

# Deemed Measure Property Data

## Subcommittee Meeting #1



**OCTOBER 6, 2022**  
**AYAD AL-SHAIKH**  
**CAL TF STAFF**

# Groups Invited

- PAs
  - SDG&E, PG&E, SCE, SCG, LADWP
- Implementers/Measure Developers
  - Synergy, ICF, Energy Solutions, Lincus/Solaris, CLEAResult, Willdan, RMS, TRC, DNV
- Evaluation/Ex Ante
  - DNV, CPUC Staff
- Future Groups to Include:
  - CCA/REN/POU's
  - Additional implementers
  - *Who else?*

# Meeting Goals

- Finalize the data structure of a Validation List item
- Review the most common Validation List items
- Discuss the review process of the initial draft data

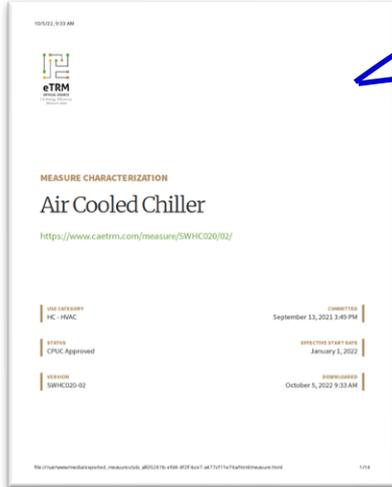
*We will stop at 10:50 am:*

- Update on Parallel Actives / Next Steps
  - Draft structured data
  - eTRM enhancement (high level)

# High Level Concept Overview

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## Approved Measure Package



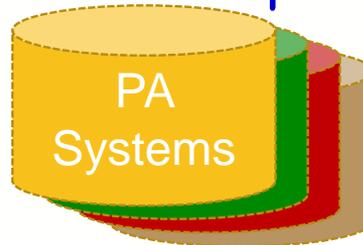
## Measure Property Description



## List of Measure Property Validation Items



Viewable / Accessible  
by 3Ps, evaluators,  
any base user



- Data acts as a starting point.
- Programs may need to modify “how” data is collected.
  - *Best practices should be fed back into the original data.*
- Recommended items may be included.

# Finalize the Data Structure of a Validation List item

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- Validation List Item structure
  - Property Fields
  - Validation Fields
  - Alternative Validation Fields
  - Additional Flags
  - Category Fields

# Data Entry Validation Item

**eTRM**  
OFFICIAL SOURCE  
CA Energy Efficiency Measure Data

**ELIGIBLE PRODUCTS**

This measure requires the installation of a VSD and associated controls on a motor driving a ventilation fan. Eligibility requirements include:

- The fan motor rated hp must be  $\leq 100$  hp.
- As an *add-on equipment installation*, the VSD must be applied to the HVAC supply or return air system.
- Any other throttling devices, such as inlet vanes or bypass dampers, and throttling valves, must be removed or permanently disabled.

Navigation: HOME, CPUC ADMIN DASHBOARD, MEASURES, SHARED DATA, CPUC SUPPORT TABLES, IMPLEMENTATION CODES

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<b>Source Record (Item from Workpaper requiring Property)</b>	This measure requires the installation of a VSD and associated controls on a motor driving a ventilation fan. Eligibility requirements include: <ul style="list-style-type: none"> <li><b>The fan must be <math>\leq 100</math> hp.</b></li> </ul>	Source Record – copied text from the measure package to directly connect to the Property Name.
<b>Property Name</b>	Input Rating (HP)	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.
<b>Property - Label</b>	What is the input power rating on the fan motor (HP)?	Property – Label – further description of the name to make the property easier to interpret; sometimes can be modified to a question.
<b>Property - Installation - Control Type</b>	Number	Property - Installation - Control Type – choice (Date, List, Text, Number, <b>Formula</b> , None)
<b>Property - Installation - Values - Custom</b>		Property – Installation – Values – Custom – choice from List values
<b>Property Comment</b>	Input power located typically on the motor, not the fan.	Property Comment – <i>measure specific comment to provide context or specific instructions</i>

