

2023 Business Plan: Q4 Progress Update



DECEMBER 2023

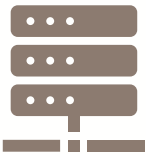
Contents

- 2023 Highlights
 - eTRM (Enhancement Charrette, 2023 Releases)
 - Cal TF Staff - QCs / Training / Tools
 - Communication / Versioning Plan
 - Measure Property Data
 - New Measure Status
 - Data Charrettes
 - Custom Initiative (*highlights included in later presentations*)
 - Gas Decision Response (D.23-04-025)
 - TSB (other data) Updates
 - POU Measure Streamlining Initiative
- Appendix: Progress Update by BP Goal

2023 Business Plan Goals

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Cal TF 2023 Business Plan



Goal 1: Administer software development of eTRM v2.x



Goal 2: Ongoing Implementation of Current eTRM Version



Goal 3: Manage Existing Measure Updates



Goal 4: Manage and Implement the Statewide New Measure Development Process



Goal 5: Develop POU and Statewide Custom Measures



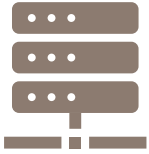
Goal 6: Identify, Analyze, and Recommend Key Emerging Technical and Technical Policy Issues in a Statewide Consistent Way



Goal 7: Manage the Cal TF and Cal TF PAC



Goal 8: Develop and Manage the Cal TF Roadmap, Business Plan, and Budget



eTRM Enhancement Charette (1C)

4

- Priority Enhancement Types

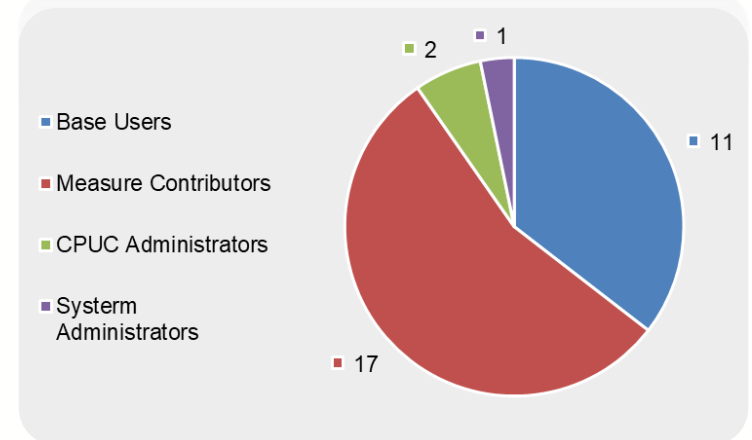
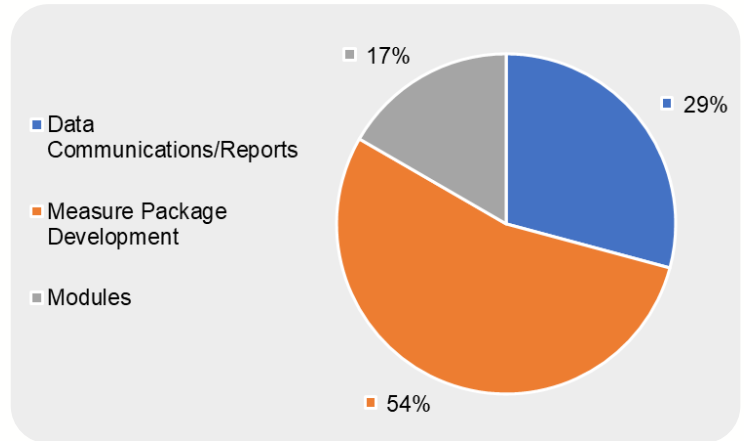
- Decrease time, increase quality
- Improve transparency, visibility
- Leverage and extend capabilities; improve user experience

- Enhancement Charette

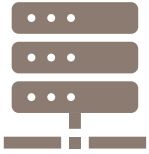
- 29 attendees (10 in-person; 19 online)
- 25 survey responses*

