



California Technical Forum (Cal TF)

Meeting 52: Technical Forum (TF)

October 23, 2019 | 10:00 a.m. – 4:00 p.m.

Pacific Energy Center, 851 Howard Street, San Francisco

Agenda

Time	Agenda Item	Discussion Leader(s)
10:00 – 10:30	Welcome <ul style="list-style-type: none"> Welcome to New TF Members Roundtable Introductions 	Annette Beitel, Cal TF Staff
10:30 – 10:45	Agenda Review & Updates <ul style="list-style-type: none"> Review Meeting Agenda Updates 	Annette Beitel
10:45 – 11:45	eTRM Overview & Future Vision <ul style="list-style-type: none"> eTRM Demo Proposed Enhancements High-level Launch Plan - 2020 ACT: TF Member Feedback & Questions	Roger Baker Ayad Al-Shaikh Annette Beitel
11:45 – 12:30	Lunch	
12:30 – 1:30	2020 Measure Development Process <ul style="list-style-type: none"> Review Draft Plan TF to Provide Feedback Discuss Next Steps ACT: TF Member Feedback & Proposed Changes	Tim Melloch, Cal TF Staff
1:30 – 2:30	DRAFT 2020 Business Plan <ul style="list-style-type: none"> Review Draft Business Plan ACT: TF Member Feedback & Proposed Changes	Annette Beitel
2:30 – 2:45	Break	
2:45 – 3:45	DRAFT Modeling TPP <ul style="list-style-type: none"> Review Draft TPP prepared from Modeling Charrette Review Cal TF proposed Modeling Activities & Coordination for 2020 ACT: TF Member Feedback on Proposed Cal TF Modeling Activities for 2020; Identify TF Member Interest in Participating in Further Subcommittee Modeling Activities.	Roger Baker Ayad Al-Shaikh
3:45 – 4:00	Close <ul style="list-style-type: none"> Recap Agreements & Action Items 	Annette Beitel

Meeting Attendees

	<i>In-Person</i>	<i>Via Telephone</i>
<i>Cal TF Staff</i>	Annette Beitel Jennifer Barnes Jennifer Holmes Ayad Al-Shaikh Roger Baker Tim Melloch Tomas Torres-Garcia Cameron Assadian Chau Nguyen	
<i>Cal TF Members</i>	Spencer Lipp, Lockheed Martin Sepi Shahindard, Cadmus George Beeler, AIM Ed Reynoso, SDG&E Armen Saiyan, LADWP Lacey Tan, Frontier Energy Chan Paek, So Cal Gas Gary Fernstrom, retired PG&E Vrushali Mendon, Resource Refocus Jay Madden, SCE Eric Noller, Energy Resources Integration Akhilesh Endurthy, Solaris Pierre Landry, Landry & Associates Larry Kotewa, Elevate Energy Mike Casey, Onsite Energy Abhijeet Pande, TRC Scott Blunk, SMUD Alfredo Gutierrez, Lime Energy Mudit Saxena, Vistar Energy Jonathan Pera, Willdan Charles Ehrlich, Independent Randy Kwok, PG&E Richard Ma, Ecology Action	Andrew Parker, NREL Tom Eckhart, UCONS Steven Long, Lockheed Martin Greg Barker, Energy Solutions Chris Rogers, CleaRESULT Yeshpal Gupta, Lincus Energy
<i>Non-Cal TF Members</i>	Bryan Boyce, Energy Solutions Henry Liu, PG&E Sue Haselhorst, ERS Peter Turnbull, Retired PG&E Will Baker, Google/Nest Serj Berelson, Google/Nest Patrick Moore, PG&E Marc Costa, The Energy Coalition Peter Biermayer, CPUC	Rachel Murray, DNV GL Adam Spitz, Energy Solutions Adan Rosillo, PG&E Bob Ramirez, DNV GL Eric Martin, Energy Solutions Eric Merkt, Independent Greg Wikler, CEDMC Jennifer Scheuerell, Sound Data Leonel Campoy, Franklin Energy Tai Voong, PG&E Bing Tso, SBW Breesa Collyer, PG&E Kerri-Ann Richard, ERS Peter Lai, CPUC Amy Reardon, CPUC Jeremy Sasse

Meeting Notes

I. Welcome

Presenter: Annette Beitel

Materials: None.

