



Meeting Notes

California Technical Forum (Cal TF) Meeting

July 27, 2022

Agenda Item	Discussion Leader(s)
New Member Introduction	Annette Beitel
Existing eTRM Updates	Tomas Torres-Garcia
New eTRM Tools	Chau Nguyen
Custom	Arlis Reynolds
New Measure Process	Ayad Al-Shaikh

Meeting Materials

- Meeting Decks
 - Existing Measure Updates
 - New eTRM Tools for Data Visualization
 - Custom Overview and Subcommittee
 - New Measure Process Updates

Meeting Attendees

	<i>In-Person</i>	<i>Via Telephone</i>
<i>Cal TF Staff</i>		Ayad Al-Shaikh Annette Beitel Arlis Reynolds Chau Nguyen Tomas Torres-Garcia
<i>Cal TF Members</i>		Adan Rosillo Alfredo Gutierrez Anders Danryd Andres Fergadiotti Arash Kialashaki Armen Saiyan Dave Hanna David Chan Denis Livchak Eduardo Reynoso Eric Noller Gary Fernstrom George Beeler Greg Barker Jay Bhakta Kristin Heinemeier



	<i>In-Person</i>	<i>Via Telephone</i>
		Lake Casco Steven Long Martin Vu Mike Casey Richard Ma Roger Baker Sepideh Shahinfard Spencer Lipp Vrushali Mendon Yeshpal Gupta
<i>Non-Cal TF Members</i>		CPUC Peter Biermayer / CPUC Amy Reardon / CPUC CPUC Consultant Rachel V Murray / DNV IOU/POU Andres Marquez / SCG Babak Yazdanpanah / LADWP Charles Ehrlich / PG&E Henry Liu / PG&E Jared Brown / LADWP Martha Garcia / SCG Owen Howlett / SMUD Sean Lim / LADWP Terry Palacios / SMUD Implementer / 3P / Consultant Angela Crowley / RMS Anna Kelly / Power Takeoff Bob Ramirez / Opinion Dynamics Briana Rogers / AESC Mohammad Dabbagh / NORESKO Glen LaPalme / TRC James Hanna / Energy Solutions Jay Luboff / Consultant Jeff Sage-Lauck / SBW Lauren Seymour / TEC Nicholas Fette / Solaris Nick DesChamps / DesChamps Technologies Paul Kuck / Energy Solutions



Meeting Notes

I. New Member Introductions

Presenter: Annette Beitel

Materials:

II. Existing eTRM Updates

Presenter: Tomas Torres-Garcia

Materials: Existing Measure Updates

George Beeler (via chat): For "Refrigerant Avoided Cost Calculator" does it include just the \$ cost or GHG costs?

- Ayad Al-Shaikh (via chat): There is a translation from refrigerant to \$ now. Those inputs are both feed into the eTRM and CET to influence TRC.
- Anders Danryd (via chat): Refrigerant ACC calculates the cost in CO2 equivalent and uses the avoided costs to calculate dollar cost by year. Costs are reported in \$.
- Andres Fergadiotti (via chat): The RACC estimates the avoided cost in terms of \$ due to refrigerant leakage. It includes GHG adders. Calculation methodology is described in CPUC's 2021 ACC documentation and is based on the EUL of the equipment, and based on annual and end-of-life leakage.

Steven Long (via chat): Will this table be posted.

- Tomas Torres-Garcia: The table is included in the meeting materials, more tables are in the appendix, that are posted on the Cal TF website.
- Ayad Al-Shaikh (via chat): We will post the PG&E spreadsheet on the CalTF website (with caveats on where data came from); this is a good tool to tell you where to look deeper.

Andres Fergadiotti (via chat): CEC just finalized a T24 Weather update for 2025. I wonder if CPUC will consider the adoption of that dataset for future updates. Methodology may deviate from previous approach since it was evaluated by a different consultant. I will try to research this more.

Martin Vu (via chat): The CEC just released building type data for 189 building types in 13 building categories using a platform called DODGE Data. Is CalTF staff or IOU staff working with the CEC for eTRM building type permutation update considerations?