- Next Steps

- Present priority items to eTRM funders
- Develop release schedule



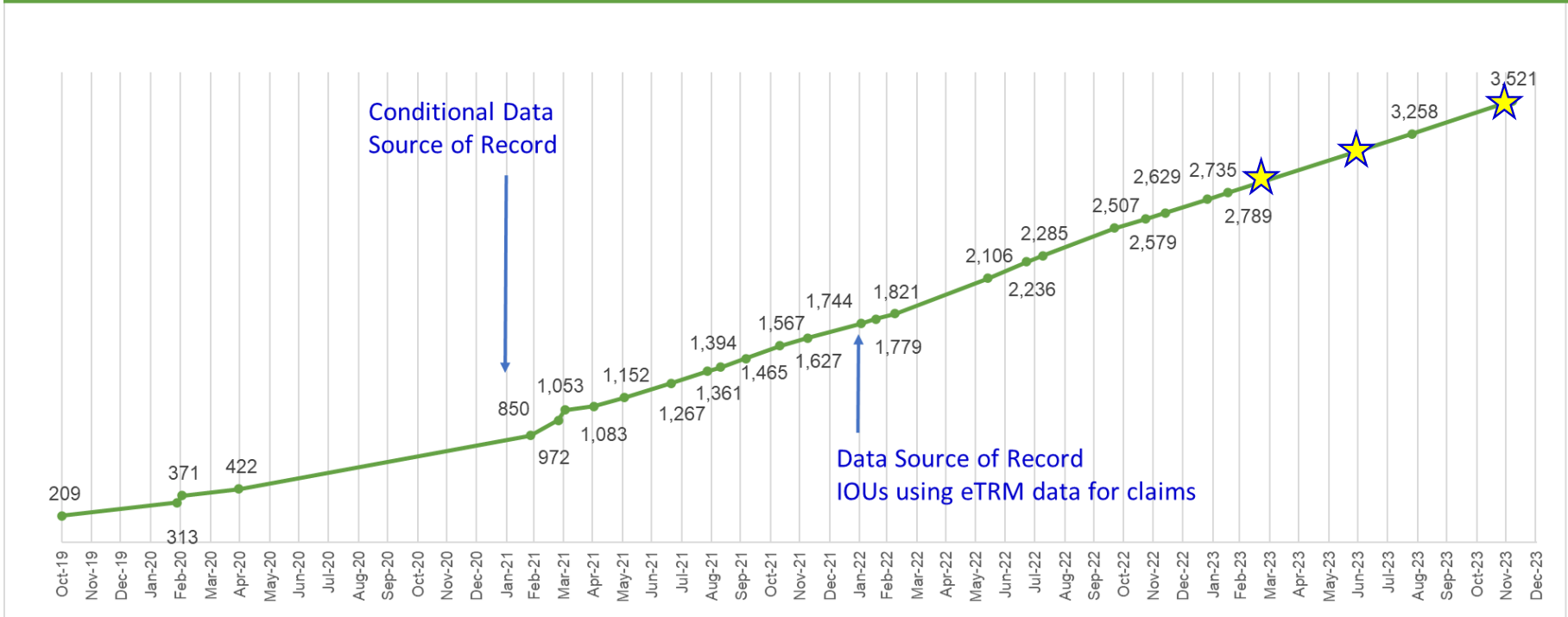
* Users can have multiple user types (e.g., a base user can also be a measure contributor)



eTRM – User Acceptance Growing

5

Total eTRM User Accounts



★ v2.5.0 (released 3/7/2023)

★ v2.6.0 (released 5/30/2023)

★ v2.7.0 (released 11/10/2023)



- Cal TF Staff reviews in 2023:
 - 77 Measure Packages reviewed / 28 in process
- Training, Tools and New Guidelines to Promote Quality Deemed Measures
 - [Video Cheat Sheet](#) – to jump to specific trainings quickly
 - ✦ Including 11 trainings focused on fixing known issues
 - [Measure Developer Checklist](#) – to focus QCs
 - [Office Hours](#) - for Additional Help
- QA/QC Now Largely Automated versus Manual
 - [Excel and Python tools](#) to automate complex rule checking
- Enhancements to Focus Reviews
 - [Characterization Redlining](#) – to visualize changes within the text
 - [Data Comparison](#) – to highlight and quantify changes within the data



eTRM Efficiency Enhancements - Redlining



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● Characterization Redlining

□ Goal

- ✦ Quickly understand the changes within the text

□ Result

- ✦ Internal Stakeholders - Speed and focus reviews
- ✦ External Stakeholders – understand changes visually from version to version

Measure Case Description

The measure case is defined as a constant speed air-cooled (screw) chiller for use in a nonresidential building that exceeds the minimum efficiency requirements set forth by the California ~~2019~~ 2022 Building Energy Efficiency Standards (Title 24) in both full load AND integrated part load conditions under Path A. In conformance to ~~Resolution E-4952~~ Resolution E-4952, measure offerings are defined as follows:

- Tier 1, both the full load AND integrated part load efficiency of the chiller technology should exceed Title 24 minimum requirement by 10%.
- Tier 2, both the full load AND integrated part load efficiency of the chiller technology should exceed Title 24 minimum requirement by 20%.

Measure offering are required to meet both full load AND integrated part load efficiency requirements specified below.

Offering ID

CAPACITY	ENERGY EFFICIENCY RATIO (EER)	INTEGRATED PART LOAD VALUE (IPLV)	STATEWIDE MEASURE OFFERING ID (TEXT)	MEASURE OFFERING DESCRIPTION (TEXT)
< 150 tons	11.1	15.1	C	Air cooled constant speed screw chiller (< 150 tons, 11.1 EER, 15.1 IPLV)
< 150 tons	12.1	16.6 4	D F	Air cooled constant speed screw chiller (< 150 tons, 12.1 EER, 16.6 4 IPLV)
>= 150 tons	11.1	15.4	A	Air cooled constant speed screw chiller (>= 150 tons, 11.1 EER, 15.4 IPLV)
>= 150 tons	12.1	16.9 8	B E	Air cooled constant speed screw chiller (>= 150 tons, 12.1 EER, 16.9 8 IPLV)

Text and Reference Revisions

Table updates



eTRM Efficiency Enhancements – Cover Sheet



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• Data Redlining and Summary

□ Goals

- ✦ Standardize and automate valuable comparisons

□ Data

- ✦ Percent of portfolio (and programs using it)
- ✦ What labels have change
- ✦ How much have impacts changed (%)
- ✦ How much do changes impact TRC/TSB (%)

