AGENDA

California Technical Forum (Cal TF) Meeting

Thursday, April 27, 2023
10:00 a.m. – 4:00 p.m.
LACI Building (525 S Hewitt St, Los Angeles, CA 90013)

GoToMeeting Details
https://meet.goto.com/752766341
You can also dial in using your phone
United States: +1 (646) 749-3122
Access Code: 752-766-341

Time (PST)	Agenda Item	Discussion Lead(s)
10:00 – 10:30 (30 mins)	Agenda Review and Quick Updates • 2023 Q1 Progress Report • Measure Property Data Update • Potential Database for New Technologies	Ayad Al-Shaikh
10:30 – 11:15 (45 mins)	eTRM Updates • eTRM Enhancements, draft release schedule • eTRM Training for Base Users • 3C Communication/Versioning for MP Updates **ACT:** • Participate in and share stakeholder survey	Tomas Torres-Garcia
11:15 – 12:00 (45 mins)	8A Cal TF Roadmap Update – Scope and Sequence **ACT:** • TF/stakeholder input on priorities and timing	Ayad-Al Shaikh and Arlis Reynolds
12:00 – 1:00	Lunch	n/a

1:00 – 1:45 (45 mins)	New Measures • Update on Deemed Lighting Measure Package • Other Measure Packages in development **ACT:** • TF/stakeholder input	Ayad Al-Shaikh & Willdan / SCE
1:45 – 2:15 (30 mins)	5X Custom Initiative, Revised Workplan **ACT:** • Affirm 5X Workplan	Arlis Reynolds
2:15 – 2:30	Break	n/a
2:30 – 3:00 (30 mins)	6D Deemed Regulatory Updates **ACT:** • Input on scope, sources, and form	Arlis Reynolds
3:00 – 4:00 (60 mins)	June 21 Data Charrette • History of CA EE data; data challenges • Charrette Objectives • Draft agenda **ACT:** • Input on data needs, opportunities and complementary data efforts	Ayad Al-Shaikh and Arlis Reynolds
4:00	Next Steps	Ayad Al-Shaikh
4:00+	No-host happy hour at: Arts District Brewing Company (828 Traction Ave, Los Angeles, CA 90013)	n/a

Meeting Materials: http://www.caltf.org/tf-meeting-materials

- TF Meeting Presentation
- 2023 Q1 Business Plan Progress Update
- 5X Custom Initiative Workplan (revised, for affirmation)
  - 5X Custom Initiative Workplan (revised, with redlines)

Next TF meetings:

- Thursday, May 25, Remote meeting (TF Meeting)
- Wednesday, June 20, PG&E HQ (Data Charrette)
- Thursday, June 21, PG&E HQ (TF Meeting)

Meeting Attendees

	In-Person	*Via Telephone*
Cal TF Staff	Arlis Reynolds Ayad Al-Shaikh Chau Nguyen Tomas Torres-Garcia	Randy Kwok
Cal TF Members	Alfredo Gutierrez Andres Fergadiotti Armen Saiyan Eric Noller Martin Vu Myrna Dayan Roger Baker Sepideh Shahinfard Steven Long	Adan Rosillo Charles Ehrlich Christopher Rogers Denis Livchak Eduardo Reynoso Gary Fernstrom George Beeler King Lee Lake Casco Martin Vu Mike Casey Richard Ma Yeshpal Gupta
Non-Cal TF Members	IOU/POU Babak Yazdanpanah / LADWP John Zwick / SDG&E Sean Lim / LADWP Implementer / 3P / Consultant / Other Diego Monterroso / Willdan Felix Monterroso / Willdan	CPUC/CPUC Staff Amy Reardon / CPUC Peter Biermayer / CPUC Rachel Murray / DNV IOU/POU Andres Marquez / SCG Ajay Wadhera / SCE Danny Ng / PG&E Harpreet Singh / PG&E Heming Chen / PG&E Henry Liu / PG&E James Choi / SCG James Gringas / PG&E Jessie Wang / SDG&E John Zwick / SDG&E

	In-Person	Via Telephone
		Mike Walters / SCG Mina Sharobim / SCE Soe Hla / PG&E Tai Voong / PG&E Implementer / 3P / Consultant / Other Angela Crowley / RMS Antonio Aliberti / Cascade Energy George Wilkins / Willdan Janik Somaiya / Willdan Jeff Romberger / SBW Jim Hanna / Energy Solutions Jhonattan Sebastian / Willdan Lore Michael Green / Willdan Mohammad Dabbagh / NORESCO Nicholas Fette / Solaris Pablo Pecora / Willdan Paul Kuck / Energy Solutions Steven Apodaca / RMS Vivek Joshi / RI

Meeting Notes

I. Agenda Review and Quick Updates

Presenter: Ayad Al-Shaikh
Materials: Cal TF Meeting Presentation (PDF)

Steven Long: is Cal TF part of viable electric alternatives / exempt gas measures discussion?

- Ayad Al-Shaikh: Cal TF will want to be involved but so far it has just been about identifying what measures are exempt and non-exempt.
- Steven Long: I think all the PAs and even implementers should be part of that group as well.
- Ayad Al-Shaikh: We can figure out a way to get people involved.
- Andres Fergadiotti: We are marching through the first items, I think it would be good to talk to other people to come up with solutions.
- Steven Long: I would like to be involved.

