

Cal TF Data Charette

Part 1



JUNE 21, 2023
PG&E HQ – OAKLAND, CA

Cal TF Data Charette

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Part 1 (6/21, Oakland)

- Establish shared understanding of:
 - existing EE data systems & data flows
 - data needs/challenges from all stakeholder perspectives
- Discuss data use cases to support stakeholders and the state's EE and decarbonization goals
- Identify top 5 opportunities and/or strategies to address data challenges and improve EE performance through data solutions

Part 2 (9/28, San Francisco)

- Establish a vision for a “future state” where we can fully leverage data to support the state's EE and decarbonization goals.
- Determine coordination needs and opportunities for demand side and supply side data
- Chart a path for key data use cases

Agenda

Time	Topic	Discussion Lead
10:00 – 10:15	Welcome, History of Data in California, Charette Agenda & Objectives	Amy Reardon, CPUC Annette Beitel, Cal TF
10:15 – 11:15	Overview of Existing EE/IDSM Systems and Tools	Moderator: Annette Beitel, Cal TF
11:15 – 11:30	Break	-
11:30 – 12:30	Panel Discussion: Data “Manager” Perspective	Moderator: Annette Beitel, Cal TF
12:30 – 1:30	Lunch (Outdoors)	-
1:30 – 3:00	Panel Discussion: Data User Perspective	Moderator: Annette Beitel, Cal TF
3:00 – 3:30	Break	-
3:30 – 4:45	Strategies and Solutions: Small Group Discussions	Moderator: Arlis Reynolds, Cal TF
4:45 – 5:00	Where do we go from here? Data Charette Part 2	Annette Beitel, Cal TF Arlis Reynolds, CPUC

