

MEMORANDUM

Date: September 14, 2022
To: Cal TF Members
From: Ayad Al-Shaikh, Cal TF Staff
Subject: Cal TF Proposal for Deemed Measure Property Data

I. Summary







To ensure that a deemed measure is installed in a manner that aligns with the deemed impacts that are claimed, Program Administrators (PAs) often define measure-specific eligibility and exclusion rules as well as site-specific data requirements. These rules and requirements are collectively referred to in this memo as Deemed Measure Property Data.

Deemed Measure Property Data define requirements for program eligibility, program exclusions, and data collection and may be unique to each Program Administrator (PA) based on the PA's program requirements. Currently, PAs independently review each deemed measure package once the measure package is approved by CPUC to extract Deemed Measure Property Data. These data are described within the measure package to list the basic requirements for:

- Program eligibility (in the Program Requirements section)
- Program exclusion (in the Program Exclusions section)
- Data collection (in the Data Collection Requirements section)

PAs convert the descriptive information in an approved measure package into a structured data format that includes the list of basic requirements from the measure package and additional validation criteria, allowable ranges for values, validation rules, timing for checks, and applicability for alternatives. This conversion is a manual process performed by each PA and differs across the PAs due to PA-specific criteria, formatting, and QA/QC methods. This conversion is intended to accurately translate requirements to the many users of the measure package for that specific PA, so the data reside within the PA systems.

The Cal TF proposes to create a statewide process to produce reviewed Deemed Measure Property Data, hosted and managed within the eTRM, for each measure version. By creating a statewide solution for each measure version and housing this data within the eTRM, we can achieve the following benefits:

-  • **Cost savings** – Eliminate redundant work while improving the quality of the work by having the statewide lead draft the data, and reduce errors and miscommunication through automation of data transfer/entry.
-  • **Time savings** – Workflow can begin during measure development and proceed directly to review once measure package is approved so that it is completely aligned with the final package.
-  • **Customer Experience** – Data are accessible by all users so that data are visible early. If data changes, announcements can be distributed to keep stakeholders informed.
-  • **Standardization** – Statewide consistency across PAs as well as across measure packages can be driven. Furthermore, standardizing the availability and structure the data opens the door to door to offering more measures especially through smaller PAs.
-  • **Transparency** – Data access shares what will and will not be available for each claim across all stakeholders from customer to evaluator.
-  • **Stakeholder Engagement** – Stakeholders who opt into the process of data review will have the opportunity to review and comment on how data can be provided.

This memorandum describes the Cal TF proposal for stakeholder view and feedback.

II. Analysis

Current State

Once a package is approved, each PA independently reviews the measure package to extract and potentially elaborate on the equivalent of Deemed Measure Property Data for their programs. Obtaining Deemed Measure Property Data today is a manual process that has issues that arise from:

- Data entry
- Data maintenance
- Data access
- Data consensus

These issues lead to an inefficient flow of data that is prone to errors and miscommunication.

The amount of time to create a set of requirements for each measure package is significant since this entails having a new engineer within each PA understand the measure package that was likely sponsored by a different lead PA. This effort includes manually copying requirements

and documenting reasonable limits to make validation more concrete for QC checks that may be performed by non-engineers.

The possibility of inconsistency, errors, delays, and miscommunications becomes clearer when considering that this work will need to be completed under tight time constraints to start programs cleanly in 2023.

III. Proposed State

Cal TF proposes to create a statewide process that would result in stakeholder reviewed Deemed Measure Property Data hosted and managed within the eTRM for each measure version. The proposed process would achieve multiple benefits by addressing each issue with the current process:



- **Data Entry** – to create robust data in a timely and cost-effective way



- **Data Maintenance** – to document clearly how updates occur and are communicated



- **Data Access** – to provide a reliable way to access data for keeping stakeholders informed



- **Data Consensus** – to document workflow and scope to keep data requirements reasonable

Attachment A shows a figure of the proposed workflow process. The following sections describe each of these four aspects of the process.