- James Gingras (PG&E): I would think the future increased gas cost will make natural gas savings measures more cost effective.

Steven Long: Part of the issue is people looking at measures to see if they will be impactful during the year, having gone through measures and being discouraged because it might not have enough impact. The ET programs are doing this already, I know the gas one is, but I don't think the New Measures is where the focus is but most of that is way out-that is not ready for measure packages. How can we get low impact measures in quicker, just the process is taking forever.

- Andres Fergadiotti: What do you mean by low impact measures?
- Steven Long: Niche products with niche applications, like the asphalt mix.
- Andres Fergadiotti: Is there a magnitude of savings?
- Steven Long: Savings, market, and where it is in the life cycle.
- Ayad Al-Shaikh: Good point, there is something already like that in the guidance document.
- Steven Long: We have to figure out how to get it through the process quicker.

Roger Baker: What exactly are we commenting on - the database?

- Ayad Al-Shaikh: Yes, the database.
- Roger Baker: Would it be something like the eTRM?
- Ayad Al-Shaikh: That is a good question, not sure what it would look like yet, but we would just want to make information available.
- Andres Fergadiotti: A linkage between databases would be good to consider.

Spencer Lipp: We need to think of the effort that it takes [*for measure collecting measure property data*], understand the level of effort vs. the value?

- Andres Fergadiotti: We are doing it based on the requirements in the measure package, historically we do not think about implementation during development and we need to change this and start thinking about this.
- Steven Long: The issue is not the requirements, it is more if the interpretation on how these apply.
- Ayad Al-Shaikh: That is what we want figure out.
- Spencer Lipp: Why is this recommend and not required, I am scared the IOUs will say it is needed, why is it recommended, what is the value, and if there is value, why is it not required?
- Ayad Al-Shaikh: I have either seen required or not required.
- Spencer Lipp: Sometimes they become requirements and are interpreted as requirements even if they are recommended.

Lake Casco: You really need to consider the value of collecting something, we need to consider risk, what is the risk if something is not collected. What should the rigor be if it does not affect costs or savings.

- Spencer Lipp: There could be other ways to manage risks, maybe in some circumstances that is ok, some might affect cost effectiveness or other factors.

- Andres Fergadiotti: We have seen projects that do not meet the basic industry standard guidelines and this is important. But it is also important to implement these energy efficiency measures so we need to make sure that we can work together.

II. eTRM Updates

Presenter: Tomas Torres-Garcia
Materials: Cal TF Meeting Presentation (PDF)

John Zwick: If you add up the development hours, how does that match up with the eTRM annual budget for 2023?

- Ayad Al-Shaikh: It is under right now, a portion of the budget for bugs and minor enhancements that we are not touching so if other things come up we can pull from that.
- John Zwick: Are you accounting for enhancements that might help with the gas incentives decision?
- Ayad Al-Shaikh: We do not know what that is now but we are flexible.
- Tomas Torres-Garcia: We have flexible hours later in the year that we can pull from to address enhancements like that one.

Group 1:

Felix Monterroso: So if we have a MP that will be available in 2024, will we be able to see the comparison in Q3/Q4 of 2023 to see the proposed changes? Or will we have to wait until the measure is approved.

- Tomas Torres-Garcia: We want to give that power to the Lead PA, if they want that info to be public or not, if they have comparisons that they are comfortable with sharing during production then we would do that before the measure is approved.
- Ayad Al-Shaikh: However, note that because it is still in development the values/info might change.
- John Zwick: So at this point you are only creating the ability to do it? Not telling people to/when to do it?
- Ayad Al-Shaikh: Correct, just creating the ability now.

Group 2:

Armen Saiyan: Is this adjustable by system admin? So that they can keep on adding warnings to the enhancement?

- Tomas Torres-Garcia: The system admin would not have the power to do this, it would be the developer. However, this would build the foundation and it would be a lot easier to add to it later down the road.
- Ayad Al-Shaikh: There are a lot data validations that we are tracking but are not doing now, we can build things like this later.

Steven Long: What happens to the rest of the list? Does it just sit there until the next enhancement prioritization?

- Tomas Torres-Garcia: Correct, we will have a similar process for 2024.

Andres Fergadiotti: Is there anything to tackle the issue where a 3rd party is really interested in a MP and wants to have visibility during development, do I still need to go through you or is there an enhancement that would allow me to give them visibility?

- Tomas Torres-Garcia: They would still have to go through me currently, there is an enhancement that would allow the PA to give the 3rd party visibility but due to survey data it got pushed down the list to group 3 but if stakeholders want to move this one up then we certainly can. However, one thing to keep in mind is that the coversheet enhancement and the measure development activity enhancement will provide stakeholders with this information if the Lead PA wants to make the information public.

Martin Vu: CalNEXT process has a lot of similar information, is there a mapping or handshake with some information coming out that effort that recommends transfer into Cal TF that can connect here without rework or manual copy and pasting?

- Tomas Torres-Garcia: This report would only show deemed measures that are in the eTRM, what you are talking about is before the eTRM.
- Steven Long: That seems more of like what Ayad was talking about earlier.
- Ayad Al-Shaikh: It is similar, there are things that we did not get too, one of them was the funnel to the eTRM to make that transfer happen but no one voted for it. There is a lot of value in that but we are not there yet.