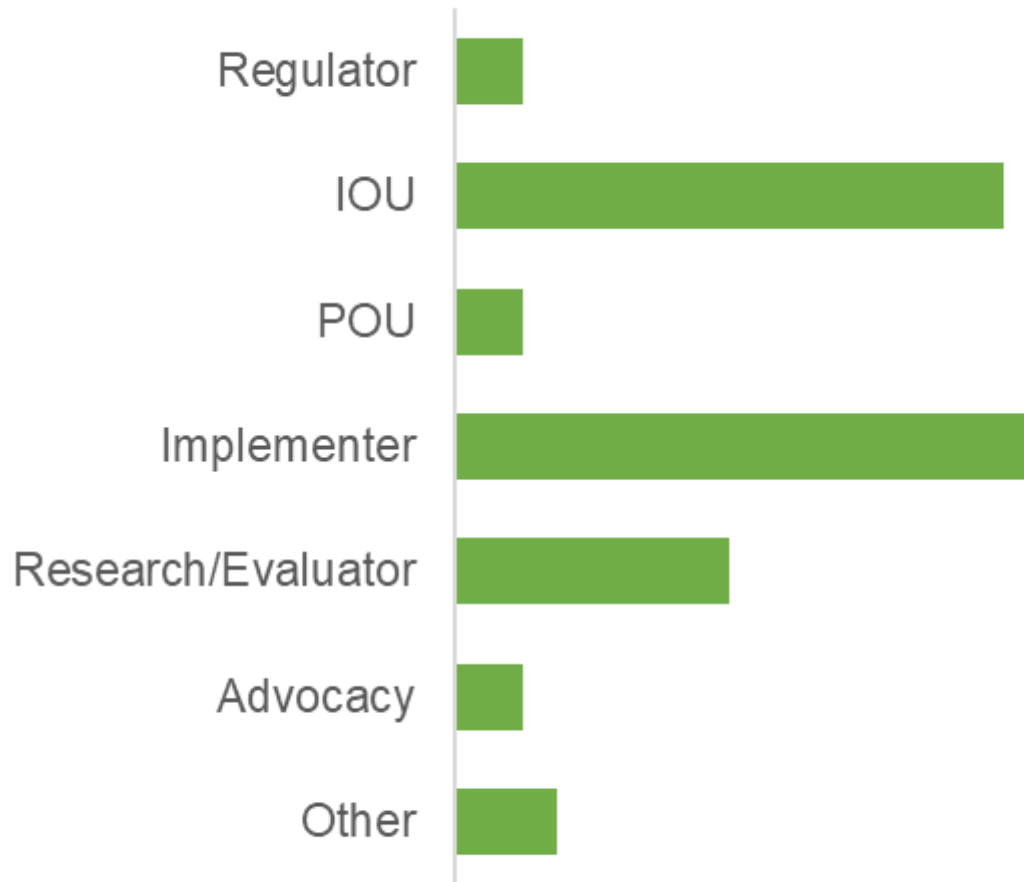
Background / Context



AMY REARDON, CPUC
ANNETTE BEITEL, CAL TF

Charette Attendees (based on RSVP)

5



Q: How are you using data in your role as an energy-efficiency stakeholder?