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<b>Validation Rule</b>	Must be $\leq 100$ hp	Validation Rule – logical statement or assertion that describes the passing state
<b>Validation criteria</b>	LTE 100 hp	Validation Criteria – logical statement of how the correct answer can vary (ie, Equal to, Greater than, etc)
<b>Validation Correct Answer</b>	LTE	Validation Correct Answer – value that designates the passing criteria
<b>Numeric Type</b>	General	Numeric Type – number type (currency, number, percent, none)
<b>Min Value</b>	3	Min Value – minimum range of the value allowed
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<b>Validation Checkpoint</b>	Inspections	Validation Checkpoint – when is data expected to be collected (Application, Inspection, QA Checklist)
<b>Validation Verification</b>	Photograph the nameplate of the HVAC Fan to capture the power rating, hp (if accessible).	Validation Verification – What data should be used and how should data be used to validate this item
<b>Pass Criteria</b>	Use the nameplate power rating (hp) to validate what is listed in application; the power rating must be $\leq 100$ hp	Pass Criteria – statement of what passing data should look like

# Data Entry Validation Item

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- **Additional Flags**

<b>Alternate Validation Checkpoint</b>	QA Checklist	Alternate Validation Checkpoint – when is data expected to be collected; only required if primary validation data is not available
<b>Alternate Validation Verification</b>	Use photographs of the manufacturer spec sheet to validate the power rating (hp) of the fan motor	Alternate Validation Verification – how should data be used to validate this item
<b>Alternate Pass Criteria</b>	The power rating of the fan must be $\leq 100$ hp	Alternate Pass Criteria – statement of what passing data should look like

# Data Entry Validation Item

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OFFICIAL SOURCE  
CA Energy Efficiency Measure Data

**ELIGIBLE PRODUCTS**

This measure requires the installation of a VSD and associated controls on a motor driving a ventilation fan. Eligibility requirements include:

- The fan motor rated hp must be  $\leq$  100 hp.
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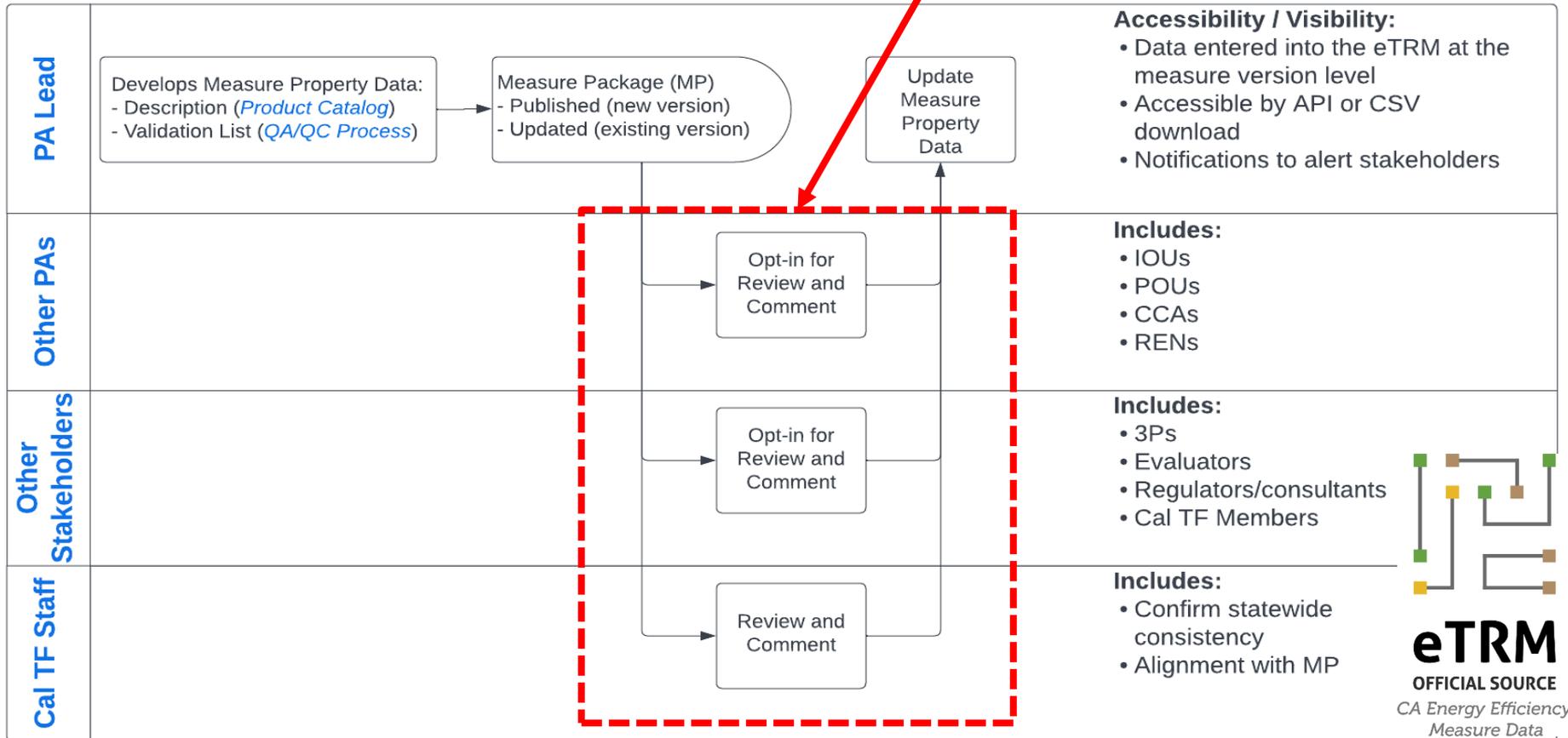
- Category Fields

