Staff Workshop on Normalized Metered Energy Consumption

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January 27, 2016

Presentation Overview

- Workshop objective and outcome
- Normalized meter energy consumption
- Our collective task
- Today's discussion
- Q&A on December 2015 Ruling on High Opportunity Programs and Projects - Attachment A
- Additional slides
  - Legislative mandates

Workshop Objectives and Outcomes

Objective:

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

Outcomes:

Common understanding of legislative obligation, methods outlines in Attachment A of High Opportunity Programs Projects guidance, approaches, opportunities and challenges, roles and responsibilities

NORMALIZED METERED ENERGY CONSUMPTION

Normalized Metered Energy Consumption?

- Already under consideration via M&V 2.0 staff research
- Existing methods, innovative technology, program design
- Legislation accelerated the process

AB802
- Normalized meter energy consumption as a measure of savings

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SB350
- Link incentives to measured savings

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AB793
- Potential application of method and approaches

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NMEC
- Directly or indirectly leverages methods and technologies

Opportunities

- Leverage academic methods for quantifying “savings”
- Use of ‘data analytics’ technology and methods
- Leverage Advanced Meter Infrastructure (AMI)
- Simplify Evaluation Measurement & Verification
- Allows innovative program design and implementation
- Post-intervention emphasis: greater assurance of incentive payment and grid integration
- Allow for flow of consistent information across:

Normalized Metered Energy Consumption and R.13-11-005

OUR COLLECTIVE TASK

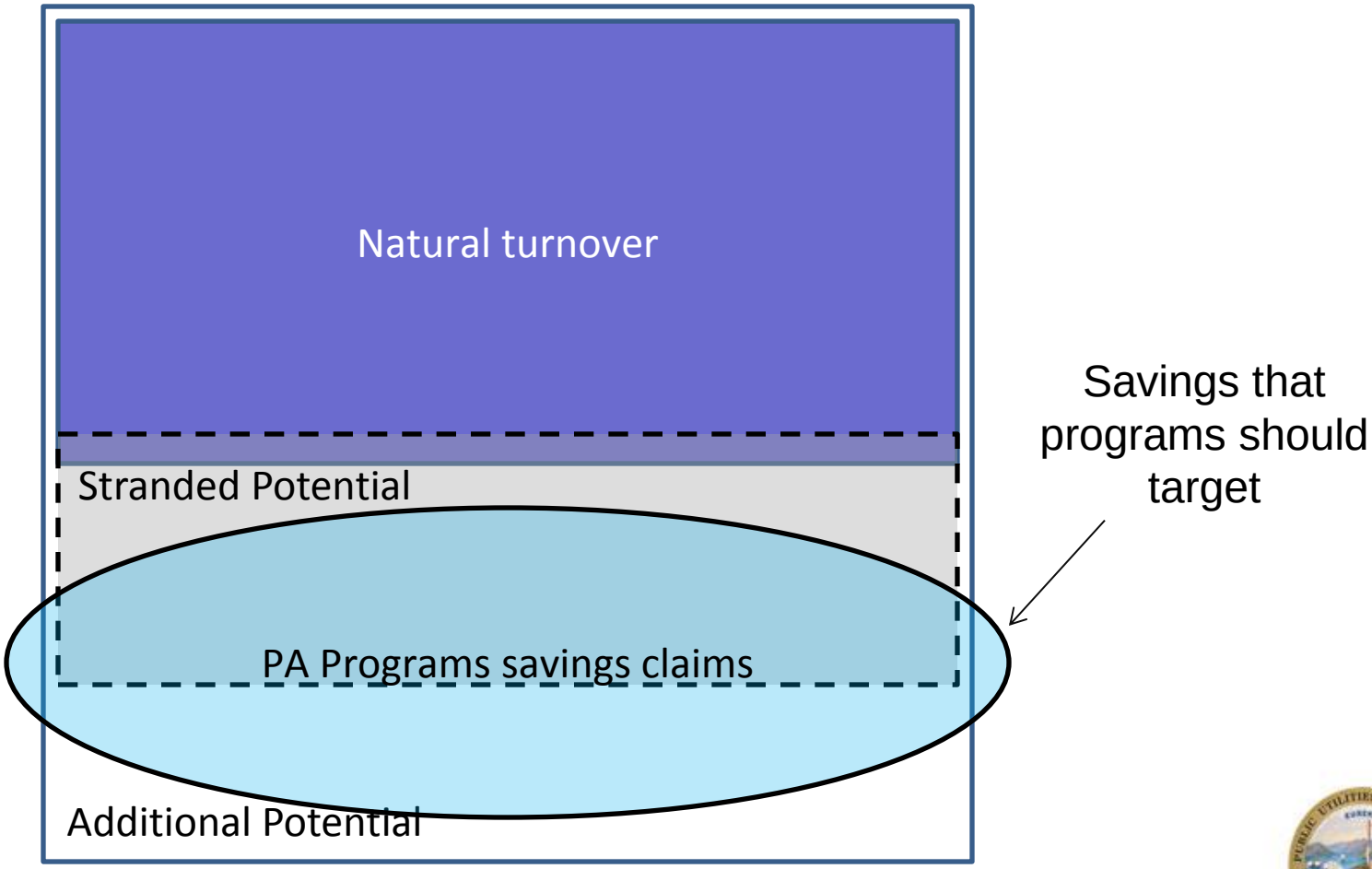
Proceeding Recap

Step	Status
HOPPs framework	Done
Formal comments on HOPPs framework	Done
AC ruling on final HOPPs framework	Done
Staff workshop EB Policy Considerations	Done
Staff workshop EB EM&V Protocols	Today
Informal comments due on workshops	2/10/2016
Staff White paper: EB Policy, Tech analysis, EM&V protocols	3/18/2016
Formal comments on white paper	4/8/2016
Proposed Decision	Q2
PA Business Plans	9/1/2016