6

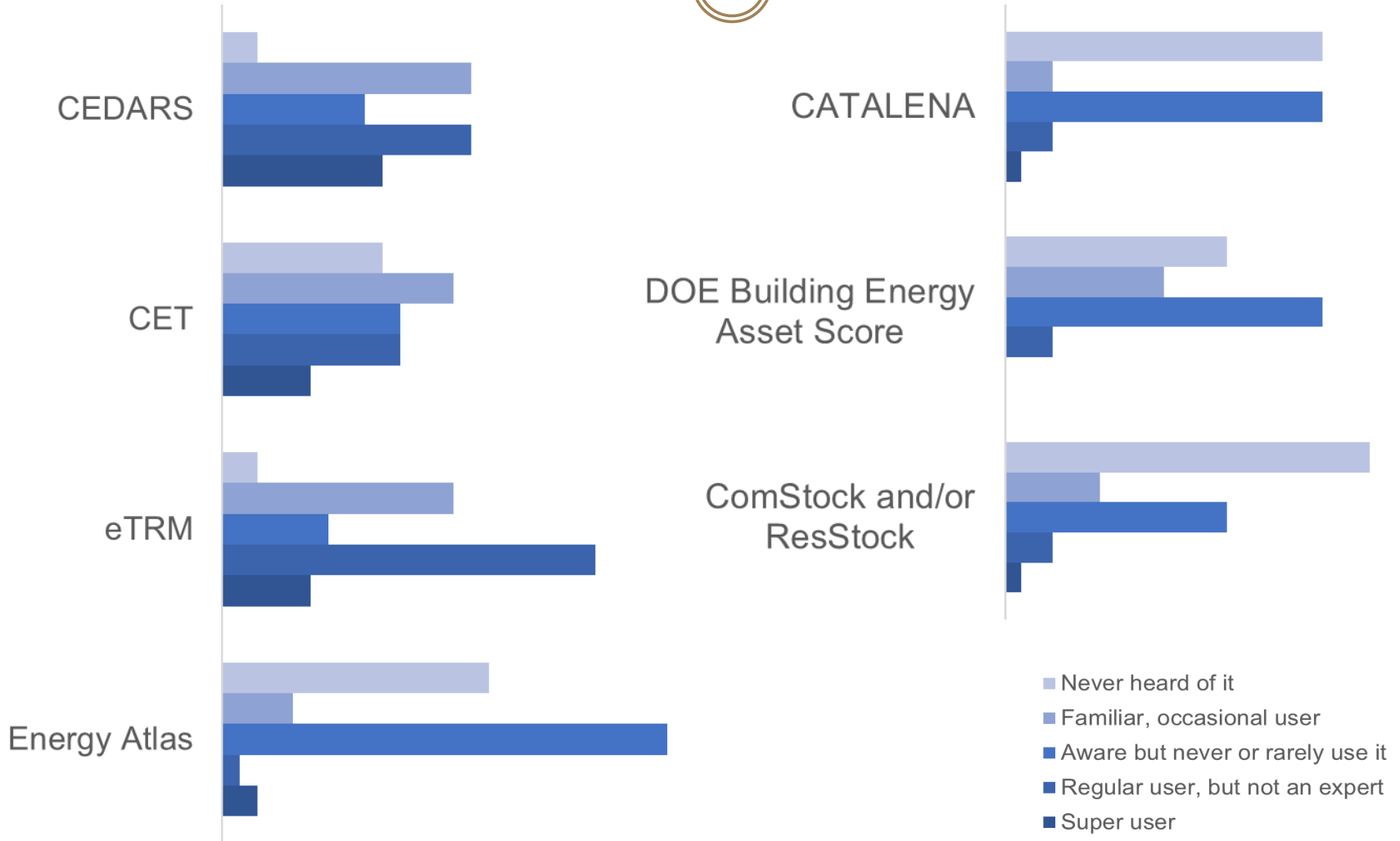


Overview of Existing EE/ISDM Systems and Tools



Q: Indicate your level of familiarity with the following datasets, systems, and/or tools.

8



Presentations

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- **Amy Reardon, CPUC**
 - CEDARS, CET, CPUC IT Systems
- **Tomas Torres-Garcia, Cal TF Staff**
 - California electronic Technical Reference Manual (eTRM)
- **Andrew Parker, NREL**
 - [Federal Data and Tools](#)
- **Armen Saiyan, LADWP**
 - [LA100](#)
- **Eric Fournier, CA Center for Sustainable Communities at UCLA**
 - [Energy Atlas](#)