Annette Beitel welcomed the new Cal TF members. In a round table of introductions, each in-person attendee introduced themselves and stated their future vision for the Cal TF. Annette listed phone attendees.

I.A. Future Vision for Cal TF

Future visions for the Cal TF stated by attendees are categorized below.

Policy Change / Policy Advocacy

- There is a need for Cal TF to have subcommittees to review specific EE projects, CPUC policies, custom measures, and to address technical issues raised by third parties (3Ps).
- Consider reviewing policies to capture the benefits of EE measures and for easier implementation.
- Increase awareness of and address data access issues
- Incentivize market transformation for cost-effective EE solutions
- Review methods and approaches for calculating the value of EE, DR, and decarbonization methods
- How to pivot from EE to carbon savings
- Develop measure bundles to promote electric-only buildings

Integration, Remove Silos.

- Focus on equity and the needs of low- to moderate-income customers

Best Available Data.

- Get all parties to reach a consensus understanding of what the best available data is and how to use it

Beyond Widget-based EE: Custom, Whole-Building Energy Use, Modeling

- Use eTRM and Cal TF collaboration model to streamline the custom process
- Emphasize knowing how to use field and modelling techniques to fill the current gaps in the EE industry
- Break down custom and metered based measures and start incorporating the available weather data.
- Look for more cost-effective ways to save energy; we currently overlook activities/methods that can achieve our energy goals that are very cost effective. (For example, changing the building orientation can reduce 30% of energy consumption and is very cost effective.)

- Cal TF should engage in helping to improve the custom side/custom measures
- Foster better communication and transparency between implementers and utilities
- Identify best measures/measure packages to achieve decarbonization within buildings
- Need for measures to be looked at from a systems and holistic approach

Measure / Measure Analysis Improvements

- Improve rating for HRI/HVAC equipment plus more reliable savings plans.
- Need to better validate savings from EE measures and reduce reliance on calculated or modeled savings values.
- Measures need to have market potential; more details need to be provided on the barriers that prevent measures from being implemented.

Load Profiles

- Greater need to improve savings profiles, there is a lack of tools for load profile analysis
- Better understanding of load profiles, and need to update load profiles

Program Design / Implementation

- Make EE programs easier for customers to understand and follow
- Work out the complexities within the eTRM so it is simpler on the front end for customers. Study past programs data to see what works and what does not to see how future programs can be developed and implemented.

New Technologies, New Opportunities

- Identify new measures with input from 3Ps and utilities.
- Would like to see different approaches to reviewing new technologies and platforms
- There should be more incentives to reduce our carbon footprint
- Increase support for gas EE measures
- Increase demand for smart home management space; smart thermostats, market transfers, smart home investments, and work with utilities to develop a framework for evaluation of these approaches.
- Eradicate the myth that there is no more low hanging fruit of EE
- Continue to develop innovative projects/products within the EE field.

ACT: Visions stated in introductions will be summarized and discussed in January to develop list of Cal TF Staff “white papers” or Cal TF technical position papers (TPPs) to be developed in 2020.

II. eTRM Overview & Future Vision

II.A. eTRM Demo

Presenter: Roger Baker

Materials: None.

Roger Baker provided a brief, live demonstration of the eTRM. Currently there are 83 measures published for viewing, all of which have been approved by the CPUC.

Value Tables

Pierre Landry: Why are 90% of the GSIA IDs not used?

- Ayad Al-Shaikh: Not all IDs are valid for certain vintages, includes all combinations but only the ones from CPUC are used.
- Pierre Landry: Is there an archive in the eTRM that can be used to store all the older GSIA IDs that are not being used?
- Roger Baker: The archive can be added in a future development, eventually we want to add start and end dates to all the shared data in order to filter what is useful today.
- Ayad Al-Shaikh: An exclusion feature can be added to the shared data tab, similar to what is in the supporting data tab, to pull out unnecessary GSIA or other data.

