
Workshop Agenda
Implementation of AB 802
Day 1: Policy Considerations in Implementing Existing Conditions Baseline
January 26, 2015 9:30-4:30
CPUC Auditorium

Call in number: 866 633 5564 Passcode: 8705907
WebEx information: [Join WebEx meeting](#)
Meeting Number: 740 087 231
Meeting Password: !Energy1

Workshop Facilitator: Rick Diamond, Lawrence Berkeley National Laboratory
Panels will include time for public Q&A

- 9:30-9:40** **Introduction**
Dina Mackin and Rick Diamond
- 9:40-10:40** **Panel 1: Assessment of Stranded Potential in Existing Buildings**
What energy efficiency is currently occurring in the building stock, and what is stranded?
Panelists:
- Holly Farah, Cadmus, Codes & Standards Impact Evaluation Study
 - Jean Shelton, Itron, Commercial Saturation and Market Share Tracking Studies
 - Greg Wikler, Navigant, Potential and Goals Study
- 10:40-10:50** **Opening Remarks**
Commissioner Peterman
- 10:50-11** **Break**
- 11-12** **Panel 2: Implications of Existing Conditions Baselines**
Does existing conditions baseline count for everything required by Title 24? Title 20? Federal standards? What would be the implications and consequences of using existing conditions baseline without exception?
Panelists:
- Jan Berman, PG&E
 - Dina Mackin, CPUC
 - Mike Rufo, Itron, Non-residential Impact Evaluations
- 12-1** **Lunch**

1-2

Panel 3: Existing Conditions Baseline Applications and Exceptions

If exceptions are warranted, how do we define them? For instance, for upstream, midstream, and downstream interventions? Are there types of building ownership and uses that are reliably upgraded and brought to code?

Panelists:

- Dan Buch, ORA
- Ted Pope, 2050 Partners, CEEIC board member
- Martha Brook, CEC
- Bryan Warren, SoCal Gas

2-3

Panel 4: Baseline and Savings Values for Deemed Measures

What issues need to be addressed with deemed and calculated savings approaches in order to accurately apply existing conditions baseline? Does existing conditions baseline apply to measures being replaced on burnout? How do we determine whether a project is replace on burnout or early retirement?

Panelists:

- Mohit Singh-Chhabra , Northwest RTF
- Jeff Hirsch, DEER and ex ante review
- Janisse Martinez, SDG&E

3-3:15

Break

3:15-4:15

Panel 5: The Future Role of Metered vs. Deemed/Calculated Approaches

Currently, virtually all of portfolio savings are estimated, either through deemed or calculated methods, but both AB 802 and SB 350 focus on meter-based savings. To what extent should the future EE portfolio be metered/ pay for performance versus deemed/calculated savings? In other words, which types of EE activities are best reached through metered approach and which are best reached with deemed or calculated savings approaches?

Panelists:

- Brian Landry, SCE
- Tim Guiterman, Energy Savvy
- David Jump, Quest

4:15-4:30

Closing remarks

Todd Edmister

Commission-Led Workshop on Normalized Metered Energy Consumption

Operationalizing Directives in Assembly Bill 802 and Assembly Bill 793

Wednesday January 27, 2016

Call in number: 866 633 5564 Passcode: 8705907

[Join WebEx meeting](#)

Meeting number: 746 667 916

Meeting password: !Energy1

10am to 4:00pm – Courtyard

Workshop Objective:

Inform and discuss pathways to implementing AB802's 'normalized metered energy consumption as a measure of energy savings' mandate for the portfolio. Identify synergies with AB793's obligations for program administrators to create programs utilizing "energy management technology" in the residential and small commercial sectors.

Agenda:

Time	Description
10:00 to 10:05	Intros and safety
10:05 to 10:35	Presentation, Discussion and Q&A: AB802's 'normalized metered energy consumption as a measure of energy savings' mandate and intersecting requirements of AB793 Discussion and Q&A on current High Opportunity Programs and Projects Framework.
10:35 to 10:40	In Room Stretch Break
10:40 to 12:20	Panel 1: Current research and programs using normalized metered energy consumption methods
12:20 to 1:05	Lunch
1:05 to 2:45	Panel 2: Potential program designs that may have potential for wide scale use in the current energy efficiency portfolio
2:45 to 2:50	In Room Stretch Break
2:50 to 3:50	Panel 3: Expectations on review processes and transparency
3:50 to 4:00	Closing, next steps
4:00	Adjourn

Workshop Outcome:

- Stakeholders, parties and Commission staff have a common understanding of the legislative obligations in AB802 and AB793. (Presentation 1 with discussion and Q&A)
- Stakeholders, parties and Commission staff have greater understanding of:
 - o Basic estimation methods that may be appropriate, as preliminarily outlined in Attachment A of the High Opportunity Projects and Programs guidance (Discussion of presentation 1 and Q&A + Panel 1)
 - o Current approaches and activities that may inform expansion of metered approaches in the portfolio (Panel 1 & 2)
 - o Opportunities and challenges of incorporating metered approaches and measurement and verification into program design, including scope, scale and timing (panel 1,2 &3)
- Common understanding of roles and responsibilities for developing and proposing viable strategies as well as expectations for review and feedback (Panel 3)

Presentation by Energy Division Staff (Paula Gruendling): **Introduction and Overview of AB802's 'normalized metered energy consumption as a measure of energy savings'** mandate and summary of AB793. Discussion and Q&A on "Definitions and Requirements" table of the 12/2015 ruling for High Opportunity Projects and Programs.

Outcome: Participants are clear what the AB802 legislative mandate is, what opportunities it presents and clarify current guidance for the High Opportunity Projects and Programs for metered approaches. Hold an open public conversation of Attachment A as orientation to key issues in scaling metered approaches to the full portfolio.