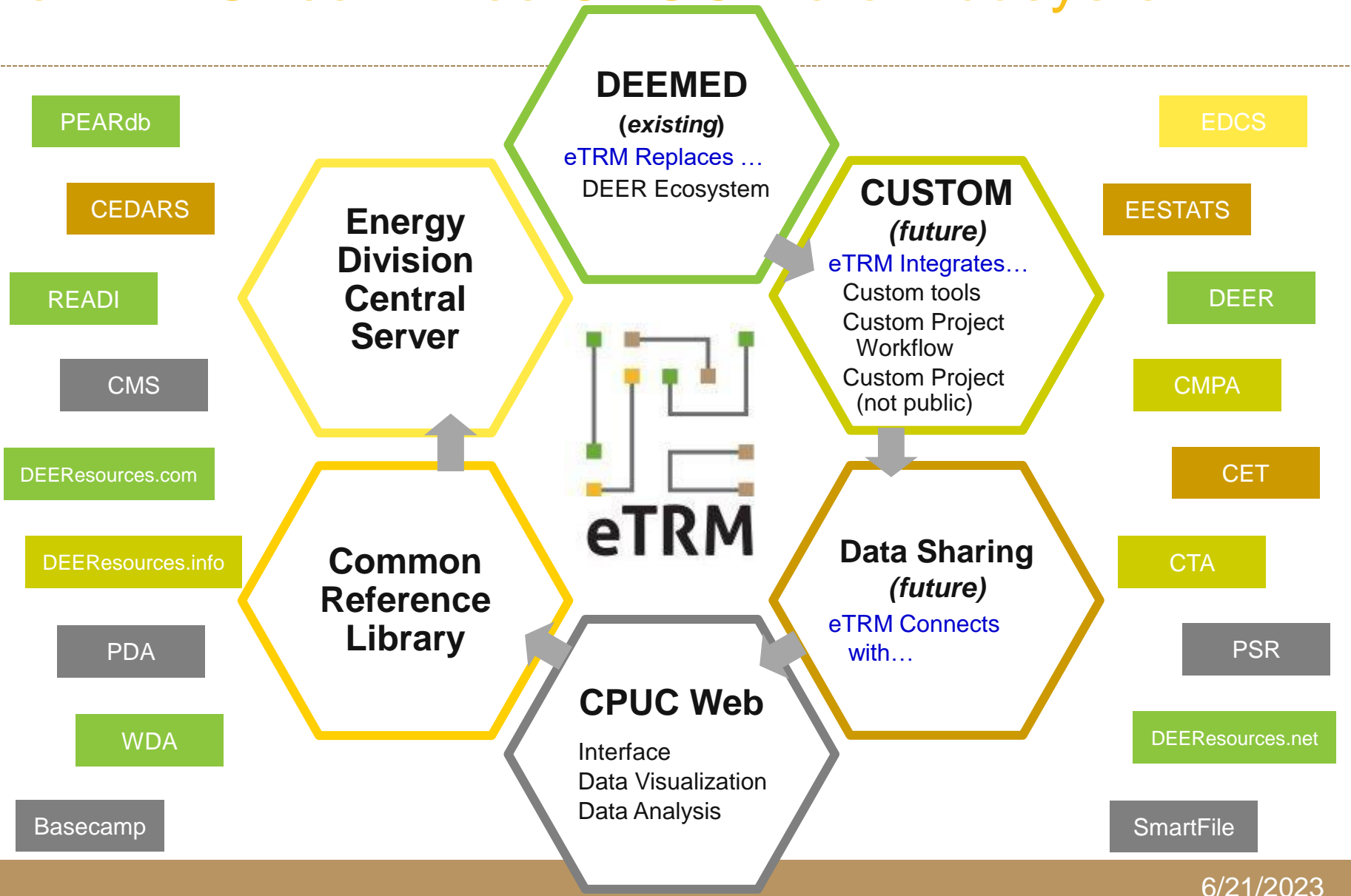
CPUC Data Systems



CALIFORNIA
TECHNICAL FORUM

AMY REARDON
JUNE 21, 2023

eTRM Streamlines CPUC Data Ecosystem



California electronic Technical Reference Manual (CA eTRM)

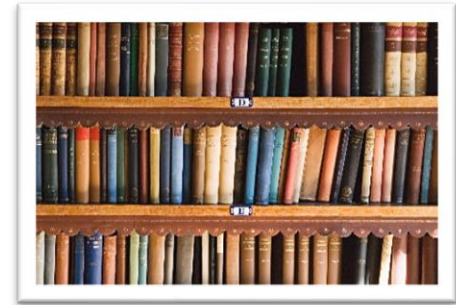


TOMAS TORRES-GARCIA
JUNE 21, 2023

What is the eTRM?

www.caetrm.com

Online application that serves as the repository for all statewide deemed measure packages (MPs) for California.



The “data source of record” for “EE measure information approved for EE planning and reporting for PY2021 and beyond.”¹

What is in the eTRM?

14

- Statewide Deemed Measure Packages (MPs)
- Shared Data Library / CPUC Support Tables
- PA Implementation Codes
- CEDARS Cost Effectiveness Tool (CET) input files
- Reference Library
- eTRM Stats

What is in the eTRM?

