
Other (Describe: _____)		$	$
Subtotal Commercial & Industrial Sector			
TOTAL ENERGY EFFICIENCY PROGRAM EXPENDITURES		$	$
* In cases where electric (or gas) programs provide gas (or electric) savings, please estimate cost according to allocation by either: ☐ Estimated Savings ☐ NVP of Benefits ☐ Other Method – Describe: _____			
TOTAL DEMAND RESPONSE PROGRAM EXPENDITURES		$	

Table 2.3: Cost of Saved Energy

(Supporting definitions provided further below)

Jurisdiction/State XX	**Program Year** 20YY	**Cost of Saved Energy**	
Cost of Saved Energy Methodology		**Electric Cost ($/kWh)**	**Natural Gas Cost ($/Therm)**
Levelized Cost per kWh or Therm (using formulas provided on previous pages)			
Levelized Cost per kWh (With Participant Costs)			
Levelized Cost per kWh (No Participant Costs)			
NET Levelized Cost per kWh (optional) Cost Parameters Excluded:			
Real Discount Rate (i) **Weighted Avg. Measure Life (n)** Source of Discount Rate (describe):		**i =**	**n =**
Levelized Cost per Therm (With Participant Costs)			
Levelized Cost per Therm (No Participant Costs)			
NET Levelized Cost per Therm (optional) Cost Parameters Excluded:			
Real Discount Rate (i) **Weighted Average Measure Life (n)** Source of Discount Rate (describe):		**i =**	**n =**
IF LEVELIZED COST PER KWH OR THERM IS NOT AVAILABLE, PLEASE PROVIDE: Lifetime Cost per kWh or Therm (using formulas provided on previous pages)			
Lifetime Cost per kWh ☐ with participant costs OR ☐ no participant costs			
Lifetime Cost per Therm ☐ with participant costs OR ☐ no participant costs			

Tables 2.1 - 2.3 Supporting Definitions:

Administration/Marketing/Other Costs: Program administration and marketing costs, and other costs associated with implementation of programs, including direct installation costs, program implementation contractor services, etc.

Customer Rebates/Incentives: Direct financial rebates or incentives paid to customers to support the investment in energy efficiency (i.e., incremental cost, or portion thereof, of higher efficiency equipment). Financial rebates do *not* include direct installation costs – these should be reported under Administration/ Marketing/ Other costs.

Energy Savings: Reduction in electricity use (kWh) or in fossil fuel use in thermal unit(s).

Gross Savings: The change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated.

Incremental Annual Savings: These savings reflect changes in energy use (measured in megawatt hours or therms) caused in the current reporting year by new program participants in existing energy efficiency programs and all participants in new energy efficiency programs (i.e., programs begun during the current reporting year). Reported Annual Incremental Savings should be annualized.

Levelized Cost per kWh (orTherm): The level of payment needed each year to recover the total investment and interest payments (at a specified interest rate) over the life of the measure(s). This calculation is useful for comparing the value of energy efficiency to other resources.

Lifetime Cost per kWh (orTherm): The cost of saved energy over the lifespan of the measures implemented.

Net Levelized Cost per kWh (or therm or MMBTU): Levelized cost per kWh that subtracts the net present value (NPV) of benefits of certain savings (e.g., fossil fuel savings (gas and/or oil), water savings, O&M savings, or even peak electric savings) in order to capture the fact that energy efficiency provides numerous and diverse benefits, yet is often compared to a total cost that provides just one type of benefit (e.g., comparing levelized cost of energy efficiency to market clearing prices for energy on the supply side).

Net Savings: The total change in energy consumption and/or demand that is attributable to an energy efficiency program. This change in energy consumption and/or demand may include, implicitly or explicitly, the effects of free drivers, free riders, energy efficiency codes and standards, changes in the level of energy service, and other causes of changes in energy consumption or demand.

Participant Costs: Costs incurred by participants as a result of their participation in a program, including participant contributions to the capital cost of installed measures as well as for technical assistance and/or energy ratings etc.

Performance Incentives: Can be earned by electric or gas distribution companies or energy efficiency program administrators if they meet established goals.

