



# Agenda

## California Technical Forum (Cal TF) Meeting

September 22, 2022

Location: Teleconference Only

9:00 a.m. – 11:00 a.m.

11:30 a.m. – 1:00 p.m.

Please join my meeting from your computer, tablet or smartphone.

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Access Code: 540-540-781

Time	Agenda Item	Discussion Leader(s)
9:05 – 9:15 am	<b>Opening</b>	Arlis Reynolds
9:15 – 10:00 am	<b>Custom Activity Update</b> <b>ACT:</b> <ul style="list-style-type: none"><li>• Feedback and Comments on measures selected and eTRM enhancements</li></ul>	Arlis Reynolds Chau Nguyen
10:00 – 11:00 am	<b>Deemed Measure Property Data Custom Tools</b> <b>ACT:</b> <ul style="list-style-type: none"><li>• Feedback and Comments on structure of data and process</li><li>• Join the subcommittee meeting (Oct 6<sup>th</sup>)</li></ul>	Ayad Al-Shaikh

**11:00 a.m. – 11:30 a.m.**

**Break**



Time	Agenda Item	Discussion Leader(s)
11:35 – 12:30 pm	<b>New Measure Process</b> <ul style="list-style-type: none"> <li>• <i>Food Service Measures (Paul Kuck – Energy Solutions)</i></li> <li>• <i>IOU Sunsetting Measures (Ayad Al-Shaikh – Cal TF Staff)</i></li> </ul> <b>ACT:</b> <ul style="list-style-type: none"> <li>• <a href="#">Feedback and Comments</a></li> </ul>	Ayad Al-Shaikh
12:30 – 12:45 pm	<b>eTRM Release Documentation</b>  <b>ACT:</b> <ul style="list-style-type: none"> <li>• <a href="#">What eTRM training is needed</a></li> </ul>	Tomas Torres-Garcia
12:45 – 1:00 pm	<b>Cal TF 2023 Business Plan</b>  <b>ACT:</b> <ul style="list-style-type: none"> <li>• <a href="#">Feedback and Comments</a></li> </ul>	Arlis Reynolds Ayad Al-Shaikh

**Meeting Materials**

- [1] TF Updates and Custom (Presentation on [Website](#))
- [2] Deemed Measure Property Data Memo (PDF on [Website](#))
- [3] Deemed Measure Property Data - Validation List (Excel on [Website](#))
- [4] Deemed Measure Property Data Presentation (Presentation on [Website](#))
- [5] New Measure - Food Service Program with Sunset Measures (Presentation on [Website](#))
- [6] eTRM Release Documentation & Training (Presentation on [Website](#))
- [7] Cal TF 2023 Business Plan Update (Presentation on [Website](#))



## Meeting Attendees

	<i>In-Person</i>	<i>Via Telephone</i>
<i>Cal TF Staff</i>		Ayad Al-Shaikh Arlis Reynolds Chau Nguyen Tomas Torres-Garcia
<i>Cal TF Members</i>		Abhijeet Pande Adan Rosillo Alfredo Gutierrez Anders Danryd Andres Fergadiotti Andrew Parker Arash Kialashaki Armen Saiyan Briana Rogers Christopher Rogers Dave Hanna David Chan Denis Livchak Eduardo Reynoso Gary Fernstrom George Beeler Jay Bhakta King Lee / CLEAResult Kristin Heinemeier Lake Casco Steven Long Martin Vu Mike Casey Myrna Dayan Richard Ma Roger Baker Spencer Lipp Tom Eckhart Vrushali Mendon
<i>Non-Cal TF Members</i>		CPUC Amy Reardon / CPUC Peter Biermayer / CPUC  IOU/POU Ajay Wadhwa / SCE Andres Marquez / SCG Babak Yazdanpanah / LADWP Heming Chen / PG&E Henry Liu / PG&E Justin Westmoreland / PG&E Merry Sweeney / SDG&E Munsoo Choi / SCG



	<i>In-Person</i>	<i>Via Telephone</i>
		Olof Bystrom / SMUD Sean Lim / LADWP Soe Hla / PG&E Wenyan Wang / SDG&E  Implementer / 3P / Consultant / Other Angela Crowley / RMS Cameron Tuttle / DNV Daniel Pidgeon / DNV Edward Ruan / Frontier Energy James Hanna / Energy Solutions Jennifer McWilliams / DNV Mohammad Dabbagh / NORESKO Paul Kuck / Energy Solutions Steven Apodaca / RMS

## Meeting Notes

### I. Opening

*Presenter: Ayad Al-Shaikh and Arlis Reynolds*

*Materials: None*

### II. Custom Activity Update

*Presenter: Arlis Reynolds and Chau Nguyen*

*Materials: [1]*

#### Custom Measures

Amy Reardon (via chat): How much have PA and ED staff been involved in development? E.g., has the ED custom team provided input?