15

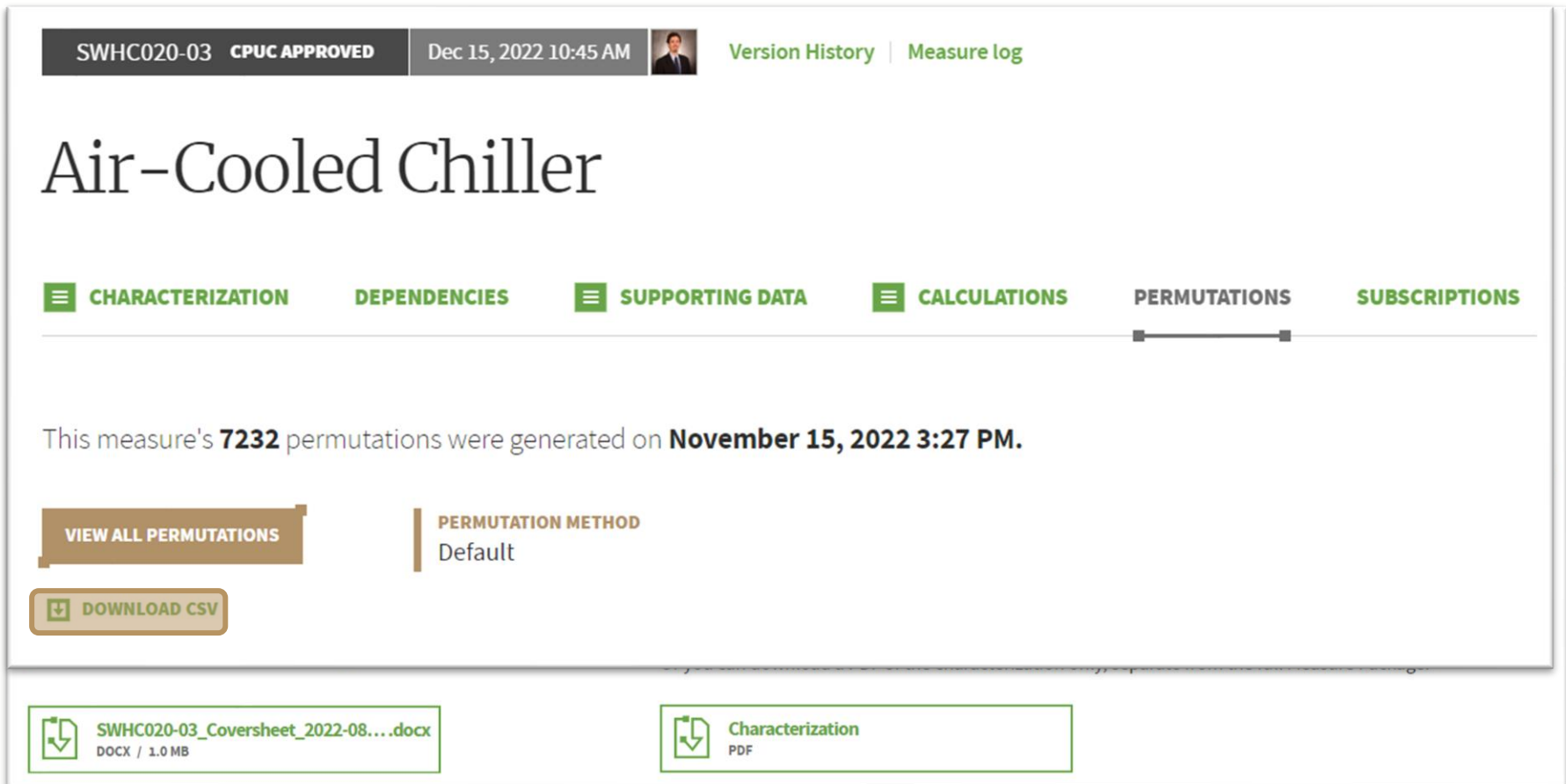
- **163** Statewide Deemed MPs
 - **151** active MPs


Use Category	# of MPs	Use Category	# of MPs
AP - Appliance or Plug Load	13	MI - Miscellaneous	2
BE - Building Envelope	5	PR - Process	7
CA - Compressed Air	1	RE - Recreation	4
CR - Commercial Refrigeration	17	SV - Service	4
FS - Food Service	24	WB - Whole Building	3
HC - HVAC	33	WH - Service & Domestic Hot Water	31
LG - Lighting	4	WP - Water Pumping / Irrigation	3

What is in the eTRM?

16

- Technical analysis, inputs, and impact estimates



SWHC020-03 CPUC APPROVED Dec 15, 2022 10:45 AM  [Version History](#) | [Measure log](#)


Air-Cooled Chiller


[CHARACTERIZATION](#) [DEPENDENCIES](#) [SUPPORTING DATA](#) [CALCULATIONS](#) **PERMUTATIONS** [SUBSCRIPTIONS](#)

This measure's **7232** permutations were generated on **November 15, 2022 3:27 PM.**

[VIEW ALL PERMUTATIONS](#) | **PERMUTATION METHOD**
Default

[DOWNLOAD CSV](#)

 [SWHC020-03_Coversheet_2022-08....docx](#)
DOCX / 1.0 MB

 [Characterization](#)
PDF

What is in the eTRM?