<b>Workpaper ID</b>	<b>SWHC018</b>	Measure ID
<b>Revision #</b>	<b>02</b>	Measure Version ID
<b>WP Name</b>	<b>VSD for HVAC Fan Controls, Commercial</b>	Measure Name
<b>WP Offering ID</b>	<b>Any</b>	Offering ID – Offering ID referenced from Offering ID value table within the measure
<b>MeasAppType</b>	<b>Any</b>	MeasAppType – Measure application type (choice)
<b>DeliveryType</b>	<b>Any</b>	DeliveryType – Delivery type (choice)
<b>Vintage</b>	<b>Any</b>	Vintage – Building vintage (choice)

- Validations items may be applied to:
  - All permutations
    - For example: “Any offering, measure application type, delivery type or vintage”
  - Groups of permutations
    - For example: “Direct Install”, “Accelerated Replacement”, “Electric Offering”, “New Construction”

# Draft Statewide Process

## Data Review Process



# Draft Statewide Review Process

- Questions:

- What is the best format for review?

- ✦ Considering that we want to

- Engage the right group of experts and that list would vary
- Want to drive consistency across measures, where applicable

1. By Measure

2. By Use Category

3. By Hybrid Grouping

- Use Category, but some broken down such as  
Service Hot Water -> Flow Restriction and Equipment/Controls

- How do we engage the right group (now and in the future)?

- ✦ Can we rely on ambassadors from a company?

- ✦ We will not be able to accept all comments, but we need to find an appropriate way to track them.

# Next Steps

## Parallel Activities:

- Draft structured data
- eTRM enhancement (high level)

- Consolidate feedback to finalize the data structure of a Validation List item
  - Please provide feedback by [Oct 14th](#)
- Consolidate feedback of the most common Validation List items
  - Please provide feedback by [Oct 14th](#)
- Once a review process is clear, we will start collecting names of reviewers
- Next Meeting:
  - [Oct 20<sup>th</sup>, 1-3 pm](#)