Data Entry:

Owner: Lead PA

- The measure developer, who is already an expert in the measure package and connected to the discussions on measure requirements, eligibility, and data collection will draft the Deemed Measure Property Data.

Content: Collectively known as Measure Property Data

- Measure Property Description – presented in the form of a bulleted list. The description should include three sections:
 1. Requirements – this information should come directly from the measure package’s Program Requirements and Data Collection sections.
 2. Exclusions – this information should come directly from the measure package’s Program Exclusion section.

3. Additional details – this information is optional to insure a more successful installation of the measure.

The measure developer should avoid information that is redundant or overlapping across the three categories.

- List of Measure Property Validation – presented in a spreadsheet. The data should also provide guidance on alternative information that is acceptable, pass criteria, and timing for the data collection. Guidance for the contents and structure of the data is presented in Attachment B (modeled after SDG&E approach). The List of Measure Property Validation data that is provided in the attachment is intended to be used by:
 - Implementation teams to understand the required inputs to ensure measure eligibility.
 - Quality control teams that could be part of utility or implementation companies to understand what data must be collected to verify eligibility.
 - Evaluation teams to understand what data are available for each deemed application.

This List of Measure Property Validation is intended to be a comprehensive starting point for each PA who uses the data. Data can be updated based upon specific program needs. In these cases, it is highly encouraged that changes are recommended statewide so that data can remain aligned.

Timing:

- The measure developer will complete this task in connection with the measure package approval. The Measure Property Data will be finalized after measure approval to ensure that the Measure Property Description and Measure Property Validation content are correctly aligned to the measure package.

Approval Process:

- Cal TF will establish a workflow to occur outside of the Measure Package approval process. Measure reviewers will be given the option to opt into the review cycle that could include:
 - Other PAs
 - Deemed EAR Team
 - Implementers directly involved or planned to be involved in the measure
 - Evaluators
- Versioning capabilities will allow:
 - Start and end dates for each version that are directly associated with a measure version. Dates should be bounded by measure version start and end dates.
 - Access to older versions

Data Maintenance:

Owner: Lead PA

- As situations arise that require updates to the Measure Property Data, the measure developer associated with the Lead PA will initiate the workflow to update the data that could include:
 - New measure version approved
 - Correction to an existing measure version
 - Feedback from an external party on suggested improvements

Notifications:

- Distribution should include:
 - Tbd (stakeholder list)
- Timing that notifications are distributed should include, at least these points:
 - Start of workflow process
 - Invitation to review
 - End of workflow process
- Content should be standardized to include:
 - Tbd

Approval Process:

- Approval workflow should be identical to the initial data entry workflow process.

Data Access:

Visibility:

- Three states will define visibility that also remain consistent with eTRM rules for visibility:
 - Draft
 - In Review
 - Approved
- The following table describes how these three states align with the Measure Package development process as well as visibility rules within the eTRM.

Measure Property Data Status	Measure State Description			User Type Visibility		
	Measure Version Approved	Measure Version Published	Measure Property Data Approved	Measure Developer	Measure Reviewer	Base User
<i>Draft</i>	Not Approved	Not Published	Not Approved	Yes	Yes	No
<i>In Review</i>	Approved	Not Published	Not Approved	Yes	Yes	No
<i>In Review</i>	Approved	Published	Not Approved	Yes	Yes	No
<i>Approved</i>	Approved	Published	Approved	Yes	Yes	Yes

Download capabilities:

- Data can be accessible by:

- API
- CSV download
- Data not accessible through the SQL database
- The available data will include:
 - Measure Property Description download will be available at the Measure Version level (ie, one description for each version).
 - Measure Property Validation:
 - Set of rules on how Measure Property Validation should be applied to permutations.
 - Permutation data download that incorporates the validation rules aligned with permutation data.

Data Consensus:

Through the workflow process, stakeholders are provided the opportunity to opt in to review both the:

- Measure Property Description
- Measure Property Validation

Scope of the review:

What cannot be changed:

- This review process occurs after the measure package has been approved and published, so the minimum requirements (as defined in the measure package) cannot be altered.

