

Final Q3 2026 CAEECC Meeting #51

Summary September 23, 2026, 10:00am–3:15pm, Zoom

The California Energy Efficiency Coordinating Committee (CAEECC) met for its fifty-first meeting on September 23, 2026 online via Zoom. There were 154 attendees, including representatives from 20 CAEECC Member organizations (including Ex-Officio) and 48 Members of the Public. This meeting was facilitated by Katie Abrams (Abrams) and Birch Road Consulting; Michelle Vigen Ralston (Ralston) and Suhaila Sikand (Sikand) of Common Spark Consulting; and supported by Susan Rivo of Raab Associates.

Meeting attendees and presenters are available in [Appendix A](#). Common acronyms are available in [Appendix B](#). Supporting meeting materials are available at: <https://www.caeccc.org/9-23-2026-full-caeccc-mtg>.

Meeting Takeaways

- CAEECC will convene a Cost-Effectiveness Framework Working Group in Q1-Q2 2027.
- CAEECC hosted an informative fuel-switching policy panel and discussion that can be referred to in testimony for the BPA Proceeding. A [recording](#) of the panel is available.
- The CAEECC Semi-Annual Portfolio Performance Report Review session on 11/4/2026 will be designed from the input received today, previous input, and input from the Leadership Team.
- CAEECC will issue a Call for New Members in Early October with applications due at the end of October.
- A redlined version of the CAEECC Groundrules, showing clarifications on rules regarding voting abstention, can be found on the [meeting page](#) and [about pages](#).

Meeting Overview

The Meeting Summary is divided into the following sections:

1. **Energy Division Updates** - Slides posted separately on meeting page - [Appendix C](#)
2. **CAEECC Business Items** - Slides 18-27 - [Appendix D](#)
3. **Planning Substantive Topics for CAEECC Engagement** - Slides 29-40 - [Appendix E](#)
4. **Hot Topic Discussion: Fuel Switching Panel** - Slides 42-64 - [Appendix F](#)

At the end of the meeting, Abrams announced a timeline for new member applications (membership starting in 2027).

This meeting summary is intended to capture the overarching discussion of ideas, concerns, alternative options for proposals and consensus, and as such, substantive

agenda items are included. *For more detailed discussion, review the Appendices or reach out to the [Facilitation Team](#).*

Energy Division Updates

Pam Rittelmeyer and Amy Reardon (CPUC) presented Energy Division (ED) updates including recent ED Energy Efficiency Work, CEDARS updates, and Business Plan Application Timeline.

Summary of Discussion

- CAEECC Members made suggestions and clarifications to the definitions of “participants” in the CEDARS update. CPUC invited additional suggestions directly through the CEDARS website using the “Give Us Feedback” button that would then create a ticket for CPUC staff. Other definitions and methodologies are located through the following path: Claims > Specification > [View Claims Data Rules Tables](#)
- CPUC clarified the timeline for the Draft DEER Resolution: comments are due 10/7/26 and a voting date no earlier than 10/29/2026.

CAEECC Business Items

Facilitators provided an overview on a Groundrule clarification, opened discussion for the Q4 meeting topics, and provided updates on the CAEECC Website.

Summary of Discussion

- CAEECC Members discussed the mechanics of abstention. No CAEECC Members had concerns with the clarification.
- A public representative from Westlight Energy (formerly PCE) inquired about what would be expected from them as an elect-to-administer (ETA) CCA in the proposed presentations for Q4. CAEECC Leadership Team clarified that the presentations would cover what ETA CCAs have offered, currently offer, and will offer.

A redlined version of the CAEECC Groundrules, showing clarifications on rules regarding voting abstention, can be found on the [meeting page](#) and [about pages](#).

Planning Substantive Topics for CAEECC Engagement

Ralston presented a CAEECC proposal for engagement on cost-effectiveness, which was revised during conversation. Ultimately, CAEECC Members voted to launch the working group on cost-effectiveness (CE). Sikand led a discussion to plan and prepare for the Semi-Annual Portfolio Performance Report Review (PPRR) session on 11/4/2026.

Summary of Discussion

- CAEECC Members and the Facilitation Team discussed and clarified who would be targeted in recruitment for the Cost-Effectiveness Working Group and how the working group would begin with a primer on CE.
- SDG&E and SCE expressed their concerns with a CAEECC-hosted CE WG, stating the extensive resource cost, the likelihood of non-consensus recommendations to result from the WG, the need for engagement in the formal rulemaking and the various other proceedings where this issue is being addressed. Several CAEECC Members noted that CAEECC's purpose is to try to work through contentious issues prior to the formal rulemaking to build greater understanding between parties - even if resulting recommendations are non-consensus.
- CAEECC Members voted on whether CAEECC should host the WG and if their member organization would participate.
- CAEECC Members and the Public engaged through discussion and slido input fields to provide suggestions for the Semi-Annual PPRR.

CAEECC Members approved the cost-effectiveness Working Group. All Members approved it except the IOUs in dissent.

Hot Topic Discussion: Fuel Switching Panel & Discussion

[View the Recording >](#)

Ralston presented an overview of the topic then invited five panelists (Patricia Terry, Jeffery Liang, Sarah Sharpe, Ericka Flores, and Jenny Roecks) to discuss the following questions:

1. How could fuel switching support equity, grid, or other system level benefits?
2. How should fuel switching measures be valued? Do we have existing tools (like the ACC) that would work, or should the Commission consider alternatives?
3. If EE funding for fuel switching is authorized, should there be caps, limitations, or targets?
4. How should the cost-benefits of fuel switching be assessed? (same as energy efficiency and fuel sub measures?).
5. Since the baseline fuel in fuel switching is unregulated, how should the reduction in delivered fuel use be measured?

Summary of Discussion

Q&A

- CAEECC Members and participants discussed outdoor appliance fuel switching from propane to natural gas, for an appliance like a BBQ. Discussion pointed out the cost of propane (often a seasonal rate) versus natural gas, GHG reduction, segment policies, and the lack of avoided energy system costs from any fuel switching measures.

