

Minutes for the Uniform Methods Project Steering Committee Meeting – Part II

October 5, 2011

Attendees

Convener: Chuck Kurnik, National Renewable Energy Laboratory (NREL)

Presenter: Tina Jayaweera, The Cadmus Group

Tom Eckman, Regional Technical Forum
Carla Frisch, U.S. Department of Energy (DOE)
Donald Gilligan, National Association of Energy Service Companies
Brian Granahan, Illinois Commerce Commission
Dennis Hartline, Maryland Energy Administration
David Jacobson, National Grid
Val Jensen, Commonwealth Edison
Steve Kromer, Efficiency Valuation Organization
Michael Li, DOE
Bill Miller, DOE
Julie Michals, Northeast Energy Efficiency Partnerships
Bill Newbold, Detroit Edison
Doug Scott, Illinois Commerce Commission
Mary Ann Ralls, National Rural Electric Cooperative Association
Steve Rosenstock, Edison Electric Institute
Steve Schiller, Lawrence Berkeley National Laboratory
Nancy Seidman, Commonwealth of Massachusetts
Dub Taylor, Texas State Energy Conservation Office
Malcolm Woolf, Maryland Energy Administration
Marguerite Kelly, NREL

Summary of Action Items

- Chuck K to send out Doodle Poll to establish availability for next meeting
- Chuck K to send out meeting notes
- Tina J to develop measures noting:
 - use cases, and/or certain cross-cutting evaluation issues
 - IPMVP “Options”, or other non-IPMVP techniques

Discussion Notes

The following notes are NREL’s best effort to capture the ideas discussed at the meeting. They are meant to share among meeting attendees and Uniform EM&V Methods Project (UMP) Steering Committee members only, not with the larger public.

Discussion on Definitions

- Will the project address individual measures or a collection of measures?
- Currently there are 3 ways that evaluators document savings
 - M&V as defined by IPMVP options
 - Deemed savings or deemed savings calculations
 - Large Scale Data Analysis (Experimental Design control group approaches)

- In addition, the “V” or M&V is about verification and verification can be done with inspections or a sample or census and with or w/o confirming proper operation (commissioning), and can be done just for first year or during measure lifetime with review of persistence –sometimes all that is needed is “V” (with deemed savings values).
- Recommend using the NAPEE guide and EM&V Forum Glossary as a reference for definitions
- Suggest that the group address gross and adjusted gross savings, and let the Technical Experts and Technical Advisory Group address how to determine savings for a particular use case.
- Other items to cover in the method template: The difference between an M&V and Evaluation plan. There are lots of M&V plans available, e.g. on the EVO (Efficiency Valuation Organization) and FEMP website [Federal Energy Management Program] that address verification of specific technologies.

Discussion on Net-to-Gross

- The exercise is of marginal value if market effects are not addressed
- The uncertainties of going from gross to adjusted gross are a large influence on the calculation
- The Uniform Methods Project should be about formalizing the things that we know. Net to gross is important, but we should formalize adjusted gross before attempting to get to net.
- We cannot get to net given the timeline of this project, but we may be able to address net for some of the measures
- May be able to address net to gross in some of the specific methods
- We are in an illogical situation if we have different evaluators coming up with different results for the same programs because they don’t use consistent methods
- Experience from NEEP EMV Forum:
 - Started with a scoping paper to list the challenges.
 - Next we will issue an RFP to come up with common definitions on adjusted gross savings and net savings.

This will be used to provide direction for future research to catalogue energy and environmental policies and to make future recommendations on the types of categories of savings for future use.

Question for DOE: It is not apparent that dealing with net-to-gross isn’t central to the issue. If we don’t, I don’t think we have a uniform method.

Mike Li:

We are proposing a structure, but it is really just a proposal. If you as a group agree that we need to change the focus, then we can do it. You guys are the experts. I agree that this net-to-gross issue is challenging. One of the ways we are approaching it is to agree first on the gross savings. Then in Phase II, we will address how to get to net savings. It is not our intent to say that once we get to the gross savings that we are done.

