DEMAND ANALYSIS WORKING GROUP (DAWG)
Energy Savings Pup

Notes

CPUC Energy Efficiency Potential Study -- CPUC 2018 & Beyond EE Potential & Goals Study – Behavioral, Operational Efficiency and Retrocommissioning (BROs)

April 20, 2017 @ 10am-11:30am PT

Webinar only

Meeting Link:
http://demandanalysisworkinggroup.org/?post_type=ai1ec_event&p=2710&preview=true

Agenda:

The CPUC 2018 and Beyond Potential and Goals study is currently being updated with an expanded scope of Behavior, Operational Efficiency and Retro-commissioning (BROs) savings potential

The CPUC's contractor, Navigant, will present at this webinar an overview of the Residential and Commercial BROs methodology and draft results for stakeholder review and comments.

Draft documentation of input assumptions will be released one week prior to the workshop and we strongly encourage stakeholders to review this material ahead of time.

This workshop will not cover any topics other than BROs savings. An informal comment period will follow the workshop.

Support materials: available on 04/13/2017 on https://pda.energydataweb.com and here on the DAWG website

CPUC/Greundling
Introductory remarks – schedule/next steps

•Today (this presentation)
- Residential and Commercial BROs draft results
- Informal comment period to follow

- April 28, 2017
  - Residential Low Income Draft Results
  - Informal comment period to follow (see http://www.demandanalysisworkinggroup.org for additional information)

- Mid-June (via the CPUC energy efficiency proceeding R.13-11-005 as opposed to the informal process that that takes place via DAWG):
  - Draft public report and all results (including rebate programs and C&S) available for public review
  - In-person workshop at CPUC
  - Formal comments period (comments via the proceeding)
  - A proposed decision will be published
  - Formal comment period
  - Final decision establishing energy efficiency goals – Q3 2017.

The purpose of this meeting is to obtain feedback on some draft results. Note that the presentation today is not final. Measures/savings presented today are drafts – the team is particularly interested in public input on BROs which is the reason for today's presentation.

The .ppt presentation and additional materials will be posted on the DAWG site.

The Behavioral, Retrofit and Operational savings component to this cycle's energy efficiency potential study expanded the scope quite a lot and has been/is an important part of this study.

The team did not receive much feedback on retrocommissioning (RCx) last fall (2016) during the initial presentation of proposed approach/data sources. So RCx has been added to/combined with the BROs component of the study.

Modeling Framework
- Savings can apply to both existing equipment and retrofits/new construction
- Savings will be incremental to savings from equipment change-outs

- Behavioral Approaches
  - Changes in efficient technology purchasing behavior
  - Reducing or avoiding the use of technologies
  - Technology operating practices
  - Changes in technology settings

- Potential Actors
  - Building occupants
  - Building operators
  - Building managers
  - Company leadership
  - Others

- The BRO estimates are net of any rebated measures. That is: retrofit savings are counted in the retrofit programs and only the additional effects of BRO savings are counted as savings potential in the BRO categories. This is consistent with Resolution 4818.

- What is the difference between "behavioral" savings vs. savings that may occur as a result of marketing program? Navigant the modeling is based on results drawn from studies that only include impacts from BRO programs, how a marketing campaign may influence purchase decisions. That is: the measurements are only taken for participants who chose to participate in BRO programs (in a few cases there are opt out programs, so in that case participants are those who did not opt out).

- Step up and Power Down is one of the hallmark current programs in this category https://stepupandpowerdown.com/ (CA). Duke Energy's Saving Charlotte is also a relatively robust BRO program so some of the estimates are from that program. (There are other studies, too.)

- Navigant's approach for the analysis to use the best available savings estimates as the basis for forecasting energy efficiency potential. Sources include available information from CA or other jurisdictions. (In some cases the published estimates are adjusted by professional judgment to better match current or proposed CA programs and/or conditions. This is consistent throughout the analysis, not just BROs are published studies for certain program types – whether in CA or other states – modified by professional judgment for certain parameters to best represent the CA programs, which is the approach used throughout the study. With that slight caveat, the overall approach is to use best available estimates.)

- Several meeting participants have expressed concern that some of the study results as input for the BRO potential calculations may be from pilot programs and/or use small sample sizes and may not be reliable enough. Some of the references in the appendix cite secondary rather than primary

research so it is not easy to review the source material to assess the quality of the results. Some stakeholders expressed concern that these data sources may not be reliable enough to use in the modeling. Stakeholders are encouraged to submit informal comments on this topic following this meeting.

- Another idea to address this uncertainty could be to weight the better/more reliable estimates more heavily than inputs derived from less stringent research.

- The CPUC EM&V lead for large sites (Hardy) suggests that the draft strategic energy management (SEM) effective useful lives (EULs) may be overly optimistic. Navigant/Tierra suggest that SEM represents relatively wholesale changes in organizations that implement the approach. SEM requires training/equipment/capacity, so it does likely last. Kay will set up a meeting with Navigant/Tierra to discuss.

- ORA – the savings estimates from energy savings competitions (an approached used in both the residential and commercial sectors) seem overly optimistic. The results may be uncertain and the source studies may be from pilots. ORA will submit this as a comment.

- Note: CPUC rules allows for 1 year residential 1 year EUL for "energy savings competitions" and 2 years for commercial competitions. These EULs are used in the current analysis.

- Avoided costs are based on total resource cost (TRC) were used to screen measures for inclusion in the draft results.

- CPUC is currently considering allowing an adder for efficiency, to help with cost-effectiveness. The adder is not being used in the current analysis since the adder is still in the discussion phase and has not been approved.

- Results for a reference and an aggressive scenario are shown for each sector (both residential and commercial). The aggressive scenario is based on increased adoptions, not by increasing unit savings.

- In some cases the adoption scenarios are driven by numbers of vendors/installers that can be recruited and trained. Increases in these mid-level market actors drive adoptions by end-use customers.

- The study presents potential for both electricity and natural gas, though electric savings are more prominent.

Results highlights

- Realtime feedback provides the largest share of potential electric savings for residential programs and the home energy rating system (HERS) has the largest share for natural gas programs.

- For commercial programs, competitions and benchmarking generate the most electric savings and building operator certification training provides the largest share of savings for natural gas.

- Overall, the current draft results from this study are higher in both the reference and aggressive cases than in the 2015 study.

Next steps

- Please provide comments by May 4, 2017. Email comments to:
  - Paula Gruendling paula.gruendling@cpuc.ca.gov
  - Amul Sathe amul.sathe@navigant.com
  - Chris Ann Dickerson cadickerson@cadconsulting.biz

- Additional documents and data for stakeholder review will be posted on www.demandanalysisworkinggroup.org . Comments will also be posted.

- On April 28, 2017 there will be a DAWG webinar to discuss draft potential from low income programs.