- CAEECC Members clarified that fuel substitution measures are funded by ratepayers of the new fuel being subbed in.
- CAEECC Members and participants discussed how fuel substitution and fuel switching would reconcile the installation of A/C (through a heat pump) for a customer that did not have this function prior to the switch. The TECH program gets to side-step this issue because its funding is not from EE. Some CAEECC Members noted that fuel switching measures should have to pass fuel substitution tests of not increasing source energy, and then only looking at heating systems instead of the new A/C capability. Others noted that one could think about what would the savings be if the customer installed a traditional A/C versus the installed heat pump. Another indicated the DEER and eTRM could consider this new load a new piece of equipment and develop another baseline for it. A panelist discussed how at the end of the day, the point is to provide AC to customers without it in high climate zones and that it would be helpful if EE money can help customers comply with the CARB appliance standards. A panelist clarified in chat that currently, D.19-08-009 p.14 requires the fuel substitution test for heat pumps to assume an existing standard efficiency air conditioner in cases where an air conditioner did not previously exist.
- CAEECC Members mentioned the Census as some of the best data to understand how many unregulated fuel users there are and analysis for electric customer crossover.
- Public members discussed the possibility of using a dollar-per-BTU proxy price that can be applied into the Avoided Cost Calculator (ACC). A panelist clarified [after the meeting] her perspective that there are no avoided cost calculator benefits for fuel switching.
- CAEECC Members and panelists clarified that “positive bill impacts” means bill savings for participants receiving fuel switching incentives, but there are no avoided cost benefits to ratepayers, and that the TECH presentation data set includes 74 heat pump water heaters (HPWH) and 337 HP HVAC installations for unregulated fuel users.
- Participants shared two reports that may be relevant: [draft TECH Clean California Best Practices Report](#) and [Characterizing household air pollutant concentrations associated with an electrification program in the rural San Joaquin Valley](#).

Discussion & Slido

- Through slido, 16 of 34 participants who voted think that the Commission should develop a separate valuation framework for fuel-switching measures. CAEECC Members and participants discussed their rationale for their votes, how to create a framework that's repeatable of future measures, how to make adjustments and adapt the current framework, applicability of the current ACC, and elevated that a few other states (primarily in the NE) have fuel switching policy.
- Through slido, 18 of 36 participants who voted believe all of the topics below should be the primary consideration when evaluating potential rate impacts. CAEECC Members and participants discussed their rationale for their votes, the

tension between long-term and short-term impacts, customer basic needs, who to prioritize for funding, and alignment to the primary policy goal the Commission sets.

- Average bill impacts across all customers
 - Impact on low-income and other vulnerable customers
 - Total size of the market and resulting revenue requirement
 - Whether long-term system benefits offset near-term rate increases
- Through slido, 30 participants ranked priority objectives for fuel switching policy (below). Participants raised that the source of fuel switching funding may or may not be most appropriate as EE-funding, or even ratepayer funding.
 1. Equity
 2. Other System Level Benefits
 3. Grid

Appendix A: Attendees

Presenters

Energy Division Updates: Pam Rittelmeyer & Amy Reardon (CPUC Energy Division)
CAEECC Business Items: Katie Abrams (Birch Road Consulting), Michelle Vigen Ralston & Suhaila Sikand (Common Spark Consulting)
Planning Substantive Topics for CAEECC Engagement: Michelle Vigen Ralston & Suhaila Sikand (Common Spark Consulting)
Hot Topic Discussion: Fuel Switching Panel: Michelle Vigen Ralston (Common Spark Consulting), Patricia Terry (NREN), Jeffery Liang (Energy Solutions), Sarah Sharpe (Central California Asthma Collaborative), Ericka Flores (NRDC), Jenny Roecks (PG&E)

CAEECC Members

Lead representatives identified in **bold**.

3C-REN	Alejandra Tellez , Erica Helson
BayREN	Karen Kristiansson
CodeCycle	Dan Suyeyasu
CCRREN	Trevor Keith
CSE	Rocky Fernandez
Frontier Energy	Nancy Barba , Margaret Marchant, Emily Carter, Aaron Jones
I-REN	Benjamin Druyon
LGSEC	Amaury Berteaud
MCE	Alice Havenar-Daughton , Jennifer Green
NRDC	Ericka Flores
NREN	Patricia Terry , Stephen Kullmann, Jennifer Brennan, Shea Donnelly, Lena Means, Ryan O'Neill
PG&E	Lisa Hunter , Maya Biery, Rob Bohn, Claire Braico, Jake Richardson, Jenny Roecks, Lester Sapitula, Antoinette Siguenza
SBUA	Ted Howard
SCE	Elizabeth Gomez , Zhong Li, Gerald Nesbitt, Mara Portlock
SDG&E	Stacie Risley , Athena Besa, Melanie Lopez (contractor), Lori Leiva Jungbluth (consultant), Jennifer Sanchez, Jessie Wang,
SDREN	Sheena Tran , Aisha Cervantes-Cissna

SMW Local 104	Chris Ruch
SoCalGas	Mori Farid , Anders Danryd, Guy Christian
SoCalREN	Lujuana Medina , Audrey Bragg, Tessa Charnofsky, Tory Coffin, Sulma Hernandez, Bryan Lopez, Flora Naylor, Shelley Osborn
The Energy Coalition	Laurel Rothschild (co-chair), Natalie Espinoza, Rebecca Hausheer, Molly Morgan

Ex Officio CAEECC Members

CA Energy Commission	Kristina Dulonglo , Nicholas Janusch
CPUC	Pamela Rittelmeyer, Ely Jacobsohn, Coby Rudolph , Peter Biermayer, Peter Franzese, William Graswich, Nora Gutierrez, Heather Iwamuro, Kapil Kulkarni, Jessie Levine, Lea Neufeld, Amy Reardon, Gillian Weaver, Ana Zapata

Members of the Public

Alison LaBonte Advisors	Alison LaBonte
Brandt Energy Strategies	Melissa Brandt
CA Strategic Growth Council	Melissa Moyce
CalMTA	Smita Gupta
CalPA	James Ahlstedt
Cascade Energy	Emily Lange, Even Smith
Center for Biological Diversity	Howard Crystal, Kate Whisler
Central CA Asthma Collaborative	Sarah Sharpe
ClearResult	Kim DiCello, Heidi McKenzie, Josh Miller, Nadine Stewart
County of Marin	Dana Armanino, Kellen Dammann
County of Napa	William Doran
DAC	Don Arambula
Ecology Action	Brenda Hopewell
Energy Solutions	Jeffery Liang, Ryan Wilson
ESP Labs	Mike Myser
Future Energy Enterprises	Akasha Fobbs, Sara Murillo
Guidehouse	Yamini Arab
High Sierra Foundation	Pam Close Bold, Ella Francis

