

2023 eTRM Enhancement Planning



CALIFORNIA

TECHNICAL FORUM

AYAD AL-SHAIKH
TOMAS TORRES-GARCIA
ARLIS REYNOLDS
CHAU NGUYEN
CAL TF STAFF

Charette Agenda

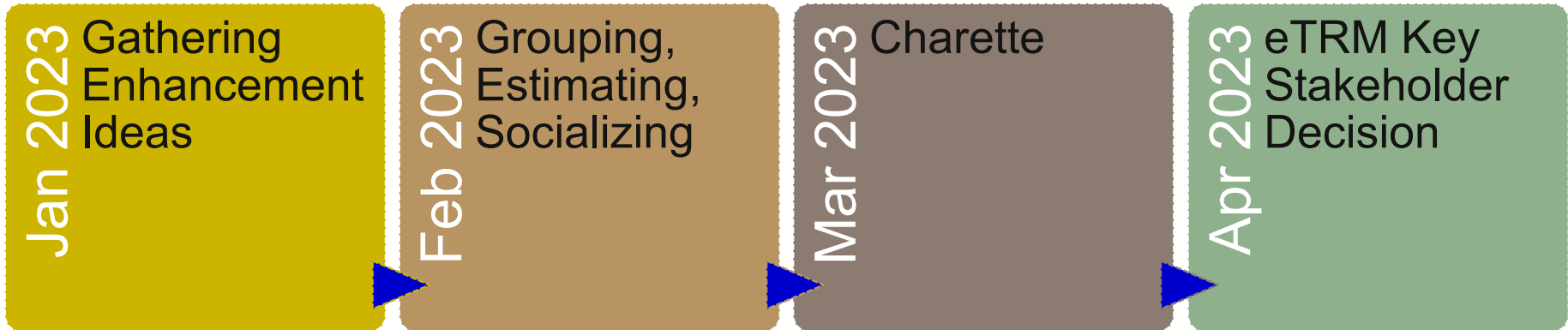


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Time (PST)	Agenda Item	Discussion Lead(s)
10:00 – 10:15	Introduction and Charrette Goals	Ayad Al-Shaikh
10:15 – 12:00	Enhancements: Measure Package Development (part 1)	Tomas Torres-Garcia
12:00 – 12:45	Lunch	n/a
12:45 – 1:45	Enhancements: Measure Package Development (part 2)	Tomas Torres-Garcia
1:45 – 2:00	Break	n/a
2:00 – 3:00	Enhancements: Data Communications/Reports	Ayad Al-Shaikh
3:00 – 3:50	Enhancements: New eTRM Modules	Cal TF Staff
3:50 – 4:00	New Proposals & Closing	Tomas Torres-Garcia Ayad Al-Shaikh

Enhancement Selection Process

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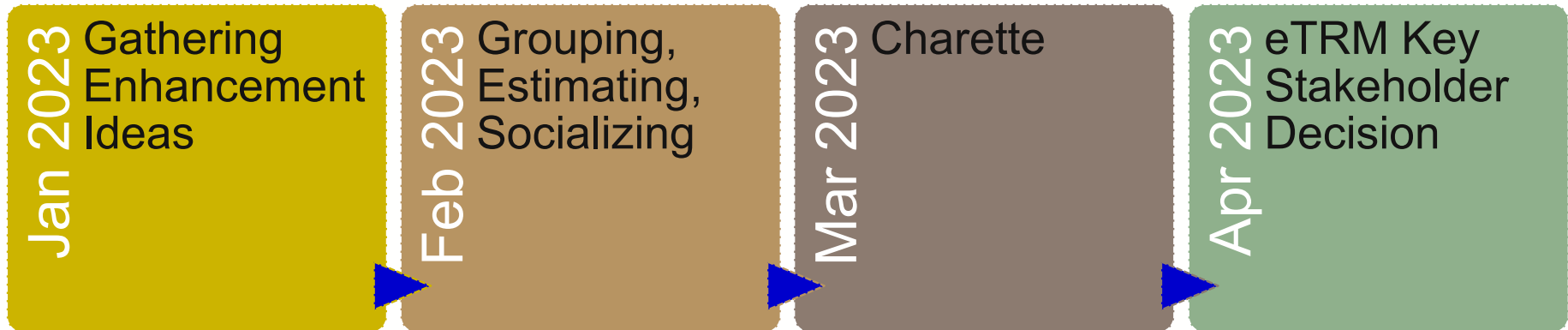


- Goal today

- Note: We have about 5x more enhancement hours than we do budget and time
- Describe enhancements that are the highest priority for 2023 based upon:
 - ✦ 2023 needs
 - ✦ Stakeholder input / Cal TF Staff perspective

Enhancement Selection Process

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- After today:
 - Cal TF Staff will consolidate feedback from this meeting
 - Cal TF Staff will propose groups of enhancements that fit within budget and time constraints
 - ✦ All responses will be available for review so that stakeholders can recommend additional adjustments

2023 Enhancement Planning

- Measure Package Development
 - Shared Data
 - Dependencies
 - Parameters/Value Tables
 - Calculations
 - Permutations
 - Characterization
 - Workflow
 - Other
- Data Communications/Reports
 - Communications
 - Reports
 - Filtering
- New Modules
 - Custom/Emerging Measures
 - API
 - 8760 Capabilities
 - Other
- New Proposals



Stakeholder Input

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- Provide feedback on each enhancement
- Fill out Survey:
 - The order the enhancements are presented in the survey matches the order they will be presented.
 - Survey ID can be matched to the Enhancement List excel file
 - **Priority?**
 - ✦ What should be the priority of this enhancement based on your/your organizations needs?
 - **Will this enhancement help reduce cost/time?**
 - **Will this enhancement increase the usability of the eTRM?**
 - **Additional Notes/Comments**

eTRM enhancements: Measure Package Development

Shared Data

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- Update the shared value tables' sync behavior to only sync when there is data content change (versus including dependency versioning change). This issue specifically affects the Energy Impact value tables since they share the same source data (Energy Impact CPUC Support Table) and the same "Energy Impact ID" parameter dependency. However, each takes up a portion of the full data, so their versioning are somewhat linked together. Whenever there are energy impact records added/removed for one table (i.e. one use category), a new version of the "Energy Impact ID" parameter would be created (no issue here). This then triggers all Energy Impact value tables to upgrade their versions even though the new data changes only affect 1 table.
 - Example: New AppPlug data were added to the Energy Impact database
 - ✦ "Energy Impact ID" parameter: New version 017 was created/published (ok - data changes)
 - ✦ "Energy Impact - AppPlug" value table: New version 018 was created/published (ok - data changes)
 - ✦ "Energy Impact - BldgEnv/HVAC/SHW" value tables: New version (v018 for BE, v025 for HC, and v021 for SHW) was created even though the content of these three tables didn't change. These three tables upgraded their versioning because there is a new version of the "Energy Impact ID" parameter
- Rewrite the script for the Energy Impacts CPUC Support Table.

Dependencies


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- Measure developers have the ability to update all dependencies of shared items with one button. Create an option/button for measure developers to update all shared data items to the most up-to-date dependency.
- **Currently:** If a measure developer wants the most up-to-date dependency for all shared items, they have to manually update each item individually.

Upward


SHARED MEASURE PARAMETERS

Building HVAC

 v016 CPUC APPROVED


 Version history

Building Location

 v015 CPUC APPROVED

 Version history


Building Type

 v015 CPUC APPROVED

 Version history


SHARED VALUE TABLES

Effective Useful Life and Remaining Useful Life

 v022 CPUC APPROVED

 Version history

Gross Savings Installation Adjustments - Default

 v014 CPUC APPROVED

 Version history

Dependencies (continued)

10

- Data health notice should identify not just that there is a difference, but also that the difference affects the specific measure.
 - **Currently:** The health warnings just show if the version used in the measure is different from the most recent version in the shared object library. What is important is that there is a difference and that the difference is also related to this measure. This is still not an indication of a problem, but more actionable. For example, just because a new NTG-ID has been added to the NTG object, the warning is only relevant if the NTG-ID is used within the measure.

SHARED VALUE TABLES

Effective Useful Life and Remaining Useful Life

⚙️ v022 CPUC APPROVED

📄 Version history

⚠️ Data health warning

Gross Savings Installation Adjustments - Default

⚙️ v014 CPUC APPROVED

📄 Version history

⚠️ Data health warning

Net to Gross Ratio

⚙️ v028 CPUC APPROVED

📄 Version history

⚠️ Data health warning

Null Values

⚙️ v009 CPUC APPROVED

📄 Version history

Dependencies (continued)






11

- Data health notice should identify not just that there is a difference, but also that the difference affects the specific measure.
 - **Currently:** The health warnings just show if the version used in the measure is different from the most recent version in the shared object library. What is important is that there is a difference and that the difference is also related to this measure. This is still not an indication of a problem, but more actionable. For example, just because a new NTG-ID has been added to the NTG object, the warning is only relevant if the NTG-ID is used within the measure.