Andres Fergadiotti: Do you have a table that will describe the level of resources that are associated with each recommended enhancement?

- Tomas Torres-Garcia: There is flexibility for group 2, group 1 is more solid but we are still trying to balance group 2 with the regulatory enhancements.
- Andres Fergadiotti: From a management perspective, may also want to evaluate the criticality of the enhancements vs the level of resources to support that enhancement. How much will it cost IOUs to work with that enhancement.
- John Zwick: Each enhancement has development hours, group 1 is locked in, group 2 is not locked in yet. Are we expecting 2 sprints for each group, is that right?
- Tomas Torres-Garcia: It is somewhat right, we are planning for 2 sprints and have buffers in case other things come up, we will cover this during the schedule.

Steven Long: So just to confirm, there are several measures that are somewhere that belong the 2nd list that are not showing up in the review report so there is a never land right now?

- Tomas Torres-Garcia: That is not the case, this is only affecting measure updates where the measure package plan is always associated with the earliest version of the measure, a new measure that passes the measure screening committee will always have a shell created.
- Steven Long: Are there measure packages that stuck there now?
- Tomas Torres-Garcia: No measures are stuck now, we have fixed all of them currently.

Andres Fergadiotti: One item that I have not seen here is the calculation of percent savings from versions of measure packages did I miss that?

- Ayad Al-Shaikh: It is included in the cover sheet.
- Tomas Torres-Garcia: Also in the measure development activity report, this is where a base user would be able to access this information.
- Andres Fergadiotti: Do we still need to discuss the methodology for that or has that been decided?
- Ayad Al-Shaikh: The only methodology that is in question is how to come to a common fuel, converting to Btus and how that is done during the life time. We still need to do that but it is too much detail for today.

Gary Fernstrom: You briefly mentioned life time Btu, would this be site Btu or source Btu?

- Ayad Al-Shaikh: The only times this comes into play are fuel sub measures and try to answer how things are changing from one measure to another. Right now, we want to use the same methodology that is used in the fuel substitution calculator, but nothing is final now so if you have ideas let us know.
- Steven Long: That is a good point here, in essence moving the emissions from the site to the source.
- Gary Fernstrom: I think of it with respect to fuel switching but also in respect to TSB and decarbonization. If we switch electric uses which would be expressed in life time Btus around in time that is when they are used relative to availability of renewables. It has serious impacts on carbon production so if we find it too complicated to use source Btus, we understand that is complicated because you question what conversion factor to use for what place and what applications. However, if we do not use source Btus, we have to think about a converter that would allow users to make that conversion and evaluate what is happening with carbon production.
- Steven Long: The avoided cost calculator has factors, it does not do the time of day thing but this might be a starting point.
- Ayad Al-Shaikh: The other calculator does have it annually, there is a different conversion per year, not sure if it is site or source.
- Andres Fergadiotti: Before we start getting too excited, the intent is simple, understand the variation of savings between one version to the other.
- Steven Long: Yes, however, fuel substitution has made this more complicated.
- Andres Fergadiotti: The original intent is for the CPUC to see if there is a big change in savings, but it is just the magnitude of a scale of numbers between one version to another. I think using site would give you a good approximation.
- Steven Long: You can always include two values, but if we did not have fuel substitution this would be exactly the same.
- Gary Fernstrom: Time of day makes a huge difference; in the summer we have more renewables and in the winter at night we do not. So there is a significant carbon foot print associated with when energy is being used.
- Andres Fergadiotti: These are valid questions, but in the context of just seeing magnitude of a scale of numbers, this is a different story.
- Lake Casco: The avoided cost calculator (ACC) has hourly GHG and source Btu values so the data is there if we ever get to that point.

John Zwick: We are working on integrating the CCAs and the RENs but I do not see them on the list? Can we included them?

- Tomas Torres-Garcia: We will go ahead and include them on the list moving forward.

III. 8A Cal TF Roadmap Update – Scope and Sequence

Presenter: Ayad Al-Shaikh & Arlis Reynolds
Materials:

eTRM Extension:

Steven Long: I know this is meant to be high level but any estimate on how much effort each of these points, huge or not worth it? I like the EnergyPlus integration idea but I can see it being a huge effort and needed a lot of maintenance.

- Ayad Al-Shaikh: We are not there now.
- Steven Long: Gary's question a few minutes ago relates to #1 and this one (#4) right? You need to have both of those to do that.
- Ayad Al-Shaikh: Yes, they get more impactful when you have loadshapes that are not so generic.

Andres Fergadiotti: I am assuming the loadshapes will have a huge impact on TSB correct?

- Ayad Al-Shaikh: It is very important.
- Andres Fergadiotti: We have to start thinking about how these topics will influence those estimates.
- Ayad Al-Shaikh: Armen always has a good point, if you can do this then you can start valuing that energy for preferred upgrades to the grid.

Andres Fergadiotti: With integration are you meaning the characterization of the measure using EnergyPlus housed in the eTRM? Or do we want to run the models in the eTRM? Or just the assumptions?