Real Discount Rate: Adjusted to eliminate the effects of expected inflation and used to discount constant year dollars or real benefits and costs. A real discount rate can be approximated by subtracting expected inflation from a nominal discount rate.

Rebates/Incentives: Financial rebates and incentives paid directly to participants in an energy efficiency program.

Research and Evaluation Expenses: All in-house and outsourced costs associated with evaluation activities, including costs related to cost-effectiveness evaluation, market research (e.g., baseline studies, market assessments, and surveys), impact and process evaluation reports, and other costs clearly associated with evaluating the program.

Weighted Average Measure Life: Reflects the average life of the installed measures that takes into account the proportional relevance of each measure/program measure life, weighted by annual savings.

3. Reporting of Air Emission Impacts

The purpose of this section of the Guidelines is to provide consistent reporting of air quality and greenhouse gas emissions avoided associated with energy efficiency programs, including data needs to support inclusion of energy efficiency in State Implementation Plans (SIPs). In order to calculate these impacts, program administrators need to provide consistent energy and demand savings data (from Tables 1.1-1.3), which can serve as the basis for air quality regulators to use in calculating the avoided emissions.

Table 3 provides the reporting template for avoided air emissions associated with electric and gas efficiency savings impacts, and includes the following reporting elements:

- General description of calculation methodology used to estimate the avoided emissions, with example calculation(s)
- Emission factors and types, with references
- Annual and peak avoided emissions

Other energy efficiency data may also be needed or referenced to support the avoided emissions calculations. See Table 1.0 - *Supporting State Energy Savings Assumptions and EM&V Process Information* which includes links to and/or information on:

1. Detailed energy savings supporting data, such as program savings documents (or technical reference manuals);
2. Energy efficiency program plans;
3. Program administrator reported data, where applicable;
4. State achievable potential studies;
5. Other relevant publicly available energy efficiency data; and
6. A description of EM&V practices and links to relevant documents used to support the reported energy savings and associated avoided emissions.

Process Recommendations to Support Reporting of Avoided Air Emissions: To fully support air regulators' incorporation of efficiency benefits into their air quality and climate change planning activities, these guidelines provide the following process-related recommendations for energy and air quality regulators and policymakers, and other relevant stakeholders:

- Coordination between state utility regulators, program administrators and air regulators is needed to identify and implement best processes for sharing energy efficiency impact data, and calculating emissions impacts to support Table 3, as well as to address additional air regulator needs, in particular with regard to forecasting emissions reductions from efficiency programs; and
- With US EPA starting a process to refine its State Implementation Guidelines, further coordination within US EPA departments and with state air regulators are encouraged in order to work together to develop a more structured approach for effectively incorporating efficiency benefits into air quality and climate change planning activities.

Table 3: Avoided Emissions

Table 3 provides estimated avoided emissions associated with energy and/or demand savings from energy efficiency programs administered by [NAME OF PAs] for the year 20__, where such estimates were developed based on savings reported in Tables 1.1-1.3 unless otherwise noted. The emission reduction calculations were developed in collaboration with the PAs, the [STATE AIR REGULATORY AGENCY] and the [STATE PUC]. Table 3 may be completed for the entire portfolio of EE programs or can be broken down by sector or program type, consistent with reporting levels in Tables 1.1-1.3.

Jurisdiction/State:

			Annual Emissions Avoided (metric tons)		Annual Peak Emissions Avoided (metric tons)	
Pollutant	**Emissions Calculation Method Used**	**Emissions Factor Used**	**From Electric Savings**	**From Nat. Gas Savings**	**From Electric Savings**	**From Nat. Gas Savings**
eCO_2		☐ Marginal ☐ Other (Describe) Source: _____				
NO_x		☐ Marginal ☐ Other (Describe) Source: _____				
SO_2		☐ Other ☐ Average Source: _____				
Other						

Based on Annual Demand Savings coincident with:

☐ High Electricity Demand Days ☐ Utility Peak Demand ☐ ISO/RTO System Peak ☐ Other

Provide description of peak coincidence hours:

_____

_____

Table 3 Supporting Definitions:

Annual Demand Savings: The expected reduction in demand associated with the higher efficiency equipment or installation in a given year coincident with a specific peak period(s).

