REGIONAL EVALUATION, MEASUREMENT & VERIFICATION FORUM

Regional EM&V Forum 2010 Annual Public Meeting Synopsis

The Regional Evaluation, Measurement & Verification Forum held its second Annual Public Meeting ('the meeting') on October 19, 2010 in Baltimore, Maryland. Over 70 attendees from the region and beyond came to learn more about the Regional EM&V Forum and discuss several EM&V topics that play an important role in establishing legitimacy for energy efficiency programs, namely: common reporting of energy efficiency impacts, the role of efficiency in system planning, and calculating net energy savings.

"We have to get energy efficiency to the point where people can understand it and believe it…and that's where EM&V comes in. We need to make it real – evaluate it, measure it, and verify it [in a consistent, transparent way] to give people the confidence to invest in it."

Malcolm Woolf
Director, Maryland Energy Administration and EM&V Forum Steering Committee Member

Sue Coakley, NEEP's Executive Director, kicked off the meeting, noting that the work being done through the Forum is groundbreaking and is a rare example of true regional collaboration, with the intent to continue work and bring additional value to the region in 2011 and beyond. To date, a number of Forum products have been adopted, referenced, and used. Importantly, the Forum is building relationships and increasing coordination among PUC regulators, air regulators, program administrators, and ISOs/RTOs to support the use of consistent EM&V protocols in the region. The Forum is also informing national EM&V efforts through the US DOE and US EPA State Energy Efficiency Action Network (SEE Action), the North American Energy Standards Board, and technical assistance to American Recovery and Reinvestment Act grantees.

In his opening remarks, Malcolm Woolf (Director of the Maryland Energy Administration and EM&V Forum Steering Committee member) stated that this is a very important moment in time for energy efficiency because: 1) the world is globalizing, which leads to a continued increase in demand for resources including fossil fuels, 2) global climate change is a serious issue that needs to be addressed, and 3) the rapid pace of technological innovation in energy efficiency makes investments in efficiency a real and viable strategy to lower energy consumption. The challenge to promoting energy efficiency is that it is invisible, and people may not trust that it is effective.

The first session, *State of the EM&V Forum*, by Rich Sedano (Director & Principal of the Regulatory Assistance Project and EM&V Forum Steering Committee co-chair), Julie Michals (EM&V Forum Director), and Elizabeth Titus (EM&V Forum Senior R&E Manager), reviewed the history of the Forum with updates on key Forum accomplishments and ongoing projects. View the State of the Forum presentation for more details.

"There's a sense here that we are actually solving real problems, and the people who really know how to solve these problems have been brought together and are working on them."

Rich Sedano
Director and Principal, Regulatory Assistance Project and EM&V Forum Steering Committee Co-chair

The next panel addressed the Forum's *Common Statewide Energy Efficiency Reporting draft Guidelines* with presentations from Clifton Below (New Hampshire Public Utilities Commission), Julie Michals (NEEP), Kathleen Hogan (U.S. Department of Energy), Julie Rosenberg (U.S. Environmental Protection Agency) and Rob Sliwinski (New York Department of Environmental Conservation). Ms. Michals provided an overview and status of the draft Forum Common Reporting Guidelines project and the Guidelines. The Guidelines provide for common reporting with

consistent or transparent definitions for electric and natural gas energy efficiency savings, costs, emission and job impacts, with links to supporting energy efficiency data and EM&V methods.

Commissioner Below commented that the reporting Guidelines are very important as they are the first step to being able to compare energy efficiency data and understand it. The Guidelines will provoke discussions of what is reported, and help address any concerns about the value of ratepayer funded energy efficiency.

"[SEE Action's one page reporting form] will be a great complement to the Forum's Common Reporting Guidelines and will really dovetail with what is going on [with the Forum]."

Kathleen Hogan
Deputy Assistant Secretary for Energy Efficiency, US Department of Energy

Dr. Kathleen Hogan and Julie Rosenberg provided information about EM&V activities at the federal level. The DOE is engaged in evaluating its own programs, providing guidance to grantees that are evaluating programs and is attempting to build capacity nationwide for improving EM&V. One key activity is the development of a one page reporting form to collect four types of program performance data at the portfolio and sector level. See Kathleen Hogan's presentation.

Ms. Rosenberg shared that EPA is working to provide new guidance to states on approaches to incorporating efficiency into air quality planning. She emphasized the importance of robust EM&V and transparency of data to promote efficiency program savings as a legitimate option for emission controls to meet State Implementation Plan goals (e.g., ozone attainment). Ms. Rosenberg noted that the Forum draft Reporting Guidelines support EPA's air quality objectives to improve transparency and consistency of energy efficiency data, as well as make important recommendations to improve coordination of efficiency data sharing across state agencies (PUC and air regulators) and program administrators. See Julie Rosenberg's presentation.

Mr. Sliwinski provided the perspective of a state air regulator, reviewing New York's history with respect to incorporating energy efficiency into State Implementation Plans. He stated that the time is ripe for getting credit for emissions reductions from energy efficiency. See Rob Sliwinksi's presentation.

Sue Coakley closed the discussion about the Guidelines by suggesting that the states will implement the Guidelines if the Guidelines allow states to provide the energy efficiency information that the DOE and EPA will need for the integrated EM&V frameworks that are now in development. Panelists commented that the Guidelines' implementation would be facilitated if DOE and EPA could agree that the Guidelines are an acceptable format for providing energy efficiency data. Mr. Woolf suggested that the Guidelines could gain momentum if they are used for ongoing State Energy Program and Energy Efficiency Conservation Block Grant programs.