Exclusions

Pierre Landry: What about residential measures installed in a commercial setting? For example, a residential refrigerator in a commercial building. Will that get excluded or how would it be calculated?

- Ayad Al-Shaikh: Each measure has certain building types associated with it; you have to stay true to it if you want to make a claim and it needs to match the meter.
- Pierre Landry: Is there a way to go around? The world is messy, can it be calculated?
- Sue Haselhorst (Non-Cal TF member): These are deemed savings for average settings. If someone snuck in a residential measure in a commercial setting, evaluation would say it does not match, we are not trying to fit everyone but instead represent a good average.
- Pierre Landry: Agree.

Sue Haselhorst (Non-Cal TF member) and Pierre Landry: eTRM is a general database, we can use it to evaluate specific situations.

Calculations

Sue Haselhorst (Non-Cal TF member): How to bring in DEER data/analysis, such as cooling loads, is essential.

- Ayad Al-Shaikh: There are different types of measures, food service measures are fully calculated, other measures are fully modeled. If it is a DEER measure, then we pull

savings values and reference the model files. For some measures the modeled results are scaled or weighted, and we try to do the math in the eTRM.

CAL TF Member: Is it displayed in the measure? Whether modeled or calculated?

Permutations

Alfredo Gutierrez: [Referring to the measure shown in the demo] I see building type as “Any”, do we have an exclusion table for this? The “Any” building type does not make sense for a commercial oven measure.

- Ayad Al-Shaikh: Every measure is different. “Any” is a valid choice for a permutation, as long as it matches the sector (cannot specify MFm building type when sector is Com).
- Alfredo Gutierrez: I am just trying to see how to bring this to CET, “Any” is not a choice there.

General

Pierre Landry: The eTRM looks great; consider who would use it (people doing research, people developing measures).

- Annette Beitel: Currently there are three user profiles. We will likely need to create more but for the sake of starting it was kept simple.

II.B. eTRM Future Visioning

Presenters: Ayad-Al Shaikh, Annette Beitel

Materials: eTRM Phase 3 – CalTF update v5 FINAL.pptx.

Spencer Lipp: Think about different entities and how they interact and use information. Customers want to know their *own* savings not claimed savings, this is something to consider. Trade allies are not concerned with average, claimed savings or code, they want to know what is applicable to them.

Annette Beitel: eTRM is being planned for use in broader applications; it will be further developed in next phase. We want to build off the eTRM and make it more efficient to do work. There is room for more conversation so that the eTRM can be catered toward the needs of many individual entities.

Akhilesh Endurthy: Is the plan of eTRM to include measures as they move from custom to hybrid to deemed?

- Annette Beitel: No. It will be discussed if a measure applies to a broader audience or interest. A subcommittee will decide if it can extend eTRM and improve it. We will also use outside input to inform decisions; however, decisions will be made based on what Cal TF members suggest.

Akhilesh Endurthy: Will there be integration between ex-post results and claims data?
Incorporating deemed measures and custom projects?

- Annette Beitel: Yes. Part of next phase of development and our business plan is to incorporate ex post results, even possibly embed EM&V. This includes working to collect adequate data in order to improve quality of deemed measures.

Mudit Saxena: Will there be a system to bring in climate and weather zone information?

- Ayad Al-Shaikh: It is difficult to generate models in the eTRM. However, the eTRM already provides references that have model files so you can see what data was used to run the simulations. Other climate zone-specific data is already in the eTRM in the shared data tab (groundwater temperatures) for specific measures. Value tables will provide results such as savings, baseline and measure case consumption, etc.

Mudit Saxena: Do the number of permutations increase with baseline and measure case consumption, and additional data? How will this be dealt with?

- Annette Beitel: This is a relational database, it uses JSON files so that it does not become too big, it was designed with software shortcuts and traditional database in mind.

Mike Casey: How does NMEC fit in the deemed-hybrid-custom continuum?