Weighted averages, with percent change

Summary of Impacts

FIELD	CURRENT VALUE (SWFS007-03)	PREVIOUS VALUE (SWFS007-02)	CHANGE FROM PREVIOUS TO CURRENT
First Baseline - Peak Electric Demand Reduction (UnitkW1stBaseline)	0.2227	0.2227	No change
First Baseline - Electric Savings (UnitkWh1stBaseline)	813.04	813.04	No change
First Baseline - Gas Savings (UnitTherm1stBaseline)	0.0000	0.0000	No change
First Baseline - Water Savings (UnitGalWater1stBaseline)	0.00	0.00	No change
First Baseline - Measure Total Cost (UnitMeaCost1stBaseline)	976.50	1,358.50	-382.00 (-28.12%)
First Baseline - Life Cycle (Life1stBaseline)	12.00	12.00	No change
Second Baseline - Peak Electric Demand Reduction (UnitkW2ndBaseline)	0.0000	0.0000	No change
Second Baseline - Electric Savings (UnitkWh2ndBaseline)	0.00	0.00	No change
Second Baseline - Gas Savings (UnitTherm2ndBaseline)	0.0000	0.0000	No change
Second Baseline - Water Savings (UnitGalWater2ndBaseline)	0.00	0.00	No change
Second Baseline - Measure Total Cost (UnitMeaCost2ndBaseline)	0.00	0.00	No change
Second Baseline - Life Cycle (Life2ndBaseline)	0.00	0.00	No change
GSIA Value (GSIA)	1.00	1.00	No change
NTG kWh (NTGRkWh)	0.60	0.60	No change
NTG Therms (NTGRTherm)	0.60	0.60	No change
Lifecycle Net kWh - FuelSub only (LifecycleNetkWh)			
TRC Ratio - No Administrative Cost (TRCRatioNoAdmin)	0.85	0.89	-0.03 (-3.61%)
Total System Benefit (TotalSystemBenefit)	476.59	449.57	27.02 (6.01%)

Cost effectiveness

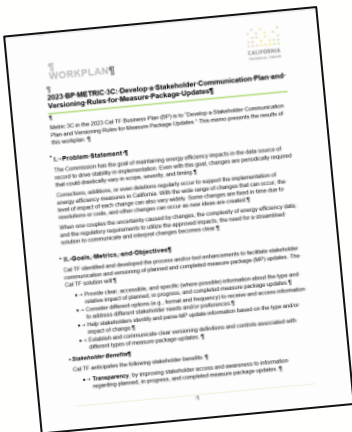
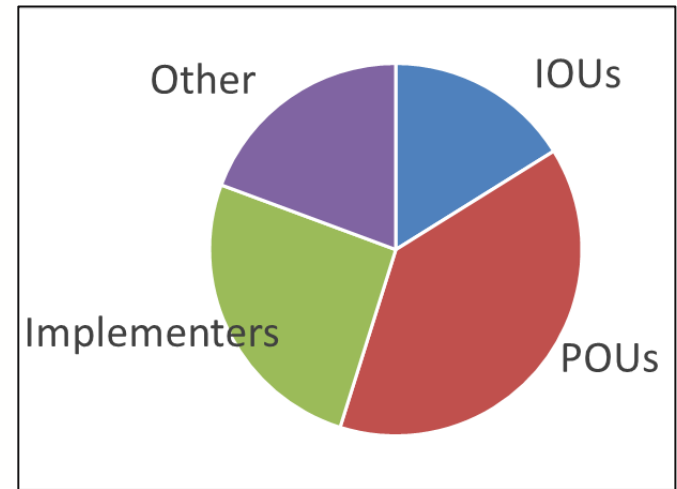
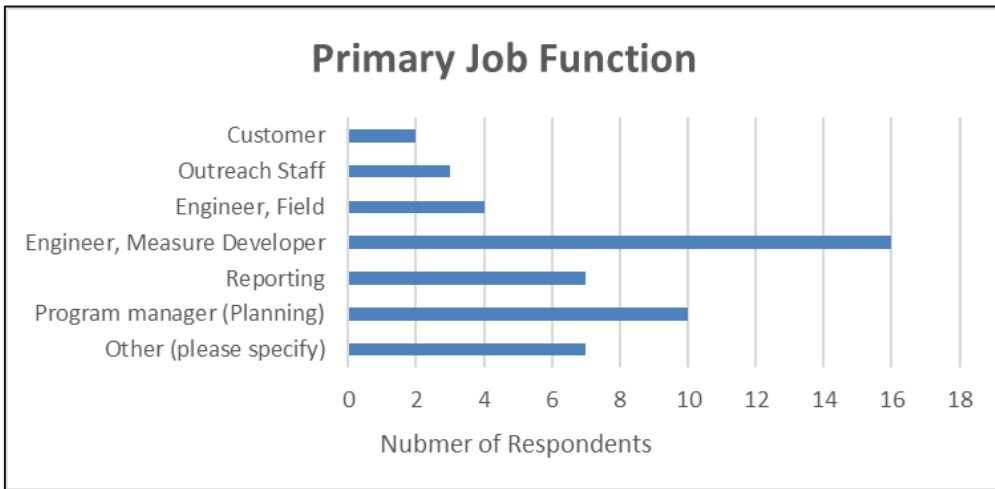
Measure level values displayed; offering level available



Measure Package Communication and Versioning Plan

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Stakeholder outreach – 31 responses



Memo Developed for Cal TF Member review in Q1 2024

- Versioning plan
- Highlighted enhancements



Measure Package Change Visibility

- Engaging more with stakeholders
 - CCA/RENs invited to weekly meetings with other PAs
 - CCA/RENs invited to monthly meeting with CPUC
- Sunset Measure List
 - Updating and communication process
 - More reminders that it exists
- Resolution Changes (temporary)
 - Cal TF [website](#):