Carla Frisch:

I think that is exactly right. We are approaching it differently with this group. We have the right people on board with the Steering Committee, Cadmus, and the Technical Experts. We are very willing to tackle the difficult problems.

Discussion of Baselines

- During M&V versus EM&V discussions in the past, it is clear that those talking about M&V were talking about some “E” activities, perhaps doing some verification on specific projects.
- The more complex plans involve more than just M&V, and this points to the wide disparity between values resulting from the same measures.
- Some of the differences in results come from assumptions – baselines, lifetimes, weather, rigor, budget, preference for neutral or biased figures, etc. A project in a different state with a different baseline will get a different answer.
- The methods must include a process for defining a baseline
- In some states it is calculated as the difference between current codes and standards and not field conditions
- The choice of a baseline has a lot to do with the policy context. The design of the program determines the baseline, not the specific application
- Here are a series of questions to think about as we develop the document, because one size does not fit all. There may be different policy goals involved, etc.
 - How can we develop a document that makes clear and transparent what those choices are?
 - How can one readily see which method is being used in a particular program?
 - What were the assumptions being used? This goes to the transparency issue.

We are trying to narrow things down to make the process manageable; give State Managers a method; and use consistent language to address how results differ in different states.

Questions for Tina:

1. Under fuel, you will get both gas and electric in there, do you intend for there to be a method to cover both fuels for water heaters, for example?

Tina Jayaweera:

Yes, exactly. I wanted the method to include both gas and electric because the physics behind the calculations is the same. And then any differences in calculations between electric heaters and gas heaters would be explicitly listed in the calculations themselves.

And yes, baseline is a critical variable. We have to be cognizant that different jurisdictions address things differently. Some use federal standards; some use market averages.

2. Will there be some sort of literature search to see what different jurisdictions have done and to see if these issues have changed in response to new codes and technologies?

Tina Jayaweera:

Part of the membership of our Technical Advisory Group is to find people who have been around long

enough to bring that perspective to the table...If there are questions about these issues we are willing to do a literature search.

One of the comments that has surfaced is how much of this work has already been done. One project we did for SEE-Action last spring was to look at about 15 technical manuals for about 20 measures to compare calculations methods. We found a wide disparity. Therefore we are not displacing TRMs [Technical Reference Manuals], but as the TRMs get revised and updated, they can look to this project to familiarize themselves with the algorithms that determine critical variables.

Discussion of Measures

- Suggest that we not just use M&V, but look at other options such as a real-time control-group approach for a series of measures, and include option A, option B, computer simulation, etc.
- A recommendation was made to include other components that use more energy within the refrigeration ECM, such as compressors.
- It is important to have depth and breadth of measures to test the types of methods that might be applied more broadly so that they can be applied to other programs. For example, residential and commercial lighting have different problems to solve. Cadmus and the technical group can explain what the different issues of this measure might be in such a way that can be applied to other measures as well.
- When proposing measures for selection, outline the proposed M&V approach.

The delivery method of the measure affects the EM&V choice, and will affect the results.

Questions to Tina:

1. Several of these options include several measures. For example in commercial lighting, there is a whole fleet of options that could be included. Don't you have to get specific about what each fixture is to determine wattage savings? It seems quite open-ended.

Tina Jayaweera:

No, we are trying to establish the big picture for how to determine savings in a commercial lighting project: wattage, lumens, fixture, etc, the critical variables. It will not address specific technologies.

2. Would the whole house retrofit use utility meter data?

Tina Jayaweera:

Utility meter data is where we would start, but I don't want to try to steer the results in advance.

3. Where you are talking about heat pumps and central equipment, I'm curious about why you didn't include geothermal in there.

Tina Jayaweera:

Mostly it was about the prevalence issue. Not to say that geothermal heat pumps are not gaining traction, they are not as prevalent as the other 12 measures listed. We certainly could broaden #11 to read "Central HVAC," which would include geothermal heat pump systems, and more.