

To-Code Pilot Workshop



**MILTON MARKS CONFERENCE CENTER
455 GOLDEN GATE AVE,
SAN FRANCISCO CA 94102
SAN DIEGO ROOM
APRIL 11, 2017
1:00 – 4:00 P.M.**

**PARTICIPATE BY PHONE
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Agenda

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| Time | Topic | Content | Presenter |
|-------------|--|--|--------------------------|
| 1:05 – 1:25 | Introduction and Background | <ul style="list-style-type: none"> • Agenda and purpose of workshop • Intent of the Pilots, Decision 14-10-046 • Timeline and Relevant Policy Developments • Original Advice Letter • Evaluation Budget | CPUC Staff |
| 1:30 – 2:00 | Southern California Gas Company Boiler To-Code Pilot | <ul style="list-style-type: none"> • Program Overview • Pre-tests, Lessons Learned • Findings, Status, Budget and Schedule • Expected Value of Pilot Outcomes • Next steps | HAAS (E2e) and SCG Staff |
| 2:00 – 2:15 | Pacific Gas and Electric Pilot | <ul style="list-style-type: none"> • Selection of program measures and program designs considered • Barriers & Challenges • Budget • Informational Needs/Gaps • Lessons Learned | PG&E Staff |
| 2:15 – 2:25 | San Diego Gas and Electric Company Pilot | <ul style="list-style-type: none"> • Program Designs Considered • Barriers & Challenges • Budget • Informational Needs/Gaps • Lessons Learned | SDG&E Staff |
| 2:25 – 2:35 | Southern California Edison Pilot | <ul style="list-style-type: none"> • Program Designs Considered • Barriers & Challenges • Budget • Informational Needs/Gaps • Lessons Learned | SCE Staff |
| 2:35 – 2:50 | Electric Pilots | <ul style="list-style-type: none"> • Conclusions, Q & A • Discuss Next Steps for Pilots | PG&E Staff |
| 2:50 – 3:00 | | – Break – | |
| 3:00 – 3:30 | Best Practices in RCT | <ul style="list-style-type: none"> • Refresher on Causal Evaluation and Randomized Control Trial Design • Necessary Pre-Conditions to Experimental Design Program Research <ul style="list-style-type: none"> ◦ Market Characteristics ◦ Program Design and Implementation • Opportunities for CA EE Portfolio | HAAS / E2e Staff |
| 3:30 – 3:45 | RCT | <ul style="list-style-type: none"> • Question and Answer | All Attendees |
| 3:45 – 4:00 | Workshop Discussion | <ul style="list-style-type: none"> • Closing Remarks | CPUC Staff |

To-Code Pilots, History and Context

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- **A prevalent meme (D. 14-10-046)**
 - “...in some parties’ comments is that codes and standards have become so stringent that (a) there are few above-code savings to be had, and (b) some customers are left “stranded,” unable or unwilling to come up to code, and ineligible for Commission-funded programs, which generally go only to above-code measures. The corollary is that we should start crediting program savings and basing incentives on existing conditions rather than code requirements and industry standard practice.”

To-Code Pilots, History and Context

- D. 14-10-046 acknowledges a lack of evidence or detailed understanding of the potential savings that were subsumed by codes and standards:
 - “As to customers unable or unwilling to meet codes or conform to standard industry practices, we have no doubt that such customers exist; anecdotes abound. But anecdotes are no basis for a change to baseline, and parties have presented no empirical evidence¹ regarding “stranded” customers. The volume of such deferred upgrades, the ability of program administrators to target and accelerate such upgrades cost-effectively, and whether/how to create appropriate incentives are open questions for Phase III.”
 - “Whether code compliance are onerous as “existing conditions” baseline proponents assert, and whether levels of code compliance are as low as they assert are empirical questions. So, too, is the question of how the costs of extending incentives to the “to code” portion of through code (and potentially only marginally through code) activities compare with the benefits.
 - Advocates for an “existing conditions” baseline, whether for a limited purpose or generically, have offered no evidence regarding levels of code compliance. They have also offered no evidence on either the costs or benefits of a shift to an existing conditions baseline for schools or more generally.”

To-Code Pilots, History and Context

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- In October of 2014, the residential comprehensive retrofit program – Energy Upgrade California – already used an existing conditions baseline. The Decision noted,
 - “.. although we have allowed use of an “existing conditions” baseline for home upgrades, those programs have been chronically undersubscribed. This experience, limited as it may be, suggests that changes to an existing baseline will not necessarily lead to increased uptake of energy efficiency measures.”

To-Code Pilot Authorizing Language Ordering Paragraph 8 of D.14-10-046

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8. We ...direct (IOUs) each to file ...a Program Implementation Plan for a pilot program to better understand the extent to which there is below-code equipment that is not getting replaced quickly enough through natural turnover or existing programs.

To-Code Pilot Authorizing Language Ordering Paragraph 8 of D.14-10-046

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- The pilots shall be designed to assess whether cost-effective ratepayer-funded programs can be developed to target this equipment when PAs receive savings credit and customer incentives are made available based on to-code, in addition to through-code, savings.

To-Code Pilot Authorizing Language Ordering Paragraph 8 of D.14-10-046

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- **The Pilots shall:**
 - **Be budgeted up to \$1M per IOU** using program funds authorized in this decision;
 - **Find similar cohorts within a service territory, then break them into control and treatment groups**, with the treatment group eligible for incentives "to and through" code, while the control group receives only incentives based on above-code savings.
 - **Extend through one full calendar year**, so that we see program impacts across seasons.
 - Include program implementation and third-party evaluation, with the **evaluation to address** at minimum program impact on both **program uptake** (Does the program increase replacement rates? Are customers who did not have a particular device at all participating, as well as customers who are replacing a device?) **and customer energy use** (aggregate use and load shape).

To-Code Pilots, History and Context

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- The electric IOUs filed a joint advice letter for a statewide pilot,
 - Leverage existing direct install programs.
 - Use Pilot funds for to-code incentives, given “constraining factors of the budget and sample size requirements.”
 - CPUC direction: focus on long-lived measures, LED Fixtures.
 - ✦ Bulb/ballast and T-8 based fixture replacements were already being delivered in DI program with payback of **less than one year and ER baseline.**
 - ✦ Pilot measures more expensive (~3x), had marginally higher savings (~10%) resulting in longer payback (3+ years)
- Lighting options already cost effective – Are incentives the barrier to lighting code compliance?

Meanwhile, Policy and Context Evolve...