- Ayad Al-Shaikh: The assumptions will be there, the initial thought was to house the parameters that define the base and measure cases and that would be the driver for running the models so you can suck in the results.
- Steven Long: And you could actually do a custom calculation?
- Ayad Al-Shaikh: Other jurisdictions do that now, but initially this is deemed related, however, there are a lot of opportunities there.
- Armen Saiyan: You will need #3 (develop tools for difference stakeholders and use cases).
- Steven Long: When you are putting the costs signs on these, maybe put an extra one there, this one can be costly.
- Lake Casco: Also have to think about processing time, some MFm models take days to run sometimes.
- Charles Ehrlich: There are other ways EnergyPlus data can be shared, you can extract an object from the model and then share the design of a special system and plug that in to other models, so you can think of that integration in many levels. Does initiative #3 address the development of APIs to access, for example, the Shared Data tables?
- Roger Baker: There are many end points available today, real time interactions with different clients is a different story.
- Ayad Al-Shaikh: Some capabilities with API are already in place, there might be other information that we can make available.

Armen Saiyan: For "fostering regional licensing…" does that require more cooks in the kitchen?

- Ayad Al-Shaikh: It might, not sure what this would look like yet. It could be a different portal for different people.

Andres Fergadiotti: We need more clarity on what we mean by integration, I might think about it differently than other stakeholders.

- Ayad Al-Shaikh: For voting please consider only deemed. Make the running of the models and pulling in the data more easier.
- Armen Saiyan: The way I think about it is like a MASControl version of eTRM.
- Andres Fergadiotti: We do not connect the batch processor with the eTRM, the characterization and inputs are already a requirement but we are not enabling the run via eTRM. Why would you want to do it?
- Steven Long: There is a lot of opportunity for this. Simplify, give a lot more versatility to measure development, and a huge potential to custom.
- Ayad Al-Shaikh: Even for making some of the parameters visible, that is not always done now.
- John Zwick: Are we not just collecting measures now?
- Ayad Al-Shaikh: Yes, but we only have the model files after they are run.
- John Zwick: The first step is to lock down versioning. We can maybe make a tool to interface with EnergyPlus. What do we want to consider developing models, tweaking models, running them?
- Ayad Al-Shaikh: This would just be used for running them, we will need to drive out the details and what will make it work. This is more of what is the value of doing it.
- Armen Saiyan: There could be more streamlining, instead of uploading the final values into the eTRM you can just pull them in.
- Andres Fergadiotti: Personally, I just do not see running the models in the eTRM. There are a lot of powerful interfaces to do what we want, hosting the files in the eTRM is really good, but running the models is just something I do not see.
- Steven Long: There used to be a SW custom tool that did this before, but there was a big challenge on updating it and the cost that are associated with keeping it good. The effort to update that tool/interface is where costs go up a lot, might not be worth it.
- Roger Baker: We just want to have visibility in the eTRM, just have structures that would translate from point A to point B. There has to be some separation, the idea is great, we just want the eTRM to be able to intake the data and reduce the manual process that it takes to get these values into the system.
- Nicholas Fette (via chat) Some modeled measures already include a reference attachment with scripts to automate the steps to run simulations/analyze/prepare files for eTRM upload. A set of templates or a standalone tool might work for most needs. Perhaps eTRM could simply have an API for external tools to retrieve a supporting data table (or JSON/other data structure) that documents the simulation setup.

<u>“All Source” eTRM:</u>

Spencer Lipp: Are you referring to site specific inputs in order to develop those NMEC estimates?

- Ayad Al-Shaikh: Maybe not initially; to start, modeled results from deemed measures and how you would use those to estimate your savings. Long term, maybe you would use site specific inputs from a prototype to get the values.
- Spencer Lipp: Are you referring to site based NMEC or population based NMEC?

- Ayad Al-Shaikh: Nothing specific now, what do you think?
- Spencer Lipp: The problem with site specific and using deemed values is that you are making a judgment on the site specific baseline and using deemed values if that site qualifies. Deemed values are a big average, using deemed values to estimate savings to determine eligibility with NMEC is not a correct way of doing this in my opinion. I do not know how to make that happen.
- Steven Long: The challenges with deemed numbers and real project numbers is that they do not apply. Costs can go up, if you want to present a project as a deemed project then the values would not match the real numbers. From the customer's perspective these will be off and will not be what they expected. That is why I think it must be something you end up simulating.
- Ayad Al-Shaikh: The intent is to make the process easier; we do not need to solve the problem now.
- Steven Long: There are tools that have been developed, DOE and NREL tools, that make it a high-level analysis. Once again, if you are doing something such as typical building types, you would be able to run really fast and I think would be very valuable, but it will not work for everything.
- Spencer Lipp: There were a lot of discussions in the NMEC working group about a year ago about using deemed values, and there is a report. It would be good to see what the issues are from EM&V experts; I do not see the value but maybe there is some.
- Steven Long: Historically, those other DERs, DSM type activities there are different regulations, and the analysis is very different for each one. Low income is the logical one to move into the process, don't think it makes it easier to deal with the others, but you can do the same analysis.
- Armen Saiyan: The intent is to have everything in a single place so that you can easily find it for those types of measures. You might need to follow different methods and all that, whatever framework works is good, but the intent is to have it in one single place as a resource so that someone can easily find it.
- Spencer Lipp: I see value in using the same ACC for these things, to see what the actual value is. I see a lot of things that can be done.
- Roger Baker: The ACC is one start. In a lot of ways, it does make sense.
- John Zwick: eTRM is really good at some things. We need to stick with the basics, looking at different things there is already challenges we have brought up, we are funded by EE but if we want to bring in other portfolios then we need to think about strategy and not get overly complicated. Right now, with what is being discussed, there is a big jump we have to make to get customer data in the eTRM.
- Andres Fergadiotti: I agree with NMEC and comments from Steven, Spencer, and John.