- Annette Beitel: NMEC is not part of eTRM yet, but it is a significant part of the California portfolio and will be discussed as a group in the future.

Henry Liu: How will utilities manage and use eTRM for their own specific programs? The eTRM contains all approved deemed measures but not all IOUs will adopt every measure because of cost effectiveness.

- Annette Beitel: Yes, these measures are statewide approved, but not all IOUs/POUs will utilize all of the measures in their portfolio.

II.C. eTRM Phase 3 Enhancement List – Update

Presenter: Roger Baker

Materials: eTRM Phase 3 – CalTF update v5 FINAL.pptx.

This agenda item was removed due to time constraints.

III. 2020 Measure Development Process

Presenter: Tim Melloch

Materials: 2020 Measure Development Process v 4.3 FINAL.pptx and DRAFT TPP 11 Measure Development Update and Review Processes v24.docx

After reviewing the proposed 2020 measure development/update process, Tim facilitated comments and questions on the process flow diagram (slide #6).

Marc Costa (Non-Cal TF Member): Are there workpapers for a calculation methodology instead of a widget?

- Annette Beitel: An example would be the water-energy calculator. Right now calculation methodologies are not currently in the mix of measures, but it is worth discussing for future development.

Pierre Landry: Is there a chance for measures to get kicked out of the process flow halfway through ... if the measure screening committee votes “yes” but later Cal TF decides “no”?

Cal TF Member: What criteria will be considered?

- Annette Beitel: Measures need to be cost effective – this is determined by committee. There is measure screening criteria. There is a high confidence for cost effective measures, but other criteria will be looked at as well.
- Pierre Landry: Start to look at a number, just because it gets a “yes” before does not mean it will go through.
- Annette Beitel: True. For example, a 3P presented a measure and lots of engineering calculations and the measure almost got confirmed. However, the measure was not affirmed after subsequent field test results indicated much lower savings than shown by the calculations.
- Charles Ehrlich: Screening criteria should include if the measure has ever been in ex ante review or custom and not just focus on cost effectiveness/money criteria.
 - Annette Beitel: Agreed.

Will Baker (Non-Cal TF Member): Does a measure get a “badge of approval:” once it goes through entire process flow? What does the process look like for ex ante review, after the measure is handed off to the CPUC?

- Annette Beitel: We [Cal TF and Cal TF Staff] know what is acceptable for approval and have worked with the ex ante review team and with the utilities on the statewide deemed rulebook and quality standards, as well as getting CPUC approval of approximately 130 statewide measures. We have a good sense of what is “acceptable”. Part of the process is early feedback from the CPUC ex ante review team. The ex ante review will happen regardless of a Cal TF affirmation.

- Peter Biermayer (non-Cal TF Member): Agree; the ex ante review must occur. Typically, we will be given high-quality workpapers; we will already have a good quality measure to start with so sending a measure back will be less likely.
- Annette Beitel: A high-quality peer review is useful and valuable for everybody, POUs included, even if it is not required it should be tested out first.

Armen Saiyan: Since screening is important, the process should be transparent, so people know what the measures need before submitting. It will be important to reduce subjectivity of the decision.

- Annette Beitel: Agreed. Ultimately it is profession judgement and persuading the committee that there is value.

Lacey Tan: Are the measures statewide?

- Annette Beitel: Yes, measures are statewide. But we do need to refine the approach to make more measures viable. There are measures that are cost effective in certain climate zone, but we would develop it for the whole state. For the consolidated statewide measures, there were measures that are PA specific, but we still developed the measure for the whole state and can help measure developer with this.

Leonel Campoy (phone): The measure screening committee excludes other PAs.

- Annette Beitel: Good point.

Lacey Tan: If a measure is not cost effective for a certain CZ, is it not applicable?

- Annette Beitel: No, right now there is a binary way of looking at it, but we know everything is not uniform. We want to capture the full potential, determining cost effectiveness but look forwards to refining the approach for data analytics.

Marc Costa (Non-Cal TF Member): Is there a process to track proceedings?