ICF	Justin Kjeldsen, Savannah McLaughlin
Los Coyotes NSN	Jacob Norte
Mendota Group	Grey Staples
MCR Group	Melanie Gillette
Rising Sun Opportunities	Sneha Ayyagari
Sacramento MUD	Jennifer Venema
Sierra Business Council	Callie Kendall, Kari Sinoff
Stillwater Energy	Anne Joiner
TRC	Jacquleen Albanese, David Paton, Janice Tobias
TURN	Julia de Lamare, Ruthie Lazenby
Valley Clean Energy	Daniel Alvarez
Verdant Associates	William Marin
West Light Energy*	Matthew Rutherford, Sebastian Sarria
Willdan	Jill Bushman, Rosie Kang

*Formerly Peninsula Clean Energy (PCE)

Appendix B: Common Acronyms

Common acronyms used in this document include:

- California Energy Efficiency Coordinating Committee (CAEECC)
- California Public Utilities Commission (CPUC)
- Energy Division (ED)
- California Energy Commission (CEC)
- California Air Resources Board (CARB)
- Energy efficiency (EE)
- Working group (WG)
- Disadvantaged communities (DAC)
- Hard-to-reach (HTR) communities
- Justice equity diversity and inclusion (JEDI)
- CPUC's Environmental and Social Justice Action Plan (ESJ Action Plan)
- Portfolio Administrator (PA)
- Investor-owned utilities (IOU)
- Regional Energy Network (REN)
- Community-based organization (CBO)
- Market transformation (MT)
- Equity Metrics Working Group (EMWG)
- Market Support Metrics Working Group (MSMWG)
- Evaluation measurement and verification (EM&V)

- Ordering Paragraph (OP)
- Disadvantaged Communities Advisory Group (DACAG)
- Low-Income Oversight Board (LIOB)
- Evolving CAEECC Working Group (ECWG)
- Compensation Task Force (Compensation TF)
- Mid-Cycle Advice Letters (MCALs)
- Order Instituting Ruling (OIR)
- Non-Energy Impacts (NEIs)
- Non-Energy Benefits (NEBs)
- Integrated Demand Side Management (IDSM)

Appendix C: Energy Division Updates Detailed Discussion

- **Lujana Medina (SoCalREN):** For the participant definitions, could we add the word “unique” because some PAs count WE&T numbers by participants that attend, but not unique participants that attend.
 - **Amy Reardon (CPUC):** Please bring this up on the Dev Demo meeting so we can capture a precise definition.
- **Amaury Berteaud (LGSEC):** On the participant definition for public agencies, If a public agency participates in a program at multiple sites (for example a city has both their City Hall and a Community Center participate), would it be counted as one participant, or multiple participants?
 - **Amy Reardon (CPUC):** It's each site and we will clarify this. You can also raise these questions in the bottom of every CEDARS page, there's a “give us feedback button” and please add your input there.
- **Facilitator:** Can you clarify who can attend the Dev Demo meetings?
 - **Amy Reardon (CPUC):** The Dev Demos are internal meetings and are not public. However, ED would reach out to you if you submit feedback, acknowledge your ticket, and invite you to the Dev Demo meeting where the ticket would be discussed.
- **Laurel Rothschild (TEC):** I have the same thoughts as Amaury and am happy to offer an implementer perspective on these ideas.
 - **Amy Reardon (CPUC):** We will chat about this offline.
- **Laurel Rothschild (TEC):** Is there a dictionary on CEDARS with a methodology?
 - **Amy Reardon (CPUC):** Yes, go to Claims > Specification > [View Claims Data Rules Tables](#) and these have information.
- **Pamela Rittelmeyer (CPUC):** Update from the ED Updates: Draft DEER Resolution was sent out to the R25-04-010 Service list for comments. Comments must be submitted per comment letter instructions by October 7th. The voting date for the resolution is October 29th.

Appendix D: CAEECC Business Items

Clarification of Groundrules

- **Amaury Berteaud (LGSEC):** I will just note that abstention not impacting the denominator is odd. The way this works in local government is that you can abstain, but it does not count to the denominator.
 - **Facilitator:** If someone abstained and that abstention didn't affect the denominator, then the abstention essentially counts as a “no” vote, which is why this clarification is being made.
 - **Amaury Berteaud (LGSEC):** Speaking from a government standpoint, the way local governments tend to work is that you can recuse yourself but it doesn't impact needing a majority of the total number. I think the combination of the threshold based on the number of members present and then the abstention not impacting the denominator is odd.

- **Alice Havenar-Daughton (MCE):** I think it's the opposite, it does impact the denominator. If you abstain from a vote, it will change the denominator and the numerator.
- **Facilitator:** To clarify, if LGSEC chooses to abstain from a vote, we'd go from 22 members voting to 21 members voting.
- **Amaury Berteaud (LGSEC):** To clarify, not being counted in the denominator is odd.
- **Rocky Fernandez (CSE):** In a lot of other non-governmental organizations, this is pretty standard. This helps people not vote on topics they maybe don't understand or don't have a stance on. I like this.
- **Nancy Barba (Frontier Energy):** I am fine with the language, but do think it could potentially impact the outcome of the vote if there are insufficient members, unless we don't require a majority of people voting.
 - **Facilitator:** Yes, Groundrules require $\frac{2}{3}$ members present. If for example, all PAs elect to abstain, we can pause and ask if this is appropriate in this instance.
 - **Nancy Barba (Frontier Energy):** That's possible, I think what I've seen is that things don't pass if there's insufficient numbers.

Tee Up Q4 Agenda

- **Matthew Rutherford (Westlight):** Do we have a sense of what the elect-to-administer (ETA) presentations would cover?
 - **Pamela Rittelmeyer (CPUC):** Details we can discuss offline, this would entail short presentations about the different stages ETAs are at. PAs here don't know what you've been up to and we would like you to provide an overview of what your portfolio offers or plans to offer.
 - **Laurel Rothschild (TEC):** A lot of folks don't know about the ETA pathway and think of this as educating on the ETA vs apply-to-administer (ATA) CCAs. We would love info on what's been done, going to be done, etc.

