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eTRM Roadmap Workplan

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About The eTRM

The California electronic Technical Reference Manual (eTRM) is a publicly accessible online application that serves as the repository for all statewide deemed energy efficiency measures for California. The state-of-the art, best-in-class platform ensures the accuracy, transparency, and accessibility of all deemed measure values, and streamlines the program design and reporting workflow.

All CPUC-approved statewide deemed measures are published in the eTRM. CPUC Resolution E-5082 (2020) established the regulatory path for the eTRM to become the "conditional data source of record" in January 2021. CPUC Resolution E-5152 (voted out on August 5, 2021) designated the eTRM as the "data source of record" for "EE measure information approved for EE planning and reporting for PY2021 and beyond."

The eTRM supports the policy goals of the new California implementation framework for which third-party implementation contractors will design and implement 60% of the portfolio by 2022 (D. 18-01-004). As eTRM usage continues to grow, additional ways to leverage its value become apparent to drive not just regulatory compliance, but also

- Statewide Consistency
- Quality
- Collaboration
- Stakeholder Engagement
- Cost Savings and Time Efficiency

The eTRM user base continues to grow, surpassing the 3,000-user level in mid-2023. As users grow and diversify, and as additional data is added to the eTRM, Cal TF Staff identified the importance of working with the Cal TF and PAC Members in 2024 to develop an eTRM Roadmap to guide further eTRM development. This eTRM Roadmap Workplan describes the vision, purpose, elements, and approach to developing the full eTRM Roadmap[1].

[1] Cal TF and the Cal TF Policy Advisory Committee (PAC) affirmed the value and creation of an eTRM Roadmap as part of the Cal TF 2024 eTRM Roadmap.

About the eTRM Roadmap

The eTRM Roadmap fosters longer-term strategic planning (beyond a one-year time horizon) and describes multi-year initiatives to further develop the eTRM. The eTRM Roadmap development process will seek to engage eTRM stakeholders, which include a broad range of current and prospective eTRM users, and other stakeholders.

Purpose

- **Grow and solidify the foundation** – so the tool stays robust and powerful by:
    - Establishing the processes for maintaining performance/stability and security
    - Documenting best practices for software development
    - Maintaining best-in-class training and support documentation
    - Developing eTRM governance documentation
- **Create modules that simplify processes**, such as
    - Establishing a custom module
    - Simplifying the upload of measure validation data
    - Adding market facing applications
- **Connect data that drives action**
    - Solving integration challenges between systems and applications
    - Adding features to better integrate systems. Adding new measure types
    - Operationalizing strong data analytics and data visualization tools

Key Tasks for the eTRM of the Roadmap Workplan

The key tasks of the eTRM Roadmap are listed below and described further in the tables below:

- Finalize eTRM Governance and Oversight
- Update and Memorialize eTRM Quality Assurance Requirements and Practices
- Enhance eTRM Integration with External Databases and Other Applications
- eTRM Documentation, Training and Support
- Custom Measure Project Development, Tracking and Review
- Field Data Collection / Data Analytics / Data Visualization
- Market-Facing Applications
- Adding New Measures and Measure “Types” to the eTRM

Task 1: Finalize eTRM Governance and Oversight

Task	Description
eTRM Governance Document	Finalize governance document that describes how eTRM will be governed. Ideally, this document will be developed in coordination with other systems that are used by the CPUC and CEC to develop, track and report on energy efficiency data.

Task 2: Update and Memorialize eTRM Security and Quality Assurance Requirements and Practices

Since the eTRM is now the Data Source of Record and used by all energy efficiency Program Administrators and Implementers, ensuring that the quality, stability, performance, and security of the eTRM and associated data is essential.

Task	Description
Performance / Stability	Maintaining the Performance and Stability of the eTRM remains a top priority because of the key role that the eTRM has come to play as the Data Source of Record in California. Stress testing to understand product limits and an analysis of the impacts of growth will secure Performance and Stability but also allow for the most informed choices as the product continues to grow.
Security	Security relates to the security of the eTRM application as well as the data contained in the eTRM. Security will be particularly important if the eTRM houses any Personally Identifiable Information (PII). Ensuring the security of the eTRM and eTRM data has several elements, including, but not limited to: 1) External certification (SOC2), 2) "Defense in Depth" – multiply layers of security protection for the system and data, 3) Requirements and guidelines that are regularly monitored and enforced to ensure ongoing security, 4) Regular third party review of system security, including but not limited to penetration testing and 5) Breach and restore plans so that if the application and/or data is compromised, the intrusion and any resulting damage is addressed and restored within a reasonable time frame.
eTRM Software Development Standards and Practices	Development Standards are documented within the eTRM Technical Guidelines. This guideline sets a high standard for software development, documentation, and maintenance practices. The guideline intends to make it clear how and when proprietary code can be used.