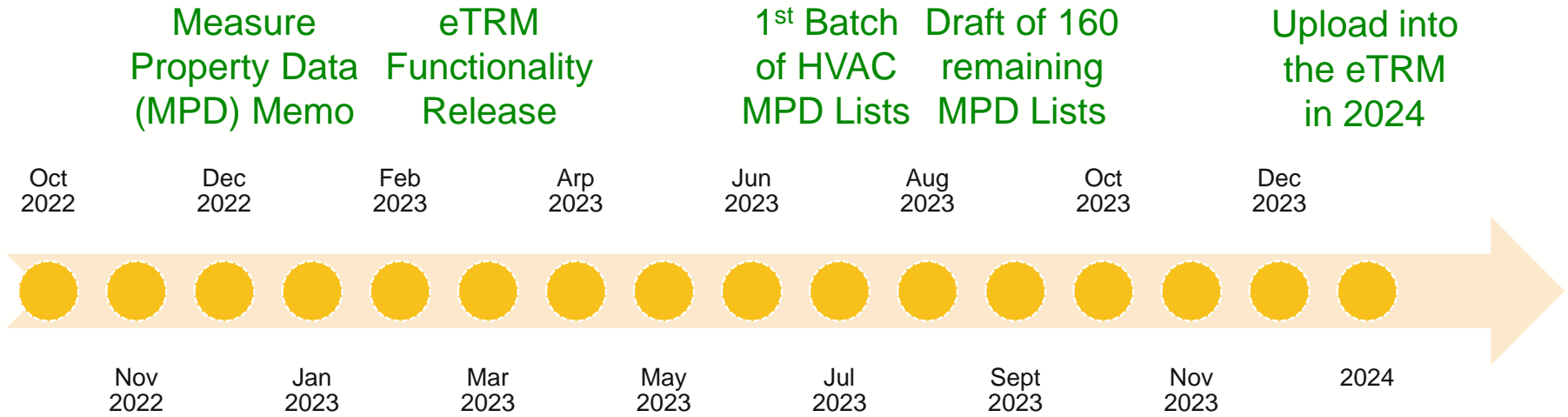
2024 Measure Package Update Report

Measure Name	Version ID	PA Lead	Estimated Submittal Date for PY24	Estimated Submittal Date for PY26-27	Note / Primary reason for update
Boiler, Commercial	SWWH005-06	SCG	11/1/2023	1/31/2024	Delivery Type and Measure Impact type DEER updates
Boiler, Multifamily	SWWH010-02	SCG	NA	1/31/2024	Delivery Type and Measure Impact type DEER updates
Boiler, Process	SWWH008-01	PGE	NA	12/31/2023	
Brushless Fan Motor Replacement, Residential	SWHC038-03	SCE	10/27/2023	4/26/2024	PY24 Update data collection requirements PY26-27 Update baseline/measure costs
Ceiling Insulation, Residential	SWBE006-02	SCG	11/1/2023	12/31/2023	EUL update based on D. 23-04-035 Delivery Type and Measure Impact type DEER updates
Central Storage Water Heater, Multifamily	SWWH011-02	SCG	NA	1/31/2024	Delivery Type and Measure Impact type DEER updates



Measure Property Data Timeline

Development:



Stakeholder Engagement:

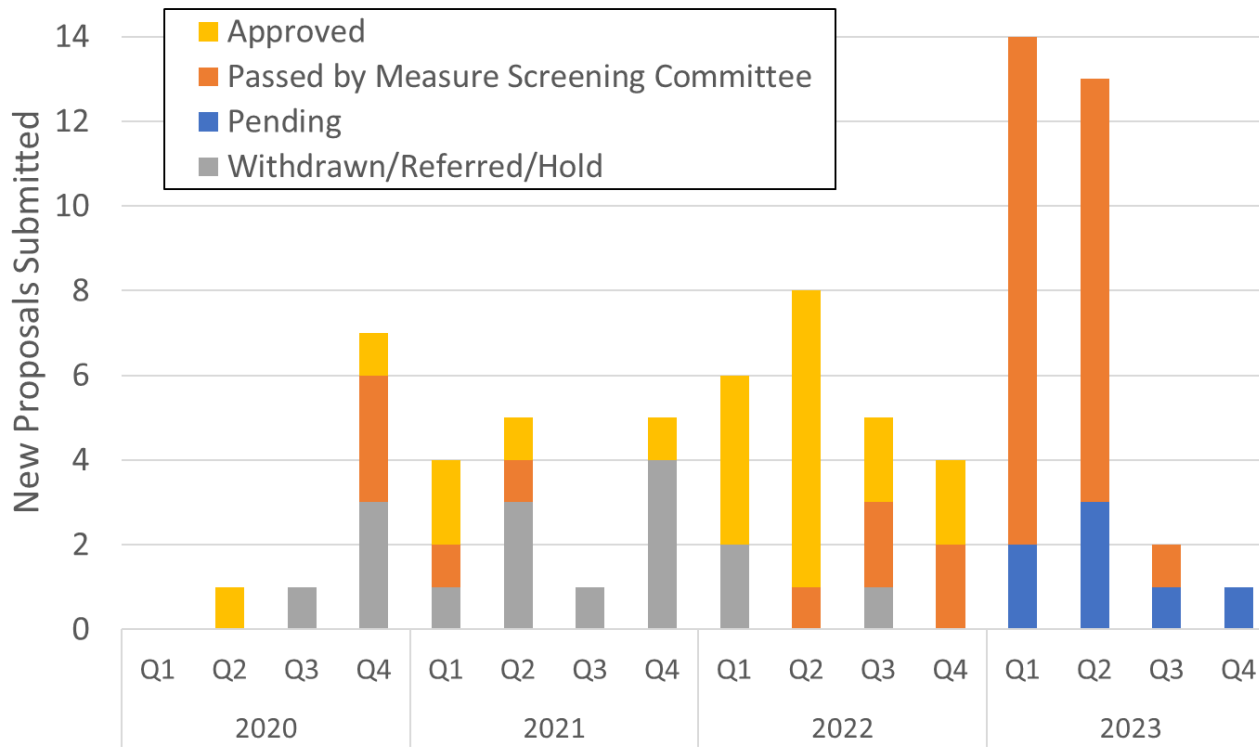


★ Cal TF Meeting Updates



New Measure Activity

New Measure Status



Measure Sources:

- IOU/Implementers
- Non-Exempt Gas Measures
- LADWP measures
- REN measures for MFm
- CalNEXT Offering Extensions



Data Charettes

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Data Charrette #1 (Jun 2023)

- Establish shared understanding of EE data systems/flows and challenges
- Discuss data use cases
- Identify top opportunities



Data Charrette #2 (Sep 2023)

- Identify areas of top improvement
- Discuss recommendations for improvement



Data Charrette #3 (Feb 2024)

- Data Analytics Opportunities
- If we spend time, what can we do?

Gas Incentive Decision (D.23-04-035)

- Facilitated PA working group (IOUs, CCAs, and RENs)
- OP-2: Consensus approach of calculating TRC for non-exempt NC permutations
 - Memo created to support 6/13/2023 (60-day) response requirement
 - Visualization tool to understand the data
 - TRC < 1.0 (5 measures)
 - TRC >= 1.0 (14 measures)
 - TRC result mixed (14 measures)
 - Restricted Flag included within eTRM

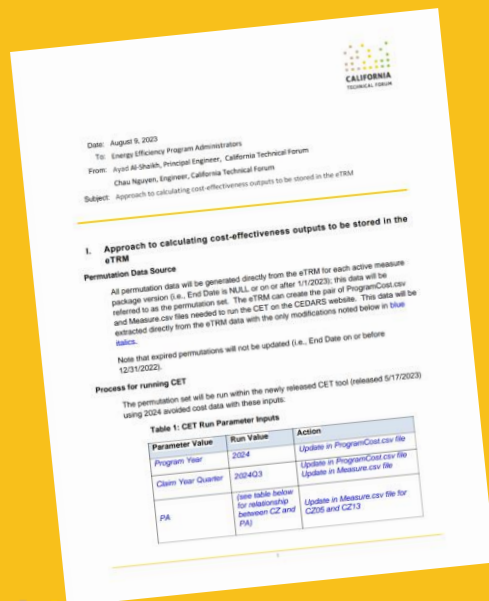
Summary of Measurement Data by TRC Range

MeasureVersionID	MeasureName	# of MeasDetail	% of Total	# of MeasDetail	% of Total	# of MeasDetail	% of Total	Total
SME117-03	Oven, Gas, Residential	96	100.0%					96
SME211-02	Flatpack, Commercial	730	89.18%	4	0.54%	2	0.27%	736
SME243-01	Multiple Capacity Unitary Air-Cooled Commercial Air Conditioners Between 65 and 240 Btu/h	1310	88.99%	150	10.19%	12	0.82%	1472
SME304-03	Pool Heater, Residential	40	85.7%	4	8.57%			44
SME432-01	Solar Thermal Water Heating System, Residential	48	100.0%					48
SME503-02	Combustion Oven, Commercial			27	100.0%			27
SME504-01	Griddle, Commercial			9	100.0%			9
SME505-03	Steamer, Commercial			9	100.0%			9
SME506-01	Conveyor Oven, Gas, Commercial			9	100.0%			9
SME511-05	Space Heating Boiler, Commercial & Multifamily			18	100.0%			18
SME513-02	Automatic Conveyor Broiler, Commercial			18	100.0%			18
SME519-02	Unrefined Boiler, Commercial			9	100.0%			9
SME525-01	Cooking, Commercial			9	100.0%			9
SME600-06	Boiler, Commercial			5402	100.0%			5402
SME606-07	Tankless Water Heater, Commercial			12480	100.0%			12480
SME610-02	Boiler, Multifamily			96	100.0%			96
SME611-02	Central Storage Water Heater, Multifamily			96	100.0%			96
SME613-03	Tankless Water Heater, Residential			21	1.67%	1131	88.32%	1152
SME633-02	Gas Heat Pump Water Heater, Multifamily			32	100.0%			32
SME693-04	Clothes Dryer, Residential	141	73.49%	3	1.56%	48	25.0%	192
SME701-03	Convection Oven, Commercial			9	16.47%	10	18.52%	18
SME714-02	Rack Oven, Gas, Commercial			9	33.33%	12	44.44%	18
SME704-03	Space Heating Boiler, Commercial & Multifamily	1432	26.47%	832	15.37%	279	5.08%	3543
SME713-03	Unitary Air-Cooled Air Conditioner, Over 65 Btu/h, Commercial	5426	64.47%	2054	24.47%	196	2.32%	8476
SME714-03	Unitary Air-Cooled Air Conditioner or Heat Pump, Under 65 Btu/h, Commercial	4084	27.74%	423	2.83%	674	4.53%	5181
SME721-03	Freezers, Residential	448	36.06%	54	4.35%	162	13.1%	664
SME747-03	Gas Inlet Valve, Residential			24	12.5%	168	87.5%	192
SME748-03	Packaged Air Conditioner Heat Recovery, Commercial			9	12.5%	42	56.25%	48
SME749-03	SEER-Rated AC and HP in HVAC Equipment, Residential	1633	35.26%	150	3.27%	137	2.94%	1920
SME803-03	Heater for Pool or Spa, Commercial and Multifamily	345	84.2%	307	85.7%	78	18.8%	730
SME807-05	Storage Water Heater, Commercial	3030	37.9%	330	4.1%	1955	24.5%	5315
SME812-03	Storage Water Heater, Residential	403	34.3%	780	65.7%	145	12.3%	1228
SME830-01	Tankless Combination Space and Water Heater, Residential	9	12.5%	36	46.7%	20	27.2%	64
Total		20263	88.42%	8654	33.54%	3797	54.91%	66604