DATA HEALTH WARNING ✕

Net to Gross Ratio

The imported version of this shared value table prefers different versions of the shared parameters currently available in this measure.

Parameter	Version in measure	Version preferred by this value table
 Net to Gross Ratio ID	 v009	 v025
NTG-Version	 v002	 v002

You may resolve this data health warning by doing one of the following:

- **Change the version of the warned parameters above** to match those preferred by this value table.
- **Change the version of this value table** to match the current version of the parameters listed above.


Dependencies (continued)

12

- Ability to note that a data health warning has been checked.
 - **Currently:** Data health warning appears next to the value table but there is no way to note that the warning has been checked by the measure developer.

SHARED VALUE TABLES


Effective Useful Life and Remaining Useful Life

 v022 CPUC APPROVED

 Version history

 Data health warning


Gross Savings Installation Adjustments - Default

 v014 CPUC APPROVED

 Version history

 Data health warning


Net to Gross Ratio

 v028 CPUC APPROVED

 Version history

 Data health warning

Null Values

 v009 CPUC APPROVED

 Version history

Dependencies (continued)

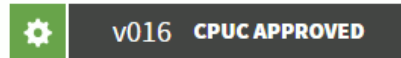
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- Information indicating that shared objects have change should be viewable only by a limited group. Objects to consider hiding: Layered icons (green/yellow/red). Shared Object note ("A newer version of the shared data library exists")
 - Should be viewable only by:
 - Admin
 - Measure Developer, Measure Reviewer, Measure Manager, CPUC - if measure is assigned
 - Currently:** The icons are visible to all users.

Upward

SHARED MEASURE PARAMETERS


Building HVAC



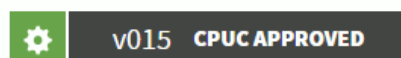
 Version history

Building Location



 Version history

Building Type



 Version history

	<u>MEASURE APPLICATION TYPE</u> NC, NR
	<u>BUILDING TYPE</u> Any
	<u>BUILDING VINTAGE</u> Any

Parameters / Value Tables / Calculations

- Automatically sort the measure parameters and value tables to a preset order.
 - Measure parameters and value tables are automatically sorted to a preset order, then the measure developer can have to option to reorder the lists if desired.

Parameter List

The standard list of parameters and the order in which they should be uploaded and listed in eTRM is provided below.

Parameter Names and Order	Parameter Type
Measure Application Type	Shared
<i>DEER Measure ID (if a DEER-based measure)</i>	Shared
<i>Energy Impact ID (if a DEER-based measure)</i>	Shared
Building Type	Shared
Building Vintage	Shared
Building Location	Shared
Building HVAC	Shared
Sector	Shared
Effective Useful Life ID	Shared
EUL-Version	Shared

All parameters in black font are required for all measures, regardless of category.

Parameters in blue italic font are to be included if the specified criteria are met.

Parameters should be listed in the order shown here when viewed in the "Supporting Data" tab of the eTRM.

Value Table List

The standard list of value tables and the order in which they should be uploaded and listed in eTRM is provided below.

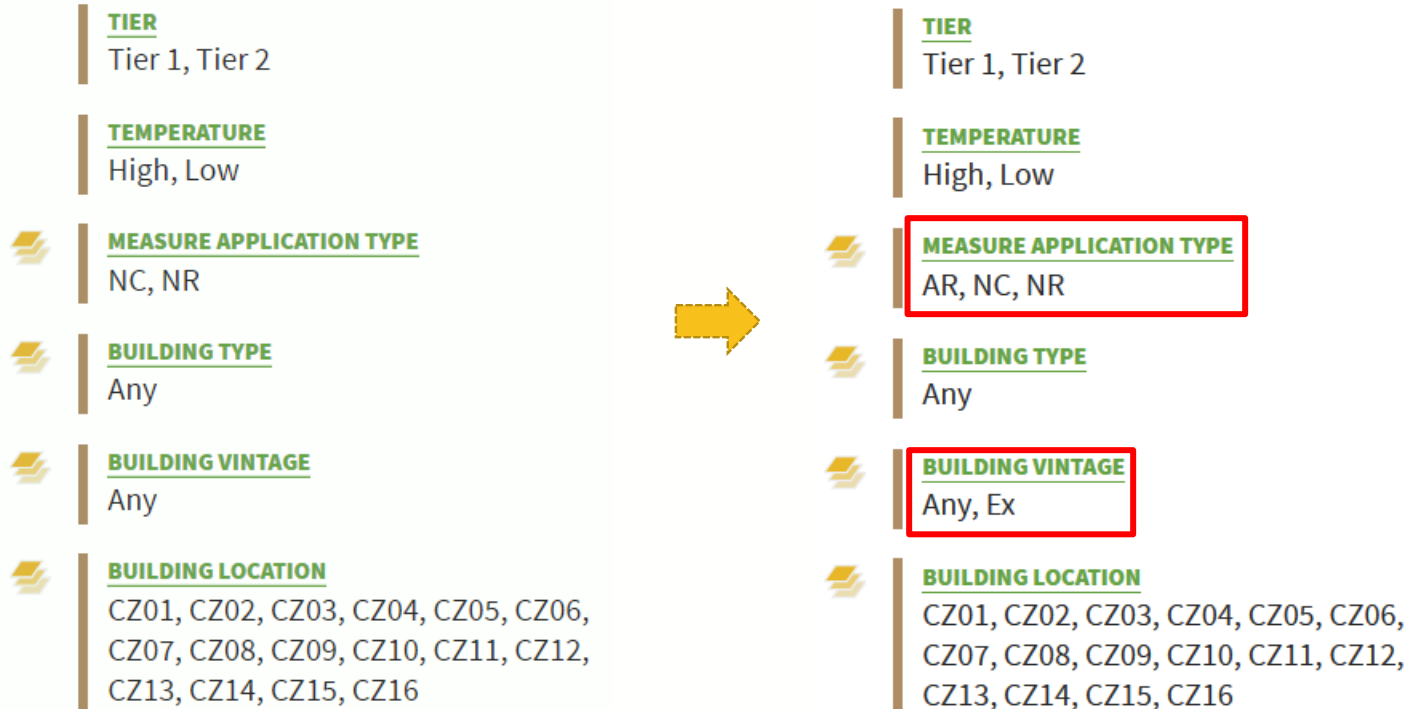
All value tables listed in black font are required for all measures, regardless of category.
Value tables listed in blue italic font are to be included if the specified criteria are met.
 Value tables should be listed in the order shown here when viewed in the "Supporting Data" tab of the eTRM.

Value Table Names	Criteria	Value Table Type
Offering ID		Non-shared
Measure Offerings		Non-shared
Implementation Eligibility		Non-shared
Base Case Descriptions		Non-shared
<i>Measure Offering IDs and DEER Measure IDs</i>	<i>Only if it is a DEER based measure</i>	<i>Non-shared</i>
<i>Upstream Flag</i>	<i>Only if Delivery Type = DnDeemDI and/or DnDeemed + UpDeemed</i>	<i>Non-shared</i>

Parameters / Value Tables / Calculations (continued)

15

- Add ability for the eTRM to generate a measure package revision history by parameter.



Parameters / Value Tables / Calculations (continued)


- The csv files for value tables that are a part of the Measure Package that is downloaded for a measure should not include rounding and should show all the "true" values that were uploaded.
 - **Currently:** The eTRM rounds all kWh, kW, and Therm values to 3 significant figures. However, when you download a specific value table, the "true" value that was uploaded is displayed in the csv file. This is not the case for the value tables in the Measure Package, when you download the measure package and click on the csv file for a value table the rounded values will be displayed.

Parameters / Value Tables / Calculations (continued)

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- The csv files for value tables that are a part of the Measure Package that is downloaded for a measure should not include rounding and should show all the "true" values that were uploaded.

LENGTH (FT / UNIT)	WIDTH (FT / UNIT)
0.50	0.46



	A	B	C
1	measuremer	measurements__w	
2	0.5	0.46	
3			

Editing **1-1** of **1** row

LENGTH (FT / UNIT)	WIDTH (FT / UNIT)
0.5	0.456

Parameters / Value Tables / Calculations (continued)

18

- Add more mathematical functions to the eTRM.
 - Supported operators, functions, and constants in the eTRM:
 - ✓ Add: `'a+b'`
 - ✓ Subtract or negate: `'a - b'`, `'-(a + b)'`
 - ✓ Multiply: `'a * b'`
 - ✓ Divide: `'a / b'`
 - ✓ Modulo: `'a % b'`
 - ✓ Power: `'a^b'`, `'a^3'` or `'pow(2, 3)'`
 - ✓ sin: `'sin(a)'`
 - ✓ cos: `'cos(a)'`
 - ✓ tan: `'tan(a)'`
 - ✓ asin: `'asin(a)'`
 - ✓ acos: `'acos(a)'`
 - ✓ atan: `'atan(a)'`
 - ✓ atan2: `'atan2(3, 2)'`
 - ✓ Square root: `'sqrt(a)'`
 - ✓ log: `'log(a)'`
 - ✓ Absolute value: `'abs(a)'`, `'abs(a) == abs(-a)'`
 - ✓ Ceiling: `'ceil(2.2)'` => 3 OR `'ceil(2.6879,2)'` => 2.6900
 - ✓ Floor: `'floor(2.2)'` => 2
 - ✓ Round: `'round(2.4)'` => 2
 - ✓ Exp: e to the x power. `'exp(2)'` => 7.389056
 - ✓ Min: `'min(10, b)'`
 - ✓ Max: `'max(10, b)'`
 - ✓ E: e
 - ✓ PI: pi
 - ✓ Parenthetical Grouping: `'()'`

Parameters / Value Tables / Calculations (continued)

- Add the \$/sqft unit that includes at least 4 sig figs. SWBE007-01 has calculations for costs that need to be very precise because the cost is \$/sqft, currently the eTRM only has units for costs that only have 2 sig figs. The 2 sig figs do not help show the full impact of the costs in the permutations. Add the kWh/hr/hp (decimal) unit that would be used for SWPR006.