IV. New Measures

Presenter: Ayad Al-Shaikh
Materials: Cal TF Meeting Presentation (PDF)

Steven Long: How would you reconcile this with the existing measure package?

- Felix Monterroso: We will talk about this a little later. We will need to inform the marketplace when end and expiration dates will happen and figure out if the measure package that is there will fit into this.
- Steven Long: So, one is not going away? You are sampling cutting 2 pieces of the market should we say?
- Felix Monterroso: Yes, I believe the other one is expiring at the end of the year. It depends on when this one gets approved, we would need to coordinate with SCE so that the same offerings are not duplicated.

Steven Long: Does the MLC include more offerings, is there a conflict between MPs, is there a conflict with the MATs with the other measure package?

- Felix Monterroso: There is no tool that will tell you what is a deemed and custom, ideally with the next MLC iteration, MLC will tell you what is deemed and what is custom, the transition is not yet developed.
- Steven Long: Are all the MATs in the MLC? Or only the downstream ones?
- Ayad Al-Shaikh: When you say downstream do you mean, NC, NR, and AR?
- Steven Long: Well, right, MAT, but I am specifically thinking upstream. The initial focus of the MLC was mainly direct install.
- Felix Monterroso: The MLC is mostly custom delivery, it does include NR and AR, it does have a capability for DI but that is custom. This MP will have AR, NR, and NC for downstream delivery / deemed DI, for all customer types and all the sectors.
- Steven Long: As I recall, the other one included upstream and possibly midstream.
- John Zwick: There is no AR upstream or midstream allowed, the MLC is based on AR so not used in midstream programs.
- Steven Long: So then the 2 MPs will have to co-exist? Because the MATs are different.
- Spencer Lipp: I mean you can just use NR, for upstream.
- Steven Long: I think there will be special cases with NTG.
- Felix Monterroso: Upstream is currently not included, the number of permutations is over the top so we needed to be strategic with the delivery types.
- Michael Green (from chat): High bays are only NR in the current measure package, but the new Measure Package will have AR, and NR.

Martin Vu: Is the MP updated to reflect the code change in the year? Does it include the AR MAT application types?

- Felix Monterroso: There are code requirements and ISP efficacies for savings, we did an ISP and grouped product classes and efficacy ranges. The code requirements are in the MP. The characterization describes the code in detail.

Steven Long: Is multifamily not in the tool? Where does that stand? Do you have any indication of them being integrated into the tool? Is there anything planned?

- Felix Monterroso: Multifamily new construction was not allowed for deemed, there are early opinions for this, but we decided to stop work on this for now to focus on the current scope of the MP. It is not planned, but it is a potential opportunity.
- Ayad Al-Shaikh: Just to clarify, your plan is to propose multifamily in the measure package correct?
- Felix Monterroso: Yes, the measure package will have multifamily and new construction.

Mike Casey: Is there a way to increase operating hours for industrial buildings? A lot of smaller facilities operate 2 to 3 times more than what is listed in the DEER hours.

- Felix Monterroso: The MP uses DEER hours because it only includes DEER building types, for that example you might need to do a custom project.
- Mike Casey: It is a gray area for industrial sector buildings currently, the DEER hours are for light industrial, and a lot of facilities do not align with that.

Armen Saiyan: How will this work for POUs? Regarding exposing permutations.

- Ayad Al-Shaikh: The process will be similar, we do <u>not</u> want to turn this into a full-time job, we would expose permutations on a month-to-month basis.
- Felix Monterroso: We also have a workbook that aligns with the eTRM measure detail ID, so that will match up with your claims. You can select the different parameters and will get the corresponding detail ID.

John Zwick: What is the process for this, will there need to be a claim before the permutations are exposed?

- Ayad Al-Shaikh: This will happen a bit earlier, ahead of the claim, a 3P implementer will tell you what they want to use before the application so that those permutations could then be exposed and available in the eTRM which will flow to the PA systems.
- Alfredo Gutierrez: They will need to have that knowledge at hand before the application so it will be way ahead of the claim.
- Felix Monterroso: Ideally, we want to see when a good time is to share the workbook to see what we can get in the pipeline and see what we need to turn on currently, all PAs and implementers.
- Alfredo Gutierrez: There is a workbook that Felix created that can provide you with everything you need to develop a claim, it just lives outside of the eTRM currently. This tool can be used to develop the pipeline and request permutations to be displayed in the eTRM.
- John Zwick: Is that status of the approach approved by the CPUC.
- Alfredo Gutierrez: The CPUC will approve everything in the measure package. We had conversations about the process approach back in December and they agreed with this approach.
- Ayad Al-Shaikh: Before moving forward with the enhancement we met with the CPUC to show them what the enhancement would entail and how it would work so they are very familiar with.
- John Zwick: Would this be approved and then go live in January? Is that the intent?
- Felix Monterroso: We ideally want to get this approved by Q3 or Q4, depending on review, feedback, and eTRM enhancements.