# Deemed Measure Property Data

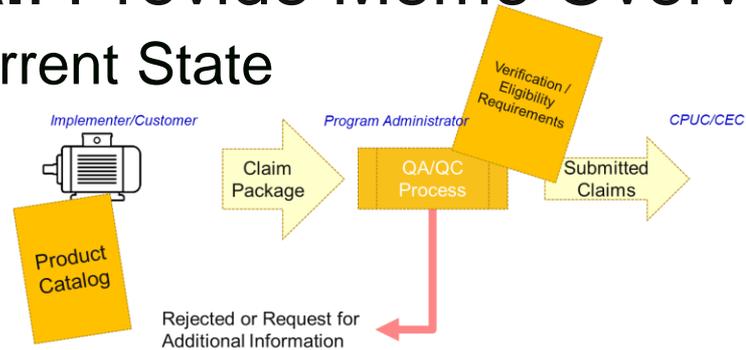


**SEPTEMBER 22, 2022**  
**AYAD AL-SHAIKH**  
**CAL TF STAFF**

# Deemed Measure Property Data



- **Goal: Provide Memo Overview**
  - Current State



- Proposed State

- ✦ Data Entry - Statewide effort
  - *Are the fields proposed the correct ones?*
- ✦ Data Maintenance – eTRM solution
- ✦ Data Access – eTRM solution
  - *Comments on keeping stakeholders informed.*
- ✦ Data Consensus – Engage stakeholders
  - *Comments on proposed review process.*

# Data Entry Timeline

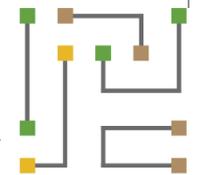
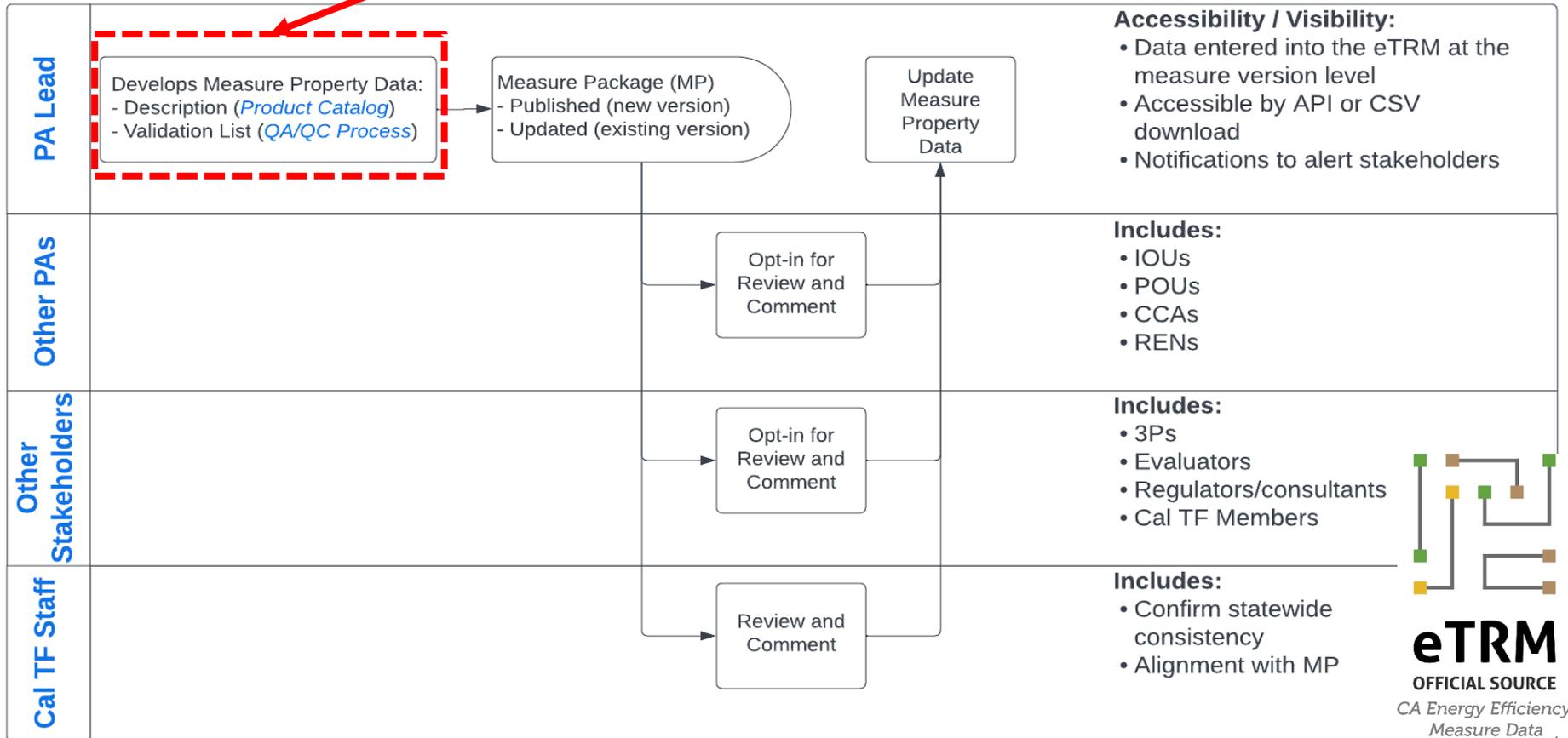
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- Oct: Kickoff
  - Subcommittee feedback on: **Thur, Oct 6<sup>th</sup> (9 - 11 am)**
    - ✦ Data structure for Validation List items
    - ✦ Most common Validation List entries
    - ✦ Review process
  - Finalize memo
- Oct – Jan\*: PA Leads develop Measure Property Data
  - Typically, occurs during Measure Package (MP) development
  - PY2023 and 2024 MPs are all virtually complete/approved
- Dec – Mar\*: Stakeholder feedback and upload
  - Review by Measure, Measure Group, Use Category, etc
  - Upload into the eTRM as available

