

UMP Steering Committee Meeting – 4/5/2012

Attendees

Rodney Sobin, Nikolaas Dietsch, Tom Eckman, Alan Shedd, Diana Lin, Amy Royden-Bloom, William Newbold, Julie Michals, Malcolm Woolf, Michael Brandt, Brian Granahan, Michael Li, Chuck Kurnik, Dan Beckley, Tina Jayaweera, Alexandra Rekkas, Scott Dimetrosky, David Jacobson

Meeting Notes

- Discussion of protocol approval process
- Questions about when SC will receive last 5 protocols. Answer is a couple of days before each meeting to discuss them.
- Discussion of public review schedule.
- Steering Committee Member: What is the length of time for public review?
- Chuck: About four weeks. Informal review process to get stakeholder feedback. Not formally registered in federal register.
- Scott Dimetrosky: Overview of residential lighting protocol
 - Protocol meant to address as many delivery methods as possible
 - Discussion of recommended approach
 - Comparison to industry practices
 - Feedback – mostly was clarifying questions and request for more detail
 - Major points for reconciliation
 - Delta watts
 - Annual operating hours – request to see more data
 - Presented recent studies across U.S.; request to see more detail about sample sizes of these studies.
 - Questions about sample size assumptions; recommendations to do metering, request for info about sample size of that
 - In-service rates
 - How do we estimate a long-term installation rate vs. bulbs purchased in last year? Ongoing debate.
 - Interactive effects – simulations where possible is recommended
 - Cross-service territory – add recommendations about extrapolating to different samples
- Steering Committee Member: Decision to handle installation rates seems might be baseline question instead of NTG question. If baseline production of CFLs is producing savings already, saturation numbers compare loads to system. Not net effect, gross effect.
- Scott: Our concern was not to double-count. Not in NTG, some way to parse out, I agree, but you don't want to count twice.
- Steering Committee Member: If you're at 50-60% saturation of CFLs, some that are failing are being replaced by programs that are still operational. Baseline question. Some fraction of lamps is replacing CFLs in existence. Assume will happen in forecast.

- Scott: If people would switch back to incandescent is another issue. Baseline is that every consumer has a choice when CFL fails.
- Steering Committee Member: EISA standards coming into play, moderate baseline. More extensive than standard incandescent.
- Scott: Areas with no NTG has an issue. At minimum, if NTG is not being incorporated, needs to be handled as baseline issue.
- Steering Committee Member: Should be handled at one place or another. Shouldn't be ignored.
- Scott: If saturation gets high in next few years and NTG ratio isn't really low, is it counting for CFL to CFL replacement. Can make that modification.
- Steering Committee Member: How are you treating storage issue?
- Scott: Recommended to estimate first year installation rate, which will differ from long-term installation rate. In-home audit. Quantify installation vs. storage rate for that. Out of stored bulbs, assume most will get installed and that installation will happen within 2 years of program activity. Based on CA study that used projected of installation rates based on sales data. Further research should be conducted to quantify.
- Steering Committee Member: Bonneville did follow-up survey of giveaway program. Check with Laura Gage at Bonneville.
- Scott: Working with a client to see if we can conduct study to work on this.
- Steering Committee Member: In calculation of HOU, should use hours per application instead of hours per home.
- Scott: Recommendation is to stratify by room type.
- Steering Committee Member: Do secondary data sources address that in significant detail?
- Scott: The sources I've seen do. Weighted average of HOU by room.
- Steering Committee Member: One concern is impacts on heating and cooling, impact of electricity is accounted for, but not other fuel sources.
- Scott: Recommendation is to account for both.
- David Jacobson: Unitary HVAC
 - Description of measures covered by protocol
 - Overview of protocol
- Steering Committee Member: If you're using metering, why not take kWh from metering instead of capacity/EER?
- David: In some cases, if your metering period is a full hour, it's rare you will pick up full hour, but I have not seen it done that way.
- Steering Committee Member: You can take 5 minute intervals as long as you're going out there.
- David: I can look into that, I'm not sure. Part might be uniformity. If some units didn't achieve peak demand during the period, to try to have all units subject to the exact same standard.
- Major points of reconciliation:
 - Covered by every TRM. Most manuals have simplified equation. Most groups like their evaluation methods to feed back into TRM.