- Annette Beitel: Yes, we track proceedings and incorporate new measures that come up, especially in decarbonization area.

Jonathan Pera: Cost effectiveness is assessed at the project level.

- Annette Beitel: That is at the custom level, even if there are deemed measures in a custom project.

Gary Fernstrom: Since the measures will be screened by the measure screening committee, what is the role of Cal TF?

- Annette Beitel: Cal TF will provide early feedback and affirmation

Annette Beitel: The measure screening process will be a loose net, but the net will be tighter at the stage that utilities decide whether to fund measure development.

Armen Saiyan: Are we given awareness about incoming measures?

- Annette Beitel: In eTRM, a user can register to receive notifications from the eTRM system, which can be used to notify users of measures in development. Also, Cal TF Staff works with the IOUs to publish the statewide measure list each month. Measure development and Cal TF is a public process.
- Tim Melloch/Armen Saiyan: Also, share the list of measures that enter but did not make it through the screening process.

Peter Biermayer (Non-Cal TF Member): Will a unanimous vote or majority vote that will approve measures?

- Annette Beitel: Majority vote.

Mudit Saxena: Screening only seems to check whether measures have followed the guidelines. Is this process needed?

- Annette Beitel: Screening also considers the quality of data and whether the measure is applicable. Screening is meaningful and it will be adjusted along the way; we can discard screening if it is not useful.

Mike Casey: What is the process for measure development by a 3P? How do we encourage 3Ps to develop measures given the measure is going to be available for everyone to implement?

- Annette Beitel: 3Ps will still want to present the measures. 3Ps know people can pick up their program, but at the end of the day they know they have a good measure.
 - Mike Casey: People can use custom.
 - Annette Beitel: Custom has cost; there is a tradeoff and 3Ps will still want to propose measures.
- Tim Melloch: The IOUs clarify that a 3P can opt to follow the public process if confidentiality is not a concern. Alternatively, they can stick with the traditional route, which can also provide feedback.
- Annette Beitel: A measure is still ultimately public. Once approved, it goes to the eTRM.

Tim Melloch: This process is not intended to include annual DEER updates.

Richard Ma: Is there a timeline for the process?

- Tim Melloch: Yes, there is a timeline in the document, but a few things do not have a date because the CPUC review time is not specific. Measure can be submitted anytime, and the cut off is last of the month. If the measure gets a “thumbs up” then it goes through the Cal TF meeting, etc. roughly 8 weeks.
- Jennifer Barnes: Timing varies per measure. So, we cannot really know for sure, depends on measure complexity.

Lacey Tan: Has anything changed with the CPUC involvement in the measure review process?

- Annette Beitel: The CPUC is currently reviewing the workpaper review process. There is broad-based interest for the Cal TF to make recommendations to the CPUC.
- Peter Biermayer (Non-Cal TF Member): The CPUC has a committee looking at the procedure to see what the problems are and recommend solutions. This should all be shared information.

Chan Paek: How do the IOU internal processes fit into this statewide process? Also, we may run into intellectual property problem. There are guidelines from CPUC that a measure cannot be manufacturer-specific.

- Peter Biermayer (Non-Cal TF Member): Do not want to promote a certain manufacturer so workpapers needs to be broad.
- Annette Beitel: The measure must be defined broadly and there may be performance test runs needed. Performance testing could be done before measure is processed.
- Peter Biermayer (Non-Cal TF Member): There might be instances for which people say their product works better. We would advise them to run trials to see the actual data. Typically, there is randomized control trial and review of data, including savings and whether the measure is energy efficient relative to the baseline.
- Chan Paek: The IOU internal processes take a long time to get through and there is even a high failure rate.
- Henry Liu: PG&Es goal for measure screening is utilize its phased gate product development and governance process used by its Energy Efficiency Group to evaluate, develop, launch, or sunset products and programs. This existing process will be leveraged to get sense of what questions need to be asked and to solicit feedback before voting.

Armen Saiyan: There is an opportunity with screening to refer measures to emerging technologies and other areas.