Run Type: Measure Version ID
6/2023 TRM (No Unapproved Offers) | Only NC "Gas - Nonexempt" is included in the analysis

Updating TSB Values in eTRM

Memo – process to calculate/populate eTRM cost effectiveness



- **Goal**
 - Consistency of TSB values in eTRM
 - Broadening of TRC/TSB from relative indicator of cost effectiveness to a tool for supporting contracts
- **Process**
 - Collaborative meeting with PAs to discuss relative trade-offs
- **Result**
 - Cost effectiveness values included in v2.7.0 release (Nov 9th)
 - Process to update annually
 - Clarity to specify details of running CET



New Initiative

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- POU Measure Updating/Streamlining Project
 - 3 Data Sets
 - ✦ Full eTRM data set – updated automatically into ESPPortfolios™
 - ✦ Streamlined data set – collapsed to use 16 permutations for each offering*
 - ✦ Offering collapse – guidance on how to choose the streamline offerings
 - POU Measure Streamlining
 - ✦ Long of interest to many in the CPUC-regulated world
 - ✦ Useful for Planning, Design, Implementation
 - ✦ Collapsed measures may be less useful for claims

2023 Business Plan: Q4 Progress Update



**APPENDIX A: PROGRESS UPDATE BY
BUSINESS PLAN GOAL AND METRIC**

2023 Cal TF BP Adjustments

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- **Added Items + Rationale**

- Support for Gas Decision
- Support for Cost Claims Fields
- TSB Updates
- Update to eTRM Cost Effectiveness Values
- Custom Initiative – Policy Discussions and Regulatory Review

2023 Cal TF BP Adjustments

- **Ongoing Into 2024 + Rationale**
 - 2C eTRM Governance and Operating Procedures
 - ✦ Suggest approval is “provisional” to align with CEDARs/CET Governance
 - 3C Stakeholder Communication Plan for Measure Updates
 - ✦ Will conduct additional stakeholder surveys as part of broader stakeholder input on deemed measure development and QA/QC Outstanding Challenges
 - 5A-2 Standardizing Custom Measure Nomenclature
 - ✦ More impactful custom work for stakeholder review/focus

2023 Cal TF BP Adjustments

- **Ongoing Into 2024 + Rationale**

- **5E Custom eTRM Modules**

- ✦ Developed wireframes for Custom Library and Custom Measures
- ✦ Continue as part of comprehensive eTRM Planning Process
- ✦ SOC-2 Certification Not Complete

- **6A TPP – Focused on Custom Policy**

- ✦ Discussions and analysis not ready for broad review

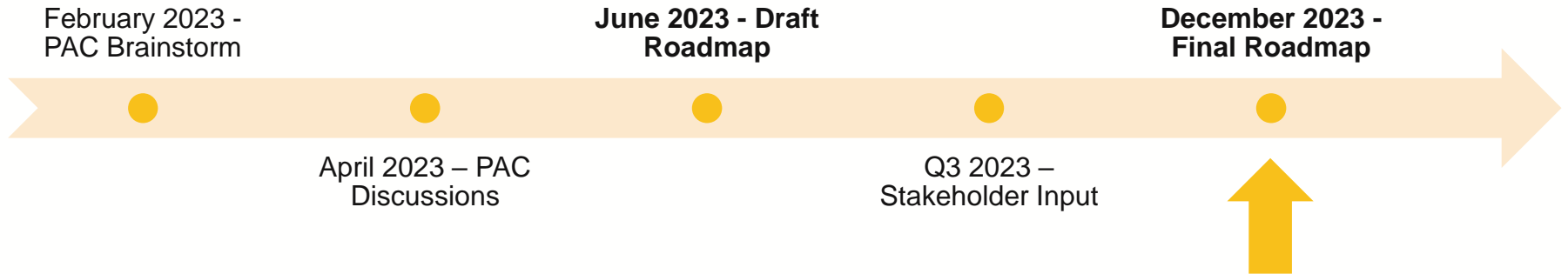
- **6D Regulatory Updates**

- ✦ Waiting for Staff to complete Deemed and Custom Guidelines
- ✦ Cal TF Staff Proposal to propose updates to guidelines rather than updates through dispositions



Cal TF 5-year Roadmap (8A)