Appendix E: Planning for Substantive Engagement

Cost-Effectiveness Working Group Proposal

- **Nancy Barba (Frontier Energy):** I think this would be a good opportunity to work through the topic that's been brought up in many spaces. Is there some sense that there would be the technical professionals readily available to collaborate with the WG? I want to make sure the WG is informed by the technical experts, such as those in CalTF. Have you already chatted with CalTF?
 - **Facilitator:** We would do a specific and targeted recruitment to make sure we have the right composition to be supportive. We also recognize this conversation is happening outside CAEECC, but we recognize the uniqueness of CAEECC through its stakeholders, collaboration, interest, and curiosity in these rich conversations.

- **Akasha Fobbs (CalTF):** This is Akasha Fobbs with CalTF and we definitely want to be part of this working group!
- **Laurel Rothschild (TEC):** This is an important and unique venue. This is not limited to CAEECC Members and it is an opportunity to bring in other voices like special guests. For example, SDREN proposed an initial workshop for level-setting and equal understanding of the topics. We are thinking CAEECC would intertwine that into the scope, which will be worked into after this proposal is voted upon. There doesn't seem to be a timeline from the CPUC of when this topic would be addressed, and this seems like a great opportunity for us to create a space for shared ideas and I don't think it will be a waste of time.
- **Ted Howard (SBUA):** I support this proposal. I've been in this for years and in MA was the cost of equity expert for the DPU. I'll note another test is the RIM (ratepayer impact measure), which is less referred to generally. I want to support the SCT, which allows for a lower discount rate and future net benefits. There's a tension between those just trying to get by day to day and we don't want to lose sight of them. I would also add we should add a primer at the beginning that starts with context on the TSB and its six components that are integrated into the ACC.
- **Sneha Ayyagari (Rising Sun Center for Opportunity):** It would be great to have perspectives from community groups and implementers.
- **Laurel Rothschild (TEC):** Can you remind CAEECC Members on expectations for participation?
 - **Facilitator:** First thing we will do is test for consensus (active no's). If we get any no's, we will go into an active vote with two thresholds to meet. First, $\frac{2}{3}$ of present members need to support the launch of the working group. If this passes, we need $\frac{1}{3}$ of CAEECC members to commit to participating. We need a quorum, but we already have that. It gets nuanced with the participation, you can say no on passing the WG, but yes on participation if it does end up passing or vice versa.
- **Dan Suyeyasu (Codecycle):** I support this proposal. Didn't we already vote to do this on 6/9?
 - **Facilitator:** One of the things that came up in the vote last time, there was no direction in the proceeding scope and that's why we are doing a revote.
- **Stacie Risley (SDG&E):** SDG&E's disagrees with CAEECC undertaking the working group.
- **Elizabeth Gomez (SCE):** SCE also does not support CAEECC undertaking the working group.
- **Chris Ruch (SMW Local 104):** It would be great to hear from folks who are against this proposal, would love to learn why and any concerns that we can address if this moves forward.
 - **Stacie Risley (SDG&E):** My concern is that there is a pretty big risk that we would spend a substantial amount of time and resources for WG Members and the Facilitation Team. I think there's a pretty big divide

among party positions and that this WG would not get consensus. Ultimately, this will be put on the record either through a CAEECC Motion of non-consensus or through the judge requesting this report through a ruling. And since it's most likely going to be in the rulemaking, we would also engage in that. I don't think it's worth it to use the resources for this. This is why we don't support this. We may be in a position to attend the WG, but would not be participating.

- **Lujana Medina (SoCalREN):** SoCalREN does not support "a Reform" working group but does support a facilitation of understanding how the TRC works, the calculations on how it is applied to projects to programs, etc, its limitations, its benefits. For the past 20+ years, we have used TRC and want to discuss more. One side wants to get rid of it altogether, and another that it should stay in place. I agree with what Stacie said that it would be an exercise of futility. However, I do think CAEECC holds great benefit of facilitation with stakeholders. The legislation says that EE must have cost-effectiveness programs, but it doesn't define this as TRC. Perhaps we need to level-set on the TRC (its inputs, limitations, benefits) and really learn more about it which could help build understanding among each other in the actual proceeding. This could enable us to develop proposals in our comments to make the TRC better or offer the ALJ solutions.
 - **Facilitator:** Would you support an amendment to remove "reform" and add specificity to the first scoped topic of a deeper dive into TRC?
 - **Lujana Medina (SoCalREN):** Yes
- **Elizabeth Gomez (SCE):** I share Stacie's concerns on resources. The CE framework that oversees EE Programs is part of the DER proceeding. This proceeding may soon consider which CE tests serve Distributed Energy Resource Program Cost-Effectiveness Issues, Data Access and Use, and Equipment Performance Standards proceeding (R.22-11-013) programs. Perhaps this is the forum for CAEECC Members to provide input. Absent of clear direction from the CPUC on the schedule and scope, I am worried about spending time and resources on this.
 - **Facilitator:** This effort is not at all intended to supplant or move the conversation procedurally at the Commission, but in the spirit of CAEECC's history, legacy, and purpose, it's meant to help advance the conversation. To further clarify, we identified that this seem to be pointed in the EE proceeding (through the BPA scoping memo) and we know it's relevance in the DER proceeding. Because it intersects with EE, it is in scope at CAEECC and CAEECC has taken on issues that also bridge between other proceedings.
- **Ericka Flores (NRDC):** Just curious (and with consideration that I'm very new here), but was this not the original purpose of CAEECC? to resolve outstanding policy challenges. We will need to see what the specific scope

is, but the value of figuring it out collaboratively would be very beneficial IMO. Maybe we would want to have a more clear pathway from a working group to the CPUC to ensure that it does in fact, feel like meaningful work to advance.