Annette Beitel: The second stage of this will be to work with the IOUs to develop a statewide procedure.

ACT: Cal TF Staff will reach out to REN and CCA representative(s) to educate and engage them in the statewide measure screening process.

IV.DRAFT 2020 Business Plan

Presenter: Annette Beitel

Materials: Cal TF Draft 2020 Business Plan ver. 4.0 09.30.2019.docx

Annette Beitel summarized each goal in the Draft Cal TF 2020 business plan. Discussion points and questions pertaining to specific goals are noted below.

Business Plan Goal #3. Implement and Manage 2020 New and Updated 3P Measure Development and Review / Provide Consistent Cal TF Review of IOU-Developed and Updated Measures

Pierre Landry: Regarding the tracking of time and costs, who will do this?

- Annette Beitel: We invite the utilities to track time and costs of measure development if they are interested. The eTRM has the mechanism to do so.
- Pierre Landry: What does the PAC have to say about that?
- Annette Beitel: There is an understanding that utilities are under pressure to look at costs and cost effectiveness. They would have to agree to do it.

Business Plan Goal #7: CA EnergyPlus Building Prototype Model Analysis and Documentation

Ayad Al-Shaikh: Is there value to include this task in our business plan?

Abhijeet Pande: Yes, there is value to work on beyond-code programs. The CPUC and CEC are using different metrics. Modeling for code uses different metrics and assumptions than modeling for programs/other use cases. There are two considerations: What is the end goal? What is the metric?

Abhijeet Pande: I believe it is knowing whether to use metric, angle, savings, time-dependent savings, or carbon savings. Choosing between annual or other methods and knowing what modelling techniques to use. It is about timing, if using an annual kWh metric or another. Another issue is defining the assumptions, code, program, rule set, and models.

Annette Beitel: The issue is currently the same building might need to be modeled five different ways. Since both CEC and CPUC are regulating this, it would be good to encourage a uniform approach. Coordination between different regulatory bodies is expensive; it is unusual to have two regulatory bodies for EE in one state.

Armen Saiyan: We need to go back to the fundamentals and develop a framework on how to develop the prototypes. We need to study the usefulness of prototypes (use case) and see how measures can be developed from the use case. What is the usefulness of prototypes, especially if you are chasing after a certain metric?

- Annette Beitel: Agree we need to develop a framework for developing and using prototypes that considers prior prototype development. This will be added to 2020 Business Plan.

Akhilesh Endurthy: Should the baseline be the same between CEC and CPUC? They should be the same in principle but are not the same in practice. We do not want to have to change prototypes with every code cycle.

Abhijeet Pande: The CPUC and CEC are different. New prototypes are developed to see if they are applicable for the energy efficiency industry. Prototypes are different and for a reason. For consistency, we do not want to change prototypes too often, but at some point, a prototype becomes out of date.

Annette Beitel: We should step back to see what we need so we will not be wasting or duplicating efforts.

Henry Liu: Cost effectiveness tests are not aligned with carbon. If the state corrects (increases) the cost of carbon, then avoided costs would be improved. The biggest issue is that load shapes dictate where to put savings.

Vrushali Mendon: There is no need to go back and start from scratch. DOE prototypes are relevant for new construction with Dodge Data that provides averages for parameters. This can be used to develop the framework. Cost effectiveness and other parameters can use a similar model. Currently there is no way of consolidating prototypes since code seeks to represent the worst buildings (minimum) and programs seek to represent the leading buildings. But we can still use the existing information to develop the framework. There is an additional element of compliance versus incentive-based software. The fundamental codes are different.

Bryan Boyce: Some differences are due to inherent differences between analytical engines?

- Abhijeet Pande: Presumptions are included with the engine, with other elements. Engines constraint parameters differently, but also the internal assumptions.

Mudit Saxena: There is overlap here; clarification needs to be associated with the modelling and scaling can be made using the framework. The goal is consistency; inconsistencies can be solved and metric/rules sets need a separate column.

Leonel Campoy (phone): Look at lessons learned from years of DEER model, positive and negative.