Task 3: Enhance eTRM Integration with External Databases and Other Applications

Data in the eTRM is used by multiple systems, including PA and implementer tracking systems, CEDARs and EnergyPlatform.™ eTRM also has fields that includes data from other systems, such as the CET. Finally, users may find additional value if eTRM either pulls data or pushes data into other systems, such as the California Energy Commission's SB 1037 Report and Snowflake.

Task	Description
CPUC Systems CEDARS	Develop Business Requirements (BRs) to describe how eTRM can better support and be integrated with the current features of CEDARS (including program/budget filings, program updates, and claims) but also connects or integrates the data lake (EDSC), DEER database, ATR (All Things Reporting), and P4 (Portfolio Parameter Prioritization Project).
CPUC Systems CET	Develop Business Requirements (BRs) to describe how eTRM can better support and be integrated with the current features of the CET. Explore whether shifting the CET benefits calculation to accept base and measure case usage load shapes changes the methodology and inputs to the calculation significantly.
Other Databases and Applications (PA, implementer, other third party)	Develop Business Requirements (BR) to describe how various databases and applications are allowed to pull data from eTRM or "push" data into eTRM. Currently, data is uploaded into the eTRM from various external databases and systems, and several systems need to download data from eTRM. This activity will involve characterizing the types of databases and applications that need to push or pull data into/from the eTRM, under what terms, and through what form (e.g. flat file and/or API).
POU C-E Tool (EnergyPlatforms™)	EnergyPlatforms™ is the POU system for cost-effectiveness tracking and reporting. The task is to ensure eTRM data is transferred in a form that is used and useful for the POU C-E Tool.

Task	Description
CEC Snowflake Database	Discuss and memorialize rationale and approach for whether eTRM data combined with Snowflake data could provide useful insights for portfolio and program planning and analysis. CEC's Snowflake database contains IOU and POU AMI data in 15 minutes intervals for all customers (for what time period). Being able to access the CEC Snowflake database and combining with measure data in eTRM could help improve measure targeting as well as measure analysis.
Schematic of Streamlined EE Data Ecosystem	Diagram and accompanying description of how to better integrate and streamline databases and applications that either "push" or "pull" data into eTRM. Diagram may include recommendations for streamlining data flow and data bases.

Task 4: eTRM Documentation, Training and Support

Task	Description
eTRM Documentation Summary	Description of eTRM documentation and updating process. The eTRM Documentation includes: • User Guide • Administrator Manual • eTRM Release Packet Updated after each release.
Training and Support Plan	Document describing eTRM Training needs and obligations, which would be updated no more than annually. Will identify: • Different training needs • Training materials available, including written resources and videos • Training requirements to use eTRM • Live support, such as office hours This document would describe current training but would need to be updated as eTRM expands. Would include general discussion of support needs for statewide tool to be used and useful by a wide variety of market actors.
Document Maintenance Policy	Policy describing how different documents related to the eTRM and information contained in the eTRM will be: • Stored, accessed, maintained, and updated. • Includes standardized and transparent versioning.

	• Linked to measures (deemed and custom measure packages) as appropriate. Examples could be regulatory guidance, templates, measure development guidance, references, etc. Storage options could include, and may vary depending on the nature of the document: • The eTRM reference library (any documents that support a measure) • The eTRM website • An internal SharePoint site, etc.

Task 5: Custom Measure Project Development, Tracking and Review

Task	Description
Custom Projects in eTRM	Develop Business Requirements (BPs) to allow PAs and implementers to develop projects in the eTRM, have Custom Projects reviewed in the eTRM, and support custom measure, project and program tracking and analytics. Time permitting, this task will include developing Functional Requirements (FR) for some or all of the Custom Projects This task is intended to support streamlining of the custom process development and review, such as: • Consolidate, organize, and streamline the flow of custom data throughout its life cycle • Facilitate QA/QC and reviews • Facilitate measure, project, and portfolio level tracking and analytics. The task covers functionality for projects, measure packages, tools, and documentation and provides the right security to mitigate PII concerns. Discussions should build upon prior Cal TF work documented as part of the May 2020 eTRM Custom Module Memo.