Measure Version ID	Offering IE	First Base	Measure C	Existing De	Standard C	Measure A	Building Ty	Building Vi	Building Lc	Capacity	Energy Effi	Integrated Energy Im	EUL-Versic	EUL-Bldg T	First Basel	First Basel	First Basel	Measure T	Measure -	Measure - Sr
2 SWHC020-03	C	Air cooled	Air cooled	Air cooled	Air cooled	NC	ECC	New	CZ01	< 150 tons	11.1	15.1	NE-HVAC-DEER2014	Any	0.0418	18.2	854.7	103.35	0	958.05
3 SWHC020-03	C	Air cooled	Air cooled	Air cooled	Air cooled	NC	ECC	New	CZ02	< 150 tons	11.1	15.1	NE-HVAC-DEER2014	Any	0.0616	60.8	854.7	103.35	0	958.05
4 SWHC020-03	C	Air cooled	Air cooled	Air cooled	Air cooled	NC	ECC	New	CZ03	< 150 tons	11.1	15.1	NE-HVAC-DEER2014	Any	0.0546	53.2	854.7	103.35	0	958.05

Permutation Reports



- DASHBOARD
- MEASURE REPORTS
- PERMUTATION REPORTS**
- CET DOWNLOADS
- SUBSCRIPTIONS

Your Bookmarks

SHARED REPORTS

Saved permutation reports created by administrators.

CUSTOM REPORTS

My saved permutation reports.

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.

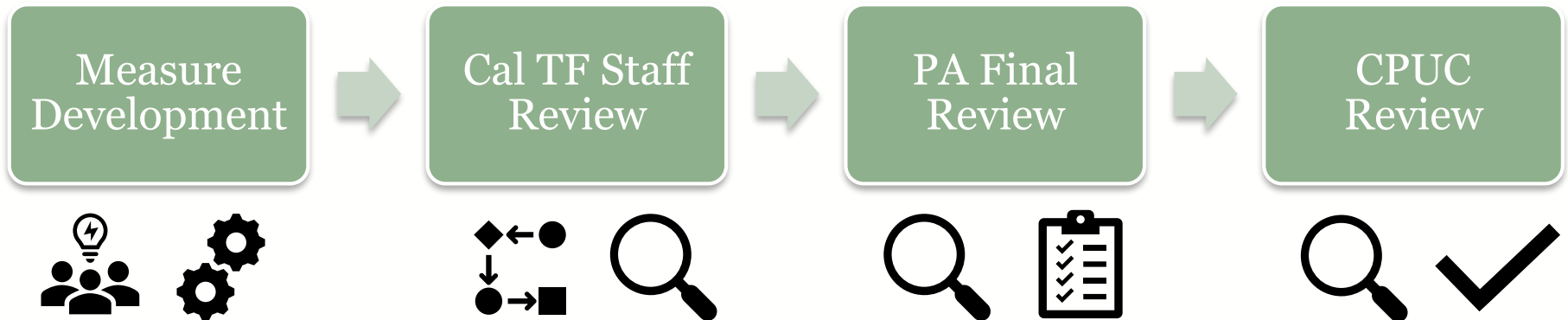
Last generated on Jun 19, 2023 1:17 AM.