Armen Saiyan: There is quite a bit of transparency of other sources (except for DEER) and we do not need to start from scratch.

Annette Beitel: I think we should start with a framework then worry about implementation. There is a lack of transparency to effectively screen the measure. Need to examine the pros and cons of various approaches for developing and using prototypes.

Leonel Campoy (phone): Any consideration given to better inform the post-modeling measure built-up using stochastic methods and data from NMEC population-wide data?

- Annette Beitel: That is something we need to think about, NMEC is a place to start for metered data.

Leonel Campoy (phone): Another area to focus is on the uncertainties of key parameters that feed the modeling. This gets to what Pierre Landry pointed out as best available data.

- Andrew Parker (phone): I totally agree; there is a lot of better information that can be incorporated into the models. The work that LADWP did/is doing to model (and calibrate the models) of their building stock is an example.

Leonel Campoy (Phone): Where is the point of diminishing returns for modeling many of these measures? Consideration should be given to the overall cost-effectiveness.

Charles Ehrlich: There is overlap between languages. We should build models and combine them to make EnergyPlus or DOE-2 models.

Tom Eckhart (phone): Model calibration needs to be part of the discussion.

- Annette Beitel: Yes, there has been a lot of discussion regarding which models have been calibrated, the source and vintage of the data (for those that are). In the Northwest this is more routine. We should first find out which (California) models are calibrated.
- Tom Eckhart (phone): The RTF has put their models aside and moved to billing history.

ACT: Cal TF Staff will host a teleconference to discuss and refine Goal #7 of the Draft 2020 Business Plan.

Business Plan Goal #8: Document Deemed Modeled Measures in a Consistent / Transparent Way

The in-person meeting attendees agreed this task is valuable for the 2020 Business Plan.

Armen Saiyan: How do we extract information that we need out of DEER?

- Ayad Al-Shaikh: We need to do it to the point that we can re-produce the measure if needed.
- Annette Beitel: We need to be able to reproduce measures, but DEER measures we cannot. Everything needs to be transparent so we can move away from “black boxes”.

Mudit Saxena: We cannot work on Goal #7 before Goal #8; #7 be completed without documentation developed from #8?

- Ayad Al-Shaikh: We can. We can do the work in DOE-2 then can be move it to another program if needed.
- Mudit Saxena: If the direction we take is to move to EnergyPlus, then what has been done in DOE-2 will not be useful.
- Ayad Al-Shaikh: Goal #8 is to document the base, the modeled measures we have now. Right now, it is difficult to mimic DEER measures.

Armen Saiyan: We need to figure out valued parts of the model instead of starting from scratch.

Akhilesh Endurthy: The challenge is that we do not know where the weights come from. There are different weights for different building vintages. If we knew, we would be able to use other software.

Business Plan Goal #9: Support Custom Process Project Improvement Process

Pierre Landry: There should be improvements in custom measures. How will this work with Cal TF?

- Annette Beitel: The Cal TF works on any technical issues related to integrated demand management, not just deemed measures.

Charles Ehrlich: PG&E's policy is that deemed measures must follow deemed procedures. Custom projects with deemed measures equated to a lot of overlap.

Pierre Landry: You are referring to improving the process for estimating savings for custom?

Annette Beitel: There are some parallels between deemed and a subset of custom measures. I think we should use eTRM tools to streamline custom projects through standardization and consistency within the eTRM. Apply eTRM in different area to make more transparent and save costs. We want to be specific about what Cal TF wants to work on and not duplicate others work.

- Pierre Landry: Caution on the scope; there is lots to do to take on the "elephant of custom."

Sepideh Shahinfard: There is lots of talk to streamline custom process. What are we trying to achieve that has not already been achieved? The statewide custom guide just came out, and we should be aware of other things being discussed in the EE industry.

- Annette Beitel: There is still interest from practitioners to use the eTRM features to help address custom challenges. We are in discussion with others to prevent duplication of work.
- Ayad Al-Shaikh: We want formal process and to bridge custom to deemed through hybrid – this is a starting point.