Coincident Demand: The demand of a device, circuit, or building that occurs at the same time as the peak demand of a utility's system load or at the same time as some other peak of interest, such as building or facility peak demand. Because jurisdictions currently report a mix of summer/winter/annual demand impacts in annual energy-efficiency reports, in order to be useful from a regional perspective, it is recommended that all reported peak demand impacts be clearly defined. Examples of peak demand definitions include the following:

- Demand coincident with utility system peak load
- Demand coincident with ISO/RTO summer or winter peak, or according to performance hours defined by wholesale capacity markets
- Demand coincident with high electricity demand days

Coincidence Factors: Coincidence factors are defined as the ratio of the average hourly demand reductions that actually occur during seasonal coincident peak periods (e.g., summer, winter) to the average connected load reductions. They account for both the portion of connected load that is used in individual buildings during peak periods and the diversity of usage patterns across populations of buildings during peak periods. As such, a coincident demand reduction is simply the product of the coincidence factor and the connected equipment load reduction.

eCO_2: CO2e is used to translate emissions of gases other than CO2 into CO2 equivalents by using the gases' global warming potentials. This enables emissions of greenhouse gases to be expressed in a common metric so that their impacts can be directly compared, as some gases are more potent (have a higher global warming potential or GWP) than others.

Emissions Factors (marginal and average, other): An emissions factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant (e.g., kilograms of particulate emitted per megagram of coal burned)."

Energy Savings: Reduction in electricity use (kWh) or in fossil fuel use in thermal unit(s).

High Electricity Demand Days (HEDD): Days in which electricity demand is extremely high, leading to considerably higher emissions than on other days. Electricity rates are usually the highest, and demand response programs are usually initiated on HEDD.

NO_x: Nitrogen Oxides

SO_2: Sulfur Dioxides

4. Reporting of Jobs Impacts

These Guidelines recognize that reporting job impacts from energy efficiency programs is important to demonstrate the state and regional economic benefits of energy efficiency. Currently, some but not all states report job impacts, and different methodologies are used, from fairly straightforward calculators to more comprehensive modeling. Given the difficulty of achieving a consistent methodology, it is premature to recommend a consistent calculation methodology in this version of the Guidelines. Rather, Table 4 provides for transparent reporting of job impacts by encouraging states to reference and generally describe the methodology it uses to develop estimates of gross and net job impacts, direct and indirect jobs. In addition, Table 4 includes a section to report the median wage of direct jobs in order to inform policy makers about the quality of jobs being funded through the programs.

Types of Jobs Created: **Direct jobs** are the actual, immediate jobs that result from an investment in an energy efficiency program or initiative. For example, the employment and wages for field employees working on low income weatherization (WAP) projects or HVAC and window/insulation contractors who install high efficiency equipment through the efficiency programs.

While harder to quantify, some states currently also report indirect or induced jobs, and net jobs associated with energy efficiency activities. To the extent such information is available for a given state, these Guidelines provide placeholders for such reporting. **Indirect jobs** result from "upstream" changes in business activity among firms supplying goods and services to the industries directly involved in the energy efficiency program or initiative. For example, sales and stock people at Home Depot or Lowes, and manufacturers of high efficiency materials/equipment installed. **Induced jobs** are those that result when the worker income generated from the direct and indirect jobs is re-spent in the local economy on consumer goods and services.

Net Jobs are calculated to get a sense of the broader economic impact of efficiency programs. Net jobs are defined generally as those created and sustained via energy efficiency program spending of ratepayer dollars *less* jobs that would have been created had the ratepayers kept the dollars and spent them on standard sets of goods and services typical for their sector.

