



NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS

## **REGIONAL EM&V FORUM STEERING COMMITTEE CALL**

2016 Forum Project Update and  
2017 NEEP Overview, EM&V Forum Plan  
& Discussion

November 8, 2016

# MEETING OBJECTIVES



1. Provide Steering Committee with high level awareness of:
  - a. Forum projects accomplishments for July – December 2016;
  - b. Current and Evolving Regional Needs and NEEP's Response
  - c. The Forum plans to continue and evolve
  
2. Share high level EM&V Forum 2017 Plan with Steering Committee; invite members to continue involvement under new committee; seek preliminary feedback on plans
  
3. Dialog
  - a. To understand how NEEP can serve states' needs for EM&V and related issues
  - b. Next steps



# MEETING AGENDA



*12:30 – 12:50*    **High Level EM&V Forum Update** on Q3 and Q4 2016. *Please refer to Appendix – after the Thank You slide in this deck - for detailed project updates*

*12:55 – 1:10*    **Overview of Industry Trends and NEEP for the Next Generation**

*1:15 – 1:40*    **EM&V Forum's Evolution**

- Why & How EM&V Continues to Have Value
- EM&V Forum 2017 Plans
  - Projects within NEEP Business Plan
  - Snapshot of the DOE Grant: M&V 2.0 Research – *Please see Appendix – after the Thank You slide in this deck - for list of tasks*
  - Committees

*1:40-2:00*    **Discussion & Next Steps**

# REGIONAL EM&V FORUM 2016 SCOPE

## Reminder of Projects in the 2016 Agenda



1. Steering Committee Facilitation and EM&V Exchange and completion of carryover projects
2. EM&V Methods – Protocols, Reporting and Training
3. EM&V 2.0 - Data Collection, Analytics and Auto M&V
4. EM&V for EE Integration with Other DERs
5. EM&V for New Technologies and Program Models
6. State EE Data Analysis & Trends

# EM&V FORUM 2016: High Level Update

## Delivered Q3 and Q4 2016



1. Loadshape Data Catalog
2. Evaluator Certification Scoping Paper
3. ACEEE Summer Study Papers etc. on Forum research
4. Inputs to NEER and UMP Protocol Developments and Presentations on Standardizing EE Information to EIA and HPC
5. Webinar on DR and Geotargeting
6. Workshops on HEMS and M&V2.0 Pilot Design
7. Final Scoping of the DOE SEP Grant on M&V 2.0
8. Air Source Heat Pump Workshop and Briefing Paper
9. REED Rendering #3 and Added State Data (Maine 2012-14)

# EM&V FORUM 2016: High Level Update



## Coming Soon

1. Industrial Efficiency Workshop Nov 15
2. Briefing Paper on Strategic Energy Mgt EM&V & UMP Protocol
3. M&V2.0 Briefing Paper – Industry Scan
4. REED Rendering #4 and Input of 2015 Data from New England states into REED
5. EPRI National Workshop

## FYI: Other Resources from NEEP

- <http://www.neep.org/blog> ; [Regional RoundUp](#) (March);
- [Regional Snapshot – EE Data](#)
- [HELIX Workshop](#) November 10



# NEEP'S RESPONSE TO REGIONAL NEEDS: NEXT GENERATION EFFICIENCY



**Advanced Efficiency  
Leadership Network**  
*For 80% Carbon Reduction by 2050*

**Strategic  
Electrification  
& Distributed  
Energy  
Resources**

**Market  
Transformation  
for Advanced  
Solutions**

**Resilient, High  
Performance  
Communities**

## NEEP Products & Services

**Events & Stakeholder  
Engagement**

**Research, Analysis,  
Reports, Case Studies**

**Regional Market  
Transformation  
Strategies**

**Technical Assistance  
& Resource Centers**

# 2017: NEW FUNDING MODEL FOR NEEP



***Historic funding model:*** included state “sponsorship”

***In 2017 and forward:***

***Regional Funding leverages Federal & Foundation Grants via:***

- State - NEEP Energy Efficiency Partnership Plans
- NEEP Allies Program Participation
- Project Funding Contract(s) for Selected Efforts



# EM&V FORUM EVOLVING: WHY WE SEE CONTINUED VALUE



- **The original catalysts and state benefits from support for Forum:**
  - **Policy drivers:** Efficiency as a reliable, least cost resource to meet state and regional energy and capacity needs, carbon & other emission reductions
  - **2008 & 2012 NECPUC & MACRUC Resolutions Support:** Regional Forum to Develop Common Protocols to Measure, Verify, and Report Demand Resource Savings in Collaboration with Other Northeast States, Government Agencies and Non-government Entities ..Ensure the **consistency, accessibility and reliability of EE and DR impacts**.. increase uniformity in M&V & reporting”
- **2016: Evolving Policies and Trends have Regional EM&V Implications** that also require “**consistency, accessibility and reliability of impacts and uniformity in M&V and reporting.**”
  - DER, Grid Mod, Resilience, integrated EE (peak reduction, clean least cost transmission alternatives, capacity market evolution, storage, DR)
  - Technology (M&V 2.0 and AMI and smart technologies increase data access and timeliness, offer economies)
  - Climate Change – (strategic electrification, Zero Energy building, electric vehicles, all fuels EM&V)