- **Alice Havenar-Daughton (MCE):** Ericka made some good points, this is exactly the kind of issue that has a very technical and policy component and would benefit from facilitation to bring together different perspectives and knowledge. And Stacie is also right that this will be taken up in a different procedural venue. All that to say, I do think there's some value here for CAEECC to facilitate the conversation that will make it more efficient when it gets to the procedural venue.
- **Lisa Hunter (PG&E):** PG&E disagrees with CAEECC undertaking the Cost-Effective working group.

Cost-Effectiveness Working Group Voting Results:

- CAEECC Members approved the cost-effectiveness Working Group. All Members approved it except the IOUs in dissent.

Semi-Annual Portfolio Performance Report Review

- **Slido: Suggestions to Add**
 - Focus on challenges and how to overcome them is a great suggestion. I'd add "discussion within the meeting or at a later date" be added
 - +1
 - I'd also like to hear more about the two participation suggestions and what that might look like
 - +1
 - I think the focus on themes and anomalies for high performing and low performing programs helps
 - +1
 - I would like to hear the rationale for having CPUC do report outs
 - +2
 - I like the idea of presenting on 1-2 programs per PA. I would like to suggest hearing about a PA's top performing program as well as the least performing program and what has been attributing to the success or the low-performance.
 - +3
 - option to have caeecc members nominate in advance which 1-2 program to highlight (those known to these other CAEECC members to have had challenges, been reformed to address those challenges for example), over the PA just being able to cherry pick which they highlight.
 - +1
 - Support focusing on changes
 - +3

- I'll have to give this more thinking.
- None for now- I'm still processing all the provided information.
 - +6
- **Laurel Rothschild (TEC):** A reason why CPUC might be good to do report outs is that for the quantitative data, it would be very factual. What would be good to hear from PAs is the more unique things.
 - **Facilitator:** Just to echo back, what I heard is to have the CPUC doing the reporting of the quantitative data, and for the PAs to present on the lessons learned and challenges.
- **Slido: What is the most valuable content and format for your organization to glean from the Semi-Annual PPRR?**
 - Seems like this is most valuable for non-PAs. For PAs, it can be helpful just to hear what others are doing and encountering.
 - Whether the PAs have challenges and whether they know about their challenges
 - What's working well (or not) that can be translated to non-CPUC energy efficiency programs
 - Follow up on integration with workforce and equity goals
 - Current Market dynamics the PAs are experiencing
- **Slido: What content/information is most important to dig into?**
 - Focus on qualitative data, + quantitative data that is not already captured in CEDARS Data visualizations, rather than having PAs prepare presentations with quantitative data that can be viewed publicly in CEDARS
 - Focus on the one program that is facing the most challenges + how they're being addressed (and/or advice from other PAs during discussion as to how they've addressed this challenge if they've also experienced it) and focus on one program with the most success + shareout of why/how its successful for other PAs to glean learnings they could incorporate.
 - Problems the PAs are facing with program solicitation, design, delivery, customer service, quality assurance, and evaluation.
 - Sharing success stories
- **Slido: What specific PAs or types of PAs are you most interested in hearing from?**
 - All PAs
 - IOUs since they spend the most money.
- **Slido: What format do you prefer (e.g. presentation report out, just discussion)?**
 - Not clear on the question. There really can't be discussion without a report-out, I don't think.
 - The current format works well with the presentation and discussion
 - presentation and discussion
 - Presentation

