



**California Technical Forum (Cal TF)
Technical Forum (TF) Meeting #18
March 24th, 2016
San Francisco**

I. Participants

Annette Beitel, Cal TF Facilitator
Alejandra Mejia, Cal TF Staff
Tim Melloch, Cal TF Staff

Pierre Landry, TF Member
Ed Reynoso, TF Member
Bryan Ward, TF Member
Armen Saiyan, TF Member
Spencer Lipp, TF Member
Christopher Rogers, TF Member
Alina Zohrabian, TF Member
Gary Fernstrom, TF Member
Mike Casey, TF Member
George Beeler, TF Member
Mark Modera, TF Member
Andy Brooks, TF Member
Mary Matteson Bryan, TF Member
Ron Ishiii, TF Member
Tom Eckhart, TF Member
Martin Vu, TF Member
Steven Long, TF Member
Owen Howlet, TF Member
Doug Mahone, TF Member
Brandon Tinianov, TF Member
Grant Brohard, TF Members

On the Phone

Bing Tso, TF Member
Bruce Harley, TF Member
Ryan Hoest, TF Member
Sherry Hu, TF Member
Yeshpal Gupta, TF Member
Lawrence Kotewa, TF Member
David Springer, TF Member



II. Key Decisions and Action Items

Closed Door: QA/QC Process Improvements

- ACT: Better define and use QA or QC references appropriately.
- ACT: Make sure steps are sequenced clearly and efficiently and that redundancies are minimized.
- ACT: Cal TF staff to discuss current QA/QC standards in IOU custom project groups and ask all to abide by standards.
- ACT: Add more detail and specificity to make guiding principles actionable.
- ACT: Clarify that the “dedicated TF reviewer” cannot be affiliated with the workpaper PA sponsor (either as an employee or contractor)
- ACT: Facilitate ability of “dedicated TF reviewer” to see items that were discussed between WP developer and sponsor technical reviewer.
- ACT: Add specific “affirmation authority” to Cal TF Member responsibilities and define when in process Cal TF approval occurs.
 - After Cal TF member review/sign-off and before final independent review before submitting to Energy Division).

Measure Selection Subcommittee Report Out

- ACT: Technical Forum to proceed with Measure Selection Subcommittee recommendations as long as they represent high impact measures that will benefit from prioritized migration to new eTRM.

eTRM Threshold Technical Issues

- ACT: Flesh out the definition of deemed measures to better allow the use of calculators and look up tables to determine different deemed values for the same measure.
 - Investigate the possibility of using “hybrid” measures.
- ACT: Consider how the eTRM methods can be used in custom projects to ensure consistency between custom and deemed measures.
- ACT: Identify full set of common inputs (load shapes, etc.) that will need to be used by eTRM measures and make sure they are kept current and publicly available.
 - Building prototypes, load shapes, common formulas (e.g. CDF), interactive effects harmonized across utility borders, hours of operations for different building types.
- ACT: Address eligibility requirements and other program design assumptions that need to be specified in the eTRM.



- ACT: Add consideration of existing conditions baselines.
- ACT: Flesh out data threshold requirements for interim versus full or high impact measures.
- ACT: Create guidelines for when data should be collected to establish hypothetical counterfactuals.
- ACT: Create a process for quickly collecting data for interim measures.

TF Member Commitments Starting June 1st

- ACT: All TF members to abide by new document review and in-person participation requirements starting June 1st.

III. Closed Door: QA/QC Process Improvements

This closed-door session was conducted to allow the Technical Forum full freedom to be self-critical and honest in agreeing to process improvements related to quality assurance and control. Detailed minutes were not taken in accordance with this goal. However, key ideas, suggestion, group consensus, and all action items are highlighted here:

Expanding TF purview to custom arena could help leverage data gathering efforts.

Lack of clarity and precision on CPUC staff guidance makes it very difficult for WP developers.

The term “QA/QC” may need better definition—QA can help be assured by clear guidance as summarized by Cal TF staff and QC can be a PA responsibility throughout the workpaper development process.

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IV. Closed Door: Cal TF “Next Steps” Memo

This closed-door session was conducted to allow the Technical Forum full freedom to review a collaborative “Next Steps” document drafted by Cal TF staff in response to a request from CPUC Commissioner Peterman’s office. The group discussed the content of the document and the process for collaborating on it with CPUC Staff. The document is now being shared with CPUC Staff and will be posted as soon as it is finalized.