# CORE FORUM STRATEGIES SUPPORT CURRENT AND FUTURE REGIONAL EM&V NEEDS



1. **Develop EM&V Tools to streamline and improve analysis**
2. **Standardize EE Information (e.g. Protocols, database contents) to support evolving policies and trends**
3. **Align metrics and EM&V practices with policy goals (i.e. efficiency, system planning and environmental policies)**
4. **Use results to document performance *and* to inform policy and planning (best practices & innovation)**



# REGIONAL EM&V FORUM 2017 PROPOSED AGENDA



## Excerpt from Section B.5. of NEEP 2017 PLAN

- EM&V 2.0 Field Demonstration & Peer Exchange Network (*Confirmation of US DOE 3-yr. SEP grant award to CT DEEP expected Nov 18!*)
- Regional EM&V Forum Stakeholder Leadership Committee
- Track, inform and share state, regional and national developments regarding EM&V
- Two Regional Workshops, Four Topical Webinars, Newsletter, Repository of Studies
- Technical assistance to use NEEP's Standardized EM&V Methods Reporting Forms
- Inform NEEP's Regional Energy Efficiency Database development to serve evolving state and regional EM&V need
- Joint studies and analyses to address knowledge gaps
- Mid-Atlantic TRM update (funded by participating states)

# SNAPSHOT OF DOE M&V 2.0 PROJECT: STANDARDIZED, SUSTAINABLE AND TRANSPARENT EM&V INTEGRATING NEW APPROACHES



**WHO: Project Team:** CT DEEP (Applicant), NEEP (Sub-Awardee), LBNL, Eversource-CT and United Illuminating, NH PUC, NYSERDA, RI OER, VT DPS and **Other Supporting States:** DE, DC, PA

**WHAT:** Objectives of the DOE Grant Overall

- Test the use of advanced data analytics and collection tools (M&V 2.0) and compare to traditional EM&V practice in terms of savings certainty, timeframe and other aspects.
- Assess how advanced capabilities of M&V 2.0 tools are best integrated or coordinated with supplemental evaluation and analysis.
- Track use of advanced data analytics and collection tools and transfer knowledge to build state capacities in the region.
- Develop and support transparency and adoption of acceptance criteria and standardized software testing protocols and reporting.
- Inform and coordinate EM&V 2.0 learning and pilot results with other regional EE organizations and national efforts.

**WHY:** “The overall goal of this project is to explore and develop expertise and experience with advanced data collection and analytic tools and develop standardized automated M&V software tool protocols in order to support state efforts in the region to adopt and implement streamlined EM&V practices that provide for reliable, standardized, transparent and cost-effective approaches to quantify energy efficiency savings to support their state and regional policies and markets.”

# EM&V FORUM: STEERING COMMITTEE EVOLUTION



## From Steering Committee to EM&V Forum Stakeholder Leadership

- **Thank You** to Steering Committee for your role in advancing EM&V in the region
- Request for members to **join 2017 EM&V Forum Stakeholder Leadership**: Continued involvement of states and Steering Committee members in *defining regional EM&V priorities and shaping future direction and metrics* is key

## Plans include

- Expand Stakeholder Leadership representation (*add states, state organizations*) to address broadened “next generation” scope and regional interests.
- Seize *regional opportunities for in-person meetings* of state officials (eg NASEO, NARUC)
- Committee to *advise on* priority topics for Forum scope and information needs; region to *benefit from* integration of regional EM&V interests with protocol development; *help align* EM&V metrics and practices with next generation EE developments; intersections with M&V 2.0 project

# EM&V FORUM: OTHER COMMITTEES



## Formation of M&V 2.0 Advisory Committee to support the DOE Project

- Includes State Partners (CT, VT, NH, RI, NYSERDA) and Other Supporting States (DE, DC, PA) and LBNL, NEEP, CT utilities
- Key roles include input to and review of draft products, sharing state-specific M&V 2.0 experience, assistance with state-specific outreach and the routine reporting to DOE facilitated by NEEP

# EM&V FORUM: OTHER COMMITTEES



## Formation of EM&V Forum Stakeholder Committee

- Builds and expands current Forum Contacts – including ISO, environmental, industry/vendors, regulators, program administrators, NGOs
  
- Provides opportunities for
  - open exchange of ideas and stakeholder perspectives across the region on priority topics
  - Exploring and creating opportunities for collaboration on future research; facilitated stakeholder input and review of regional and national protocol and EM&V related developments
  - extending the regional outreach on the M&V2.0 project
  - meeting other needs - TBD

# EM&V FORUM: DISCUSSION & NEXT STEPS



## Discussion:

*What are your reactions? Suggestions?*

*What information will you need to decide on your future involvement?*

*What EM&V priorities do you have?*

## Next Steps:

December 2016: Committee formation

December/January: EM&V Forum Teleconference: Year End Summary & “hand-off” to 2017 Committee