- [PY2023 AND FUTURE PERMUTATIONS \(ZIP, 26.7 MB\)](#)
- [EXPIRED PERMUTATIONS \(ZIP, 34.8 MB\)](#)

Measure Development Process

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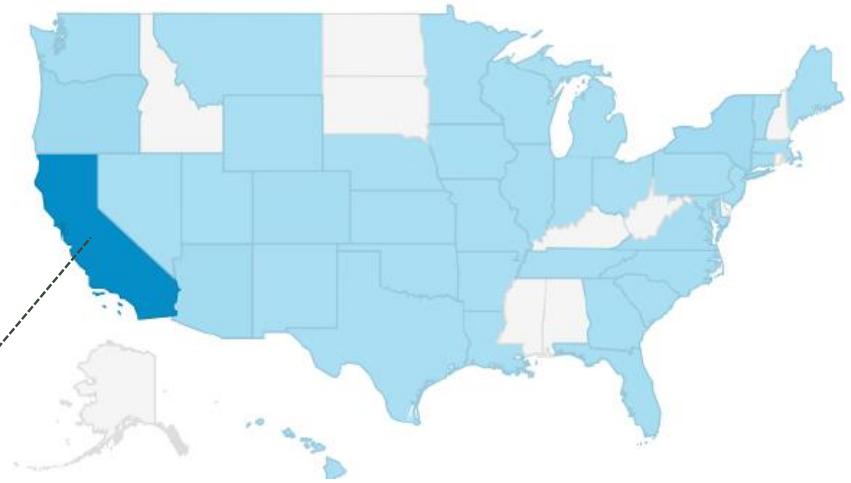
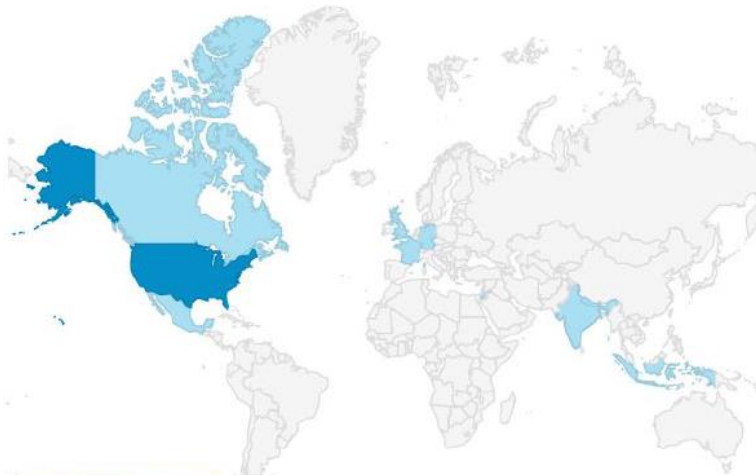
- Update frequency: Typically, every 2 years
- Process:



Who is using the eTRM?

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- More than 3,000 eTRM user accounts
- Active users from North America, Asia, and Europe



67% users from California

How are people using the eTRM?

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- How do you use the eTRM today?
 - Program Planning
 - Understanding/Learning
 - Keeping Informed
 - Accessing CPUC Approved Measure Data
 - Program Reporting
 - Research

Updating and Improving the eTRM

- Collaborative Development / Enhancement Process
- Expected by the end of 2023
 - Compare MP versions
 - Track MP development activity
- Expected in early 2024
 - Custom Library
- New ideas?
 - Email: eTRM@FutEE.biz

- **Andrew Parker, NREL**
 - [Federal Data and Tools](#)
- **Armen Saiyan, LADWP**
 - [LA100](#)
- **Eric Fournier, CA Center for Sustainable Communities at UCLA**
 - [Energy Atlas](#)

Discussion

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- **Amy Reardon, CPUC**
 - CEDARS, CET, CPUC IT Systems
- **Tomas Torres-Garcia, Cal TF Staff**
 - California electronic Technical Reference Manual (eTRM)
- **Andrew Parker, NREL**
 - Federal Data and Tools
- **Armen Saiyan, LADWP**
 - LA100
- **Eric Fournier, CA Center for Sustainable Communities at UCLA**
 - Energy Atlas and CATALENA
- Moderator: **Annette Beitel, Cal TF Staff**

