

## **Uniform Methods Project Steering Committee Meeting**

Preview of Residential Lighting Method

November 30, 2011

### **Presenting**

Scott Dimetrosky, CADMUS

### **Attending**

Chuck Kurnik, National Renewable Energy Laboratory (NREL), moderator

Dan Beckley, NREL

Jimmy Jones, NREL

Marguerite Kelly, NREL

Carla Frisch, U.S. Department of Energy (DOE)

Michael Li

William Miller, DOE

Hossein Haeri, CADMUS

Tina Jayaweera

Alex Rekkas

Donald Gilligan, National Association of Energy Service Companies

Julie Michals, Northeast Energy Efficiency Partnerships

William Newbold, DTE Energy

Chuck Rea, MidAmerican Energy Company

Gene Rodrigues, Southern California Edison

Amy Royden-Bloom, National Association of Clean Air Agencies

Steven Schiller, on behalf of Lawrence Berkeley National Laboratory

Nancy Seidman, Commonwealth of Massachusetts

Mary Ann Ralls, National Rural Electric Cooperative Association

Rodney Sobin, Alliance to Save Energy

### **Meeting Purpose**

The purpose of this meeting is for the Uniform Methods Project Steering Committee to review the first method, now called protocol (see below), developed under this project. Scott Dimetrosky presented a summary of the draft protocol at the meeting.

The Dimetrosky presentation and these meeting notes are now posted on the NREL Extranet website:

[www.nrel.gov/ump](http://www.nrel.gov/ump)

The Nov. 30 Uniform Methods Project Steering Committee meeting preceded a review of the draft of the Residential Lighting Evaluation Method by the Technical Advisory Group (TAG), and the steering committee will formally review the protocol after the TAG has completed their review, about the middle of December.

In the future, protocols will be reviewed by the TAG before presentation to the steering committee for review. This meeting to review the first protocol was scheduled this way in order to give the steering committee an opportunity to give general feedback on the process and format.

***Steering Committee Comments:***

- Request to the project team to indicate what types of issues they are looking for in the steering committee review when the draft protocols are distributed.
- Request to the project team to provide a time frame for moving forward, including when the steering committee review will be due. And a request to please get this first protocol to the steering committee for review as quickly as possible, given that the review might take place over the holidays.

**Announcement**

An in-person steering committee meeting will take place in Chicago on Monday, January 30, 2012. The project team will distribute details as soon as they are finalized.

**Discussion of Method versus Protocol**

*Chuck Kurnik:* We are considering changing the name of the technical document from *methods* to *protocols* and are interested in feedback from the steering committee. The project team feels that the term protocol is more natural. Furthermore, a method is very specific, while a protocol is less specific.

*Hossein Haeri:* The project name will continue to be the Uniform Methods Project. But when we talk about specific measures, we will refer to those specific documents as protocols. We felt that it creates confusion to talk about calculation methods when the project itself is called methods. Furthermore, the measures also describe procedures for things like data collection, and we are sometimes using the word method to refer also to these procedures. We therefore felt that using the word protocol to maintain clarity.

***Steering Committee Comments:***

- There are specific meanings that people attribute to protocols compared with words such as standards. There is some concern about the word protocol because it seems to claim that this is *the way* to do this instead of simply a recommendation.

## **Discussion on Interactive Effects**

*Scott Dimetrosky (from the slide notes):*

We recommend using a model from the Northwest Regional Technical Forum Calculator for which inputs include climate zone, saturation of air conditioning, saturation of electric heat, and lighting hours of use by month. Larger utilities would typically already have many of those data readily at hand. For smaller utilities, we recommend using secondary data.

One note from the model, it is focused on electricity savings only, not savings (or increases in use) of other fuels such as natural gas or propane.

### ***Steering Committee Comments:***

- That the model only addresses electricity effects is an issue. However, we can use fuel data to fix the model for electric heat versus gas heat simply by translating to equivalent Btus.