Appendix F: Hot Topic Discussion: Fuel Switching Panel

Panel Q&A

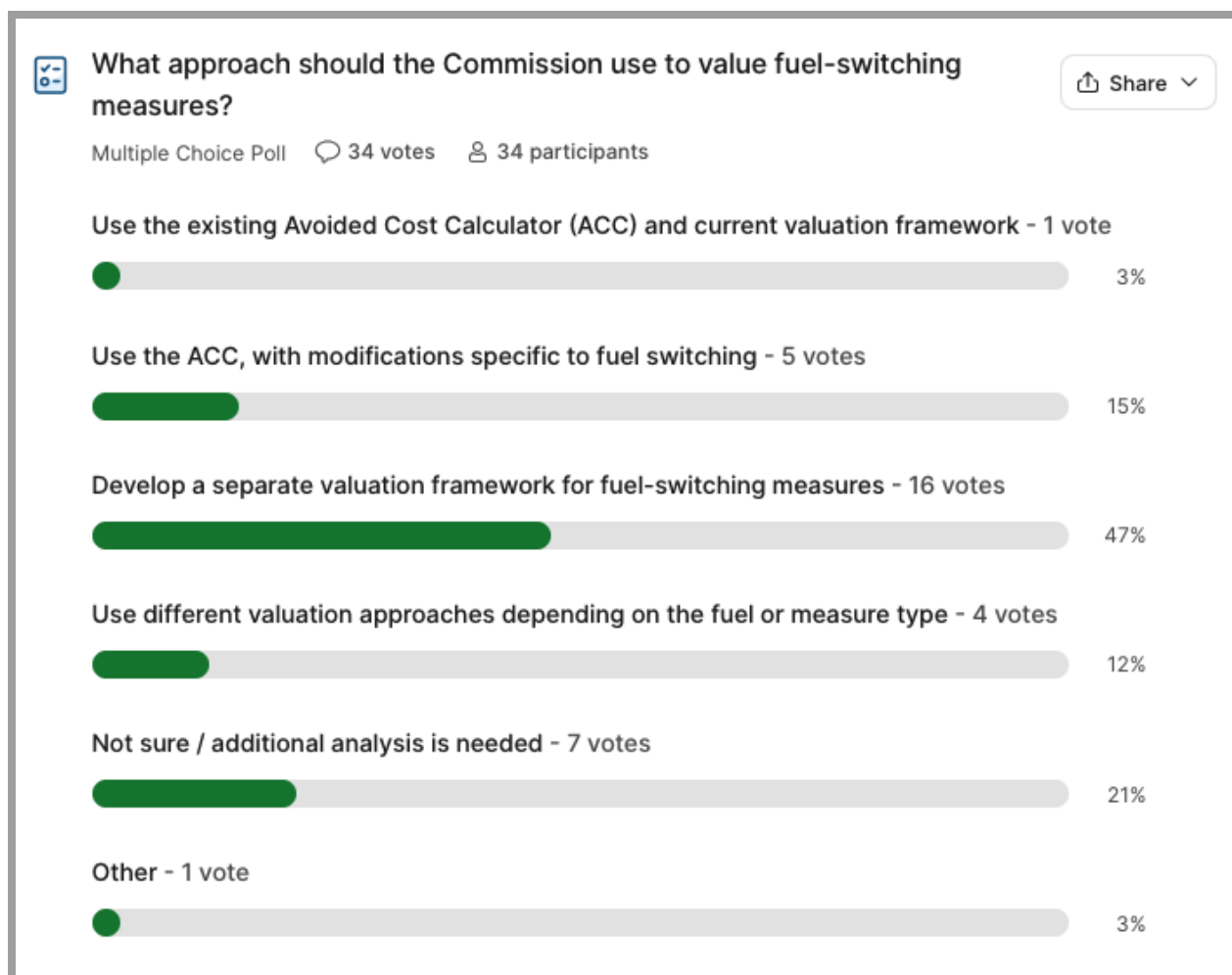
- **Aisha Cervantes-Cissna (SDREN):** Is there data available that would allow us to see how many unregulated fuel users are also electric customers?
 - **Anonymous:** So far Census data is the best data that NREN has access to. We are also looking at ResStock. NREN is working on some data analysis and mapping our customers fuel use. We are also collecting data on the customers we currently interact with groundtruth other data sources.
- **Josh Miller (CLEAResult):** BTU-normalizing shows energy displaced, not its value. We still need a dollar-per-BTU proxy price for propane/fuel oil to plug into the ACC; that piece doesn't exist yet. Where would that price series come from, and how often would it update, given these are unregulated, volatile commodity prices?
 - **Anonymous:** I also think we should consider the avoided cost of expanding the natural gas infrastructure for customers that choose to electrify from unregulated fuels. This is less an issue for NREN region, but more for what Sarah is talking about in the SJV.
- **Laurel Rothschild (TEC):** Does “Positive bill impacts” means bill savings?
 - **Jeffery Liang (Energy Solutions):** Yes, with all caveats around consumer behavior.
 - **Ryan Wilson (Energy Solutions):** Note that maybe the best source of those TECH data learnings can be found in the [draft TECH Clean California Best Practices Report](#) that was filed in the Building Decarb proceeding in March. The final version should hopefully be published soon.
- **Sarah Sharpe (CCAC):** [Characterizing household air pollutant concentrations associated with an electrification program in the rural San Joaquin Valley - IOPscience](#) - the study I mentioned. We are also currently doing a similar study to measure asthma impacts related to switching.
- **Roy Christian (SoCalGas):** SoCalGas has a proposal supporting existing gas customers by replacing their unregulated outdoor appliances with gas. This doesn't add new customers to gas infrastructure. These outdoor appliances don't always have electric alternatives. Why would we limit their ability to choose a regulated fuel?
 - **Jenny Roecks (PG&E):** We're focused on furthering electrification goals. While in that particular example, there may not be a new gas service line that's needed to serve those new gas end uses in a home. I think we have questions around costs to extend a gas line to that end use and whether that would be a cost-effective intervention from a TRC perspective and offered through the RA segment. If it's not in the RA segment, would want to learn more about its alignment to Equity or Market Support (MS) segment policy objectives. Our focus as a dual-fuel utility is prioritizing ratepayer funding for electrification.

- **Roy Christian (SoCalGas):** I have a gas BBQ stub on my patio. We made a decision to convert the propane to the existing gas stub, this is not unique and something I would see often. Removing this as an option doesn't make sense to me when we want to help our customers. This would be a new appliance offering that would add load.
- **Sarah Sharpe (CCAC):** What is the EE tieback to this scenario; is using natural gas more efficient than propane?
- **Roy Christian (SoCalGas):** Natural gas is cheaper than propane. The point here is resiliency, when you run out of your propane tank mid-cooking. There's an increased electric load there when you're taking out an appliance that wasn't part of a regulated fuel, and also has an increase in cost savings. I believe there's a GHG reduction from burning natural gas vs propane.
- **Athena Besa (SDG&E):** Appreciate Roy's points. In East County, a lot of folks have giant propane tanks with delivered propane. There's a lot of differences of opinion in terms of the cost of buying propane versus natural gas. In terms of EE, there is no savings because we are taking a customer that wasn't in the system and adding them into the load through fuel switching. In terms of GHG savings, there is no doubt, it's a fossil fuel. This belongs in the building decarbonization proceeding, where their main goal is GHG reductions. I would suggest the Commission look at this in a more formal process where we have the correct avoided costs, GHG attributions, and other benefits could add to CE analysis and be considered here.
- **Sarah Sharpe (CCAC):** San Joaquin Valley participants spent nearly 3x on propane than customers with heating spent on natural gas annually. The fuel rates for propane refilling are seasonal, so when customers run out it really impacts low-income families because they may not know when it will run out and at what seasonal rate. I do not have data on how this compares to electricity rates and homes.
- **Amaury Berteaud (LGSEC):** On the BBQ example, I think it does raise an odd question of what we consider to be tied to the built environment as an appliance. For example, we wouldn't consider fuel switching of gardening equipment to be eligible.
- **Laurel Rothschild (TEC):** For fuel substitution related to electrification, are these measures/interventions funded by electric ratepayers, gas ratepayers, or both?
 - **Ericka Flores (NRDC):** The Commission's current policy is that the measure is funded by ratepayers of the new fuel. For gas-to-electric electrification, the associated EE costs are allocated to electric ratepayers, not gas ratepayers. I think that's an important distinction from fuel switching, where the baseline fuel is unregulated, and the Commission is now considering what the appropriate funding cost-effectiveness framework should be.