V. Measure Selection Subcommittee Report Out

Alejandra Mejia, Cal TF Staff—

PowerPoint Presentation

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VI. eTRM Threshold Technical Issues

Tim Melloch, Cal TF Staff—

PDF Document

Armen Saiyan—In terms of custom vs. deemed, I think the methodologies that will be recorded in the eTRM can also be useful for custom project.

Steven Long—That makes a lot of sense and it is actually aligned with guidance the IOUs have received. I think the current straw man proposal for defining a deemed measure needs a little work.

Martin Vu—Yes, varying by less than 10% seems a little stringent. Applications of single deemed measures can vary by quite a lot.



Armen Saiyan and Bryan Warren—Allowing for greater variations, possibly with semi-deemed calculator tools, can also be very helpful for custom project standardization.

Spence Lipp—There are certainly TRMs across the country that address both custom and deemed measures. TVA is the one that comes to mind.

Annette Beitel—Yes, I’ve seen several other jurisdictions that use that “hybrid approach” to allow for consistent methodologies with variations in parameters.

Pierre Landry—Well, oftentimes the building type is what is custom. It should be possible to add a few additional options to a deemed description, like all day operation hours, to cover more applications without making it too complex.

Owen Howlett—Are the savings going to be captured 8760?

Annette Beitel—Yes. As far as I know Commission policy is to use 8760 load curves.

Ed Reynoso—Have we considered the effects of self-generation?

Annette Beitel—That’s more of a program design question. However, it does seem like we’re going to have to consider how much information and eligibility requirements should be included in characterizations.

Pierre Landry and Steven Long—The modeling versus engineering question is really core to a good TRM. It will be important to be able to pull in subject matter experts that are not TF members.

Spencer Lipp—CEC has indicated that they know the EUL and code lifetime assumptions are wrong. That is further complicated by erroneously using measure case EULs to estimate base case lifetimes.

Owen Howlett—In terms of Best Available Data, we may want to explore ways to link the measure limitations to the limitations of the available data.

Ed Reynoso—How do other jurisdictions organize their TRMs?

Tim Melloch—Most start with sectors—residential, commercial, etc—and then subdivide by technologies.



Steven Long—Edison is currently working on a study on the best residential modeling tools.

Pierre Landry—I think we may also want to consider how we’re going to be using potential and saturation studies, sometimes quick and dirty ones, to inform the eTRM estimates.

Mark Modera—So, just to be clear, we’re planning on using Energy Plus as the default modeling tool?

Annette Beitel—Yes, only for commercial and industrial measures at this point. But that doesn’t mean that other tools couldn’t be used in the cases that there are better modules for specific measures.

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VII. eTRM Threshold Process Issues

Annette Beitel, Cal TF Facilitator—

PowerPoint Presentation



Steven Long—I would assume that one of the items to flag in IOU WPs is if they were thoroughly reviewed by CPUC staff or if it was more of a preliminary or pass through approval.

Armen Saiyan—I'd also recommend that the first round review check for data of sources and availability of documentation for the existing measures.

Ed Reynoso—Who's going to own, operate, and update the eTRM?

Pierre Landry—I think it would have to be a PA.

Andy Brooks—How does ownership and responsibility work in other jurisdictions?

Annette Beitel—Well, in Illinois there are several actors that develop the characterizations and then the yearly update process is done by the central technical consultants.

Armen Saiyan—I would say that the Cal TF has to own it.

Annette Beitel—we've clearly done a lot of preparation and due diligence work for the launch of this project. But I think it is equally important to not over-engineer it before we have a chance to test out our initial proposals. We're going to be embracing a test and learn approach that will allow us that nimbleness.

Pierre Landry—And to a certain extent it will be organic as it gains more acceptance and traction, continues to broaden and formalize the funding pool, etc.

Owen Howlett—Where are you going to be recording the measure and preliminary review information while it waits to be populated in the eTRM?

Annette Beitel—we need to come up with an interim data format.

Steven Long—What is the vision for the transition moment from one repository to another?

Annette Beitel—The working plan right now is to get it picked up at the rolling portfolio bus stop once it's ready. However, this does need to be fleshed out some more. We may need some sort of formal transition point.



Doug Mahone—Have you thought about what we would do if savings values change drastically after review?

Annette Beitel—Our goal has always been to go with the technically correct value.

Spencer Lipp—It may be helpful to review Commission language on immediate corrections versus those that need to wait for the next bus stop.

VIII. TF Members Commitments Starting June 1st and Solicitation of New Members

Alejandra Mejia, Cal TF Staff—

PowerPoint Presentation

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