Permutations

20

- Warnings before publishing and/or saving measures. eTRM should help a developer determine what can be done to resolve the issues (i.e., what field is not mapped).
 - Permutations are not built.
 - A change has been made since the last time permutations have been built.
 - If all required permutations fields are not correctly mapped (data spec standard warning).
 - If CET outputs have not been uploaded.
 - If the Measure Detail ID field unique.

Permutations

21

- Warnings before publishing and/or saving measures. eTRM should help a developer determine what can be done to resolve the issues (i.e., what field is not mapped).
 - **Currently:** The message when permutations are not built

BUILD PERMUTATIONS

No permutations have been built for this measure.

- **Currently:** The message for permutation fields no being mapped correctly

This permutation configuration does not conform to the California Technical Forum's standardized data spec. To conform, every data spec field must be mapped.

- No current message for CET outputs not uploaded
- No current message for unique measure detail ID OR for unique measure offering IDs and descriptions

Permutations (*continued*)

22

- Make the "This permutation configuration does not conform to the CalTF's standardized data spec" error message visible to more measure contributor roles.
 - **Currently:** The "This permutation configuration does not conform to the California Technical Forum's standardized data spec" error message is only visible when it's an active open draft and only to the measure developer that has control of it.

This permutation configuration does not conform to the California Technical Forum's standardized data spec. To conform, every data spec field must be mapped.

Permutations (continued)

23

- In the configure permutation fields panel, fields that are not mapped will be color-coded so that they are easier to see and correct (i.e, "unmapped" fields will appear in red).
- **Currently:** The eTRM displays “Not Mapped” for the unmapped fields.

PERMUTATION CHARACTERIZATION

FIRST BASE CASE DESCRIPTION (STRING)

Measure Offerings: First Base Case Description ▼

SECOND BASE CASE DESCRIPTION (STRING)

Null Values: Blank ▼

MEASURE CASE DESCRIPTION (STRING)

Not mapped ▼

EXISTING DESCRIPTION (STRING)

Base Case Descriptions: Existing Description ▼

STANDARD DESCRIPTION (STRING)

Not mapped ▼

Permutations (continued)

24

- Permutations CSV file name that is download needs to include SW ID.
 - When the permutations download is sent, name the file with the measure package SW ID instead of just permutations.
- Align the start year in the CET Input file that is generated by the eTRM with the start year of the measure. Make CET Input file that is generated by the eTRM automatically align with the measure start year.
 - **Currently:** The fields are populated with the year in which CET input file was generated.

B	C	D
PrgID	ClaimYearQuarter	Sector
Program1	2020Q1	Residential
Program1	2020Q1	Residential
Program1	2020Q1	Residential
Program1	2020Q1	Residential

	A	B	C
1	PrgID	PrgYear	ClaimYearQuarter
2	Program1	2020	2020Q1

Characterization

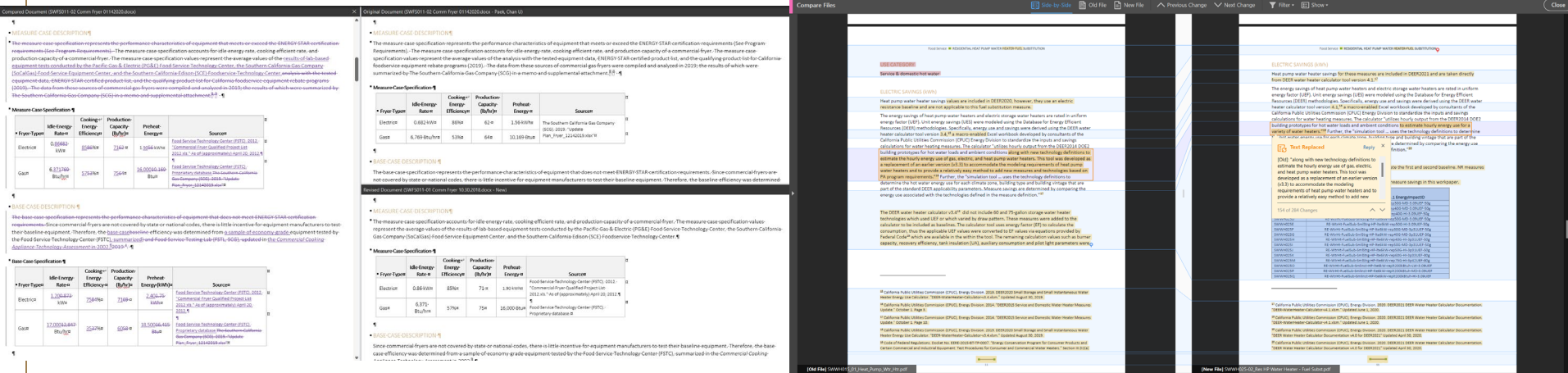
25

- Implement text comparison and redlining feature for all measure text fields so textual differences between different versions of a measure are readily apparent. This feature shall allow an editor to compare two versions of a measure, selected by the editor, marked up with differences.

Characterization



- Implement text comparison and redlining feature for all measure text fields so textual differences between different versions of a measure are readily apparent.
 - ❑ Microsoft Word and Adobe Acrobat Pro (PDF comparison) have great examples of this feature.



Characterization (continued)

- Paragraph mark (¶) toggle
 - When copying/pasting text into the characterization, the paragraph formatting sometimes is not correct (e.x. random indentation, line breaks, or new paragraph break). In the "Source Code" mode, you can identify these paragraph formats (but not everyone reads HTML). However, in regular edit mode, there is no visual indication that these are present, but they do affect the display of the rendered paragraph. Is there any way to get a feature in the editor like the ¶ button in MS Word?
 - → If the capacity (Cap) is < 7 kBtu/hr, use 7 kBtu/hr for the capacity. If the capacity is > 15 kBtu/hr, use 15 kBtu/hr of the capacity. ¶
 - → Replacement units must be factory-labeled as follows: "MANUFACTURED FOR REPLACEMENT APPLICATIONS ONLY; NOT TO BE INSTALLED IN NEWLY CONSTRUCTED BUILDINGS." Replacement efficiencies apply only to units with existing sleeves < 16 inches high or < 42 inches wide and have a cross-sectional area < 670 square inches. ¶

Characterization *(continued)*

28

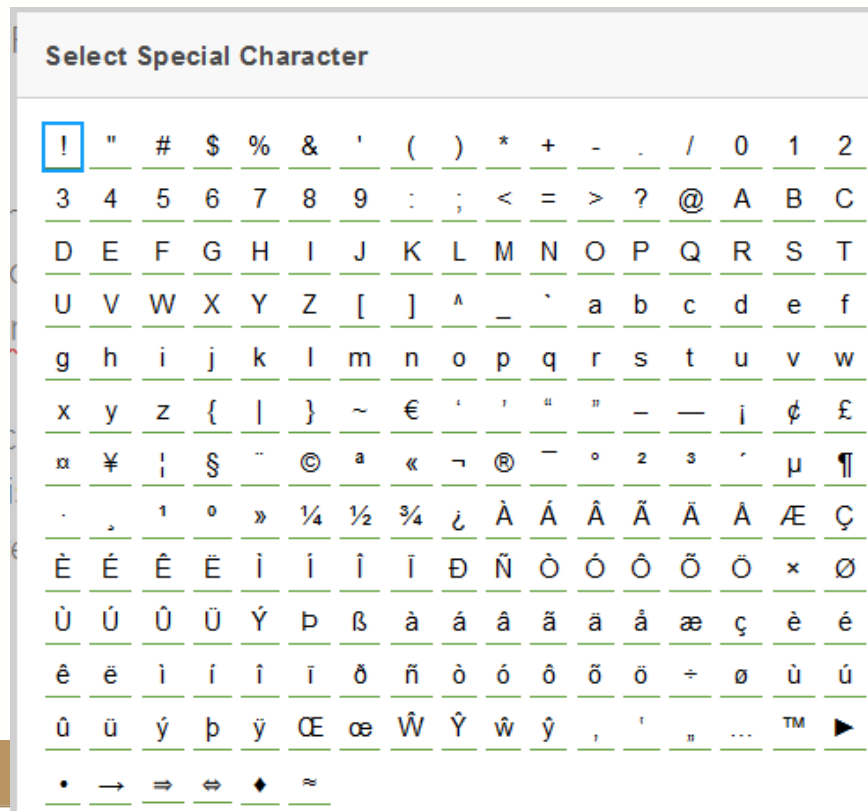
- Add capability to show calculated values in value tables.
- Allow an editor to sort Value Tables based upon any column (parameter or value) and save that sort to embed that sort into a characterization field.
- **Currently:** eTRM uses the parameter value columns to automatically sort the value tables

