



California Technical Forum (Cal TF)

Meeting 52: Technical Forum (TF)

November 21, 2019 | 10:00 a.m. – 12:00 p.m.

Teleconference

Time	Agenda Item	Discussion Leader(s)
10:00 – 10:05	Opening <ul style="list-style-type: none"> • Updates 	Ayad Al-Shaikh, Cal TF Staff
10:05 – 10:45	Modeling Charrette Recommendations <ul style="list-style-type: none"> • Overview of TPP 10 • Report-Out from SCE Software Symposium ACT: Discuss and solicit feedback for proposed Cal TF modeling activities in 2020	Roger Baker, Cal TF Staff
10:45 – 11:15	GHG Memo <ul style="list-style-type: none"> • Present proposed approach • Discuss advantages and drawbacks ACT: Cal feedback on proposed approach	Roger Baker
11:15 – 11:30	2020 Measure Development Process <ul style="list-style-type: none"> • Present changes to process based on Staff/Cal TF Input (for affirmation in December) ACT: Cal TF to provide any final comments for consideration; Cal TF will be asked to affirm in December TF meeting	Tim Melloch, Cal TF Staff
11:30 – 11:55	2020 Business Plan <ul style="list-style-type: none"> • Feedback received so far • Recommended updates to BP ACT: Cal TF to provide any final comments for consideration; Cal TF will be asked to affirm in December TF meeting	Ayad Al-Shaikh
11:55 – 12:00	Close <ul style="list-style-type: none"> • Recap agreements & action items 	Ayad Al-Shaikh

Meeting Attendees

<i>Vie Teleconference</i>	
<i>Cal TF Staff</i>	Ayad Al-Shaikh Roger Baker Tim Melloch Jennifer Barnes Jennifer Holmes Tomas Torres-Garcia
<i>Cal TF Members</i>	<ol style="list-style-type: none"> 1. Lacey Tan, Frontier 2. Ed Reynoso, SDG&E 3. Dave Hanna, Independent 4. Doug Mahone, Retired TRC 5. Charles Ehrlich, Independent/PG&E 6. Eric Noller, Energy Resources Integration 7. George Beeler, AIM 8. Gary Fernstrom, Retired PG&E 9. Larry Kotewa, Elevate Energy 10. Mary Matteson Bryan, Independent 11. Mike Casey, Onsite/Willdan 12. Pierre Landry, Retired SCE 13. Richard Ma, Ecology Action 14. Spencer Lipp, TRC 15. Steven Long, TRC 16. Vrushali Mendon, Resource Refocus 17. Scott Blunk, SMUD 18. Mudit Saxena, Vistar 19. Jay Madden, SCE 20. Jeff Seto, AESC 21. Sepi Shahinfard, Cadmus 22. Jonathan Pera, Willdan 23. Akhilesh Reddy Endurthy, Solaris 24. Alfredo Gutierrez, Lime Energy 25. Chris Rogers, CleaRESULT 26. Greg Barker, Energy Solutions 27. Randy Kwok, PG&E 28. Chan Paek, SCG 29. Lisa Gartland, Proctor Engineering 30. Andrew Parker, NREL 31. Abhijeet Pande, TRC 32. Martin Vu, RMS Energy Consulting 33. Armen Saiyan, LADWP

<p><i>Non-Cal TF Members</i></p>	<p><i>Tom Garcia</i></p> <ol style="list-style-type: none"> 1. <i>Bob Ramirez, DNV GL</i> 2. <i>Tai Voong, PG&E</i> 3. <i>Greg Green, SDG&E</i> 4. <i>Jim Hanna, Energy Solutions</i> 5. <i>Henry Liu, PG&E</i> 6. <i>Sue Hasselhorst, ERS</i> 7. <i>Paul Pruschki, SDG&E</i> 8. <i>Adam Spitz, Energy Solutions</i> 9. <i>Amy Reardon, CPUC</i> 10. <i>Bing Tso, SBW</i> 11. <i>Ryan McFadyen, SCE</i> 12. <i>Tom Garcia, Code Cycle</i> 13. <i>Andres Fergadiotti, SCG</i> 14. <i>Marc Costa</i>
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Meeting Notes

I. Opening

Presenter: Ayad Al-Shaikh

Materials: None.

Ayad reviewed the agenda. No questions or comments.