- **Amaury Berteaud (LGSEC):** The current fuel substitution test does not allow for source energy consumption to increase. I am wondering how this is reconciled with the installation of space heating heat pumps for customers that do not have AC? And how this would be reconciled for fuel switching?
 - **Patricia Terry (NREN):** I am curious if a source energy consumption value could be created for fuels like propane, diesel, kerosine, but would need to include transportation costs, processing costs, leakage, etc. My suggestion for calculating energy savings (BTU) using existing measure packages could be used to show that energy consumption is being reduced but is very simplified. Or in the case of using new construction, just looking at the avoided electricity usage from what the customer would have installed (i.e. baseboard) vs what the program influences them to install (high efficiency heat pump).
 - **Jenny Roecks (PG&E):** Hi Amaury - clarifying answer for you from PG&E's engineering team. This scenario is addressed in D.19-08-009 on p.15. Essentially, a code-compliant AC baseline should be assumed for a fuel substitution measure that replaces an existing heating system where there was no pre-existing AC system.
 - **Jenny Roecks (PG&E):** Fuel switching measures should also have to pass the fuel substitution tests of not increasing source energy. I think we would be looking at a heat pump replacing a propane or other non-regulated fuel heating system. This could increase electric load on the cooling side, but could be true of a heat pump that's replacing a natural gas furnace where there's also no air conditioning present. My understanding is that we are looking at the heating system specifically.
 - **Jeffery Liang (Energy Solutions):** TECH sort of sidesteps this issue—we don't have any restrictions because our funding is not from EE funds.
 - **Sarah Sharpe (CCAC):** As a person working with real families, it's hard to have these artificial boundaries of where money comes from. We are trying to prioritize getting AC into homes that don't have it in high heat zone areas with whatever the source of funding. I know this is not the way the CPUC works, but over 30% of the 9,000 patients we serve do not have working HVAC or central AC. This is a health and quality of life issue and we are working on standards for maximum indoor temperature. We are also working with CARB on appliance standards and the phaseout of propane appliances so if there's EE money that can help customers comply with that, that would be helpful.
 - **Patricia Terry (NREN):** I may have misunderstood the question before in my slide response. When you look at the removed fuel (e.g. natural gas or propane), there may still be source energy savings because the AC in a milder climate isn't using a massive amount of A/C use. Perhaps when looking at a home with no existing A/C in a hotter climate and converting under fuel switching, we could look at the energy savings from a heat pump versus having that home put in a traditional window AC unit.

- **Athena Besa (SDG&E):** There's a lot of issues that need to be talked about when it comes to that, for example, the bill impacts the customer who is switching from gas to electric. If you were just a normal customer buying an HVAC system for the first time, there are processes to determine what the baseline is. Within the EE program, a customer would have to buy above code. For a replacement of an existing AC, the savings would be from the code to the new efficient equipment that a customer is adding. But now we're doing it in combination through fuel switching (which adds a new load). It would be good if the DEER and eTRM look at this process and consider this new load as a new piece of equipment and develop a baseline based on what it would be. When you're substituting, the test also requires that you are pushing the efficiency by comparing it to the standard so that there are savings when you move it over. It's a little different when you're talking about the low income programs, because they don't necessarily promote high energy efficiency, but they're also facing the same question—when you don't have air conditioning, and you're now installing a heat pump space conditioner that has both functionality, why would you not use the air conditioning function? At the end of the day the customer doesn't need to be in the weeds, but that's kind of like what we're going to have to do. We need to think about the right credits and calculations and how this leads to bill savings impact, which the TRC will not tell us.
 - **Sarah Sharpe (CCAC):** Agree, this is the group who can figure out how to get real results for households.
- **Aisha Cervantes-Cissna (SDREN):** Clarifying question for Jeffery: At the top of your presentation I think you mentioned TECH's data set includes 74 HPWH and 337 HP HVAC installations for unregulated fuel users. Is that correct and included in the report that Ryan linked in the chat?
 - **Anonymous:** That is correct. It is not included in the report that Ryan linked, it is something our data team pulled for me. If you are interested, I can make the introduction to the data team for more information. Feel free to email me at jliang@energy-solution.com

Slido Poll 1: What approach should the Commission use to value fuel-switching



measures?

Other: I would recommend that all these issues be referred to the ACC proceeding.

Discussion:

- **Laurel Rothschild (TEC):** Where I landed here was about segmentation and not necessarily resource acquisition. Another component is being thoughtful about grid benefits and perhaps the valuation framework could be considered for other measures in the future.
- **Aisha Cervantes-Cissna (SDREN):** How are other states treaded in this territory before or deliberated in this policy?
 - **Patricia Terry (NREN):** I heard about this happening in NY and have a contact to learn more from them.
 - **Ely Jacobsohn (CPUC):** Many of the states in the NE (MA, NY, NJ, VT, etc) have figured out how to offer fuel switching.

- **Laurel Rothschild (TEC):** Really good to know and would be helpful to know what approaches they took.
- **Patricia Terry (NREN):** I have been meaning to follow up on this, I'll take an action item to dig into it and make some contacts and bring back what I find.
 - **Facilitator:** Oregon is thinking about this now.
- **Ted Howard (SBUA):** I'm on the fence about being flexible on it. I think there's reasons to make adjustments to the usual ACC approach— about the value of the program (only when the energy avoided can be dispatched), how quickly a program can respond when it's called, whether the program can alleviate transmission and distribution constraints and other factors. It's pretty complex, and we should leave it open for possible adjustments.
- **Ericka Flores (NRDC):** So previously I was torn between developing a separate valuation framework for fuel switching, but I ended up selecting "not sure/ additional analysis is needed". The reason for that is because I think that the ACC can help quantify the incremental system costs associated with adding electric load. I think it remains, super helpful, but by itself, I don't think that it fully answers the ratepayer value question for fuel switching. I think that's the caveat there for me. I think we also need to understand the value of the additional electric sales, how those revenues compare with incremental system and program costs, and the resulting impact on rates. This leads me to the more analysis needed before deciding whether modifying the ACC or developing a separate valuation framework is the right approach.
- **Josh Miller (CLEAResult):** Maine funds oil/propane efficiency separately from the ACC: a 1% fee on wholesale heating oil/propane sales, not an electric ratepayer charge. For valuation, they use the regional AESC study (Synapse) to forecast oil/propane prices, feeding the same TRC test used for electric/gas.
- **Mathew Rutherford (Westlight):** Disconnected from some time from VT, but when utilities were directed to support fuel switching in 2015 or so, utility targets were based on annual electric sales. Utilities would earn a MWh equivalent per HP, EVSE, wood pellet stove, etc. The Technical Resource Manual is a place to start:
<https://publicservice.vermont.gov/document/2023-tier-iii-trm-characterizations>

Slido Poll 2: What should be the primary consideration when evaluating potential rate impacts from a growing fuel-switching market?