Offering ID

MEASURE CASE STORAGE CAPACITY (GAL)	MEASURE CASE UNIFORM ENERGY FACTOR (UEF)	BASE CASE EQUIPMENT TYPE	BASE CASE DEFINITION	STATEWIDE MEASURE OFFERING ID (TEXT)	MEASURE OFFERING DESCRIPTION (TEXT)
<= 45	3.5	Storage	40 Gal	U	Heat pump water heater, <= 45 gal, UEF = 3.5 replacing storage natural gas water heater, 40 gal, UEF = 0.58
<= 45	3.5	Storage	40 Gal	V	Heat pump water heater, <= 45 gal, UEF = 3.5 replacing storage natural gas water heater, 40 gal, UEF = 0.64
> 45 to <= 55	3.09	Storage	30 Gal	A	Heat pump water heater, > 45 to <= 55 gal, UEF = 3.09 replacing storage natural gas water heater, 30 gal, UEF = 0.6
> 45 to <= 55	3.09	Storage	40 Gal	B	Heat pump water heater, > 45 to <= 55 gal, UEF = 3.09 replacing storage natural gas water heater, 40 gal, UEF = 0.58

Characterization (*continued*)

- Adding more traditional mathematical notations.
 - Adding more traditional mathematical notations that can be used for static calculations, i.e. being able to add a bar on top of variables which lets the reader know that this is the average of a value.



Workflow

30

- On the Dashboard with your assigned measures, it would be useful to know what sort of role you have been assigned to the measures.
 - On the Dashboard with your assigned measures, it would be useful to know what sort of role you have been assigned to the measures, whether it be reviewer, developer, etc. I don't really like the way the design is laid out in the slides vs the way it is in the eTRM currently. This should be captured as part of future Enhancement #22 where the dashboard table will be further improved.

Workflow

31

- On the Dashboard with your assigned measures, it would be useful to know what sort of role you have been assigned to the measures.

□ Currently:

Your Assignments

MEASURES

- [Convection Oven, Commercial \(SWFS001\)](#)
- [Refrigerator or Freezer, Residential \(SWAP001\)](#)

Your Development Roles

MEASURES

NAME ▲▼	STATEWIDE MEASURE ID ▲▼	USE CATEGORY ▲▼	STATUS ▲▼	LAST EDITED ▼
Ceiling Insulation, Residential	SWBE006	BE - Building Envelope	Peer Review	March 17, 2023
Convection Oven, Commercial	SWFS001	FS - Food Service	CPUC Approved	Feb. 10, 2023
Refrigerator or Freezer, Residential	SWAP001	AP - Appliance or Plug Load	CPUC Approved	Oct. 28, 2022

Workflow (*continued*)

32

- Status of a measure should be tied to the release cycle instead of the whole measure. The measure status should be changed to "Draft" every time when created from a published version and a new release cycle is specified.
- Measure announcement log. Allow users, who were not previously subscribed to the measure, to read the recent, if any, announcements. Also useful for users that may have missed announcement notifications.

Workflow (continued)

33

- Add a measure announcement log, allow users who were not previously subscribed to a measure to read past measure announcements that were sent out (also useful for users who might have missed notifications).
 - Users can subscribe to measure announcements using the Subscriptions tab in a measure.
 - ✦ Subscribed users receive email notifications.
 - Only certain roles (measure contributors/admins) can send out measure announcements.

☰ CHARACTERIZATION DEPENDENCIES ☰ SUPPORTING DATA ☰ CALCULATIONS PERMUTATIONS SUBSCRIPTIONS

Measure Announcements

Stay informed of important content updates and other announcements relating to this measure.

✉ You are not subscribed | [Subscribe](#)

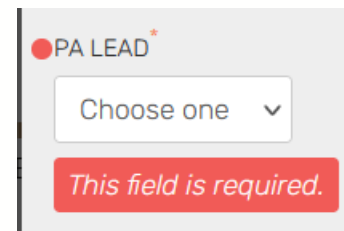
SEND A MEASURE ANNOUNCEMENT

Workflow (continued)

34

- Limit publishing to only be available when a measure is in the "POU Ready" or "CPUC Approved" status only.
- Error message when the start date field is removed, similar to error message when lead PA field is removed.
 - **Currently:** Users receive a server error (500)

Server Error (500)



PA LEAD*

Choose one ▾

This field is required.

Workflow (continued)

35

- Add a pop-up to verify actions when a user
 - Changes status to “Submitted to CPUC”, “Resubmitted to CPUC”, “POU Ready”, “CPUC Approval”, “Cancelled”
 - When choosing to make a measure log entry “open” to confirm that’s what they really want to do.

VERSION PUBLICATION

Confirm

Are you sure you wish to publish this version of the **Ceiling Insulation, Residential** measure?

If you proceed, this version will become visible to all eTRM users as SWBE006-02.

Workflow (continued)

36

- Measure Manager to be able to assign all non-CPUC measure development roles (Manager, Reviewer, Developer). The measure manager to manage the Developer and Reviewer roles for measures.
- Add PA-Admin capabilities (new role).
 - Add PA-Admin capabilities (new role) = visibility should be able to be set independently for other admin roles. Sometimes PAs need to access data or review measures that are under development.
 - Will have measure manager capabilities, assignment of Measure roles, assign PA association for their PA.

Workflow (*continued*)

37

- Add approval flow chart listing roles with person assigned to it to indicate who is involved and highlight or indicate where the current status is.
- Fix developer removal role. Create a way to do many at once.
- Allow management of a measure's contributors while viewing a measure, without first having to re-find the measure in Admin Central.
- Email notifications to be sent to users when assigned a measure contributor role or when a role is revoked.

Other

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- Cover sheet - add cover sheet fields to eTRM such that a separate cover sheet document does not need to be attached to the measure before submitting to CPUC. Review cover sheet information and determine fields that are "used and useful" that need to be added to eTRM so that can be included in workflow status reports and data visualizations.
 - ❑ Some fields are already in eTRM.
 - ❑ Some fields may be calculated and not needed to be entered.
 - ❑ Cover sheet could be a separate tab for a measure (in front of the characterization tab, for example).
 - ❑ Consider data entry form for PA to enter data.
 - ❑ Determine if cover sheet information should be added to the PDF download.
 - ❑ Make these fields required to be entered when going to CPUC review.

Other

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- Add/integrate coversheet fields to the eTRM (some fields are already in the eTRM).
 - Current fields that can be pulled directly from the eTRM:
 - ✦ PA Lead
 - ✦ Measure Name
 - ✦ Draft MP Statewide Measure Version ID
 - ✦ Final MP Statewide Measure Version ID
 - ✦ Measure Package Change Description
 - ✦ Measure Impact Type (DEER / CEDARS)
 - ✦ Estimated Effective Date
 - Other fields can potentially be calculated by the eTRM (Ex. Percent change in savings due to MP revision)

Other (continued)

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- EnergyPlus integration with the eTRM.
- Default view of a measure is the "active" published version.
 - There are other uses that will want to see previous version or future versions, but this is a smaller/specialized group. Note that there should only ever be one "active" version of the measure.
 - **Currently:** The default view of a measure is the latest published version
- Improve search field results. Search looks also in all past drafts/versions, so results are less valuable.
- Set up the capability to allow certain data in all measures to be overwritten, one example would be CET or TechTypes.

eTRM enhancements: **Data Communications & Reporting**

Communications

42

- Separate deemed measures (CPUC Approved) from POU only measures (POU Ready).
- Share Measures prior to publication for use in program planning.
 - Is it possible to share measures prior to publication for use in program planning (from customer)? At least proposed changes.
- Receive notification that a measure package is about to expire (90-day window).
 - This will give the IOUs the ability to notify all parties that a version of the measure package will soon expire soon and if any system preparation is required it can be done in a timely manner. A 90-day window would give adequate time to expire measures in systems and provide updates to all parties. Might be good to also do 60 and 30 day notifications as well.

Communications

43

- Separate deemed measures (CPUC Approved) from POU only measures (POU Ready).

- Currently:** Characterization

SWHC020-03 CPUC APPROVED Dec 15, 2022 10:45 AM  Version History | Measure log

Air-Cooled Chiller

CHARACTERIZATION DEPENDENCIES SUPPORTING DATA CALCULATIONS PERMUTATIONS


Measure Details

Measure Package

STATEWIDE MEASURE ID
SWHC020

SOURCE DESCRIPTION
SWHC020.03

The Measure Package includes: CSV files of parameters, value tables, and reference files. PDF of the characterization report.