**Review proposal  
from Memo today**

# Draft Statewide Process

## Data Entry



# Data Entry Validation Items

## Example:

SWHC018

*VSD for HVAC Fan  
Controls, Commercial*

## Program Requirements

# Program Requirements Section

**eTRM**  
OFFICIAL SOURCE  
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Measure Data

CHARACTERIZATION DEPENDENCIES SUPPORTING DATA CA

### ELIGIBLE PRODUCTS

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### ELIGIBLE BUILDING TYPES AND VINTAGES

This measure is applicable for the following nonresidential building types:

- Education – Secondary School
- Education – Community College
- Education – University
- Health/Medical – Hospital
- Health/Medical – Nursing Home
- Lodging – Hotel
- Office – Large
- Retail – Multistory Large
- Grocery – Grocery

# Data Entry Validation Item

## Example:

SWHC018

*VSD for HVAC Fan  
Controls, Commercial*

## Program Exclusions

## Program Exclusions Section

### Program Exclusions

Fans of size > 100 hp are not eligible.

Replacement of multiple-speed or variable speed motors (VSM) are not eligible.

Variable frequency drives on cooling tower fans are not eligible.

Exhaust fans are not eligible.

# Data Entry Validation Item

## Example:

SWHC018

*VSD for HVAC Fan  
Controls, Commercial*

## Data Collection Requirements

# Data Collection Requirements Section

## Data Collection Requirements

Per *Resolution E-5152* and to substantiate conformance with program requirements, all claims will require the submission of an invoice or other supporting documentation that includes the following: R1503

### DATA COLLECTION REQUIREMENTS

SiteID - A unique identifier for the installed location of the incentivized equipment, including site address.

Equipment ID

Existing motor HP

Existing fan controls

Existing fan type

VSD manufacturer

VSD model number

## Example Validation List for SWHC018

- **Property Fields**
- **Validation Fields**
- **Alternative  
Validation Fields**
- **Additional Flags**

- 
- **Category Fields**

### Required:

- ★ 1. VFD Manufacturer
- ★ 2. VFD Model
- ★ 3. Site ID / Equipment ID
- ★ 4. Building Type
- ★ 5. Input rating (HP)
- ★ 6. Is the VFD being installed on an existing HVAC supply or return air system?
- 7. Are there any other throttling devices, such as inlet vanes or bypass dampers, and throttling valves still operating?
- 8. Does the installation include the replacement of multiple-speed or variable speed motors (VSM)?
- 9. Is the VFD being installed on cooling tower fans?
- 10. Is the VFD being installed on an exhaust fan?