- Steven Long: Any thoughts regarding major changes to the ISP once you hit the end of the runway with the numbers you have now, any thoughts to review different technologies or is there a process for how changes can be made to the ISP?
- Felix Monterroso: There will be another slide on this, we are seeking guidance on how often that ISP needs to be done. We took pretty much every single category from the DLC the only ones that were not included were those that have low numbers of market products. Regarding the methodology we changed this from 2020 to 2021, looked at efficacy ranges; now we are looking at product count so that we do not leave 80-90% of the products out.
- Steven Long: The methodology instead of being the top quartile of the efficacy is the top quartile of the product count?
- Felix Monterroso: Product count based on efficacy.

Lore (via chat): I'm curious to hear about the suggested compliance requirements. Are you envisioning that these measure packages will follow the current lighting compliance and technical review requirements?

- Felix Monterroso: Everything we have done uses compliance products only so everything you claim will have to be a compliant product as well. Everything else would be the same as the existing measure packages, we are still waiting for additional feedback on a few things.

John Zwick: The concern that I have heard about is the POE for AR. What would be the filter to check eligibility before you go to ex-post?

- Felix Monterroso: We are still waiting for guidance; this could shape how POE works for AR measure packages in the future. Not sure what this would look like, we want deemed lighting measures to be easy so you do not have to wait 3 months, but we do not want to burden people with the POE.
- Sepideh Shahinfard: There is no streamline POE right now, the requirements now are the same between custom and deemed. The requirements that are there for custom apply to deemed.
- John Zwick: The POE will be site specific, but we will see what happens.
- Martin Vu: What is the timeline on the guidance?
- Ajay Wadhera: What I heard last is that CPUC is still working on it, have not heard an ETA yet.
- Peter Biermayer: We need to run the question by management, we are still waiting.
- Armen Saiyan: How soon will that workbook be available for stakeholders so that we can plan?
- Felix Monterroso: We are still testing, as of right now it works for specific product classes, we will need to have internal conversations to see when we can make this available.
- John Zwick: What programs is Willdan planning to use this in-midstream?
- Felix Monterroso: Downstream DI and downstream deemed
- Martin Vu: Is horticulture lighting on the exception list?
- Felix Monterroso: Correct, this is just solid-state lighting.
- Ajay Wadhera: Horticulture lighting is a different MP.

V. 5X Custom Initiative, Revised Workplan

Presenter: Arlis Reynolds
Materials: **Metric 5X Custom Initiative Workplan**, and **Cal TF Meeting Presentation**

Felix Monterroso: What is the timeline for the HVAC tool?

- Arlis Reynolds: We have been working closely with PG&E, there are about 2/3rd of the tool is done, maybe a month or two months, if possible, we want the CPUC to review for feedback.
- Danny Ng: the estimated timeline is pretty accurate, hopefully we can roll this out in a month or two.
- Andres Fergadiotti: We need to identify the validations that are done on the tool to make sure that there is a high level of reasonableness, this is very critical. Making these tools available is great, what kind of checks are done on the forecast of savings in the tool.
- Felix Monterroso: These are questions that we have had in the past, I would be interested in joining the team and review this criteria.

Cal TF Affirmation: Cal TF has affirmed the workplan.

VI. 6D Deemed Regulatory Updates

Presenter: Arlis Reynolds
Materials: **Cal TF Meeting Presentation**

Steven Long: Memos and dispositions were not always public, in the past that was not clear, now with things in CEDARs this is a lot better. Guidance documents, Impact evaluations and EM&V might be good to have.

- Arlis Reynolds: The concern with EM&V is that it is informative, but it does not go into effect until there is a resolution.
- Steven Long: Yes and no. There are some unwritten rules for custom, not sure if there are the same for deemed, but it would be good to have. One example is payback less than a year, that is more custom but still an unwritten rule. I am sure there are others for custom.
- Martin Vu: Are you talking about the CALMAC website that holds all the impact and process evaluations.
- Steven Long: That is the source of it, that data is there.
- John Zwick: It used to be that impact evaluations were completed and then they were reviewed and what was applicable showed up in the resolution. This last cycle did not work like that, evaluations came out, discussion happened with CPUC before reports were final to see what needed to be adopted, then they went into the updates, and all the updates came out with the resolution.
- Steven Long: My understanding that was before evaluations came out, utilities responded with a plan, some of it got done and some did not.

- John Zwick: What was mandatory showed up in resolutions.
- Steven Long: But there were not any resolutions before, there were only dispositions or directives.
- John Zwick: I think that was before my time.
- Steven Long: Are rulebooks under the PA guidance documents?
- Arlis Reynolds: Yes, there are under guidance documents.
- John Zwick: Another objective would be if something changes, it is important to keeping up to date to make sure that people are given the trigger for whatever action they need to take.

Steven Long: Version might need to be added, a lot of these things have history to when the changes are made.

- Arlis Reynolds: Yes, we will add.
- Steven Long: Related to awareness, timing and communications is an important part.
- Lake Casco: Level of understanding to why the changes are happening, is this part of it? Sometimes the reason why they change is not necessarily clear.
- Arlis Reynolds: Purpose or reason for a change instead of the source of the change? There could be a policy being updated by a certain resolution, but you want to make sure you understand why it was in the resolution.
- Lake Casco: Yes, we would love to know the reasoning behind it, a lot of this direction happens without justification. An example is, why is this measure being expired?