SWCR016-01 POU READY Mar 19, 2023 2:18 PM  Version History | Measure log updated now

Adaptive Refrigerator And Freezer Cont

CHARACTERIZATION DEPENDENCIES SUPPORTING DATA CALCULATIONS PERMUTATIONS PROPERTIES

SUBSCRIPTIONS

Measure Details

Measure Package

STATEWIDE MEASURE ID
SWCR016

SOURCE DESCRIPTION
SWCR016.01

The Measure Package includes: CSV files of parameters, value tables, and reference files. PDF of the characterization report.

- Currently:** Data

- Program Administrator Type: Any, IOU, POU

COMMON MEASURE PARAMETERS		
SECTOR	PROGRAM ADMINISTRATOR TYPE	PROGRAM ADMINISTRATOR
Com	Any	Any
Com	Any	Any

Communications

44

- Share Measures prior to publication for use in program planning.
 - Is it possible to share measures prior to publication for use in program planning (from customer)? At least proposed changes.
- **Currently:**
 - Measure Developer role provided

NAME	ORGANIZATION
DPQC Team	PG&E
EAS@SCE	SCE Engineering Team
LADWP - Efficiency Solutions Engineering	LADWP
SCG Implementations	SoCalGas Company
SdgeEETechnicalSrvs	SDG&E

- Prior concern is to limit exposure of measures that are not complete.

Communications

45

- Receive notification that a measure package is about to expire (90-day window).
 - This will give the IOUs the ability to notify all parties that a version of the measure package will soon expire soon and if any system preparation is required it can be done in a timely manner. A 90-day window would give adequate time to expire measures in systems and provide updates to all parties. Might be good to also do 60 and 30 day notifications as well.
- **Currently:**
 - Sunset measure list is managed independently; provides a reliable way for a user to help themselves

Communications *(continued)*

46

- Enable automatic email notifications to users who are subscribed to measures when:
 - New measure is published.
 - Measure is published (updates/corrections).
- Weekly digest of measure log notifications.
 - This request was added as a result of requirements review for Enhancement #122 for sprint 11, which added daily digest emails.
- A comment box for users.
 - Add the ability for users to add suggestions and/or comments for future measure package updates

Communications *(continued)*

47

- Enable automatic email notifications to users who are subscribed to measures when:
 - New measure is published.
 - Measure is published (updates/corrections).
- **Currently:**
 - Convention for Measure Developer to send notification; email sent.

Measure Announcement Template for a Measure Update

Template	Example
<p>Intro: An update to [measure name] ([SW measure version]) is currently underway.</p> <p>High-level statement with reason for update: This update was triggered by [reason] and will incorporate changes to [key changes anticipated].</p> <p>Anticipated submittal date (if IOU measure): The anticipated date the new measure version will be submitted to the CPUC for review is [submittal date].</p> <p>Next action: You will receive a future announcement when the new version is published in the eTRM.</p>	<p>An update to the Clothes Dryer, Residential measure (SWAP003) is currently underway. This update was triggered by Resolution E-5152 and will:</p> <p>1) update costs based on vendor material costs and 2020 RSMeans labor rates 2) update impact calculations based on 2017 ASHRAE handbook ambient design temperatures for CZ reference sites</p> <p>The anticipated date the new measure version will be submitted to the CPUC for review is November 1, 2021.</p> <p>You will receive a future announcement when the new version is published in the eTRM.</p>

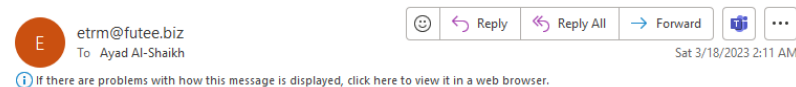
- In eTRM Workflow Guideline document
- Also required for measure package publishing
- Triggers based upon stakeholder feedback from surveys

Communications (*continued*)

48

- Weekly digest of measure log notifications.
 - This request was added as a result of requirements review for Enhancement #122 for sprint 11, which added daily digest emails.
- **Currently:**
 - Feature exists for Measure Log Comments (for a particular measure package) for Measure Contributors
 - Feature does not exist for base users for notifications

eTRM Measure Log Digest, Mar 18 — Wall Furnace, Residential (2 events)



[If there are problems with how this message is displayed, click here to view it in a web browser.](#)



Wall Furnace, Residential (SWHC001-04-draft)

Measure Log Digest — Mar 18, 2023

eTRM
OFFICIAL SOURCE
CA Energy Efficiency
Measure Data

2 measure log events happened during the 24-hour period of Saturday, March 18, 2023:

- **Characterization review comment**
THIS LOG ENTRY IS PRIVATE TO NON-CPUC MEASURE DEVELOPMENT ROLES

RESOLVED
Anders Danryd, Measure Manager at 12:27 PM
- **New reply to Characterization review comment**
THIS LOG ENTRY IS PRIVATE TO NON-CPUC MEASURE DEVELOPMENT ROLES
Anders Danryd, Measure Manager at 12:26 PM

Communications (continued)

49

- A comment box for users.
 - Add the ability for users to add suggestions and/or comments for future measure package updates
- **Currently:**
 - Recommended to email: eTRM@FutEE.biz
 - Minor items not addressed during measure development are documented in the Measure Log as



🔒 PRIVATE TO NON-CPUC MEASURE DEVELOPMENT ROLES

Tomas Torres-Garcia, Cal TF Staff Reviewer on Apr 18, 2022 11:41 AM

Measure reviewer comments

FILE ATTACHMENTS

📎 [SWCR014-03_Cal_TF_Staff_Future_Recommendations.docx](#) (WORD, 21.6 KB)

Cal TF Staff Future Recommendations: No changes required for this measure update, Cal TF Staff recommendations for all future measure package updates are attached.

Reports

50

- Create a report to track measure development activity. Announcement of updates to versions, subscription. Monthly report of updates / approved measures / expired measures. This enhancement will integrate the SW Monthly Updates effort into the eTRM.
 - This report may need to include data from the "Cover Sheets". This could be a good time to add the Cover Sheet more integrally into the eTRM so that some fields are entered / auto-populated. This data could also be used to describe the change and timeline. The idea of the measure report is common across PAs, but the need to have the Cover Sheet integral to the eTRM has been recommended by the EAR team.

Reports

51

- Create a report to track measure development activity. Announcement of updates to versions, users will be able to subscribe, monthly report of updates / approved measures / expired measures.

- Combine:

- ✦ Measure Package Review Summary Report (eTRM).

Other Reports

Measure Package Review Summary Report

- ✦ Statewide Deemed Measure Package Revision List (Cal TF website, Monthly Statewide MP Status Updates Meeting)

STATEWIDE DEEMED MEASURE PACKAGE REVISION LIST

The IOUs provide a listing, updated monthly, of measure packages they are actively working on, that recently had a change in status, or they anticipate will be changing in the near future. This includes measure packages under development for new measures or updates or revisions to existing measure packages.

Reports (continued)

- Allow users to select what measures they want included in reports; users are for the most part only interested in a subset of measures and might not be interested in all measures.
 - Reports could be permutation and/or measure reports
 - Allow users to select reports that include only measures that they are subscribed to
 - Allow users to prefilter reports so that they can select what measures they want included in reports, prefilters can include things such as:
 - ✦ Fuel
 - ✦ Sector
 - ✦ Climate zones
 - ✦ Start / End dates
 - ✦ PA
 - ✦ Other higher-level parameters
 - Should this be extended to CET output files?

Reports (continued)

53

- Allow users to select what measures they want included in reports and have the option to get a report for only the measures that users are subscribed to, users are for the most part only interested in a subset of measures and might not be interested in all measures.

Shared Reports

Saved measure reports created by administrators.

- ☆ 2020 Measures
- ☆ 2021 Measures
- ☆ 2022 Measures
- ☆ 2023 Measures
- ☆ 2024 Measures
- ☆ Lighting
- ☆ Master List
- ☆ Measure List - All Parameters
- ☆ Measures by Version

Downloads

ALL MEASURE PERMUTATIONS REPORT

A report of all permutations for all published measure versions, updated nightly, that falls into two, mutually exclusive groups:

Expired – Includes all permutations that expired before Jan 1st of the current program year.

Active or Future – Includes all permutations that are active as of Jan 1st of the current program year or that will be active in the future.

Last generated on Feb 21, 2023 12:20 AM.