- Though the measure is a core part of every EE program, cumulative savings from this measure are fairly small. Cumulative savings did not justify a lot of primary metering of BTUs and tons of cooling.
- Metrics for judging efficiency are in the process of moving for commercial units from EER/SEER to IEER. Deal with current time and what will happen in next year or two.
 - Still common to use EER
 - Steering Committee Member: EER is not used for larger equipment.
 - David: In developing this protocol for now, we're not there yet in using IEER.
- HVAC is often delivered with other types of programs. Didn't want to combine with other measures. Listed in protocol what add-on measures were not included.
- Measuring tons of cooling can be expensive on smaller units, where there are no on-board data collection activities. Never had the budget to do this personally.
- Simulation vs. field measurements. Some technical manuals have 9,000 variations of what savings are depending on building type, configuration of system, etc. Just based on simulation. Real measurements would trump these look-up tables with 9,000 entries. Large sample of usage patterns within given climate zone is better than simulation.
- How protocol compares to what is being done
 - Protocol is based on what NEEP did and large metering study in Northeast.
 - Another more sophisticated method for hot/dry climates, where traditional EER/SEER measurements were not valid.
- Steering Committee Member: Equation, using EER vs. equivalent full-load hours. High efficiency equipment doesn't perform the same way at part load conditions. Using full load hours will not accurately state energy savings.
- David: We're not covering heat pumps in this protocol.
- Steering Committee Member: You can say same for high efficiency air conditioner.
- David: Issue is who can afford to do it. I won't have data beyond EER for awhile.
- Steering Committee Member: If base everything on secondary studies, the studies quoted are only CA and Northeast. Problem filling in large portion of country with procedure that doesn't work well. This inherits all problems of original system. Another question is about baseline. Should it be code compliant or standard practice? Moot point because we're not dealing with what's actually installed, just making assumption. It seems like we're cutting savings out by not considering what's actually there and not considering what code compliant is.
- David: They will have bought another unit anyway. Only claim credit for high efficiency unit vs. code compliant unit.
- Steering Committee Member: Why is refrigerator recycling different?
- David: That program removes appliance that is assumed to run for another few years. Some people who participate are getting rid of unit they were going to replace anyway.
- Steering Committee Member: Your approach is throwing things to attribution analysis that is getting a lot of usage.
- Scott?: Reflect in normative behavior, not code. Standard practice is generally better than code.
- Tina: For jurisdictions that don't include NTG adjustments...?

- Steering Committee Member: I agree should not double ding. I'm not interested in what replaced CFL with, but who caused to get CFL, that is NTG discussion.
- Scott: How much of saturation is due to program? How much would go backwards if program was cancelled?
- Steering Committee Member: Track baselines before programs launch, have to find out before launching program what is being done.
- Scott: Assumes once baseline has shifted, will stay shifted.
- Steering Committee Member: No reasonable resolution to EER vs. equivalent load hours.
- Steering Committee Member: Is there a wide variance with what market is doing? Value added in improving practices?
- David: Because program is prevalent, and majority of people running program have done nothing to evaluate program, to have guideline with baseline about reasonable approach is worthwhile.
- Steering Committee Member: Majority of practice doesn't even do this level of evaluation.
- David: Absolutely. Few evaluations of this measure given how many utilities offer this measure. Not well studied.
- Steering Committee Member: Also gives rise of lack of adequate secondary references to point to. We know that people aren't doing M&V on this, we are putting out flawed procedure that relies on secondary data that is full of holes, and saying this is as good as it gets.
- David: I'd like to think you're exaggerating.
- Steering Committee Member: What is cost per site of implementing protocol?
- David: About \$1,000 per unit. Not per site, but per unit. That is inspecting unit, installing power meter, downloading data, conducting analysis. Measuring power at different stages for multi-stage units, air flow measurements, different temp and humidity measurements, will go to \$5,000-\$6,000 per unit. Navigant study did small number of units with measurements. Simulation to calibrate measurements in different buildings.
- Second call will be scheduled to discuss in more detail.
- Steering Committee Member: Will there be another protocol to address equipment change-out?
- Chuck: We won't be addressing heat pumps in Phase 1 or Phase 2.
- Discussion of next steps
 - Review of outreach ideas
 - Contact list
 - Continue with protocol review