### Recommended:

- 11. Does the HVAC VFD application call for varying air?
- 12. Input rating greater than 3 hp?
- 13. Was the VFD placed as close to the motor as possible?
- 14. Was sufficient airflow maintained through the motor?

# Common Data Validation Items

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- Model
- Make
- Manufacturer
- Building Type
- Building Vintage
- CA Climate Zone
- Serial Number
- Equipment ID
- Site ID
- Location
- Retail Price
- AHRI Reference Number
- Measure Size Category
- Input Rating
- Cap-Tons
- Refrigerant Type
- Is the equipment new (not used or rebuilt)?
- Is the unit operational?
- Existing Flow Rate (gpm)
- Flow Rate of Installed Unit (gpm)
- Who was the party that filled out the POE documentation?
- Has Customer agreed to the QM Service Agreement?
- Customer existing baseline fuel type
- ENERGY STAR Qualified?
- Min. Cooking Energy Efficiency (%)
- Uniform Energy Factor (UEF)
- Heating Seasonal Performance Factor (HSPF)

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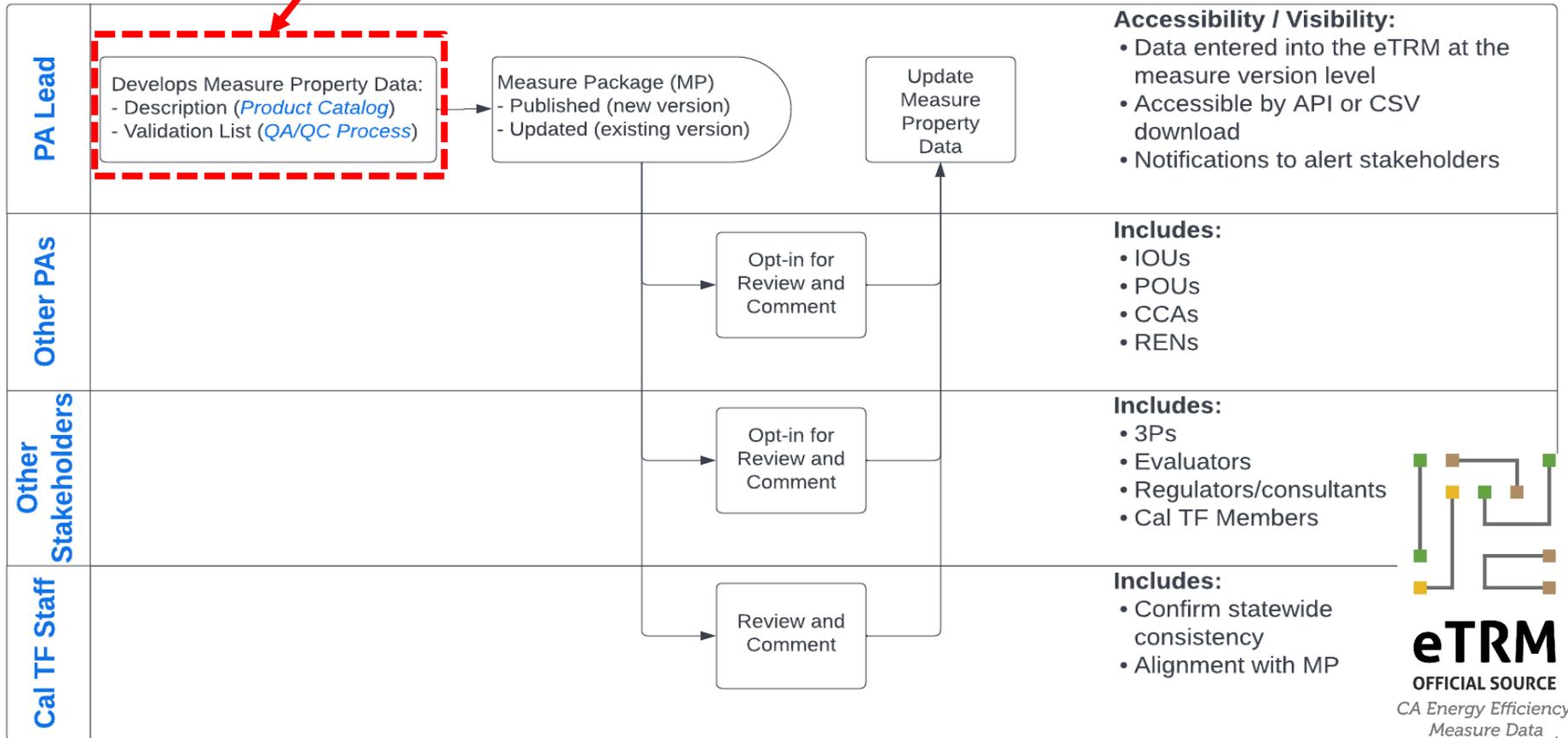
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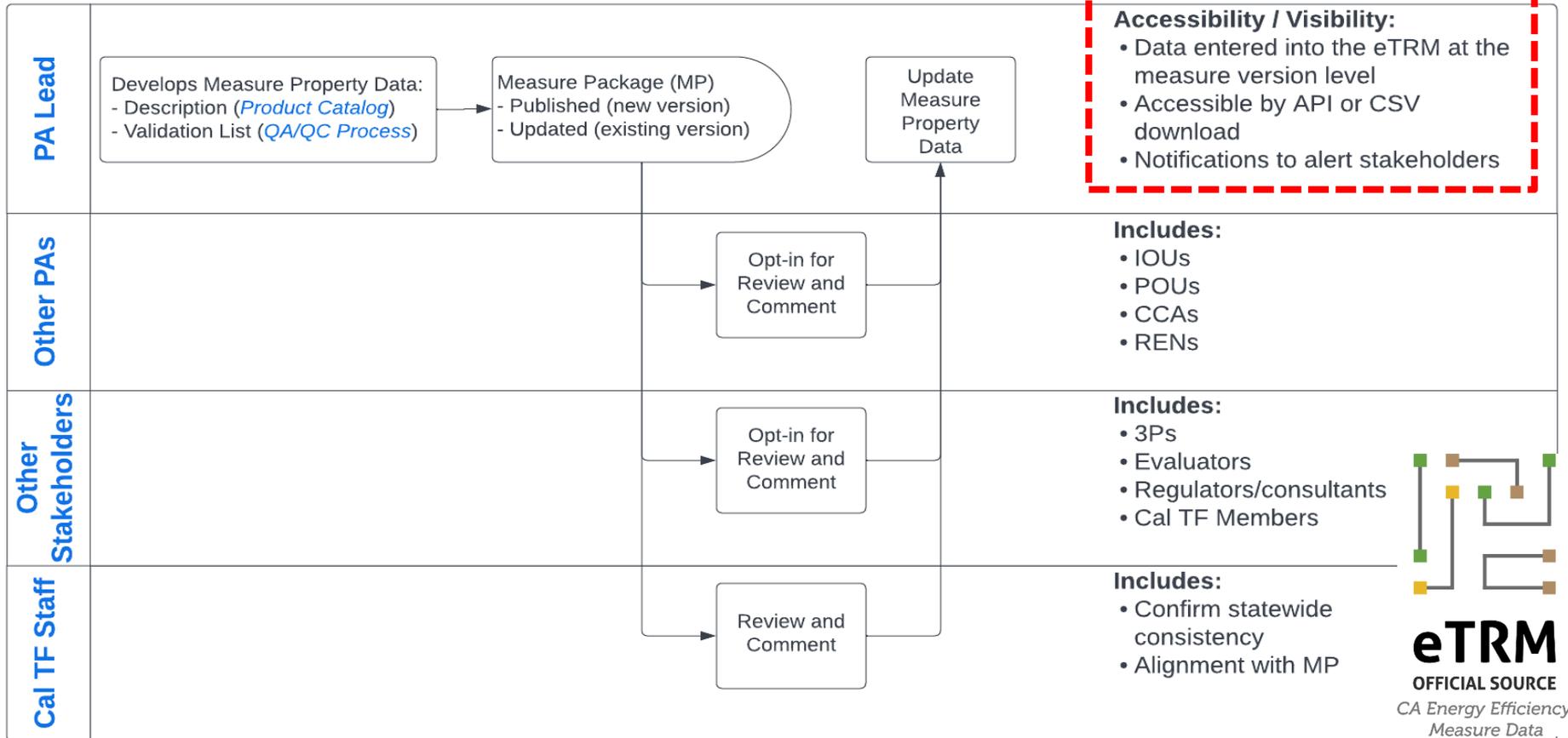
# Draft Statewide Process