 PY2023 AND FUTURE PERMUTATIONS (ZIP, 25.8 MB)

 EXPIRED PERMUTATIONS (ZIP, 34.5 MB)

[VIEW ALL PERMUTATIONS](#)

 [DOWNLOAD CSV](#)

This measure's **11088** permutations were generated

Reports (continued)

- Add different types of workflow reports.
 - Consider a measure log summary based perhaps a spreadsheet/report file that breakdowns time spent per role/user, shows the back and forth (status changes via a flow chart), etc.
- Creation of audit reports to verify data quality.
 - Creating of audit reports to verify data quality between systems, eTRM, DEER, etc (Similar to what SDG&E does).
- Range checking on permutation tables:
 - Implement feature that allows range-checking on value tables. An editor would be able to specify a maximum value, minimum value, allowable data type (such as text or number only) and/or "cannot be empty" validation on a value table column. Value table cells that do not meet the validation criteria would be flagged to the measure developer or measure reviewer. Prior to implementing this feature, ensure that error-checking features to be developed for eTRM are consistent with and at least as robust as the error-checking features for CET and CEDARs. Note: This does not apply to static (RTE) tables.

Reports *(continued)*

55

- **Add different types of workflow reports.**
 - Consider, for example, a measure log summary based on a spread sheet / report file that breakdowns time spent per role/user, shows the back and forth (status changes via a flow chart), etc.

Types of Measure Log Entries

56

User Created Log Entries

General – Select this log entry type when other types are not applicable.

Select the Log Entry type that best represents the purpose of the log entry.

Request for information – Use this category if the log entry is requesting specific information from one or more measure contributors.

Reply to request for information – This log entry type should be selected when responding to a request for information. Note that release 2.3 gives measure contributors the ability to reply directly to a measure log entry; therefore, this log entry type should be selected only for limited conditions.

Request for feedback/comments – This should be selected when a measure contributor is seeking feedback or a review from one or more other measure contributors. This log entry type should *not* be selected when seeking early feedback from the CPUC Review team.

Reply to request for comments – This log entry type should be selected when a measure contributor is responding to a request by another measure contributor to comment or review a measure version. Note that release 2.3 gives Measure Contributors the ability to reply directly to a measure log entry; therefore, this log entry type should be selected only for limited conditions when comments are not posted directly in the measure characterization.

Automated Log Entries

The following measure log entries are created automatically by eTRM, have “open” visibility, and cannot be edited or deleted:

Assignment taken
Assignment released
Characterization review comment
PA Implementation Codes

Measure version committed
Measure version published
Measure version unpublished
Changed measure status*

Measure package plan / request for CPUC early feedback – This log entry type should be used only when the Lead PA is submitting a Measure Package Plan or requesting early feedback from the CPUC Review team.

Measure reviewer comments – This log entry type should be selected when a reviewer – such as a Peer Reviewer or a Cal TF Staff Reviewer – is providing their review comments to the measure development team. Note that a measure contributor who reviews a measure version should post comments directly in the measure characterization, which will automatically create a measure log entry with “Measure characterization review comment” as the log entry type. Use the “Measure reviewer comments” log entry type for comments not inserted in the measure characterization.

Announcement – This log entry type should be used when posting an announcement to other measure contributors. Use this category sparingly and do not use this for posting review comments.

Reports *(continued)*

57

- **Creation of audit reports to verify data quality.**
 - Creating of audit reports to verify data quality between systems, eTRM, DEER, etc (Similar to what SDG&E does).
 - Check against claims/CET validation rules and warnings.
 - Custom check to ensure data consistency.
 - **Currently:**
 - ✦ These types of checks are done outside of the eTRM on an as-needed basis

Reports *(continued)*

58

- Implement feature that allows range-checking on value tables. An editor would be able to specify a maximum value, minimum value, allowable data type (such as text or number only) and/or "cannot be empty" validation on a value table column. Value table cells that do not meet the validation criteria would be flagged to the measure developer or measure reviewer. Prior to implementing this feature, ensure that error-checking features to be developed for eTRM are consistent with and at least as robust as the error-checking features for CET and CEDARs. Note: This does not apply to static (RTE) tables.

Reports *(continued)*

- Provide a single method to get all shared data versions, parameters, and value tables; alternatively, provide a method to get all measure parameters and value tables, like the “Measure Packet” download in the eTRM UI.
- Ability to download Measure Log comments.
 - Being able to download measure log comments/characterization review comments can be helpful in categorizing the most common comments made which can then be used for future trainings.
- Add the ability to download the system log.

Reports (continued)

60

- Provide a single method to get all shared data versions, parameters, and value tables; alternatively, provide a method to get all measure parameters and value tables, like the “Measure Packet” download in the eTRM UI.
- **Currently:**
 - ❑ Shared objects available through API and SQL
 - ❑ Shared objects exported on an individual basis to CSV

Shared Data ▲

Export all

<h3>Shared Measure Parameters</h3> <p>Parameters are used to characterize individual measure permutations that qualify energy savings and (in some cases) costs. Shared parameters are those that are used by multiple measures in the eTRM. Many of these parameters are taken from the DEER database and are maintained to align with both DEER and CEDARS regulatory systems.</p> <ul style="list-style-type: none"> Building HVAC ↻ IN SYNC Building Location ↻ IN SYNC Building Type ↻ IN SYNC Building Vintage ↻ IN SYNC Cost Adjustment Types 	<h3>Shared Value Tables</h3> <p>Value tables are used to assign specific numeric values to equations as well as to define values relevant to measure tracking and reporting. Shared value tables are used by multiple measures in the eTRM; managing these in a central location allows changes in these value tables to be propagated to affected measures. Many of the value tables contain data from the DEER database and are maintained to ensure currency with both DEER and CEDARS regulatory systems.</p> <ul style="list-style-type: none"> Coincident Demand Factor Constants Constants - Cost Effectiveness
--	--

Reports *(continued)*

61

- Ability to download Measure Log comments.
 - Being able to download measure log comments/characterization review comments can be helpful in categorizing the most common comments made which can then be used for future trainings.

Does this one have other use cases?
Are other PAs using / needing this data
for their internal workflows? (maybe
PG&E)

Reports (continued)

62

- Add the ability to download the system log.

System Log



Find a system event by keyword...



Add a filter



1-25 of 130,821 log entries



Starting row

Rows per page

1

25



Go

ACTION	OBJECT	ACTOR	MESSAGE DETAIL	TIMESTAMP
Characterization field updated	Measure version	Lake Casco	Updated characterization field Code Requirements in version SWWB008-01-draft of measure All-Electric Homes, Residential, New Construction	March 19, 2023 02:59 PM
Characterization field updated	Measure version	Lake Casco	Updated characterization field Code Requirements in version SWWB008-01-draft of measure All-Electric Homes, Residential, New Construction	March 19, 2023 02:29 PM
Characterization	Measure	Lake Casco	Updated characterization field Code Requirements	March 19, 2023 02:24

Filtering

63

- Expand filtering capabilities:
 - (1) allow filtering on value columns, (2) allow multiple filters per column (check boxes), (3) allow formulas when filtering (EXCEPT, values > y, values <= y, etc).
 - Add the ability to download permutations, value tables, shared value tables, and CPUC support tables that are filtered. Filtering should apply to any field (value columns as well) and users should be able to download the filtered results.
- **Currently:** For viewing only:
 - CPUC Support Tables – none
 - Shared Parameter List - none
 - Shared Value Table – On “Advanced Screen Mode”, Base User can choose one item from each Parameter List in a Value Table
 - Permutation List – none
 - Measure level – Measure Report, PA Implementation Codes, Property Data

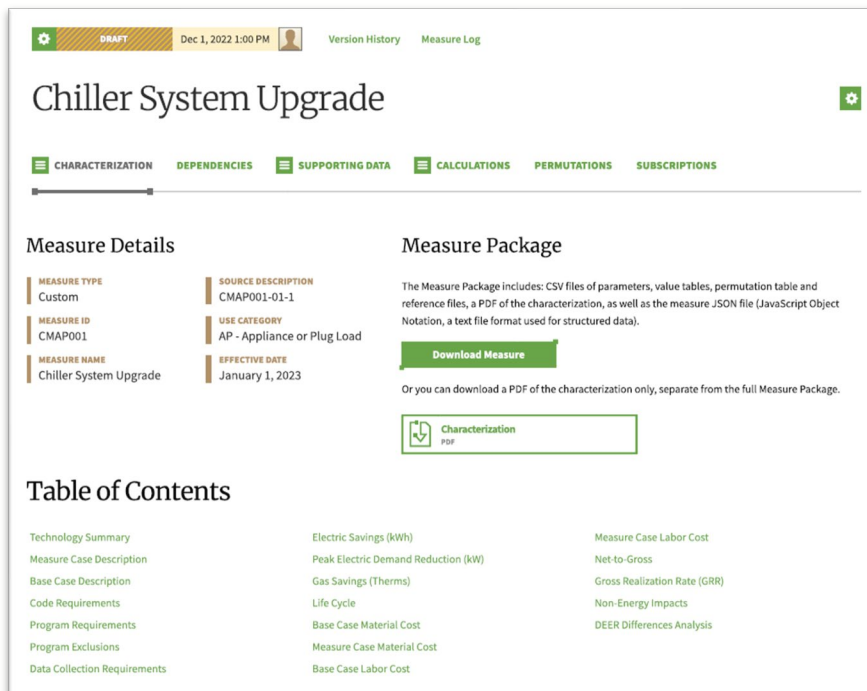
eTRM enhancements: **New Modules**

Custom “Phase 1” Module

65

Custom Measures to host information on calculation methods and tools

Custom Library to host tools, templates, and other key resources



Chiller System Upgrade

MEASURE TYPE: Custom
 SOURCE DESCRIPTION: CMAPO01-01-1
 MEASURE ID: CMAPO01
 USE CATEGORY: AP - Appliance or Plug Load
 MEASURE NAME: Chiller System Upgrade
 EFFECTIVE DATE: January 1, 2023

Measure Package

The Measure Package includes: CSV files of parameters, value tables, permutation table and reference files, a PDF of the characterization, as well as the measure .JSON file (JavaScript Object Notation, a text file format used for structured data).