Rachel Murray: Some policy shifts are measure package specific that might not belong in the rulebook, some might belong in the rulebook. We should use the developed measure characterization platform for the rulebook but change the permissions, turn them around 180. CPUC and consultants will write the document and people would then comment on the changes.

- Arlis Reynolds: We will introduce this shortly.
- Martin Vu: Metric of success to add would be buy-in, make sure all stakeholders agree with this metric.
- Arlis Reynolds: Yes, that would be a measure of success.
- Rachel Murray: I would be interested to hear if there is any feedback regarding the way memos and dispositions are posted now, we want to make sure that everyone is aware and can sign up for notifications on CEDARS for specific documents.
- Steven Long: The problem with CEDARS is not clear what subtopic it is, so I usually just search by date. On the rulebook we should have a search function to be able to look things up.
- Rachel Murray: Thank you for that feedback. I will see if there are ways to make these notifications more useful.
- Spencer Lipp: I like the idea of a real time rulebook; the questions and comments are good to keep people informed. What concerns me are the continual updates for policy that might be better to consider bus stops so that you are not getting pinged every single time an update happens.
- Arlis Reynolds: We can talk about the scheduling of updates to see what the best solution is, monthly or quarterly.
- Spencer Lipp: Probably go back to the bus stop decisions to understand the reasons why they wanted to do the process that way, maybe you can do more frequent updates.

- Arlis Reynolds: What we like about this solution is that you don't need to be aware of everything else happening; it all gets fit into one place, and you just need to look here.
- Steven Long: With the versioning you would be able to understand differences; one can be bus stop, while the other ones for live updates can be real time.
- Lake Casco: Will there be input/direction of when information goes live? Relevance is important. When will things go into effect?
- Rachel Murray: We would expect to note when things are becoming effective within the rulebook, we would note if something were on the horizon.
- Armen Saiyan: It might be good to layer in checks within the eTRM if feasible, to see if it is in compliance with the rules. Depends on what the checks are and how they are automated.
- Paul Kuck: I like the idea, one central spot for information. Now you can have 6 documents opened and still not have an answer.
- Myrna Dayan: Would it link to measures?
- Arlis Reynolds: We had not thought about this, but we can consider, the idea would be to try and get everything into one place.
- Ayad Al-Shaikh: We would need to explore real examples but there are valuable connections that you can make with everything being in the same database.
- Spencer Lipp: This can also be use-category/end use dependent.
- Lake Casco: This would be useful for referencing in the eTRM, reference the rulebook with a special link or something to the rulebook.
- Charles Ehrlich: We should think about who is making the rules and why the rules are made. Is it an IOU rule and why was it created?
- Steven Long: Is this more of a policy stuff rather than IOU "practices"? Some IOUs will interpret something different than others; this is something that we found in custom.
- Armen Saiyan: It should also be the "what is the best interpretation?"
- Arlis Reynolds: This rulebook will only include SW policy, but we can consider PA specific rules.
- John Zwick: Is the root cause that we do not have the right tool or the bandwidth to do the updates more frequently? We would be better in a civil law scenario rather than common law. Cal TF can help with the rigor of making the updates more frequently to help the problem.
- Arlis Reynolds: Talking through how and when this gets updated and then how that information flows can work through some of the discussions about a more consistent approach to how to set policy and make policy effective.
- John Zwick: Maybe having information, a disposition came out, it will join the rulebook in 3 months.
- Steven Long: Will help the issue we see with interpretation.
- Andres Fergadiotti: Being able to have a place where we communicate and agree with CPUC/CPUC Staff so being able to relate that information so that other IOUs can see that information, live information is important since some of the information might affect other IOUs. Being able to share guidance is important.
- Ayad Al-Shaikh: If you had a measure log post with clarification on guidance in your MP then you could maybe post that into the rulebook or consolidate it.
- Andres Fergadiotti: It can be an addendum so that we can consolidate it, but it would be nice to have a place where this information lives, maybe an appendix.

VII. June 21 Data Charrette

Presenter: Ayad Al-Shaikh & Arlis Reynolds
Materials: Cal TF Meeting Presentation

Steven Long: So is this less about reporting and more about how to leverage big data?

- Arlis Reynolds: It is both, what we are calling part one would be the current challenges, what do you do now and how do we solve those challenges.
- Ayad Al-Shaikh: Current challenges, how do you make reporting easier, then what are the other challenges that we can focus on.
- Steven Long: Some proprietary stuff, Co-Star, can also be helpful, but this might not be free information.

Arlis Reynolds: Double-counting would be an issue that we would love to solve. How do you make sure customers are not participating in more than one program with a data system.

- Steven Long: That is a big one, not only for utilities but also for implementers.
- Spencer Lipp: We need to have a sense of what the future stage looks like, we do not want to put that off. We need to understand what that would likely look like to make sure that we can identify those high opportunities, decarbonization, and what data could be helpful.
- Arlis Reynolds: We want to first start with what can we do now, what is not working now, what are the easier challenges and work our way from there.