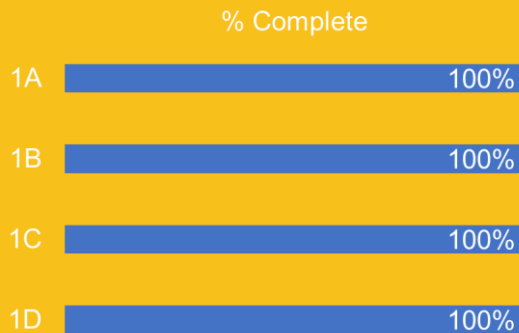
21



- Feb – PAC, TF, Stakeholder Brainstorms
- Mar – TF/Stakeholder initial rating of activities
- Apr/May – Continue brainstorming, priorities, scoping, and sequencing
- June – present Draft Roadmap document
- October – discuss key changes, priorities in Roadmap
- November – present/discuss draft Roadmap
- Dec – revised draft Roadmap for TF, PAC Affirmation

Goal 1 Metrics

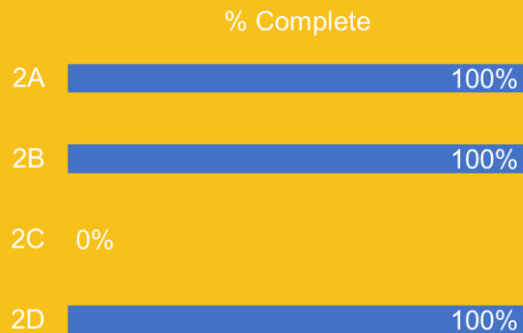
Administer software development of eTRM v2.x



- 1A. Implement enhancements for eTRM v2.x
 - eTRM 2.5.0 release (March)
 - eTRM 2.6.0 alignment with CET (May)
 - eTRM 2.7.0 cover sheet / redlining / data (Nov)
- 1B. Document eTRM technical guidance
 - Performance Metrics are being tracked with each release
- 1C. Complete eTRM enhancement prioritization in 2023 Q2
 - Compiled, organized > 200 enhancement requests from eTRM users and other stakeholders
 - March 22nd – Hosted in-person eTRM Enhancement Charette; received 25 survey responses
 - April – Cal TF meeting to socialize final enhancement list
- 1D. Socialize and Implement eTRM 2023 enhancements
 - 2024 will begin with a comprehensive planning process, then draft release schedule will be developed
 - Socialize the Key Stakeholder meetings, Cal TF meeting and Cal TF website

Goal 2 Metrics

Ongoing
Implementation of
Current eTRM Version



- 2A. Complete up to six (6) webinar trainings for various stakeholder user groups
 - Measure Developer Training Plan
 - Measure Property Data Training
 - Cost fact sheet training (PAs and CPUC)
 - 11 Targeted Trainings for Measure Developers
 - POU Training on New Measures / eTRM
 - Using Excel / Python Data QC Tools
 - [How to QC a Measure](#)
- 2B. Conduct post-training survey
- 2C. Governance: Finalize eTRM Governance Plan with eTRM Key Stakeholders
 - Provisional by EOY; propose coordinating with CEDARS governance
- 2D. Cal TF Staff will track Google Analytics *quarterly* to understand and track eTRM usage.
 - [Reports available upon request; not posted](#)

Goal 3 Metrics

Manage Existing Measure Updates

% Complete



- 3A. Track and report metrics for existing measure updates
 - 48 measure packages completed
 - 63 measure packages in process
 - Tracking of hours is not currently reliable
 - Status report tracking planned through enhancement
- 3B. Coordinate monthly statewide meetings on new/updated measures for the Statewide Deemed Measure List
 - Monthly reports on website
 - Proposed enhancement to automate report
 - iFrame on Cal TF Website for MP updates
 - Sunset Measure process – eTRM Stats
- 3C. Develop a Stakeholder Communication Plan and Versioning Rules for Measure Package Updates
 - TF affirmed 3C Workplan on 2/23
 - Stakeholder outreach/engagement
 - Memo available for Cal TF Member review

Goal 4 Metrics

Manage and Implement the Statewide New Measure Development Process

% Complete

4A 100%

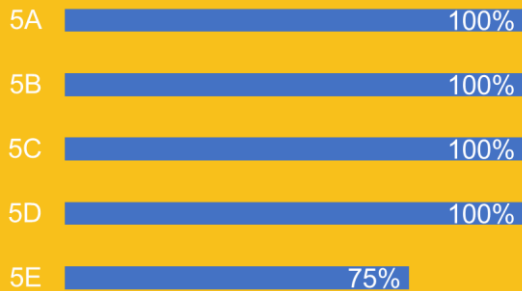
4B 100%

- 4A. Develop and Implement Measure Identification Strategy
 - TF affirmed 4A Workplan on 2/23
 - Developed new measure scorecard; adapted to TSB based on stakeholder input
 - Identified 20 organizations for initial outreach
 - Gap analysis from other TRMs supported new exempt measure process
 - Pull Strategy: Coordination with CalNEXt and GET to support MFm REN programs
- 4B. Track and Report Metrics for New Measure Process
 - Analysis of time to approve measures
 - Measures evaluated – 30 (started in 2023)
 - Measures passed – 24 (only from 2023)