The first afternoon panel, *Integrating Energy Efficiency into System Planning*, featured speakers from the three ISOs/RTOs in the region. The moderator, Paul Peterson from Synapse Energy Economics, opened the panel with the overarching question of how to incorporate state savings goals from energy efficiency with the planning processes in ISOs/RTOs when their main focus is reliability. The ISOs/RTOs are appropriately cautious and conservative so as not to overestimate the amount of energy efficiency and compromise reliability, but at the same time, to what extent should some portion of states' aggressive energy savings goals be reflected in system forecasts? See Paul Peterson's presentation.

Arthur Maniaci (New York ISO) provided an overview of NYISO's main functions and explained that NYISO's role in system planning is to observe and account for impacts on energy and peak demand due

to all aspects of economic activity. He stressed the importance of solid EM&V for efficiency through primary research. Mr. Maniaci noted that NYISO runs sensitivity scenarios of their forecasts that consider meeting the state's Energy Efficiency Portfolio Standards' (EEPS) goal of reducing load growth by 15 percent by 2015. However, due to uncertainties in forecasted data and efficiency program funding, it does not necessarily incorporate the state's goals into its forecasts. See Arthur Maniaci's presentation.

"An ounce of metering is worth a pound of credibility."

Arthur Maniaci
Supervisor of Load Forecasting and Energy Efficiency,
New York ISO

Eric Wilkinson (ISO-New England) explained that ISO-NE's existing process for incorporating energy efficiency into its forecasts is currently limited to efficiency resources that are bid into ISO-NE's forward capacity market. Recognizing that energy efficiency is becoming a greater priority in the Northeast, ISO-NE has developed a stakeholder process to address and overcome challenges to the greater inclusion of energy efficiency. As in New York, the key challenges relate to concerns regarding the uncertainty of savings and lack of consistent forecasted efficiency program and savings data. See Eric Wilkinson's presentation.

Tom Falin (PJM Interconnection) described how energy efficiency programs participate as a resource in the PJM 3-year forward capacity market. Mr. Falin shared that planning a reliable transmission system is more difficult than ever because of: 1) new Renewable Portfolio Standard requirements, 2) environmental regulations/legislation dealing with NOx, SOx, and mercury that have a major impact on coal plants, and 3) the dramatic increase in demand response and energy efficiency in the PJM system associated with the capacity market making it very hard to accurately forecast the correct amount of demand response and energy efficiency and to address concerns about double counting efficiency impacts. See Tom Falin's presentation.

The discussion following the presentations focused on how system planners select from the various assumptions of future energy reductions. Bill Miller (Sentech/US DOE) suggested that the most aggressive projections of energy reduction will not be realized from public investment alone, and that private funding is necessary to achieve the greatest energy reductions. DOE's Better Buildings program is an example of a program that brings public and private funding together to support energy efficiency.

The panel discussion closed with Julie Michals noting that the Forum has a planned 2011 project to develop Guidelines for *Integrating Energy Efficiency Into System Planning*, and she looks forward to working with the ISOs/RTOs and other key stakeholders to develop/inform such Guidelines. The panelists indicated their interest in working together in collaboration on such an effort.

The final panel of the day addressed *What's Next with Net Savings?* Rich Sedano's presentation framed the conversation about net savings and provided background about the Forum's Net Savings project. The intent of the project is to identify the key audiences that rely on net savings to meet policy and program needs, highlight the reasons for measuring net savings, document the issues and challenges associated with existing approaches to estimating net savings, and propose recommendations for next steps to increase the consistency and quality of definitions and methods related to net savings. Lisa Wilson-Wright and Lynn Hoefgen (NMR Group) and Jane Peters (Research Into Action), who collaborated on the net savings scoping paper, followed with presentations that summarized the project results.

Researchers found that there is a lack of consistency in net savings approaches, and definitions and measurement vary across jurisdictions, programs, and years. There is also no policy driver to bring about consistency with regard to net savings; the lack of consistency leads to results that cannot be compared across jurisdictions. Ms. Wilson-Wright stressed that the energy efficiency field is changing fast, which necessitates new program design and implementation approaches as well as changes to program evaluation. See Lisa Wilson-Wright's presentation.

Ms. Peters provided an overview of the four methods for measuring net savings: 1) non-statistical methods, such as deemed savings and structured expert judgment, 2) methods using billing data, such as randomized control trials and econometric modeling, 3) market level methods, such as cross-sectional studies and macro-economic modeling, and 4) self-report methods. Although there is no mandate for consistent methods, Ms. Peters observed "ultimately, consistency is very important because if you ask the same set of questions year to year, you can compare results…If you change methods from year to year, you have an unreliable response." See Jane Peters' presentation.

Mr. Hoefgen presented the paper's conclusions, noting that net savings measurement is challenging but is important to meet various needs. Nine recommendations resulted from the scoping paper: 1) define adjusted gross savings, 2) define net savings, 3) advocate for reporting requirements, 4) standardize metrics of program activity, 5) clarify the definition and goals of attribution, 6) expand the criteria for program assessment, 7) develop guidelines for estimating net savings, assuming there is a policy driver to do so, 8) convene an efficiency/air regulation working group, and 9) in the interim, before consistent methods are developed, use a deemed or negotiated approach. The paper identifies research needed to support the recommendations. For more information, see Lynn Hoefgen's presentation and view the draft Net Savings Scoping Paper.

The net savings presentations led to a discussion of American Recovery and Reinvestment Act program evaluation, and whether net savings estimates will be or have been used as an indication of program success. Rich Sedano stressed the importance of finding a "sweet spot for regulators" with regard to net savings in efficiency program evaluation, for which some type of net savings estimate provides regulators with the confidence that ratepayer funds are being used appropriately.

Julie Michals closed the Annual Public Meeting, noting that the Forum looks forward to continued participation and support of its work to move the region towards greater consistency in EM&V in order to help increase the credibility of energy efficiency as a resource.