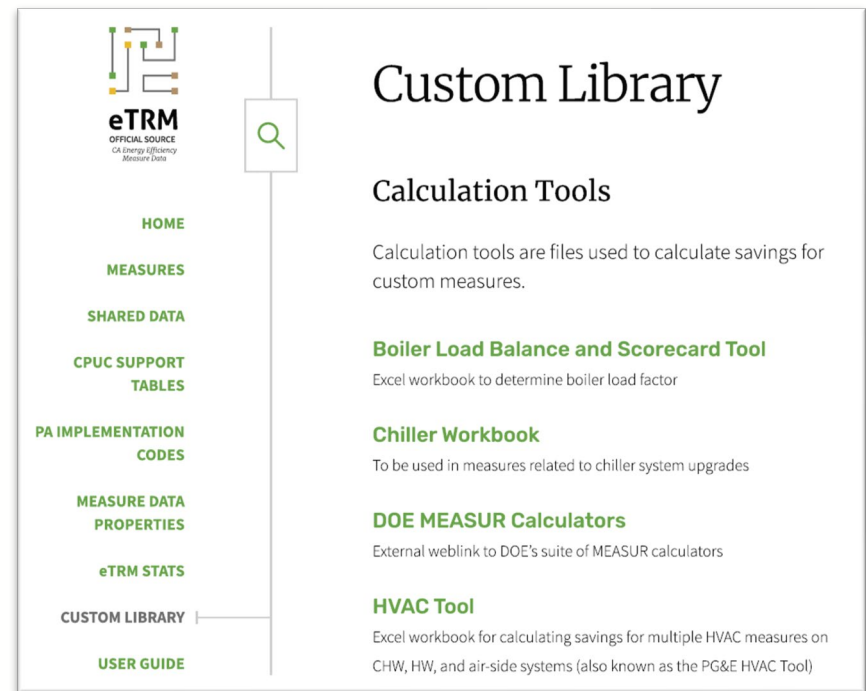
[Download Measure](#)

Or you can download a PDF of the characterization only, separate from the full Measure Package.

[Characterization PDF](#)

Table of Contents

Technology Summary	Electric Savings (kWh)	Measure Case Labor Cost
Measure Case Description	Peak Electric Demand Reduction (kW)	Net-to-Gross
Base Case Description	Gas Savings (Therms)	Gross Realization Rate (GRR)
Code Requirements	Life Cycle	Non-Energy Impacts
Program Requirements	Base Case Material Cost	DEER Differences Analysis
Program Exclusions	Measure Case Material Cost	
Data Collection Requirements	Base Case Labor Cost	



eTRM
OFFICIAL SOURCE
CA Energy Efficiency
Measure Data

Custom Library

Calculation Tools

Calculation tools are files used to calculate savings for custom measures.

- Boiler Load Balance and Scorecard Tool**
Excel workbook to determine boiler load factor
- Chiller Workbook**
To be used in measures related to chiller system upgrades
- DOE MEASUR Calculators**
External weblink to DOE's suite of MEASUR calculators
- HVAC Tool**
Excel workbook for calculating savings for multiple HVAC measures on CHW, HW, and air-side systems (also known as the PG&E HVAC Tool)

Navigation menu: HOME, MEASURES, SHARED DATA, CPUC SUPPORT TABLES, PA IMPLEMENTATION CODES, MEASURE DATA PROPERTIES, eTRM STATS, CUSTOM LIBRARY, USER GUIDE

Additional Custom Modules

66

- Planning/development to host Custom Projects (unique packages of deemed/custom measures with customer information).
 - Site-specific custom measures
 - Custom measure calculations (with unique input values)
 - Site-specific custom projects
 - Measure and project review workflows

Information Exchange

67

- Add capability for global or imported calculations, for calculations that can be used in more than one measure.
- Add capability to link measures so that some information can be assured to be the same.
 - Ex: Link Fuel Substitution measures with non-fuel-sub measures that share the same baseline.

API - Performance

68

- Improve API endpoint performances so that they can be used for real-time applications.
 - This enhancement would pre-build the permutations API responses so that providing the data occurs quickly.
- [OMBU Recommendation] Allocate a significant ad-hoc budget to consider performance improvements to the other API endpoints.

API - Filtering

69

- Add more API filtering capabilities for the eTRM.

https://www.caetrm.com/api/v1/measures?use_category=HC&version_commit_date_gte=20230101

- Add “Implementation Status” field to the PA implementation codes API endpoint and allow filtering capability for this field
 - Don’t automatically exclude “Pending” and “Not offered”)
 - PAs want to be able to use the APIs to check which codes are pending and/or not offered.

IMPLEMENTATION STATUS

- Pending
- PA codes
- Not offered

PA Implementation Codes

70

- When a start date is modified in a measure, the PA Codes will be removed.
 - Remove the PA implementation codes for measures that had the start date modified, this is needed so that the implementation start date that is in the PA codes file can align the newly updated start date of the measure. Consider doing this also when End date is modified.
- Add validations to the implementation start and end dates fields in the file that is uploaded into the eTRM PA Implementations Codes. Validations for PA Codes upload:
 - Implementation start date: must be after or the same as the measure start date and before the measure end date.
 - Implementation end date: must be after the measure start date and before or the same as the measure end date.

eTRM References

71

- Set up an input form for eTRM references so that users could request references directly in the eTRM, apply checks to references to ensure good quality. Be able to extract the list of the measures that are uploaded into the eTRM for system admins (maybe base users, we will need to discuss).
 - **Currently:** Users must request references via the eTRM@FutEE.biz.

- Transform “eTRM User Guide” page to “eTRM User Support” page with sections for:
 - 1) Base user
 - 2) Measure developer with ability to post user guide doc(s), embed YouTube or Vimeo training video play lists for each section.
 - 3) API information (Update system text for the API Guide, change the system text from System Admin Guide to System API Guide.)

eTRM User Guide

USER GUIDE FOR BASE USERS AND MEASURE CONTRIBUTORS (V2.3)

The eTRM User Guide for Base Users and Measure Contributors defines common terms and contains links to short video tutorials showing how to conduct the most common tasks in the eTRM.

Click on the PDF download icon to open and download the User Guide. Alternatively, you can [click here to access the entire User Guide for Base Users and Measure Contributors video playlist](#). (Opens a new window.)

GUIDELINES / DATA DICTIONARY (V2.4)

The Guidelines are intended for the Base User who has an assigned measure contributor role or for any Base User who wants to better understand the meaning of any field within the Characterization or Permutations.


One chapter describes each field included in the Characterization tab in the eTRM. Collectively, the Characterization fields describe the measure and explain the data sources and analysis methods to derive energy use, energy and demand impacts, and other cost effectiveness metrics.

Another chapter provides a guidance for the development and review for each data field needed to generate the permutations for a measure. Many data fields have a companion field in the Characterization that explains the source, inputs, and methodology to derive the data value.


SYSTEM ADMIN GUIDE (API DOCUMENTATION)

API stands for Application Programming Interface. An API is a set of clearly defined methods to enable interoperability between computer systems.


User Guide

 eTRM_User_Guide_for_Base_Users... .pdf
PDF / 728.0 KB


Data Dictionary

 Statewide_Measure_Development_... .pdf
PDF / 1.3 MB

System Admin Guide

 eTRM_API_Specification_20230110... .pdf
PDF / 200.1 KB

Style Guide

 eTRM_Style_Guide_v2.0.pdf
PDF / 277.3 KB

UI / UX (continued)

73

- Change mentions of "Custom" in the eTRM to "Customized" or "Tailored":
 - Home → Measure Reports → "Custom Reports" and "Manage your custom reports"
 - Home → Permutation Reports → "Custom Reports"
 - Measures → Measure Reports → "Custom Reports" and "Create a Custom Report"
 - Any SW Measure → Permutations tab → "Custom Reports" and "Manage your Custom Reports"
- Add an automated/AI FAQ feature where users can search up basic things like "how to create a draft?" and documentation would appear for that request.

8760 Features

74

- Allow ability to perform 8,760-hour array calculations (for example, developing annual carbon impact using hourly values that can be summed over full year using GHG look-up date and hourly measure energy savings), as well as over measure lifetime.
- Add ability to associate load shapes--either 8,760-hour or compressed format--to measure permutations based on permutation attributes.
 - eTRM should store library of load shapes, which may be associated at the permutation level. Energy Division will need to finalize appropriate measure-level load shapes that can be used for each measure or technology type, but we would like to add IDs now if we can.