II. Modeling Charrette Recommendations

Presenter: Roger Baker

Materials: Cal TF TPP10_summary_v3.3.pdf

II.A. Overview of TPP10

Roger presented outcomes and recommendations from the Cal TF charrette in May.

II.B. Report-out from SCE Software Symposium (CalBEM)

Roger provided updates and outcomes of the CalBEM symposium. There are parallels between CalBEM and outcomes of Cal TF charrette. The challenge will be to not duplicate efforts.

Cal TF Staff met with SCE in Q1 to discuss action items, ensure complimentary rather than competing efforts.

Next steps are: 1) Cal TF members provide feedback on TPP and 2) form Cal TF subcommittee in 2020.

- Jeff Seto: This is great, large topic, depth and breadth is overwhelming

- RB: We might not be able to do everything, goal to find common use cases and maximize efficiencies. Doug Mahone did a good job of this in identifying what are the most prevalent use cases in CA. Even so, there were additional items brought up by participants. May find that we can't do everything and have to tackle smaller sections.
- George Beeler (chat): Slide 5 Decarb. comment: Comparing electrification techniques should include:
 1. Climate zones 2 & 3 do not need air conditioning in well designed new & renovated residences and small commercial buildings.
 2. Adding AC will add a huge summer peak load that will add to NG use in peaker plants.
 3. Refrigerant leaks when adding H.P. to replace gas furnaces is a very significant GHG.
 4. Do not forget NG leaks at fracking & distribution, etc.
- 2. Should also include reduced air pollution = reduced lung disease
 - Abhijeet (Chat): Most of these items were looked at as part of the 2022 TDV meeting at CEC. especially items 2, 3 and 4
- Jay Madden: Will this cover water usage?
 - RB: Water should be included in NEBs.

III. GHG Memo

Presenter: Roger Baker

Materials: GHG slides_v4.1.pdf

Roger reviewed the current approach, which is very is complex.

GHG values are rooted in CAISO data and the avoided cost calculator, which was most recently updated in August 2019.

- Gary F: When do renewables get incorporated?
 - RB: Renewables have lower market prices, lower GHG effect is reflected in avoided cost calculator
- Gary: Does the effect of distributed solar get connected to the market price, or is it an offset with retail that customers pay that isn't recognized directly by the market? Suggesting values are not accounting for impacts of distributed solar.
 - Armen: Distributed solar is accounted for in net power for load. It's just a reduction in the
 - Roger: they are looking at CAISO data. Behind the meter data does not factor into CAISO data.
 - Gary: A unique GHG benefit of distributed solar PV is not captured correctly by reduction in load. Not sure if it properly treats GHG effect.
 - Armen: It's treated the same as efficiency, a reduction in load.
- Armen: All emissions rates are projections, modeled from resource planning tools. How do we develop a feedback loop from reality to forecast? Needs to be in sync with

resource planning cycles. LADWP is resource planning every year. Utilities have to provide IRPs to CEC.

- Mudit: How often is avoided cost calculator updated?
 - **ACT:** RB will find out.
- Armen: Look at where power is flowing from. Can develop statewide value, but some are vertically integrated and might have different values. Values might need to be utility-specific
 - Abhijeet: Using one value is not appropriate for everyone.
 - RB: The starting point for GHG is on the margin. Marginal dispatch that is addressed by EE. IRP tools have clean net short calculator using CAISO data. Expected hourly profiles, assume that IOUs will buy marginal power off CAISO rather than serving it internally.
 - Armen: Think that eTRM GHG estimates statewide values might be useful for planning, but for claims might need to compare to actual, utility-specific.
 - RB: Yes, need to consider what will be using the data for. Can only calibrate 1st year emissions. Can build out eTRM to accommodate scenarios, need to consider where data will come from, how they will be applied to measures and when.
 - Armen: The primary metric that data will be used for will be key.
- George Beeler (Chat): For planning GHG reduction why not use each utility or CCA's yearly published power mix.
 - RB: power mix looks at all power plants in stack, including nondispatchable. Want to look at as close to the margin as possible, what will be affected by EE (not baseload plants)

Roger: There is an opportunity for eTRM to streamline processes that involve different tools (CET, ACC).