- Andres Fergadiotti (via chat): Martin, I think you are referring to the stock assessment analysis that NORESCO just supported the CEC on.
- Armen Saiyan (via chat): I believe Dodge data is used for building stock projections. We have used portions of it for load forecasting purposes.
- Martin Vu (via chat): Yes, Andres. Is there a way to tie that work with what we are doing here?
- Andres Fergadiotti (via chat):
 - <https://efiling.energy.ca.gov/GetDocument.aspx?tn=244139&DocumentContentId=78046>
 - Link above is from the "Presentation - 2025 Energy Accounting Workshop Presentations and Retail Rate Adder Analysis"

Paul Kuck (via chat): When will the data be available for all these new updates? Also, are they all effective Jan 1, 2023?

- Ayad Al-Shaikh (via chat): As a base user, you are only able to view approved and published measures. These data updates are not published yet and still need to go through a full approval process to get adopted by a resolution. Hence PG&E came up with a tool to get you a glimpse of the data at a measure level. The next presentation will show you a tool to get a deeper view at the offering level. However, data is not downloadable yet. These are a mix of 2023 and 2024 program year start dates that are being approved right now. The measure report Tomas showed provides the starting date and end date of each version.
- Anders Danryd (via chat): It depends. Most commercial measures updates are effective 2023 and most residential are effective 2024 but some measures deviate from this rule. All WEN measure updates are effective 1/1/2023 regardless of sector. Some EUL and NTG updates are effective 1/1/2024. The start date is ultimately dictated by the DEER resolution that requires the change.

Armen Saiyan (via chat): Did the new measure updates include UEC (consumption) values? We were doing some research recently and noted some measures do not contain any data or if it does, seems to be indicating the same figure as savings.

- Ayad Al-Shaikh (via chat): New data does include UEC values (when available). When base and measure usage not available, we do populate with Savings in the base case and zero in the measure case. This is most often the case when values are coming directly from DEER data.

III. New eTRM Tools

Presenter: Chau Nguyen

Materials: New eTRM Tools for Data Visualization



Amy Reardon (via chat): We have a hard time showing claims at the measure level, so if this could be used to create those types of dashboards, we could use those on CEDARS.

Lake Casco (via chat): is the # of Claim ID column simply the count of claims? Or is it claimed units (tons, lamps, kBtuh, etc.)?

- Chau Nguyen: It counts the number of Claim IDs. If it counted the number of units, then the values would not be very comparable (since some units are small while other could be larger).

Steven Long (via chat): Can this all be downloaded? When is this available?

- Ayad Al-Shaikh: This is a visualization tool only, you cannot download. However, we can make some data available. We would like to hear it if there was a significant need/desire to download this data.
- Chau Nguyen: If download was available, there would be size limits in the files/data that could be download.

Nicholas Fette (via chat): Assuming that claims are matching to measures on the Source Description column, how reliable is the matching (is it robust to deviations)?

- Ayad Al-Shaikh (via chat): It is true that in the past not all claims include this data. For 2020 and 2021, we have manually aligned claims to Statewide Offering IDs. Moving forward, the Measure Detail ID will be added to all deemed claims, so this alignment could be done very easily and very robustly.
- Amy Reardon (via chat): Yes, I look forward to using the Measure Detail ID to connect.
- Rachel V Murray (via chat): Perhaps a user could hover over the MeasureVersionID to get the description to appear. Great work!

Armen Saiyan (via chat): Would it be possible to add the measure description for navigability (just to reduce cross referencing to other sources)?

- Ayad Al-Shaikh: We will investigate this; available screen space could be tough
- (*update*) We were able to implement the hover request, which works when you hover over a value.

Steven Long (via chat): This looks great, would love to see some of the recommendations implemented.

IV.eTRM Custom

Presenter: Arlis Reynolds



Materials: Custom Overview and Subcommittee

Charles Ehrlich: How can rules and guidance be consolidated to make them more comprehensible?

- Arlis Reynolds: We will explore this idea and keep it in mind.

Spencer Lipp: Improve so that IOUs are not duplicating efforts could be very valuable.

Steven Long: Uncertainty with baselines for the custom work is always a big concern, has there been any thought about that? Not related to engineering but what about the influence documentation being added in the eTRM.

Andres Fergadiotti: Custom measures are custom for a reason, measures that tend to be consistent with the old process we would want to move into the eTRM, however, we should not try to force others that are very custom into the eTRM.

Yeshpal Gupta: Standard calculations are smaller issues to address, I think addressing the baselines, standard practices, and influence are bigger issues.

- Spencer Lipp: The benefit of sharing information can be valuable.

Wayne Chi: Regarding the standardization of methods, we can take that approach, but the measurements are going to vary from project to project.