- Arlis Reynolds: This was the first step, selecting measures, good value measures that we want to try to standardize, now would be a good time to connect with PA and ED staff to get their input.
- Amy Reardon: Where can I find the documentation for the custom team to provide feedback?
- Arlis Reynolds: The Custom Subcommittee page on the Cal TF website has a request for input posted. All feedback is helpful.
  - [http://www.caltf.org/s/Cal-TF\\_Custom-Subcommittee\\_Request\\_01-Custom-Measure-Information.docx](http://www.caltf.org/s/Cal-TF_Custom-Subcommittee_Request_01-Custom-Measure-Information.docx)



Abhijeet Pande(via chat): Is the Custom Subcommittee SharePoint accessible to non-subcommittee members?

- Arlis Reynolds: We can certainly do that, please send me and email if you would like to have access to the Custom Subcommittee SharePoint site (arlis.reynolds@futee.biz).

Amy Reardon: Regarding measure standardization approach, in the past we have used the DEER resolution process, there might be another process that you have in mind but let's look at this one on one and talk about how to move forward. Let's have a follow-up meeting and discuss the format regarding the CPUC Early Opinion request.

Amy Reardon: What about emerging technologies? We have done some work with tracking these in existing deemed measures in the eTRM. Will this (custom) include emerging technologies measures?

- Ayad Al-Shaikh: There is a new measure review process that seems like a good first step, and it's a good feeder to other places if appropriate, this will also work for other things such as EPIC.
- Amy Reardon: We need a more solid home for ET projects, they share a lot of similarities with custom so it would be good to build a home for these if it is determined that this is possible
- Ayad Al-Shaikh: We can follow up.
- Abhijeet Pande: If there are certain ideas that the team has, I would be interested in those because the transfer of ET in the portfolio is a strategic goal so we want to take things into consideration or add things that we missed.
- Amy Reardon: It is very early, none now, but will reach out.

Justin Westmoreland: I am concerned about RCx, it is very complicated depending on the measure. I think it is very ambitious, what is the intent here? RCx may be too much of an undertaking because you get a lot of subsets in retro commissioning.

- Arlis Reynolds: Thank you for that feedback, is there a PG&E retro commissioning tool?
- Justin Westmoreland: There is an HVAC RCx tool, but there are limitations. We should be more specific on what measures we want the tool to be used for.
- Spencer Lipp: I agree, I was involved in putting RCx there. Generally, there are common measures, like economizers/scheduling/resets, that are part of a lot of RCx projects. So, the goal would be to identify more common measures and try to develop those strategies and expand as we go. We are not expecting to develop a tool for the whole RCx but more of a tool for the most common measures.
- Abhijeet Pande: Is the goal to come up with not only standardized savings calculation but also standard approaches? Are we identifying the industry best practices that will be the basis for the measures?



- Spencer Lipp: Yes, the goal is to make all the best practices or most common approach available. Just trying to standardize techniques, standardized collection information, baselines (this is easy for RCx), and making the information available. Understanding that this is custom, and it does not have to be followed.
- Abhijeet Pande: Going back to Justin's point, the reason I mention if there is more of a definition to what the definition of the measure is then yes that helps. If the committee says if you do it XYZ way, then the calculations are more standardizable.
- Arlis Reynolds: That is the goal, standardize but start with most common measures and build from there. One of the first steps for each measure is to define the scope and boundaries of the specific measures that we will develop standard approaches for.

**ACT:** Please send questions or input on selected custom measures or proposed measure standardization approach to [arlis.reynolds@futee.biz](mailto:arlis.reynolds@futee.biz).

This Request for input document describes the types of information we are looking for for each measure: [http://www.caltf.org/s/Cal-TF\\_Custom-Subcommittee\\_Request\\_01-Custom-Measure-Information.docx](http://www.caltf.org/s/Cal-TF_Custom-Subcommittee_Request_01-Custom-Measure-Information.docx)

### eTRM Enhancements for Custom

Andrew Parker (via chat): Will the version control for external calculators include any way to document a) what changes have been made between calculator versions and b) whether the updates are backwards-compatible or not? Figuring out what changed in the calculators will be difficult or impossible otherwise.