Panel 1: State of current research and current applications of normalized metered energy consumption.

Outcome: Participants are aware of some key approaches to operationalize normalized metered energy consumption. The key methods include engineering approaches, econometric approaches and randomized control trials. The technical methods are described from an academic perspective and a practical application perspective. Experts in these methods and example programs will address the following questions...

- How has the analysis method been used in program development (customer, sector, etc.)?
- What is new now?
- Are there new opportunities that make this project level approach to M&V scalable for programs (i.e. multiple customers)?
- Key challenges and opportunities
 - How are time series challenges like how long to measure and collection of pre and post data handled?
 - How are persistence of the savings identified and accounted for multiyear effects?
 - How are savings accounting structures set up to capture annual and cumulative effects?
 - Routine and non-routine adjustments how are they handled? Do they matter? Why or why not? How is maintenance handled? (routine or non-routine?)
 - How does the method deal with detecting small interventions versus big interventions?
 - Which meter is appropriate to use? What are the tradeoffs of a whole building meter or sub-meter for orienting the information to customers, settlement with a vendor, and grid planning?
 - Are proprietary models or methods required and how does it relate to the need for transparency to ensure a level playing field for market actors as well as confidence in the results?

Engineering methods (loosely capturing IPMVP options B and C) are a key strategy for embedding metered approaches into the implementation of programs. This is not new, but broader deployment and data access may make it more cost effective, transparent and valuable to all points along the implementation "chain".

- a. Research: Overview of DOE's M&V 2.0 activities, specifically testing opportunities for IPMVP Option C (Jessica Granderson, LBNL)
- b. Program Example: PG&E Whole Building Demonstration Project (Leo Carillo, PG&E)

Econometric (loosely capturing regression/billing analysis and also would comply with IPMVP option C measurement at the whole building end point) methods are also frequently used on the "back end" of energy efficiency programs to estimate savings via billing regression or other methods. More recently the provision of more granular AMI data has opened up opportunities to demonstrate savings via data analytic methods.

- a. Research: DNV/GL – Ken Agnew on review and lessons learned on regression
- b. Program example: Matt Golden and Open Energy Efficiency Meter (PRISM-based) pilot

Experimental Design or Randomized Control Trials was adopted by the Commission for quantifying savings for behavior programs. This method may have broader application under the normalized metered framework.

- a. Research: Paula Pedro, Haas Business School (E2e) on best practices for randomized control trials
- b. Program example: Charlie Buck, Opower experimental design programs in CA and beyond

Persistence and Multi Year savings present specific opportunities and challenges for all of these methods. Using metered approaches for capturing effects of Behavior, Retro-commissioning and Operations are still in need of consideration.

- a. Research: Illume Advising, Amanda Dwelley – Considerations for capturing persistence for behavior programs in Minnesota

Panel 2: Potential program designs may be enabled by this legislation but do not yet represent a significant share of the portfolio. Potential vendors can help focus the conversation on potential the program design hang ups – incentive models, persistence, re-reporting, getting incremental savings, and cost effectiveness to inform regulatory guidance.

Outcome: Participants understand challenges of embedding normalized metered consumption and measurement and verification practice into program design and the new opportunities it opens. Experts in program design will explore...

- What customers or market segments will most benefit from your programs? (i.e. what does it supplant in the existing portfolio?)
- What strategies or past experience are you exploring for investing in upfront costs, providing incentives and balancing against savings that are quantified after the intervention?
- How are you ensuring persistence of savings? How do you value (or not) persistence in the context of your service offerings? How do regulations support or hinder persistence?
- What reporting protocols are you typically using in program implementation and tracking, how is tracking and reporting part of your business practice?
- For behavior, retro-commissioning and operations effects, how are you ensuring the activity is related to your intervention to demonstrate value to the customer and justify the cost?
- What cost effectiveness barriers or opportunities come from embedding savings quantification – normalized metered energy consumption – in your service offerings?
- What would be the impacts of tying incentive payment to performance? Perceived adverse impacts to participants?
- What consumer protections are in place in a pay-for-performance approach? What if the savings are not realized?

Panelists:

- a. FirstFuel - Jordana Cammarata
- b. ERS – Susan Haselhorst
- c. Home Energy Analytics - Lisa Schmidt
- d. Metered Energy Efficiency Transaction Structure (MEETS) - Bill Campbell

Panel 3: Expectations on Review processes and transparency need to be clear to scale these approaches to the full portfolio. The review process has to be reasonable in time and thoroughness. The ruling for High Opportunity Programs and Projects included a proposed process. That process may be appropriate for full scale implementation, or there may be necessary modifications.

Outcome: Explore review processes that may work to balance the interests of scalability, market urgency, transparency, and fiduciary/regulatory responsibility and the need for an EM&V protocol or capacity to ensure good proposals and review. Professionals experienced in review mechanisms will explore...

- What is the core purpose of review mechanism? (e.g. quality assurance, accuracy, manage risk of investment?)
- At what point of delivery/deployment is the review?
- What types of professionals do you have involved in doing the review?
- How are expectations of the review and “passing” the review conveyed?
- How do you deal with proprietary information from vendors? What are appropriate levels of disclosure and to whom for what purpose?
- How does consistent review and processes around review enable the market players to effectively deliver their products?
- What are the key elements in the review process that may affect scalability?
- How public does it need to be?

Panelists:

- a. Kim Rodrigues, Southern California Edison – Third Party Contracts Manager
- b. Don Gilligan, NAESCO
- c. Cynthia Mitchel, TURN
- d. Athena Besa, San Diego Gas and Electric