What can be changed:

- How the requirements are met can be refined.
- Additional information that is available and/or recommended.
- How site-specific data collection can be utilized to improve the measure in the future.
- How data collection may vary by delivery type, sector or building type could be added.
- Alternative approaches when required data are not available.
- Cases when an application is not acceptable.

Attachment A shows an initial proposed process flow to start the discussion. The workflow process will be developed through the subcommittee and stakeholder feedback.

IV. Conclusion

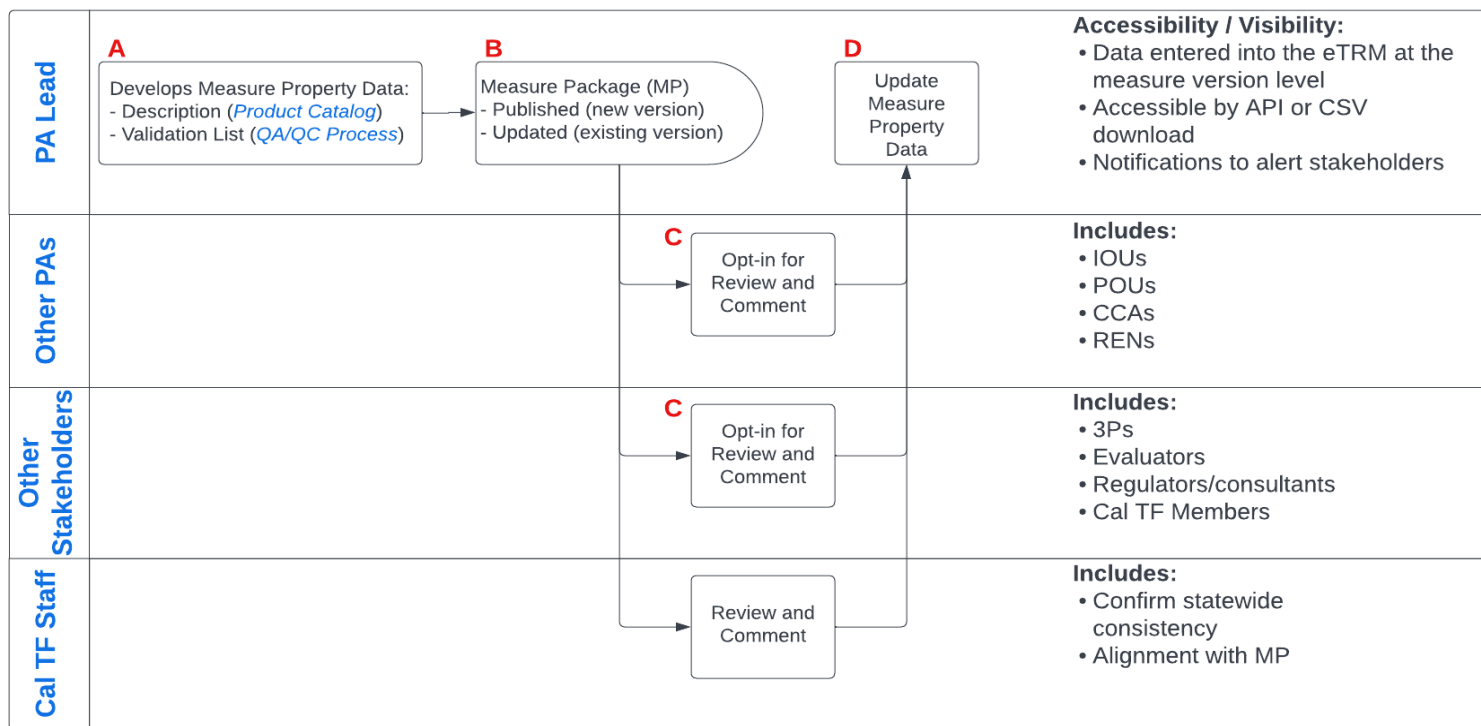
With a proposed statewide process that covers data entry, maintenance, access and consensus, creation of Deemed Measure Property Data for each measure version can proceed in a manner that:

- Achieves cost and time savings
- Promotes transparency and standardization
- Ensures stakeholder engagement and a positive custom experience

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Attachment A: Proposed Workflow Process



Notes:

- A. Measure Property Data drafted during measure development. If measure package has already been approved, this step will occur as soon as possible after approval.
- B. Measure Property Data becomes visible when the measure package is approved and published.
- C. Stakeholders are invited to participate in the review on an “Opt-in” basis. In other words, comments must be received during the review period to ensure that they get considered.
- D. Measure Property Data in the eTRM can be timestamped to include a last modified date.

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Attachment B: Examples of Measure Property Validation data:



Examples -
Validation Items.xls

Common examples

Categorization Fields

- **Measure Package ID**
- **Version ID**
- **Measure Package Name**
- **Offering ID** – Offering ID referenced from Offering ID value table within the measure
- **MeasAppType** – Measure application type (choice – e.g., NR, AOE, Any, etc.)
- **DeliveryType** – the delivery channel which a measure is being offered (choice – e.g., DnDeemDI, DnDeemed, Any, etc.)
- **Building Vintage** – building vintage (choice – e.g., New, Rec, Ex, Old)
- **Sort Order** – sequential/unique order of validation data records

Property Fields

- **Source Record** – reference to the data collection item from measure package. Keep the same language from the measure package and include the section title.
- **Property Enabled**
- **Property Name** – validation property name that can be chosen from a list of common properties or created as a custom entry. Common properties are preferred to drive consistency across measure packages. The property name should be descriptive and specific. For example, the Program Exclusions states that the complete removal of the existing display case and replacement of it with a new case with glass doors is not eligible. Instead of assigning it a property name of “Exclusion”, a more descriptive “No display case replacement” property name is preferred.
- **Property Label** – further description of the name to make the property easier to interpret. It should state the specific item required and/or data collection requirements.
- **Data Type** – choice from a list (e.g., Text, Integer, Date, etc.)
- **Choices** – it can be “n/a”, or enter a list of choices relevant to the property, such as climate zones, building types, sectors, etc.
- **Property Description** – guidance in obtaining evidence/proof that would satisfy the requirement(s) stated in the Property Label field

Validation Fields

- **Validation Rule** – logical statement or assertion that describes the passing state, and it can be of different formats depending on the type of data:
 - “Value from a list” such as for building type or building location

- “Numeric range” such as for AFUE efficiency of $\geq 95\%$ and $<97\%$
- **“Validation Correct Answer** – value that designates the passing criteria
- **Min Value** – minimum range of the value allowed
- **Max Value** – maximum range of the value allowed
- **Decimal Places** – value communicates to the submitter of the data the number of decimal places that are expected
- **Checkpoint** – when is data expected to be collected
 - Application – submitted application will include all of the information necessary for verification
 - Pre-Install Inspection – on-site inspection that occurs before the new equipment is installed will collect site-specific data; data is typically focused on existing conditions
 - Post-Install Inspection – on-site inspection that occurs after the new equipment is installed will collect site-specific data
 - QA Checklist – information submitted with the application must be used to confirm the item being validated
- **Verification** – how should data be used to validate this item
- **Pass Criteria** – statement of what passing data should look like

Alternative Validation Fields

- **Alternate Checkpoint** – when is data expected to be collected; only required if primary validation data is not available
- **Alternate Verification** – how should data be used to validate this item
- **Alternate Pass Criteria** – statement of what passing data should look like

Additional Flags

- **Purpose Flag** (Eligibility / EM&V / Categorization) – choice on whether the data is used to determine eligibility (‘Eligibility’) or required as part of a data collection requirement (‘EM&V’)
- **Check Flag** (Required / Recommended) – choice on whether data is ‘Required’ since it is explicitly documented in the measure package or ‘Recommended’