- Armen: Is the intention to capture both source and site emissions?
 - RB: Only site emissions CO2 from natural gas
 - Armen: We apply this methodology. Hourly profiles are offset from renewables.
- Abhijeet: Does EE have no carbon value because it's happening in the middle of the day?
 - RB: In a few years, the midday measures will have no carbon impact. This will force everyone to look at measures in a different way.
 - Armen: It's been enlightening to use hourly profiles, re-examining program design and measures
- Doug: I completely agree for eTRM to accept hourly; but confused why the TF is having to think about which tables, GHG, etc. are the right ones, when a lot of agencies are setting policies to make those decisions. The eTRM should implement policy decisions in calculations, not set the policy.
 - RB: we are in a unique opportunity to recommend an approach. We can work to help align approaches (IOUs, POUs) identify one that can serve all needs in the state and advocate for that.

- Doug: there is deep history in these calculations, we would have to engage in deep discussions with those other entities (CEC, CPUC, ARB)
- RB: there has been a lot of silo-ing, inertia, we can at least try to help convergence
- Armen: We need to bring in these other stakeholders to learn from their experience/why certain decisions were made
- Scott Blunk: Do not see much leadership on how to count emissions. Fuel Sub group is meeting regularly. Hourly marginal is where going to go, but it's a lot of data and a big complicated calculation.
- Martin Vu (chat): What will CalTF's role be in updating hourly load shapes in the eTRM? Will the process to propose new hourly load shapes be similar to the new measure development process?
 - Ayad – entities are working on this, load shapes need a tremendous amount of work. Cal TF will stay apprised, but there are other groups driving it ahead of us.
- Akhilesh: when specific hourly profiles are available from modeling tools for workpapers and custom projects, can we use those instead of historical DEER2011 profiles?
 - Ayad: Have been trying to capture with new SW measures. Need to keep working on this.
- Doug: Retroactivity question is heavily loaded. Reason for institutional inertia. Heartburn when TDV values change because measures in code are no longer cost effective, and do codes need to be changed?
 - Roger: Armen's question is important – what do we use the data for?

IV.2020 Measure Development Process

Presenter: Tim Melloch

Materials: 2020 Measure Development Process QA 11.18.2019 FINAL.pdf

This presentation is a follow up to presentation during October meeting. Tim reviewed questions/comments received during October meeting with Cal TF Staff responses.

Cal TF will affirm TPP 11 during Dec Cal TF meeting.

- Doug: Measure submission form - it's a lot of information. Is there any guidance on how accurate information needs to be at the screening stage?
 - TM: Measure screening committee will determine how comfortable they feel with the numbers. Does the measure have meaningful potential?
- Martin Vu (Chat) Will the measure screening subcommittee integrate ET measure screening? If no, how will the measure screening committee avoid duplicating ET measure screening efforts?

ACT: Cal TF members review TPP 11 to affirm in December.

V. 2020 Business Plan

Presenter: Ayad Al-Shaikh

Materials: Cal TF Draft 2020 Business Plan ver. 6.0.pdf

Ayad reported that Annette is working with PAC to finalize and affirm the 2020 Business Plan, and has received or will be receiving meaningful feedback from PAC, CPUC, CEC. Ultimately, the PAC will affirm the 2020 Business Plan.

Ayad reviewed recent revisions to the Business Plan resulting from PAC input.

- Goal #1: eTRM administration. Not changed.
- Goal #2: eTRM launch plan. Timing is important.
- Goal #3: 2020 measure development process (this largely is the same as prior draft).
- Goal #4: Emerging technical, policy issues – TPPs, whitepapers. Reflects input from PAC.
- Goal #5: Modeling: includes the development of framework for prototypes, not prototypes themselves
- Goal #6: Custom Measures: Focus is the role of eTRM with custom measures, process improvements, and guidelines for hybrid measures
 - Jonathan Pera: What is a Hybrid Measure?
 - Armen: This is a lot to chew on. How will Cal TF manage all of these topics?
- Other goals were not changed.
- Note that the low-income goal in previous version was removed.

VI. Close

Presenter: Ayad Al-Shaikh

Action items are:

1. Feedback on Cal TF 2020 modeling activities for 2020 and proposed approach (*comments to Roger*)
2. Feedback on Cal TF Staff open questions regarding calculating GHG reductions in eTRM (*comments to Roger*)
3. Affirmation of Cal TF 2020 Measure Development and Review Process (*comments to Tim*)
4. Affirmation of Cal TF 2020 Business Plan (final affirmation will be PAC) (*comments to Ayad*)