Establishing a Common Platform for Tracking EE’s Economic Impacts in the Northeast / Mid-Atlantic Regions

Presented at the 2013 ACEEE National Conference on Energy Efficiency as a Resource
Presentation Outline

1. Brief Introduction to NEEP and the Regional EM&V Forum

2. Developing the Common Statewide Energy Efficiency Reporting Guidelines and the Regional Energy Efficiency Database (REED) - How and Why?

3. Reporting Economic Impacts in REED: Cost of Saved Energy and Job Creation Impacts

4. Next Steps
MISSION
Accelerate energy efficiency in homes, buildings & industry in the Northeast - Mid-Atlantic region.

GOAL
Keep the Northeast region a national leader in accelerating energy efficiency.

Approach: Collaboration, Education, Advocacy
Regional EM&V Forum
Core Goal: Build a Transparent and Common EM&V Platform (per NECPUC/MACRUC Resolutions)

- PAs
- PUCs
- DEPs
- SEOs
- ISO/RTOs
- RGGI

EE Data Sharing
Consistent Savings Inputs
Consistent EM&V Methods
Common EE Reporting

Forum R&E Projects
Forum guidance and other EM&V protocols
REED - EE results
Developing a Common Platform for Reporting Energy Efficiency Program Impacts

2009: Forum Common Statewide EE Reporting Guidelines Project Begins

2013: Regional EE Database (REED) Public Launch

EM&V Forum Jurisdictions: CT, DE, DC, MA, MD, ME, NH, NY, RI, VT
Types of Data included in Common Reporting Guidelines and REED:

- Annual and Lifetime Energy Savings
- Summer and Winter Peak Demand Savings
- Avoided Air Emissions*
- Program Expenditures
- Job Creation Impacts
- Cost of Saved Energy*
- Program Funding Sources
- Supporting Information for Reported Energy Efficiency Program Impacts

* REED internal calculations, using methodology supported by Forum participants
Regional Energy Efficiency Database (REED)

Available at: www.neep-reed.org

### Energy Savings

<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
<th>Net Annual Energy Savings Electric Meter Level (MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-NE</td>
<td>Connecticut</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Massachusetts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Hampshire</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rhode Island</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vermont</td>
<td></td>
</tr>
<tr>
<td>NY-ISO</td>
<td>New York</td>
<td></td>
</tr>
<tr>
<td>PJM</td>
<td>Maryland</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- 0K
- 200K
- 400K
- 600K
- 800K
- 1000K
- 1200K
- 1400K
- 1600K
Sources of REED Data

Annual EE Program Data reported by PAs to state PUC or other jurisdictional entity (subject to EM&V requirements/review)

For New England States - electric EE program data is also submitted to ISO New England for EE forecasting purposes - ISO sends data file to NEEP for REED

For NY, MD, DE and DC, electric and gas EE data comes directly from state PUC or PA

For New England states, gas EE data comes directly from state PUC or PA

REED
How Energy Efficiency Stakeholders Can Use REED Data

Compare program impacts to help identify best practices

Support system & transmission planning, forecasting

Aggregate results to inform regional and national impacts / policies

Incorporate EE data into air quality plans
REED provides both *Lifetime* and *Levelized* Cost of Saved Energy for electric and natural gas programs at the state level:

<table>
<thead>
<tr>
<th>Lifetime Cost of Saved Energy</th>
<th>Levelized Cost of Saved Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Program Expenses / Lifetime kWh or Therm Savings</td>
<td>A more complex calculation that provides an annualized value of efficiency. Often used to compare efficiency with supply-side resources.</td>
</tr>
</tbody>
</table>
Cost of Saved Energy (2)

For formal state reporting purposes (e.g. PUC / legislative reports),

- States report either levelized or lifetime cost.
- Where levelized cost is reported, state uses its own discount rate, typically based on either long term Treasury bond rates, or a utility’s weighted average cost of capital.

For REED’s levelized cost calculation, all states agreed to a standard calculation using a consistent discount rate of 2.46% based on 30-year Treasury bond rates.
Cost of Saved Energy (3)

- EM&V Forum Steering Committee supports greater consistency in cost of saved energy calculations - Forum to develop *Cost of Saved Energy Guidelines* in 2014.

- Effort will refer to ACEEE 2009 *Saving Energy Cost Effectively* report, as well as current Forum project on Cost Effectiveness Testing practices, including review of discount rates used in each state.
Levelized Cost of Saved Energy by State

Range for electric = 2.5 - 4.3 cents/kWh

New York is not included, as it did not submit lifetime savings data to REED
Job Creation Impacts

- Reporting job impacts from EE programs is important to show the state and regional economic benefits of energy efficiency.

- REED captures:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Jobs</td>
<td>Actual jobs resulting from EE investment.</td>
</tr>
<tr>
<td>Indirect Jobs</td>
<td>Jobs from “upstream” changes in business among firms supplying goods/services to the industries directly involved in the EE program.</td>
</tr>
<tr>
<td>Net Jobs</td>
<td>Jobs due to EE program spending less jobs that would have been created had the ratepayers kept their $ and spent it on a standard sets of goods/services.</td>
</tr>
</tbody>
</table>
State Job Impacts Tracking / Studies

- REED states that did not provide job impacts to REED either did not have available job impact studies/data OR opted not to include the data.

- States that track job impacts in some manner but did not report it in REED include: CT, ME, MD, MA, NY.

- Many different approaches available and used across states; REMI modeling; EPA methodology; ACEEE calculator (ARRA).
Job Creation Impacts - Rhode Island & Vermont

<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
<th>Program Type</th>
<th>Gross Direct</th>
<th>Gross Indirect</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-NE</td>
<td>Rhode Island</td>
<td>C&amp;I</td>
<td>0</td>
<td>0</td>
<td>139</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Residential</td>
<td>0</td>
<td>0</td>
<td>196</td>
</tr>
<tr>
<td>Vermont</td>
<td>C&amp;I</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1,161</td>
</tr>
<tr>
<td></td>
<td>Residential</td>
<td></td>
<td>0</td>
<td>0</td>
<td>774</td>
</tr>
</tbody>
</table>

In accessing the REED and printing reports, the user agrees to NEEP's current full disclaimer per its website.


Job Creation Impacts

• Forum considered developing a common methodology for states to use - deemed too challenging.

• Other option is potential project on EM&V Forum 2014 Project Agenda = Regional Job Impacts Study

• Study would employ one methodology (selected with regional input or consensus) to develop current estimates of job impacts at the regional and state levels.
REED Next Steps

Remainder of 2013:
- REED Program Year 2011 Annual Report issued
- Additional features/reports on REED website
- Program Year 2012 data publicly available on REED website

2014:
- Collect Program Year 2013 data
- Issue REED Program Year 2012 Annual Report
- Additional modifications based on user feedback

Visit REED at [www.reed-neep.org](http://www.reed-neep.org)!
Thank you!

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