- Chau Nguyen: We will not have any automatic tracking, but we can add change descriptions which will detail what changes in the measure at a high level to manager the version control.
- Armen Saiyan: Will the change description be published, I understand of deemed measures that they are not, it is only for the development process.
- Ayad Al-Shaikh: These are public, you can get them by clicking on the version history or via a report. The plan for custom is the same, the change description will be public.
- Andrew Parker: I understand that you won't be able to detect the changes in the calculator itself, which is why the change description will be so important.
- Lake Casco (via chat): I don't think that the version history has a change description if you're not approved as measure developer for that measure.
- Chau Nguyen (via chat): If you view the Version History as a base user, you should be able to see the Change Description by hovering your mouse on top of it.

Lake Casco: Are we not going to be able to run savings and calculations in the eTRM? Will this be more to store external tool?

- Arlis Reynolds: Chau described our initial steps, "Phase 1" enhancements in the eTRM, which are simple adjustments just to be able to host measures in the eTRM. What you



are describing is more of a Phase 2 step, which we are exploring with the software developer and which will require some new capabilities for the eTRM. We can discuss future steps at the October meeting.

Armen Saiyan: I propose not to remove the DEER Differences analysis, maybe it would be good place to include the difference in DEER methodology. Having context about a DEER method that is available but describing the details on why this methodology is different.

- Steven Long: To add on, maybe a place where you can add how this is similar/different to other deemed measures, at a different size or different variations.

Steven Long: One more thought, when talking about the naming methods. There is technically one solution code, but there are multiple ways a measure could be done. Is the goal for the eTRM to capture only one or the best of the methods?

- Arlis Reynolds: That is something that we will tease out as we go through the process of developing the methods. The mark for success in terms for standardizing any non-deemed measure is that once that approach this is Cal TF approved then this is a robust method for estimating savings. There might be multiple approaches (e.g., depending on available data), so how we include those multiple methods in the eTRM is something that we will need to think and work on in the subcommittee.
- Steven Long: I think its good to keep in mind since there might be a few more good methodologies.

Martin Vu (via chat): Will custom measure developers be responsible for retrieving CPUC dispositions or EM&V studies are considered before starting the process to ensure current policies are captured? Or will CalTF staff retrieve that information first as a checkpoint?

- Armen Saiyan: (via chat) I would think both parties should be responsible for getting all relevant data to develop the measure (and QC).
- Arlis Reynolds: This is something we would want TF member and stakeholder feedback on; we want to capture as much as possible to help in this process. There so many experts in a lot of these areas, so our ask is to please let us know if there are other disposition, data, studies, etc. that are relevant to this work.

Ajay Wadhwa (via chat): I recommend dispositions be maintained within eTRM as reference. You can probably maintain it by end use, etc.

- Martin Vu (via chat): Thanks, Armen for your feedback and that would be great Ajay if dispositions could be maintained within the eTRM as a reference.
- Armen Saiyan (via chat): Agreed, good idea Ajay.
- Arlis Reynolds (via chat): Thanks for your recommendation regarding Dispositions in the eTRM. We will discuss that topic in the October meeting.



Arlis Reynolds: For the October Charette, you will receive an updating meeting invite with the remote login information.

**ACT:** Please use this form to RSVP if you would like to attend in person.  
<https://forms.gle/NxKXVSDxQrhxrhti7>

### III. Deemed Measure Property Data Custom Tools

*Presenter: Ayad Al-Shaikh*

*Materials: [2], [3], and [4]*

Steven Long (via chat): Would you like some other input regarding these common items? I'd suggest gas/electric/both/fuel switch as one item to qualify up front.

- Ayad Al-Shaikh: Yes, if you have other common items, please send them. When looking at data from SDG&E, there were items that appeared a lot of times, so there could be duplicates. *We are really looking more for eligibility criteria/data collection requirements rather than categorization fields.*

George Beeler (via chat): Under input fields may we ask if refrigerant used is the lowest GWP refrigerant available?

- Ayad Al-Shaikh: Maybe there are opportunities to identify other offerings. Not a lot of GWP requirements in measure packages now but can be added. CET tool has these GWP fields. *In the meeting, we will recommend adding a documentation of refrigerant time.*

Steven Long (via chat): One challenge is to relate to existing, similar workpapers. Should this be consideration? Acknowledgement that this might be like another measure. There seems to be some measures that show up in like 2-3 different workpapers, it would be nice to have that defined up front for the same technology.