What should be the primary consideration when evaluating potential rate impacts from a growing fuel-switching market?

Share

Multiple Choice Poll 36 votes 36 participants

The average bill impact across all customers - 4 votes



The impact on low-income and other vulnerable customers - 6 votes



The total size of the market and resulting revenue requirement - 1 vote



Whether long-term system benefits offset near-term rate increases - 7 votes



All of the above should be considered together - 18 votes



- **Ted Howard (SBUA):** I didn't vote for it but am curious about it. There is that tension between long-term benefits with near term rate increases the affordability issues. With long-term benefits, you think about how to quantify all benefits and costs, whereas in the near-term, you think about the day-to-day costs. There's a real tension between focusing on rates today especially if you're a politician trying to get elected or thinking longer term. We need to think about the other generations and intergenerational equity.
- **Jenny Roecks (PG&E):** I mentioned earlier, that there are no system benefits in terms of benefits avoided costly electric and gas systems. But there could be long-term rate benefits in the sense that the increased sales from fuel switching over the long term could potentially put downward pressure on rates. This of course depends on whether the increased sales offset any increased costs to the system from the added load and program costs. Considering there may be long-term downward pressure on rate increases, how does that compare to near-term rate increases that could result from increased program costs to deliver fuel switching to serve added load.
- **Athena Besa (SDG&E):** For low-income and vulnerable customers, they attempt to live day-to-day and we need to understand what they are spending on for their priorities. Different market sectors have different perspectives on what they should be spending money on. If they are in ESA, they get their appliances for free, but the heat pump might increase their electric bill. We are trying to figure out the rate impacts of this. For example, the regular customer gets their bill

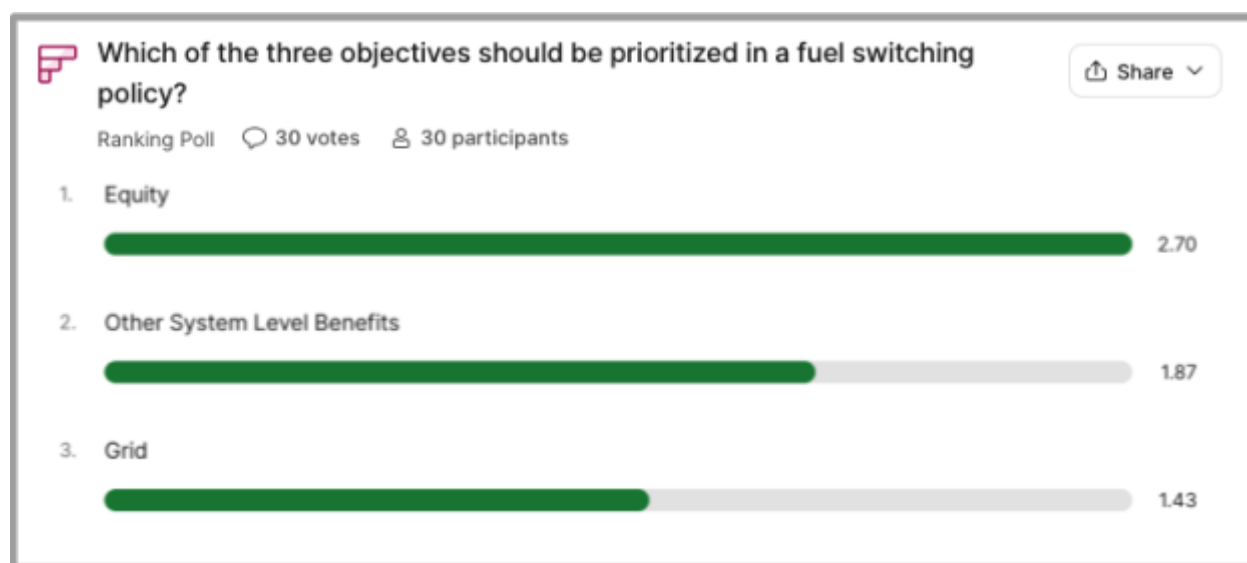
insert with a notice that they might get an increased bill of \$5, they then write to us and say they might want to use that for a different basic need.

- **Ted Howard (SBUA):** The economics principle of diminishing marginal utility helps think about DAC and HTR customers. This principle indicates that the more money you have, the less value you place on obtaining an additional dollar, whether it be of anything or energy efficiency. If somebody were asking me where you should put the focus, it would be to those who favor it most highly.

Discussion Question: How should rate increases factor into valuation, cost-benefit analysis, or EE budget limitations, if at all?

- **Jenny Roecks (PG&E):** We should think primarily about the primary policy goal of fuel switching and the appropriate valuation for that policy goal. Unless the Commission decides otherwise, the primary policy goal isn't to manage rate impacts. It may come secondary to other policy objectives that fuel switching can serve. Rate considerations are not unique to fuel switching. We often think about the experience of the customer that's participating in our programs, and the bill reductions that they will see. Anytime, we're lowering one person's bill, assuming utility costs stay the same, other customers need to kind of make up for that lost cost, which might lead to some cost shifts. For fuel switching, we are adding load, and there's the potential for long-term rate benefits. Our position is that there should kind of be a secondary priority to whatever the primary purpose is originally. If rate impacts are not the primary policy objective, but a secondary one, perhaps there could be some sort of budget limit set for fuel switching to serve equity customers, and then we can take a look and see what the rate impacts are and ensure that they're meeting expectations for whatever the Commission has determined.

Slido Poll 3: Which of the three objectives should be prioritized in a fuel switching policy?



Discussion Question: What should be required for efficiency funding to be used for fuel switching? Where there are tradeoffs among these objectives, which should take priority—and what should be a minimum threshold or guardrail?

- **Athena Besa (SDG&E):** We are in EE and we tend to think about EE funding. Earlier, Sarah mentioned that the people in need don't think about where the money is coming from. Maybe it isn't appropriate to do fuel switching in EE. It's a broader topic and my recommendations would be to talk about CE and the bigger picture in the ACC proceeding. In other proceedings there is encouragement to use other sources of funding to do all the things we need to get done. In the grand scheme, we should attribute this to the right place, (e.g. taxpayers versus ratepayers).
 - **Jenny Roecks (PG&E):** +1