Methodologies for Calculating Job Impacts: There are a variety of methods (models or resources) used to calculate net jobs which states may opt to use. One approach for calculating job impacts is to report the **direct** full-time equivalent (FTE) number of jobs funded through energy efficiency programs in accordance with American Recovery and Reinvestment Act (ARRA) guidelines. Many state agencies are recipients of ARRA funding and are familiar with the ARRA guidelines. The following ARRA formula can be used to report the number of jobs created or retained within a calendar year:

Total Number of Hours Worked and Funded by Energy Efficiency Investments for Year
Annual Hours in a Full-Time Schedule[9]

Another resource to calculate direct jobs is the ACEEE Jobs Calculator (also see User Guide).

Comprehensive models are used to calculate indirect and net job impacts. For more information about such approaches and resources, see Assessing the Economic Benefits of Clean Energy Initiatives, a publication of the US EPA that describes and compares a variety of approaches for quantifying the macroeconomic effects of energy efficiency programs.

Table 4: Job Impacts from Energy Efficiency Investments

Program Year(s):					
	Residential Program* L/I	Residential Program* Non L/I	C&I Program	Total Program	Methodology
GROSS JOBS FTE job-years					
Direct Jobs:					Describe:
Indirect Jobs:					Describe:
Median Wage - Direct Jobs:				**$**	Describe
NET JOBS: FTE job-years					Describe:
Other Metric (Describe): e.g., types of programs associated with Jobs created, etc.					

*Low Income (L/I) and Non-Low Income (Non L/I)

Table 4 Definitions (Definitions for **Direct, Indirect** and **Net Jobs** are provided on previous page)

Low Income: Households with income not more than a stated percentage of state or area median income or meeting low income requirements based on the number of family members in the household. (*Note that "low income" housing is different from "affordable" housing. For purposes of common reporting guidelines, respondents are asked to clarify whether affordable housing is included in the low income program sector.*)

Non-Low Income: Households with incomes that exceed the level required to qualify for participation in low income programs. (*Note that qualifying low income levels may vary across states/jurisdictions.*)

Median wage: The median wage of Direct jobs funded through the EE programs (in 2010 $).

[9] As defined by reporting entity.

5. Coordination with National Energy Efficiency Reporting Efforts

EIA Energy Efficiency Data Collection: The Energy Information Administration (EIA) collects energy efficiency program savings data using Form EIA-861 Schedule 6, which program administrators submit annually. Form EIA-861 is a straightforward, high level template in which many inputs are already reported in state annual reports. These reporting Guidelines reviewed the EIA-861 reporting elements to ensure consistency to the extent possible, given EIA-861 reporting tables were in process of being revised and open for comment. Assuming these Guidelines may evolve as well, it is recommended that there be coordination with EIA's efforts to ensure consistency between national and regional reporting efforts.

Other Federal Reporting Guidelines/Requirements: These Guidelines were shared with US DOE and US EPA staff, with the intent to help inform and coordinate with the development of other reporting guidelines/requirements at the federal level. Such efforts include reporting required to: support the American Recovery and Reinvestment Act (ARRA) funds used for energy efficiency projects/programs; weatherization assistance programs (WAP); and the joint US DOE and US EPA State Energy Efficiency Action Network (SEE Action) EM&V project, which is currently developing a national reporting template. The Forum will continue to monitor federal energy efficiency and other demand resource reporting developments, and share information with federal agencies regarding adoption and implementation of these Guidelines in the Forum region.

6. Incorporating Energy Efficiency into System Planning

Supporting research to these Guidelines included documenting current practice by ISO New England, New York ISO, and PJM Interconnection for incorporating energy efficiency into their system planning processes and models, where such practices generally vary across the three power pools (and in some cases rely only on efficiency data collected through the system operator's forward capacity markets). See reference to research report in footnote 2. While research efforts attempted to identify additional data needs and existing barriers to fully incorporating efficiency into system planning (energy system and not only capacity), it was concluded that further dialogue is needed with the region's three system planning bodies to better understand and address these issues. As such, the Forum is exploring a 2011 project to facilitate such a dialogue, where the outcome of this effort (potentially supplemented with additional research and/or guideline development), may lead to proposed modifications to these reporting Guidelines in terms of new/revised data needed to support integrating efficiency into system planning.