Task 6: Field Data Collection / Data Analytics / Data Visualization

Tasks	Description
Program Data Collection & Storage	Description of the process and storage approach for collecting data related to deemed Measure Packages and/or Custom Projects that could be analyzed to meet programmatic and/or regulatory requirements or to improve measure development or targeting. This would include examples of how collecting and storing data from the field might be useful to support programs, evaluation, and regulatory policy development.
Data Visualization / Data Analytics	Description of data sources that could be combined with data from the eTRM using existing commercially available tools (such as PowerBI and ArcGIS) to support: • Improved measure development and measure targeting • Comparison of different measure package solutions to identify most cost-effective ways for customers and communities to reduce energy, greenhouse gases and manage grid constraints • Broader statewide policy questions on how to achieve state's energy goals

Task 7: Market-Facing Applications

Modules	Description
Web-based Feature to Allow Customers and/or Program Allies to Report and Validate Site-Specific Information	Description (including value of) a mobile application that would allow customers and Trade Allies to upload information collected in the field, and to validate the information. Information may include: • Pictures (e.g. nameplate data), • Pre-existing conditions (such as age of equipment) • Cost documentation • Spec sheets • Qualified Product List information The description would also include approach to data validation, where applicable.

Modules	Description
Web-Based Tools for Program Allies to Offer Comprehensive Solutions to Mass-Market Customers	Description (including value of) mobile application that would allow Program Allies to see all EE, DR, solar, and battery options they could offer a customer, including list of deemed measures, costs, savings, incentives, and financing options.
Financing and Instant Pay Module	Description (including value of) mobile application that would allow financing options and instant rebate/contractor payments for eTRM measures and projects to facilitate project implementation, particularly for low and moderate income customers.

Task 8: Adding New Measures and Measure "Types" to the eTRM

Modules	Description
New Measure Development Tool	Description and Business Requirements describing a new eTRM interface to make new measure creation far more accessible to any innovator. Ideally, the interface would support new measure developers and/or those who are not familiar with California regulatory processes (such as innovators) to successfully describe a new measure that could then be further reviewed. The interface might include identifying the type of measure, the data that may be missing, the quality of data, relationships to other existing measures packages, and the expected cost-effectiveness based on initial data provided.
Low Income	Description of and Business Requirements for how low-income measures could be developed and maintained based on market-rate measures in the eTRM as a starting point and how the eTRM database structure could be used to develop and manage low-income measures. The description would include how low-income measures may need to be different from market-rate measures, such as baseline and expected useful life.
POU Measures	Description of project underway to facilitate POU use of eTRM.
Other Measure Types	Description of and Business Requirements for how other measure types could be added to the eTRM, potentially including load-shifting measures, solar, batteries, codes and standards, market transformation and electric vehicles.

Product / Deliverable Types

Deliverables produced through the eTRM Roadmap development process, described in brief in the tables above, may include (depending on the task):

- **Policies and/or Guidance Documents**
    - Policies and guidance documents will describe policies and practices to oversee, develop, maintain, and update the eTRM documents.
- **Description Overview (One per Task) (2-3 pages max):**
    - Including sections for Task Description, Value and/or Business Case, and Users
    - The high-level description will not include detailed costs, but it may include costs within a range (such as high, medium, or low) and/or level of effort to execute.
- **Description Overview + Business Requirements (BR)**
    - If the task is associated with a future software development activity, then the task may include development of Business Requirements, which describe business requirements the software should fulfil**.** Business Requirements do not provide enough specificity for software developers to price and/or develop the proposed software.
- **Description Overview + BRs + Technical Requirements (TR)**
    - Technical Requirements are only included when a module is ready to move forward to development. A set of aligned TRs and BRs can be used to clearly communicate the scope of the project to a software developer and to establish the not-to-exceed (NTE) budget for the software development project.

eTRM Roadmap Development and Review Process

For each task described above, Cal TF Staff will develop material for Cal TF member and/or PAC input (depending on whether the task is technical, policy or a combination of both).

- Draft materials for each task will generally be discussed either in the monthly Deemed Measure Subcommittee meeting or the monthly Custom Subcommittee.
- Certain tasks (such as Task 1: Governance Document) will be developed through the PAC
- After review and input by the respective subcommittee, documents will be presented to the full Cal TF
- Timing – Cal TF Staff will seek to have each Task presented to the relevant subcommittee in 2024. Due to timing constraints, some documents may not be presented to Cal TF for member affirmation until 2025.