- Ayad Al-Shaikh: The benefit of having to updated all of the measure packages at once is that we should be able to make the requirements consistent between similar packages. *This is the concept behind creating the "common" validation list items. For example, every time that we need to document "capacity", we should do it in a similar way.*

Lake Casco (via chat): This seems to be related mainly to eligibility and data collection requirements. The proposal calls this Deemed Measure Property Data. This is kind of misleading. There is a lot of measure properties that are mainly unrelated to eligibility and data collection. Should we consider a more specific name for this data?

- Ayad Al-Shaikh: This feature just beginning development, if people think other names would be better, please feel free to suggest something.





Steven Long (via chat): Decimals [and Significant Figures] have been an issue for reporting consistency. Need to address this statewide, as was done with the savings number previously.

- Roger Baker (via chat): I agree, but sig fig issues have been an albatross for as long as I've been in the EE business.
- Steven Long: Maybe we do not even want a choice in the decimal places, or if that is criteria then spell out what the criteria is. Maybe we ask them to input up to a certain number to match CEDARS and eTRM. Savings was a good example; cost may be a good one.
- Ayad Al-Shaikh: Thank you for mentioning, we will keep this in mind while going through the process.
- Amy Reardon (via chat): Ex Ante Review uses sig figs.

Lake Casco (via chat): A timeline for validation would be helpful. For example, baseline equipment would need to be confirmed preinstall. Measure nameplate or controls would be post.

- Ayad Al-Shaikh: This is all for deemed measures, so you would not need to satisfy before installing but making this information available upfront before implementation would be valuable; knowing when you would have to collect it would be a good idea.
- Lake Casco: There likely would be, but all sources might show the same value. Spec sheet and name plate will all have the same value.
- Ayad Al-Shaikh: We should think of other fields that we might need to add, maybe not required but good to have.

Anders Danryd (via chat): Will CPUC deemed measure package reviewers be approving these as part of the workpaper approval process? Does CPUC need to adopt this new deemed measure property data by resolution/memo?

- Ayad Al-Shaikh: This is something that is happening outside of the measure package approval cycle, similar to the implementation data. The Cal TF proposal is really intended to clarify how that information will be collected and reviewed. The current proposal keeps this outside of the process, but if people think it should be within the approval process, then we should discuss further.

Lake Casco (via chat): Some creation of these validation lists could be automated for things that are already housed in the permutations. Like what BTs, vintages, or CZs are eligible.

- Ayad Al-Shaikh: Point taken. This is something that can be done; we will explore this option to see if it applies.
- Steven Long (via chat): I'm surprised so many legacy BTs are still in the eTRM?



- Ayad Al-Shaikh: *The building types in the eTRM come directly from those that are allowed through the CPUC support tables. Note that the list is smaller (about half) that also have a prototype model associated with them.*

Lake Casco (via chat): Would the deliverable from PAs/Measure developers be the validation spreadsheet? Would Cal TF staff get it into eTRM or would PA/developers do that?

- Ayad Al-Shaikh: The timing is overlapping. There is no way to upload into the eTRM now. The first goal is to get input on the data structure now and develop draft data for every measure package. Uploading data into the eTRM will be the 2<sup>nd</sup> part of this process, but it is not clear how that will happen yet. Enhancements will be needed.

## IV. New Measure Process

*Presenter: Ayad Al-Shaikh*

*Materials: [5]*

### New Food Service Measures

Gary Fernstrom: What is a high efficiency toilet?

- Anders Danryd: It is a water efficient toilet, we are now able to claim embedded water energy savings, saves ~5 kWh/1000 gallons.

Martin Vu: We did work on this measure (Hot Food Holding Bin) so we can provide input/support if needed.

Gary Fernstrom: What are the savings for the Hot Food Holding Bin?

- Ayad Al-Shaikh: There are savings numbers in the proposal form that we can make available.
- Anders Danryd: There is approximately 2,000 kWh/per unit/per year.
- Paul Kuck: There is about ~45% savings, numbers have not been finalized or approved, they are initial values.

Gary Fernstrom: The development of these measures is great, even though they are small there are a lot of potential savings. Where does the funding for the measure development come from? Site monitoring, field work, etc.