## Data Entry – Lead PAs will draft Measure Property Data



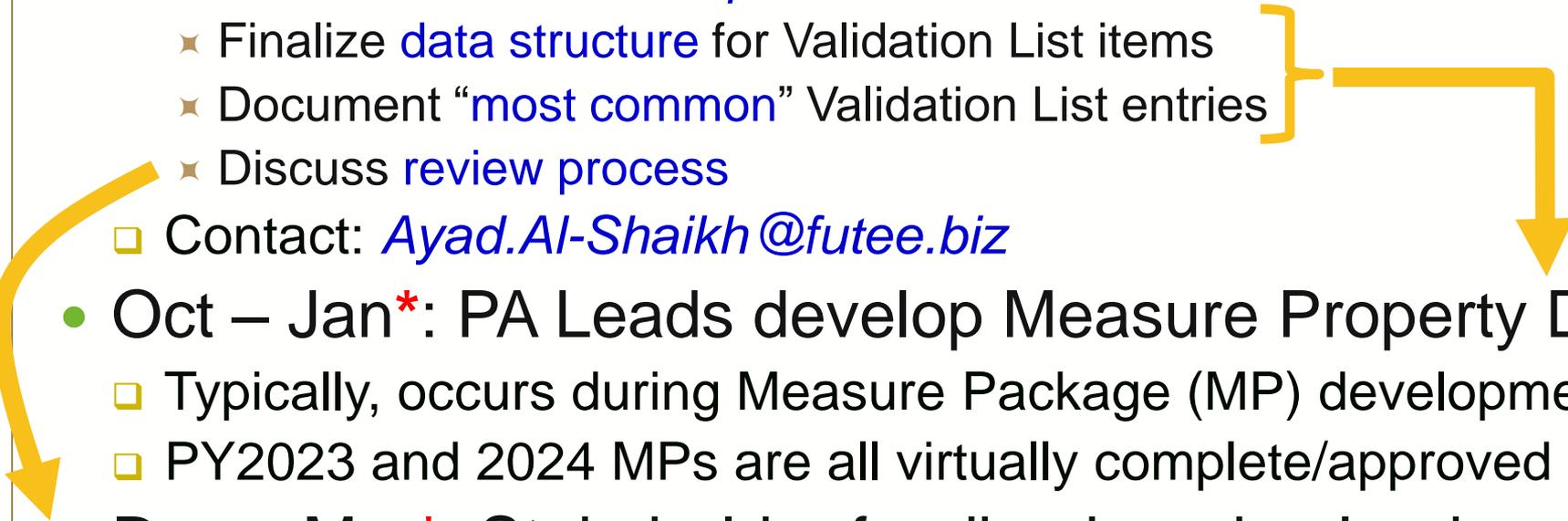
# Draft Statewide Process

## Data Access



# Data Entry Timeline

28

- Oct: Kickoff
    - Subcommittee feedback on: **Thur, Oct 6<sup>th</sup> (9 - 11 am)**
      - ✦ **Who:** IOUs / POUs / Implementers / Evaluators / CPUC
      - ✦ Finalize **data structure** for Validation List items
      - ✦ Document “**most common**” Validation List entries
      - ✦ Discuss **review process**
    - Contact: **Ayad.Al-Shaikh@futee.biz**
  - Oct – Jan\*: PA Leads develop Measure Property Data
    - Typically, occurs during Measure Package (MP) development
    - PY2023 and 2024 MPs are all virtually complete/approved
  - Dec – Mar\*: Stakeholder feedback and upload
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\*Timeframes may change due to priorities.