Andres Fergadiotti: What processes do you want to improve? What is the data that will help improve or enable the processes. Example: What data do you want to use if I want to improve the DEER prototypes; I would be interested in the building stock, would want to look at Title 24, but the problem I want to solve are the DEER prototypes.

- Arlis Reynolds: We would ask stakeholders to identify the issues and the data.
- Ayad Al-Shaikh: Do people know what some issues are and what the solutions can be?
- Andres Fergadiotti: There are a lot of sources of data, but it is all about the end goal and what data we are using to inform the solution for those goals. We can connect offline to talk more about the issue (it is identifying the problem then the data available).

John Zwick: Data governance for IOUs, is there a way for us not to make it as time consuming as it takes now. You can use data for a lot of things, but in the scope of the eTRM it is more related to reporting.

- Andres Fergadiotti: We want to be sure that we are matching the claims to the right stock in CA and how well we are mapping them.
- John Zwick: It would be great if we could validate claims using other sources and compare them together, that would be really useful.
- Andres Fergadiotti: We are trying to improve building type definitions with the right stock, this is another activity but similar idea. We see a lot of claims with “Com” or “Res” but improving and helping implementers to map savings to the right building type would be very beneficial.

Andres Fergadiotti: Anything on data property? I am not too familiar with that now can we briefly talk about that? Including code requirements would be beneficial.

- Ayad Al-Shaikh: We are drafting the lists for measure packages now, SDG&E is helping us get through most of this right now.
- Andres Fergadiotti: Is there a cost associated with this, a program that requires data collection vs. one that does not have any requirements. It would be great to have implementers and 3rd parties to comment on this.
- John Zwick: The requirements are already in the MP that is the reference we are simply just putting this into data so that they are more usable, so that is already there, we are just making the process easier/quicker so that it can be exported and used in the system.
- Ayad Al-Shaikh: It also provides guidance on how to collect the data and how it should be done if it cannot be collected a certain way. Less interpretation.
- Charles Ehrlich: I really like the data property idea.
- Steven Long: The costs relate to how the requirements are interpreted, that can range from a small cost to a larger cost.
- John Zwick: These are requirements, so we must collect them, this just makes the data more useable and reduces interpretation. Theoretically, it would make things more resilient.
- Randy Kwok: The purpose is that everyone is collecting data in a consistent manner, this would make the data usable. Everyone is going to QC it and accept it before moving forward.
- Charles Ehrlich: If workbooks have live links to the eTRM then the data can be automatically updated and revise this as needed.

John Zwick: Gas initiative, need to identify at the permutations level which are not cost effective and increase the EUL to 30 years. We have been directed to create measures for building envelope so there is a lot of work for PAs, we need to identify the schedule and the solution.

- Ayad Al-Shaikh: There are a lot of measures that fall into this category of gas saving and not gas burning so we need to look at the criteria.
- John Zwick: The criteria and the scheduling, do we use old models, or do we wait until the new models are developed by the CPUC, maybe it is a multi-year effort.
- Gary Fernstrom: What about electric measures related to new construction and building shell?
- John Zwick: What I am talking about is related to gas measures related to new construction. We are being asked to develop measures for the equity portfolio for 2024. There are a lot of details where they can and cannot be used, commission wants us to emphasize measures that save gas but do not burn gas. We are asked to develop these measures for the equity portfolio.
- Gary Fernstrom: There are a lot of measures that can save gas in the existing homes that utilize gas, so I understand how this could be a lot of work and opportunities.
- John Zwick: In order to offer incentive, you will need to prove cost effectiveness or that it does not have a viable electric alternative.
- Gary Fernstrom: So burning less gas is not viable, that is a lot of work.

Steven Long: What is the ETA on posting measures under development? The interim?

- Ayad Al-Shaikh: The information changes frequently, this will become outdated as soon as it is posted. The long term solution is the right one, we can update it on a quarterly basis but if there is one that you are interested in you can reach out to me. We can put it in the new measure section on the website.

Martin Vu: What about the ones that are being screened?

- Ayad Al-Shaikh: That information is on the Cal TF website, the gap that still exists is between when measures make it out of the measure screening committee and when they are submitted to the CPUC for review.

Martin Vu: New ideas that are not in the screening committee do not get captured right?

- Ayad Al-Shaikh: Correct, they are only captured if they are submitted to the measure screening committee.
- John Zwick: That is something that Cal TF team is working on right? Looking for new ideas?
- Ayad Al-Shaikh: It is starting, there is low hanging fruit like looking at other jurisdictions and seeing what is out there and viable. That is one source but there are a lot of sources.
- John Zwick: Yes, the number of measures that we must develop is something that we need to agree on, not all of our resources should be devoted to this. Need to look at the value to the portfolio.
- Steven Long: Also, review resources, that is a big point. Even in the equity portfolio, they might not be able to implement everything.
- Andres Fergadiotti: We should bring back measures that we have sunset, we do not need to be so stringent on those measures, we can recycle offerings that we can bring back.
- John Zwick: That is part of the decision, to bring back expired measures. The equity portfolio is part of the energy efficiency portfolio but it is not subjected to cost effectiveness.
- Alfredo Gutierrez: You will need to use the standard now, some might be really old, 2016-2017.
- Steven Long: We should focus on what is more important.
- John Zwick: It also depends on who determines the value.