- Paul Kuck: They are funded through the Food Service (FS) program and support from Frontier Energy. There was a budget specified for measure development for various reasons: to get a bit ahead of some Title 20 measures that will make a few FS measures code, and to diversify the measure offerings as there is a lot of energy intensity pieces of equipment in the food service industry.
- Gary Fernstrom: The measure development does not contribute to savings; how does this affect the programs cost effectiveness?



- Paul Kuck: Initially, it affects the cost effectiveness negatively since some budget went to development. However, when these are approved, hopefully 2023, then they will help cost effectiveness.
- Martin Vu: Some were funded through the ET program/project to help measure development.
- Ayad Al-Shaikh: A lot of stakeholders are following a similar approach to add measure packages to the statewide system. *Note that even though implementers are completing a large portion of measure development, the PAs are still needed to support measure development and submit the measure to the CPUC, which has a cost associated with it.*
- Anders Danryd: Cost effectiveness at the program level were discussed during the solicitation process.

Ajay Wadhera: How much incentives are you thinking about paying the customer?

- Paul Kuck: We have explored this, it is across the board, I do not have those numbers available now. Looked at what could be high savings and high-volume measures.

Gary Fernstrom: At what frequency does the equipment operate? Does it use a higher frequency utilizing a converter?

- Paul Kuck: We will follow back up on this one.
  - Paul Kuck - Follow-up: *The induction units generally operate between 25 kHz to 50 kHz, but we can reach out to some manufacturers if we need more exact numbers.*

Ajay Wadhera: In terms of EUL, will this program be offered as an accelerated replacement (AR) measure?

- Paul Kuck: Food service program is a midstream program; we have only looked at new conduction (NC) and new replacement (NR) only.

Gary Fernstrom: Will you claim HVAC savings due to the reduced heat waste, interactive effects?

- Paul Kuck: We did not investigate this, we can; there is probably savings somewhere in there.
  - *Paul Kuck – Follow-up: In regard to the HVAC interactive effects, foodservice sites are going to have a huge variance of HVAC conditions – conditioned and unconditioned MUA, toaster in the kitchen, toaster not in the kitchen, etc. and the interactive effects would be too variable and small to calculate a defensible value. We also don't have the specific measurements we would need to make a well supported model of how much the conditioned space would be affected, which would require a different monitoring approach or more lab data. For conveyor toasters specifically though, the interactive effects would be quite small and perhaps inconsequential compared to the energy savings cost.*

Armen Saiyan (via chat): A bit of a follow up to Gary's last comment. I think we should start having a practice of discussing/identifying all the different savings opportunities (or components of) that are available but consciously deferred to keep the measure simple and give reasoning behind why it was deferred/avoided. This is a typical type of question the TF keeps bringing up



so would be a good practice to cover it during these measure specific presentations. I think it would be good to identify all savings opportunities, maybe listing them and discussing why they were left out.

Denis Livchak: Is it possible to consider shorter hours of operation for induction? Operators usually leave the resistance on longer because it does not have the same response time.

- Edward Ruan: We can look at the data to see if we can justify that. The site-by-site variation [in operating time] is often times more significant than the technology so we wanted to be conservative with assumptions unless they are supported by the data.

Steven Long (via chat): Will this data be posted with the measure info for future reference?

- Ayad Al-Shaikh: *The supporting data will certainly be included within the measure package as a reference so that it is easily accessible.*
  - *Currently, measure proposals are not being posted but this point will be discussed at the next Screening Committee Meeting to get consensus on the process.*

**ACT:** Please reach out to [Ayad.Al-Shaikh@futee.biz](mailto:Ayad.Al-Shaikh@futee.biz) if you have input on the Deemed Measure Property Memo or if you want to participate in the Oct 6<sup>th</sup> meeting.

### Sunset Measure Packages

Lake Casco (via chat): for SWFS012, I believe it includes AOE. Why would being ISP preclude it from being eligible for AOE?

- Ayad Al-Shaikh: *Based upon feedback from Cal TF members, we will look deeper into the reasons for sunsetting the Exhaust Hood Demand Controlled Ventilation measure package. Updates are likely needed for this measure package if it is still desired.*
  - *This is a question that we can ask more about. I have seen other instances when baseline requirements have been in effect for longer than the remaining useful life of the equipment. Past this point, there may be an assumption that the existing equipment should have been replaced.*

Armen Saiyan (via chat): Yes, we would be interested in keeping some of these measures alive for POUs.

Denis Livchak (via chat): Exhaust Hood Demand Controlled Ventilation is definitely not standard practice, perhaps only in high end new construction restaurants.