BREAK
11:15 – 11:30

Panel Discussion: Data Manager Perspective



PANEL DISCUSSION
MODERATOR: ANNETTE BEITEL, CAL TF

Panelists

27

- Overview of Current State / Proposed Ideal State
 - Annette Beitel, Cal TF Staff
- Panel Discussion:
 - Amy Reardon, CPUC
 - Armen Saiyen, LADWP
 - [Marc Costa, The Energy Coalition](#)
 - Moderator: Annette Beitel, Cal TF Staff

Discussion

28

- Overview of Current State / Proposed Ideal State
 - Annette Beitel, Cal TF Staff
- Panel Discussion:
 - Amy Reardon, CPUC
 - Armen Saiyen, LADWP
 - Marc Costa, The Energy Coalition
 - Moderator: Annette Beitel, Cal TF Staff

LUNCH

12:30 – 1:30

Grab boxed lunch from lobby.
Eat outside.
Come back before 1:30 p.m.

Panel Discussion: Data User Perspective



PANEL DISCUSSION
MODERATOR: ANNETTE BEITEL, CAL TF

Panelists

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- **Joe Desmond, CEDMC** – [Implementer/Advocacy](#)
- **Richard Hart, Cascade Energy** – [Implementer](#)
- **John Zwick, SDG&E** – [Portfolio Administrator](#)
- **Jake Richardson, PG&E** – [Reporting](#)
- **Tim Olsen, The Energy Coalition** – [REN/Reporting](#)
- **Mike Yim, Tierra Resource Consulting** – [Evaluator](#)
- **Jay Madden, SCE** – [Building Codes](#)

Discussion

32

- **Joe Desmond, CEDMC** – Implementer/Advocacy
- **Richard Hart, Cascade Energy** – Implementer
- **John Zwick, SDG&E** – Portfolio Administrator
- **Jake Richardson, PG&E** – Reporting
- **Tim Olsen, The Energy Coalition** – REN/Reporting
- **Mike Yim, Tierra Resource Consulting** – Evaluator
- **Jay Madden, SCE** – Codes and Standards
- Moderator: **Annette Beitel, Cal TF Staff**

BREAK
3:15 – 3:45

Strategies and Solutions



CALIFORNIA
TECHNICAL FORUM

SMALL GROUP DISCUSSIONS
MODERATOR: ARLIS REYNOLDS, CAL TF

Small Group Discussion

35



Small Group
Discussions

3:45 – 4:30



Report Out to Full
Group

4:30 – 4:45

Small Group Discussion

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- **Form Small Group**
 - Assign scribe/reporter
 - Assign time-keeper
- **Discuss:**
 - What are your **top three** opportunities and/or strategies to address data challenges and improve EE and decarbonization performance and success?
 - What would you like to see discussed in the “Part 2” Charette (in September)?
- **Remote participants:** Think about questions above and add comments to the chat.
- **Come back by 4:30**

Report Out to Full Group

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- What are your top three opportunities and/or strategies to address data challenges and improve EE and decarbonization performance and success?
 - New tools?
 - Better integration?
 - Data structures?
 - Data access?
- What would you like to see discussed in the “Part 2” Charette (in September)?
- **Remote participants:** Think about questions above and add comments to the chat.

Next Steps



ANNETTE BEITEL, CAL TF
ARLIS REYNOLDS, CAL TF

Data Charette, Part 1

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- **Presentation slides** will be posted to [Cal TF website](#) by EOD Thursday (tomorrow!)
- **Post-event survey** will be emailed to attendees and posted on Cal TF website
- **Charette Summary** will be posted on Cal TF website (next week)
- Share additional ideas, questions, suggestions with: Arlis.Reynolds@futee.biz or (949) 394-4339

Data Charette, Part 2

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- Objectives

- Establish a vision for a “future state” where we can fully leverage data to support the state’s EE and decarbonization goals.
- Determine coordination needs and opportunities for demand side and supply side data
- Chart a path for key data use cases

- Logistics

- Thursday, September 28
- CPUC Courtyard Room (505 505 Van Ness Ave, San Francisco, CA)