## **Discussion about Leakage**

*Scott Dimetrosky (from the slide notes):*

There are two other evaluation issues. Cross-customer sales is where some bulbs subsidized by the residential energy efficiency program are purchased by non-residential customers. Non-residential customers have a higher hours of use than residential customers and thus skew the savings results. Leakage (also called spillage) is where some bulbs may go to consumers who are not customers of the utility funding the program, and the savings appear somewhere else.

Our recommendation is to ignore these effects. Their results are difficult to measure and the effects on energy savings from the different types of leakage tend to offset each other.

### ***Steering Committee Comments***

- It is extremely difficult to identify each purchaser in an upstream lighting program.

## **Discussion about Demand Savings**

*Scott Dimetrosky:* The focus of this protocol is on first-year electricity savings measured in kilowatt-hours (kWh). Demand savings measured in megawatts (MW) are not addressed.

### ***Steering Committee Comments***

- The problem with peak demand savings is that it depends on the load shape of each utility. Then you have to get into a conversation about the right way to calculate the savings. Are you talking about saving a single peak hour, as some utilities would measure it? Or do you have to address a loss-of-load probability in each case?

- Determining peak demand savings tends to be specific to a particular program and technology, and as a result, there are specific ways to address it. In general, there are three ways to calculate peak demand:
  1. Average megawatt = total kWh divided by 8,760 (kWh/8760).
  2. Peak demand is defined as an average during peak hours.
  3. Coincident peak demand.

Methods for determining each are not dependent on the system structure but instead have to do with the calculations themselves. They are different in different service territories. It really is a judgment based on time and preference.

Therefore, peak demand savings should be placed in a *not basic* category. It will depend on how much time and budget you want to put into this question.

- This discussion illustrates how difficult it gets when you go beyond the individual efficiency program measure and get into interactions with the system.
- For specific measures, if the recommended data include time of use, say from loggers, it might be good enough for this method to lay out how to take the time measured information and get it ready for a peak calculation. This latter calculation depends a lot on the particular venue, and people working in that program would know best how to carry it out.

*Hossein Haeri:* The way we have been looking at peak load impact, the basic steps are straightforward. First you need to identify the peak period, for which you do need system load shape. Then you need to determine the coincidence of the load shape with the particular measures. Then you define particular load periods—for one particular hour as some utilities do, or for a number of hours. It is a finite set of methods that are universally applicable to all measures.

There are not a lot of other steps for most measures (with the possible exception of economizers). I don't see why calculating coincidence factors would be that different, other than using particular end-use load shapes.

### **Discussion about Crosscutting Issues**

*Hossein Haeri:* Perhaps this is a good time to talk about how this report will address crosscutting issues such as estimating peak load impacts: Is this something that should be addressed in the context of individual protocols, or can we generalize the discussion and deal with it as a crosscutting issue? If you have any ideas, would you please give us guidance on how to proceed?

There are a couple of similar issues that are generally applicable to all measures, such as:

- Sample design
- Peak load impact
- Persistence
- Data management
- Evaluability assessment
- Net-to-gross ratios
- Rebound and take-back

Our idea is to discuss these issues in a stand-alone chapter in the document instead of including these topics in every protocol. If we intend to do it that way, we need to start recruiting people to write these sections, so please let us know what you think.

### **Discussion about Adopting the Residential Lighting Protocol**

#### ***Steering Committee Comments***

- *Question from Steve Schiller:*  
For those in this group who are running programs: Is this protocol a good way to describe how to do this? Are the assumptions valid? If so, would your organizations be inclined to adopt this protocol in their jurisdictions? Are Scott's assumptions valid?
- *Chuck Rea:*  
MidAmerican operates a pretty large upstream lighting program. And yes, we understand this protocol and would look closely at adopting it. Notwithstanding that this protocol is not what we do currently, but yes, we would look closely at adopting it.