Spencer Lipp: We can think of measures that are semi-deemed that lean on the deemed methodologies but there are certain parameters like BTs that are not Deemed so it pushed it to through the Custom route. There are different tradeoffs that should be considered but having what is available should be considered while the other stuff is being worked on.

Mike Casey: VFD measures could be a good choice. Or compressed air measures.

Martin Vu (via chat): There used to be a statewide custom policies and procedures manual that all IOUs used for using standardized calculation tools and collecting standardized variables impacting baseline and post retrofit energy. Without reinventing the wheel, is it possible to build off that? For example, the MLC used Appendix B Lighting Table from the statewide policies and procedures manual to support baseline and post retrofit scenarios. Secondly, for custom measures, are ISP studies still required and dispositions issued? Can we glean anything from those activities to build potential standardized custom measures?

Adan Rosillo (via chat): When incentive programs started way back then we had tools to estimate savings for several measures, some of you may remember the SPC Software we used



to estimate savings. I think that kind of approach is helpful to standardize the savings calculation methodologies for custom measures.

- Martin Vu (via chat) Adan, exactly what I was referring to.
- Glen LaPalme (via chat): The Custom Calculation Manual was a great reference for determining applicable calculations and M&V based on project size.

Adan Rosillo (via chat): DOE also published tool used mostly to analyze measures for the Ind sector such as AIRMasters+, Fan Systems Assessment Tool, Pumping System Assessment Tool, etc.

Steven Long (via chat): The first alternate indicates that the eTRM would function as the CTA was meant to. Has this been discussed with the CPUC? If so, would they be open to approving tools, which is not really the case now, except for the MLC?

Spencer Lipp (via chat): Dispositions are at www.caenergyguidance.com Two issues that need to be thought through. 1) some of the dispositions are 10 or more years old and policies may be different today. 2) since these are public, it is often hard to discern how it may apply to other projects.

Martin Vu (via chat): Lastly, about 6 years ago, I presented to CalTF on behalf of SCE VFD measures across different custom process measures. What we learned is that each of those processes has its unique one-off way to calculate energy savings making it difficult to deem. However, there were common methods and procedures on how to calculate custom energy savings for each VFD process. Can we possibly build off that effort?

Steven Long (via chat): CEDMC has a working group.

Myrna Dayan (via chat): Take into consideration - Fuel Substitution Calculator.

- Andres Fergadiotti (via chat): SCE is managing the update of the FS calculator in collaboration with CPUC. there is a working group including PAs that will be tasked to provide Quality assurance on the updated calculator and technical guidance.

Lake Casco (via chat): It's been a while since I worked on custom projects, but I recall that pump overhauls had relatively straightforward inputs and calculation methodology based on measured pump tests. Could be a potentially easy measure to include, with requirements for specific testing inputs.

Glen LaPalme (via chat): Could you show the subcommittee topics again?



Charles Ehrlich (via chat): Like a calculator for fuel sub (great idea), there could be a tool for non-IOU fuel analysis for on-site generation sources. This is needed to "cap" incentives for many Custom program measures.

Jay Bhakta: Is there a timeline for when you want us to sign up to the Custom Committee?

- Arlis Reynolds: No timeline, we can keep a running list.

V. New Measure Process

Presenter: Ayad Al-Shaikh

Materials: New Measure Process Updates

Steven Long: How does this list tie to the list the CPUC publishes?

- Anders Danryd: This list is before a workpaper plan is submitted so it would be before the step to the list the CPUC publishes. Some of these measures may not pass the screening committee and reach the CPUC list.

Gary Fernstrom: Can we see who the proposer was?

- Ayad Al-Shaikh: Yes, we can.

Adan Rosillo: Calculation methodology should be requested along with other factors.

- Ayad Al-Shaikh: It sounds like the desire here is to have the proposal form added in this process as well. We can add it on a measure basis, as identified.

Martin Vu (via chat): Ayad, I believe you had a process flow for ways to consider new cost or retired effectiveness values such as EUL IDs and values. Is there a good way to get those new values considered as part of the measure package plan/development? Is there a way to know the timing of each measure proposed regardless of status (affirmed, rejected, withdrawn, etc.)?

- Ayad Al-Shaikh: if an EUL value is need for a new measure, it will need to be requested through the PA who is leading the measure package development. The month that a measure proposal is submitted to the process is capture here. We do not currently capture the date the proposal leave the Measure Screening Committee, but we could add that.