Goal 5 Metrics

Custom Initiative

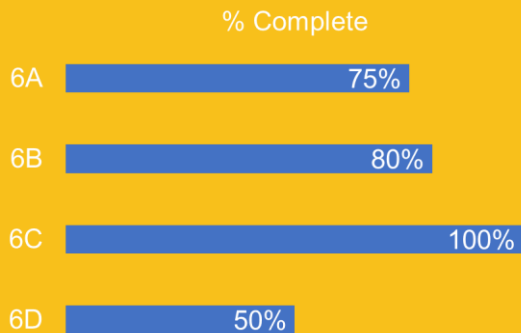
% Complete



- Custom Initiative
 - TF Affirmed Custom Initiative Workplan 4/27
 - PAC Affirmed TPP Topic: Custom Initiative on 4/28
- 5A. Gather, organize, and prioritize existing custom guidelines, tools, and resources being used by POUs, IOUs, and implementers
 - 5A-1: Custom Resource, Inventory, Assessment, and Library
 - 5A-2: Developing updated Custom Measure Code list (moved to 2024)
 - 5A-3: Custom Measure Assessment – potential for standardized/hybrid measures
 - 5A-4: Custom Tool Inventory and Assessment
- 5B. Finalize High-Level Custom Roadmap
 - Working list of challenges and improvement recommendations
 - Draft Roadmap for Custom Initiative (for PAC Review)
 - Revised Roadmap for TF, PAC Affirmation
- 5C. Develop and implement statewide methods for at least three (3) custom measures
 - 5C-1: Custom Measure Characterizations for:
 - ✦ Steam Boilers – affirmed by TF in July
 - ✦ Chiller System Upgrade – affirmed in October
 - ✦ HVAC Retrocommissioning – affirmed in October
 - ✦ Pump Systems – in progress
 - ✦ Boiler Add-On Equipment – in progress
 - 5C-2: Custom Measure Characterization Workflow – affirmed in October
- 5D. Update eTRM documentation (ongoing, as needed)
 - Custom Measure Characterization Template
- 5E. Implement select POU and statewide tools/calculators in the eTRM
 - 5E-1: Developed wireframes and functional specifications for eTRM Custom Library and eTRM Custom Measures
 - 5E-2: Scoping additional eTRM Custom Modules (ongoing into 2024)
- Added
 - Custom Policy Discussions and Regulatory Review

Goal 6 Metrics

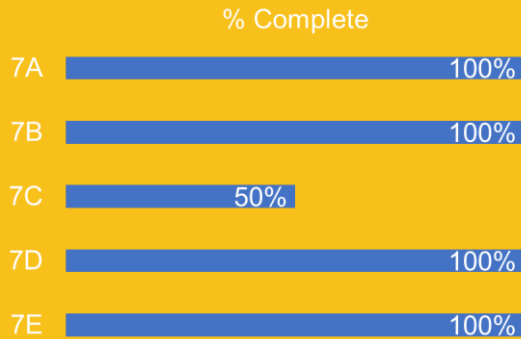
Identify, Analyze, and Recommend Key Emerging Technical and Technical Policy Issues in a Statewide Consistent Way



- 6A. Develop at least one TPP
 - Discussed/deferred TPP on data integration
 - Affirmed topic: Custom Initiative
 - Draft TPP on Custom Policy, PAC only
- 6B. Develop at least one white paper
 - Industry Standard Practice (ISP) White Paper
 - ✦ Completed data collection and stakeholder survey
 - ✦ Presented/discussed key findings and recommendations at several Custom Subcommittee and TF meetings
 - ✦ Draft White Paper delivered in December
- 6C. Review and update existing Cal TF documentation, as needed
 - Cal TF documents updated, archived as part of SharePoint Transition project
- 6D. Provide relevant regulatory updates to support Cal TF membership in staying informed with regulatory requirements
 - Coordinating with CPUC; scoping eTRM “living rulebook” concept
 - Paused pending CPUC Staff release of Custom Guidelines and Deemed Rulebook

Goal 7 Metrics

Manage the Cal TF and Cal TF PAC



- 7A. Conduct at least ten TF meetings
 - Includes Data Charrette #1 and #2
- 7B. Conduct subcommittee meetings
 - Deemed Measure Property Data Subcommittee
 - Custom Subcommittee
 - ISP White Paper Working Groups
 - Custom Measure Working Groups
- 7C. Review and Discuss Cal TF Governance Model, current practice
 - Ongoing into 2024
- 7D. Conduct four PAC meetings; ad hoc meetings as needed
 - 4 meetings complete through October
 - Nov and Dec meetings to finalize BP and Roadmap, address governance, and provide EOY summary
- 7E. Maintain Cal TF website and update and post all materials



Goal 8 Metrics

Develop and Manage the Cal TF Roadmap, Business Plan, and Budget

% Complete



- 8A. Develop 5-year Roadmap
 - Draft Roadmap presented to PAC in June; updates for discussion in October meeting; Final in December for PAC Affirmation.
- 8B. Develop and finalize the 2024 Cal TF BP and budget
 - Draft 2024 Business Plan presented to PAC in June; updates for discussion in October meeting; Final in December for affirmation.
- 8C. Develop workplans for projects for projects or initiatives as required in the BP
 - PAC and TF affirmed Workplan Procedure and Workplan Template
 - TF affirmed 4 workplans
 - ✦ [3C Stakeholder Communication Plan and Versioning Rules for Measure Package Updates](#)
 - ✦ [4A New Measure Identification Strategy](#)
 - ✦ [6D Regulatory Updates to Support Cal TF Membership](#)
 - ✦ [5X Custom Initiative Workplan](#)
- 8D. Provide quarterly status updates to the PAC on business plan and budgets
 - 2022 BP Annual Report
 - 2023 BP, Q1 Progress Update
 - 2023 BP, Q2 Progress Update
 - 2023 BP, Q3 Progress Update
 - [2023 Year End Update](#)