Development of 2017 DOE Project Operational Guidance

Continuing Development of Forum 2017 EM&V Forum Funding







# THANK YOU

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# APPENDIX: 2016 Project Status Details

# 1. STEERING COMMITTEE AND FORUM FACILITATION

## Supporting a Regional EM&V Exchange



### 2016 Activities and Updates:

- Convene and facilitate 2 Forum Participant webinar meetings (May, Dec - TBD) and 2 Steering Committee (July, Nov)
- Held an [Annual Public Meeting](#) (March 31, 2016) in Hartford, CT
- Maintain [repository of evaluation studies](#) - last updated in February with studies from: CT, ME, MA, NY, & PA
- Completed Research Projects and webinars on projects carried over from 2015 agenda
  - [Net Savings research report](#)
  - [Incremental Cost study](#)
  - [Mid-Atlantic TRM](#)
  - [Loadshape Data Catalog](#)
- Manage Forum operations and communications



Access  
Repository

## 2. EM&V METHODS

### EM&V Protocols, Reporting Tools and Training



#### 2016 Activities and Deliverables:

- Monitor national EM&V efforts: US DOE Uniform Methods (UMP) Project; EPA CPP EM&V; Stakeholder Working Group September 15 for National EE Registry ([NEER Project](#))
- Monitor and inform use of Forum's [EMV Methods Reporting Forms](#): possible use for NEER, by EIA, and in 2017 DOE M&V2.0 research project
- Held [webinar](#): EM&V Methods and National EM&V Updates – June 30, 2016
- Completed Evaluator Certification Scoping Study (US DOE Special Project) – [Report and RoadMap](#) August 2016



# 3. EM&V 2.0 / Automated M&V

## Advanced Data Collection and Data Analytics



### 2016 Activities and Deliverables:

- Monitor, track and report on ‘EM&V 2.0’ developments: vendor profiles and case studies, November Brief TBD
- Held workshop March 30 and [webinar](#) - June 23
- Held [Workshop](#) on Pilot Design and Assessment Criteria – September 22 in North Haven, CT
- “Standardized, Sustainable and Transparent EM&V: Integrating New Approaches” - the DOE 3 Year SEP Grant (NEEP/CT/LBNL) - to be awarded! – Confirmed State Partner (NH, VT, RI, NYSERDA) roles and responsibilities; In kind support also from DE, DC, PA. Key Tasks:
  1. Conduct C&I and Residential Pilots with CT utilities to compare M&V2.0 with traditional evaluation
  2. Regional outreach and information exchange
  3. Regulatory guidance and protocol development



## 4. EM&V FOR INTEGRATED EE AND OTHER DERs



### 2016 Activities and Deliverables:

- [Briefing report](#) on EE/integrated DR state policies and activities – September 2016
- [NY REV Resource Directory](#) – August 2016
- [Webinar](#)- September 8. Regional Overview of Demand Response in the context of DER (NEEP) and Geo-targeted EE as a DER Strategy Examples (Dunsky, National Grid)
- Scope 2017 research report on EM&V implications for EE/DER integrated projects/programs TBD



# 5. EM&V FOR NEW TECHNOLOGIES/PROGRAM MODELS



## 2016 Activities and Updates:

- Monitor EM&V efforts on MT –EM&V Working Group for EPA Retail Product Platform
- Home Energy Management Systems (HEMS) [Workshop](#) – Including EM&V Issues and Approaches (Sept 21) with report in October
- Industrial Efficiency - Best Practice Guidance for Cost-Effectiveness Screening and EM&V for Strategic Energy Management. Collaborative Workshop (Nov) and Report (Dec)
- Air Source Heat Pumps (ASHP) [Workshop](#) - EM&V Issues and Approaches (July 21-22) and ASHP Issue Brief ([Policies Driving Market Expansion](#)) – August



***NOTE:***  
***Industrial***  
***Efficiency***  
***Workshop***  
***November 15***  
***in Andover,***  
***MA***

# 6. STATE EE DATA ANALYSES & TRENDS

## Regional Energy Efficiency Database



### 2016 Accomplishments to Date:

- Posted 2014 EE data and issued the [Energy Efficiency Snapshot](#)
- Developed [REED Renderings](#), a bi-monthly blog series
- Added new feature to REED – identification wall
- Added ME program year 2012-2014 data to REED
- Confirmed new funding source – EIA



### What is next for 2016:

- Post program year 2015 data – expected in November
- Scope feasibility of adding PA and NJ data
- REED Rendering Issue #4
- REED 2017 plan – new metrics and graphical representations



# TASKS OF DOE M&V 2.0 PROJECT: STANDARDIZED, SUSTAINABLE AND TRANSPARENT EM&V - INTEGRATING NEW APPROACHES - 2017 - 2019



1. Conduct M&V 2.0 Pilots
  - a. Commercial M&V 2.0 Pilot
  - b. Residential M&V 2.0 Pilot
2. Track the use and experience with M&V 2.0 tools and integration with evaluation and transfer knowledge to other states
3. Develop and support transparency and adoption of acceptance criteria and standardized automated M&V software testing protocols and reporting