ACT: Cal TF Staff will host a teleconference to refine Goal #9 of the Draft 2020 Business Plan.

Business Plan Goal #10: Develop Guidelines and Process for Hybrid Measures

Many of the discussion points made previously apply to hybrid measures and the Cal TF members generally agreed this business plan goal will be valuable.

Jonathan Pera: We should think about the application of NMEC to the work Cal TF is doing.

- Annette Beitel: To see how NMEC is related to our work, we may want to consider new business plan item.
- Richard Ma: I am a fan of hybrid measures. Some parameters can be changed so there is flexibility; hybrid has benefits from both deemed and custom approaches.
- Marc Costa (Non-Cal TF Member): There is lots to learn from DR. NMEC could be difficult since analyses need to be done to improve understanding. We need to better understand buildings and their corresponding sensitivity. We must understand why realization rates are low and why we are not seeing big enough savings from certain prototypes/measures.
- Leonel Campoy (phone): Will this hybrid category embrace DR integration with EE? Baselines are very different. When procedural workpapers are approved we will need more clarity on the custom review process. The key are 8760 profiles.
- Charles Ehrlich: There should be integration of the eTRM to NMEC and custom measures. Put the calculation “shell” in eTRM but change the inputs.

Armen Saiyan: We should be able to apply a standardization to the custom approach.

- Annette Beitel: Some custom measures are already under industry standards/guidelines so they can be difficult to standardize. They should be well documented and made public.

ACT: Cal TF will further discuss adding a task to the 2020 Business Plan that explores whether and how NMEC could be used to improve deemed savings.
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V. DRAFT Modeling TPP

Presenter: Roger Baker

Materials: TPP10_v4.0_draft 10.17.2019.docx and Cal TF TPP10_summary_v4 FINAL.pptx.

Because of time constraints, Roger focused on the BEM roadmap (slide #6). Comments and questions regarding the short-, mid-, and long-term are noted below.

Liam Buckley (phone): For short-term, the Title 24 2019 code permits any ASHRAE-140 validated BEM engine to be used for nonresidential Title 24 compliance purposes (e.g., CBECC-Com/EnergyPlus is NOT required). So, any future library of building prototypes should

have a gbXML export schema available so it can be used with any BEM tool, and not solely with EnergyPlus.

Abhijeet Pande: The focus of the short term should be creating these prototypes and coordinating the process of how we do it. We look at the different use cases; we need more leadership from the program side.

Annette Beitel: We need a data warehouse, and data should be standard in format to increase the ability to analyze. The CPUC and CEC should share resources.

Marc Costa (Non-Cal TF Member): There should be more technical analyses. Currently there is no grade associated to a model.

Abhijeet Pande: The entity (who) and process (what) should be a short-term goal. We need more leadership from the CPUC, the program side of things.

Marc Costa (Non-Cal TF Member): There is an upcoming webinar on Catalina that could tie into this topic. Catalina is a tool that has merged customer level records with geospatial information to create profiles for various geographic regions. This can be used to standardize climate, building type, and weather zone data. UCLA controls the database. A robust architecture could feed into this. A year ago, the CEC started building a database, an energy information analytics platform.

VI. Close

Presenter: Annette Beitel

Action items are:

1. Visions stated in introductions will be summarized and discussed in January to develop list of Cal TF technical position papers (TPPs).
2. Visions stated in introductions will be summarized and discussed in January to develop list of Cal TF technical position papers (TPPs).
3. Cal TF Staff will reach out to REN and CCA representative(s) to educate and engage them in the 2020 measure development/update process.
4. Cal TF Staff will host a teleconference to discuss and refine Goal #7 (CA EnergyPlus Building Prototype Model Analysis and Documentation) of the Draft 2020 Business Plan.
5. Cal TF Staff will further discuss adding a task to the 2020 Business Plan that explores whether and how NMEC can be used to improve deemed savings.
6. Cal TF Staff will host a teleconference to refine Goal #9 (Support Custom Process Project Improvement Process) of the Draft 2020 Business Plan.