Other

75

- Simple Enhancements to host Emerging / New measures.
- Provide the framework that would allow the eventual sunseting of the PEAR/Ex-Ante database, at which point the CPUC user roles may absorb all administrative permissions.
- One-time setup for ongoing performance audits. With this enhancement, a software developer would be able to run reproducible performance reports on eTRM.
 - What metrics are missing? What measures are the ones that are giving us timeout issues.
- Add/update fieldnames for baseline clarity, E5152 Attachment A Tables A-3-5 and A-3-6.

- Simple Enhancements to host Emerging / New measures.
 - Possible features:
 1. Intakes forms
 2. Connection to P&G data
 3. Rough TSB/TRC calculator
 4. Linking to existing data
 5. Start storage of reference files upload to a temporary space
 6. Export tool to eTRM
 7. What's missing log
 8. Notifications to inform stakeholders/implementers
 9. Presentation / image storage to help communicate measure package concept

Other

77

- Provide the framework that would allow the eventual sunsetting of the PEAR/Ex-Ante database, at which point the CPUC user roles may absorb all administrative permissions.
 - Allow for table creation and storage (with versioning) in the eTRM
 - Some tables will need to be very large
 - Sync'ing scripts will need to be updated

Other

78

- One-time setup for ongoing performance audits. With this enhancement, a software developer would be able to run reproducible performance reports on eTRM.
 - What metrics are missing? What measures are the ones that are giving us timeout issues.
 - This feature already exists, but as the eTRM develops, we should consider if new performance checks would be valuable.

Other

Table A-3-5. Current and DEER2022 fieldnames for CET, CEDARS, and eTRM

- Add/update fieldnames

Unit-level, baseline-specific fieldnames		Rule by Measure Application Type (MAT)	
Current			
UnitkW1stBaseline	For NC and NR MATs: Non-zero, fuel-specific UES values using standard/code baseline	For AOE, BW, BRO and AR MATs: Non-zero, fuel-specific UES values using pre-existing baseline unless the delivery type is midstream or upstream where standard/code baseline is used ²³	
UnitkWh1stBaseline			
UnitTherm1stBaseline			
UnitkW2ndBaseline	For all MATs but AR: Zero UES values	For AR MAT: Non-zero, fuel-specific UES values ²⁴ using standard/code baseline	
UnitkWh2ndBaseline			
UnitTherm2ndBaseline			
UnitMeaCost1stBaseline	For NC and NR MATs: Non-zero, fuel-specific incremental cost values using standard/code baseline or pre-existing baseline	For AOE, BW, BRO and AR MATs: Non-zero, fuel-specific full measure cost values using pre-existing baseline	
UnitMeaCost2ndBaseline	For all MATs except AR: Zero or null incremental cost values	For AR MAT, only: Non-zero incremental measure cost values ²⁵ using standard/code baseline	
DEER2022 additions for fuel-substitution or interactive effects loads added			
UnitAddkW1stBaseline	For NC and NR MATs: Non-zero, fuel-specific added-load values using standard/code baseline	For AOE, BW, BRO and AR MATs: Non-zero, fuel-specific added-load values using pre-existing baseline	
UnitAddkWh1stBaseline			
UnitAddTherm1stBaseline			
UnitAddkW2ndBaseline	For all MATs except AR: Zero or null added-load values	For AR MAT, only: Non-zero, fuel-specific added-load values using standard/code baseline	
UnitAddkWh2ndBaseline			
UnitAddTherm2ndBaseline			

eTRM enhancements: New Proposals

Parameters / Value Tables / Calculations

- Add IE related shared parameters similar to what is done with EUL so that all records could be used if individual permutations do not exist within the table (i.e. IE-Building Vintage and/or IE-Climate Zone).

Interactive Effects - Commercial R1869 R1871

Starting row: 1 | Rows per page: 25 | Go | Add a filter | LIGHTING TYPES: NRes-Oltg-Gar-dWatt | CLEAR ALL


IE-VERSION	LIGHTING TYPES	PROGRAM ADMINISTRATOR	IE-BLDG TYPE	BUILDING VINTAGE	BUILDING LOCATION	BUILDING HVAC (TEXT)	KWH FACTOR (RATIO)
DEER2023	NRes-Oltg-Gar-dWatt	Any	Com	Any	Any	cUnc	1.0000

Starting row: | Rows per page: |


Workflow

82



- Add an option to allow users to set the order that they would like to view replies within measure logs, example: either ascending or descending. Currently the way the replies are ordered does not match how nested replies within a reply are ordered.




Mar 17, 2023 3:47 PM


Tomas Torres-Garcia - System Administrator  [MANAGE](#)

Reply 2


 [REPLY](#)  [COPY LINK](#)




Mar 17, 2023 3:48 PM


Tomas Torres-Garcia - System Administrator  [MANAGE](#)

Nested reply 1


 [COPY LINK](#)




Mar 17, 2023 3:50 PM


Tomas Torres-Garcia - System Administrator  [MANAGE](#)

Nested reply 2

 [COPY LINK](#)



Mar 17, 2023 3:45 PM

Tomas Torres-Garcia - System Administrator  [MANAGE](#)

Reply 1

- Published date is among the less important dates to show on high-level webpages.
 - For instance, when wanting to learn which lighting measure packages are currently in the catalog (Measures tab), I had to go to SWLG012-01 to see that it expired 2020-12-31 and that no more recent version exists. It would be ever so much more helpful to list the Effective and End dates on this page rather than the published date.

NAME ▲	MEASURE VERSION ID ▲	STATUS ▲	USE CATEGORY ▲	PUBLISHED ▲
Air-Cooled Chiller	SWHC020-03	CPUC Approved	HC - HVAC	Dec. 15, 2022
Air-Cooled Chiller, Path B	SWHC052-02	CPUC Approved	HC - HVAC	Nov. 10, 2022
Airflow Adjustment, Residential	SWSV009-01	CPUC Approved	SV - Service	Oct. 31, 2022

- Please add a pop-up or change the text below the release cycle drop down to inform users to modify “change description” text to enable “create draft” button.

CREATE A

Draft from version **SWBE006-02-9**

RELEASE CYCLE*

02

Choose a release cycle for this draft. By default, the draft will be created for the **02** release cycle. This cannot be changed once a draft is created.

CHANGE DESCRIPTION*

B *I*     Format   Source

Purpose: Resolution E-5152 updates of DEER measures due to CZ2022 weather data.

Key updates include:

1. Updated measure to use DEER2024 measures.
 - Addition of new measures for R-44 and R-60 insulation
2. Updated dependencies to newest versions of shared tables.
3. Added Measure and baseline Tech IDs.
4. Fixed miscellaneous errors in the text.
5. Added Res-Default>2 NTG ID.
6. Updated Measure Application Type per E-5221.
7. Updated delivery types.
8. Updated measure case material costs.

Updates for SWBE006-02 on 1/20/2023

Please provide a description of the changes you plan to provide in this version of the Measure. You will have the opportunity to edit this description again before committing your work.

Measure Property Data

85

- Related to Sprint 19 from 2.5: 111.2.23 comment to be considered as an enhancement. Can eTRM enforce the following relationship?
 - If data type = integer:
 - ✦ Only inequality symbols + integers is allowed in the Numeric Range field
 - If data type = date:
 - ✦ Only inequality symbols + date in MM/DD/YYYY is allowed in the Numeric Range field
 - If data type = decimal:
 - ✦ only inequality symbols + a number is allowed

Measure Property Data (continued)

86

- Related to Sprint 19 from 2.5: Can we put the "Measures with Property Data" and "Measure without property data" in one tab, then add a {Property Data = 'No Property Data', 'Property Data'} filter, similar to the PA Implementation Codes tab? Clicking back and forth between two tabs isn't very desirable.

- **Currently:**

Measure Property Data

MEASURES WITH PROPERTY DATA

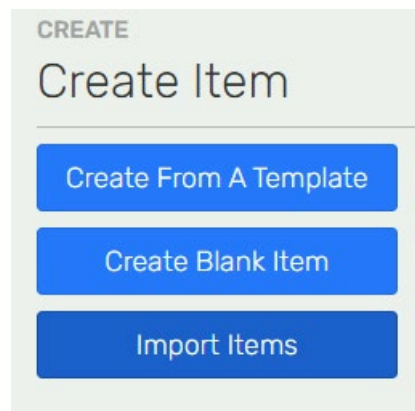
MEASURES WITHOUT PROPERTY DATA



Measure Property Data *(continued)*

87

- Related to Sprint 19 from 2.5: When importing property data, currently, the eTRM appends the new data to the existing list. A replace/delete all option will be important to allow revisions from stakeholders to be done outside of the eTRM.



Next Steps

- Cal TF Staff will consolidate feedback from this meeting.
- Cal TF Staff will propose groups of enhancements that fit within budget and time constraints.
 - All responses will be available for review so that stakeholders can recommend additional adjustments