Our Role

- EM&V: staff responsibility (D.05-01-055)
- Finalize guidance to inform September AB802 submissions together with Program Administrators Business Plans
- The final guidance needs to:
  - Ensure reliability of energy savings
  - Ensure savings are incremental to what is likely to already be occurring
  - Ensure investments are cost-effective
  - Balance efficiency of deployment with need for review

Incremental Savings



HOPPs: NMEC Guiding Principles

- Transparency and replicability of methods and protocols
  - No need to reinvent the wheel
  - Academic principles of engineering, economics and statistics are the common foundation
- Integration of M&V into program design to take advantage on interval data and available technology
  - Allow for simplification of EM&V process
  - Clarity of what needs to be submitted for review/approval
  - How to deal with ‘black box’/ proprietary models and methods
- Where do we need to ‘see’ savings
  - Prioritize the grid = emphasis on consumption vs efficiency
  - Customers need to see value in the product and service
- Multiyear savings and persistence
- Baseline determination and performance in normalized metered energy consumption
  - Appropriate timeframes for accounting of baselines and determination of performance
- Appropriate framework for program design and review of proposals

HOPPs: Party Comments

Category	Issues
M&V methods	Normalization rules and appropriate protocols, measurement timeframe
Conservation vs efficiency	The role of submetering, magnitude of savings, single measure vs bundle
Clarity of review process	Timing, documentation burden, proprietary algorithms
Incentive structure	Pay-for-performance, no incentive
Types of offerings	Single participants, groups of participants, based on small effects detectable in large populations
Industrial customers	Include process measures?

Challenges

- Embedding M&V in program design
- Generic enough guidance and process to resolve ‘special cases’
- Existing methods + new technology = unchartered territory
- Use of ratepayer funds = requirements and potential limitations
- May not be appropriate for ALL users and markets
- Proprietary solutions and need for transparency
- Accounting challenge: annual, lifecycle (different interventions and time-frame)
- Incentive structure and embedding financing

TODAY'S DISCUSSION

Structure of the Day

- Introduction
- Q&A on High Opportunity Programs Projects Ruling - Attachment A
- Panel 1 – State of current research
- Panel 2 – Innovative program designs
- Panel 3 – Review process and transparency

Next Steps

Providing informal comments:

Informal comments are due on 2/10/2016

Email informal comments to Paula Gruendling: paula.gruendling@cpuc.ca.gov

Workshop materials and informal comments will be posted on http://www.cpuc.ca.gov/general.aspx?id=4130

(please allow a couple of days to access materials on the site)

Thank you!
For Additional Information:
http://www.cpuc.ca.gov/egyefficiency/

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Attachment A Questions

Scope of Q&A: Normalized metered energy consumption

ADDITIONAL SLIDES

LEGISLATIVE MANDATES

Legislative Mandate: AB 802 (Williams)

By January 1, 2016, electrical corporations and gas corporations are authorized to implement the provisions of subdivision (b) for *high opportunity projects or programs (HOPPs)* – and the CPUC is to expedite authorization of HOPPs.

By September 1, 2016, authorize electrical corporations or gas corporations to provide financial incentives, rebates, technical assistance, and support to their customers to *increase the energy efficiency of existing buildings based on all estimated energy savings and energy usage reductions, taking into consideration the overall reduction in normalized metered energy consumption as a measure of energy savings*.

- Measures + behavior, retro-commissioning, and operational programs
- The Commission may adjust the energy efficiency goals or targets of an electrical corporation and gas corporation to reflect this change in savings estimation

Legislative Mandate: SB 350

Authorize pay for performance programs that link incentives directly to measured energy savings. As part of pay for performance programs authorized by the commission, customers should be reasonably compensated for developing and implementing an energy efficiency plan, **with a portion of their incentive reserved pending post project measurement results.**

Authorize programs to achieve deeper savings through operational, behavioral, and retrocommissioning activities.

Ensure that customers have **certainty in the values and methodology** used to determine energy efficiency incentives by basing the amount of any incentives provided by gas and electrical corporations on the values and methodology contained in the executed customer agreement. **Incentive payments shall be based on measured results.**

Legislative Mandate: AB 793 (Quirk)

IOUs are required to develop a program **by January 1, 2017** that provides **incentives** to residential, small or medium business customers **for energy management technologies**

> "Energy management technology"= a product, service, or software that allows a customer to better understand and manage electricity or gas use
>
> The IOUs will establish incentive amounts and third parties or local governments may apply for incentives on behalf of customers

By September 30, 2016, IOUs will develop a **plan to educate** customers **about the incentive program**

IOUs will report on customer savings from the incentive program annually

Energy management technologies will be included in the weatherization offerings for low-income customers

Interaction between AB793 and AB802

Customers with energy management technologies may be better able to participate in behavioral or operational programs

- Opportunity to combine the incentive program with a High EE Opportunity Project or Program (HOPP) that uses normalized metered energy consumption

September business plans

- Must include plans to educate customers about incentives for energy management technologies
- Should consider proposing a program that combines the new incentive program as part of a HOPP