- Paul Kuck: I agree.

Spencer Lipp: Do you know if the 3<sup>rd</sup> party implementors were involved in the decision to sunset the measure packages? Were they included in the discussions? Implementers may have plans to use this measure.

- Ayad Al-Shaikh: I will have to follow up with you on this one.
  - *Follow-up: This type of information is communicated through PAs to implementers in various formats (directly to implementers, monthly meetings or*



newsletters). A monthly update on measure package plans is posted to the Cal TF website ([STATEWIDE DEEMED MEASURE LISTS — Cal TF](#)).

- We will look for a more active way of informing stakeholders. Having regular monthly Cal TF meetings will support this communication - including all implementers as Cal TF members was a focused effort this year. However, creating a Measure Report through the eTRM will be examined to allow users to Subscribe to this report to receive it on a monthly or quarterly basis.
- Paul Kuck: As the food service implementer, I just learned that this one is getting sunset, so we were not involved in this decision.
- Ayad Al-Shaikh: In some cases, these decisions are just due to low/no usage of the measure package. The cost of maintaining the measure package outweighs the benefits of keeping the measure.
- Tom Eckhart: Are these [refrigerant recharge measures] for all residential homes? Mobile homes?
- Ayad Al-Shaikh: If the measure package was sunset then it would be sunset for all building types. The previous measure package did have permutation for single family, multifamily, and double-wide mobile homes.
- Spencer Lipp: We should include the implementers in the discussion, I see that as an issue. 60% of the portfolio is 3P implementers so I think they should have a voice on if these measures proceed or not, or if they need to take it over.
- Ayad Al-Shaikh: We will explore this.

Lake Casco (via chat): I believe that the pool pump one is only for integral pool pumps with VSDs, and applicable to certain size ranges. AOE measures for adding VSDs onto larger commercial pool pumps should still be eligible. This may be a good custom standardized measure for eTRM.

Steven Long: Subscription notifications need to be clearer.

Babak Yazdanpanah (via chat): Could you add the reason for dropping the measures to the sunset measures excel file downloadable from Cal TF website?

- Ayad Al-Shaikh: *This sunset measure file is downloadable from this link (<http://www.caltf.org/s/Sunset-Measure-List-12-5-19-repost.xlsx>). This file captures all measures sunset during the transition from IOU specific to Statewide measures. This file has been reposted to include the best estimate of why the measure was sunset at the time. As a disclaimer, these reasons should be used as a starting point to potentially revive a measure, but the brief descriptions may not full capture the reason for the sunset. Measures sunset after this point would be viewable within the eTRM.*

Gary Fernstrom: VSD for Pool and Spa Pump, federal codes do not require all new pumps to have VSDs. It does not change the outcome, the measure will not be cost effective, we should revise these.

- Ayad Al-Shaikh: We will follow up with you on this.
- Gary Fernstrom: All we have to do is change, all to most.
  - Ayad Al-Shaikh: Thank you. Presentation updated online.



Steven Long: I think this is something Cal TF should manage, discussions between stakeholders to determine if measures should be sunset, and process on what information will be available afterwards.

## V. eTRM Release Documentation

*Presenter: Tomas Torres-Garcia*

*Materials: [6]*

Martin Vu: Is there a test environment for measure contributors to work with before being granted access to the main production site?

- Tomas Torres-Garcia: We do have a staging environment primarily for eTRM development and enhancement testing. We can make this available for measure contributors to explore tools or do test updates. Please note that the stage environment is a testing site for new enhancements so the data may not be a 1 to 1 with the production environment. If you reach out to me, Ayad, or the eTRM email, we can grant you login access.
- Ayad Al-Shaikh: *Note that the staging data is also frequently sync'ed with production – especially when this may prove beneficial for testing. For this reason, data developed on the staging site is likely to be over-written.*

**ACT:** Please provide input to [Tomas.Torres-Garcia@futee.biz](mailto:Tomas.Torres-Garcia@futee.biz) regarding training needs or recommendations.

## VI. Cal TF 2023 Business Plan

*Presenter: Ayad Al-Shaikh and Arlis Reynolds*

*Materials: [7]*

**ACT:** Please provide input to [Arlis.Reynolds@futee.biz](mailto:Arlis.Reynolds@futee.biz) on potential TPP and White Paper topics for the 2023 Business Plans.

*Italics font used in comments are comments that were added after the meeting to provide greater context or answer a question that was asked during the meeting.*