



5-Year Roadmap 2024 – 2028

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About The Cal TF

The Cal TF is a collaborative of experienced, highly capable experts who use independent professional judgment and a transparent, robust process to review technical and technical policy information related to California's integrated demand side management (IDSM) portfolio. The Cal TF was created in 2014 by a broad group of stakeholders and is funded by participating program administrators.

The Cal TF performs its work through the:

- Policy Advisory Committee (PAC)¹ of statewide energy efficiency stakeholders who affirm Cal TF's goals, mission, metrics and guiding principles, this Roadmap and approves the annual Cal TF Business Plan.² The PAC also reviews and monitors Cal TF progress towards goals.
- Technical Forum (TF)³ of independent subject matter experts who peer review methodologies, data, assumptions, values and other technical and technical policy information.
- Cal TF Staff⁴ who facilitate an open, transparent stakeholder engagement and technical review process and develop, administer, and/or implement the California electronic Technical Reference Manual (eTRM) and other statewide tools, processes and documentation.

Goal

Cal TF's primary goal is to foster statewide collaboration and to develop, administer, and/or implement statewide processes, tools, and documentation on technical and technical policy issues to speed the adoption and reduce costs of achieving California's energy-related climate change and grid optimization goals.

Mission

Cal TF's mission is to support achieving California's energy-related climate change goals and grid optimization efforts through collaborative, inclusive, technically rigorous, independent, and transparent peer review of California energy efficiency values, tools, processes, documentation, and other related technical and technical policy-related information.

Guiding Principles

The Cal TF produces work that is:

- Technically rigorous
- Based on best available data
- Timely

¹ PAC members are listed on the Cal TF website: <http://www.caltf.org/pac-members>

² Cal TF Business Plans are available on the Cal TF website: <http://www.caltf.org/what-we-do>

³ TF members are listed on the Cal TF website: <http://www.caltf.org/tf-members>

⁴ Staff members are listed on the Cal TF website: <http://www.caltf.org/staff>

The Cal TF accomplishes its work through a process that is:

- Cost-efficient
- Transparent and well-documented
- Inclusive and collaborative
- Balances accuracy, precision, timeliness, cost, and certainty
- Provides meaningful, independent, and expert peer review
- Includes opportunity for regional and national input

Key Metrics

Cal TF measures and plans its activities using both quantitative and qualitative metrics below:

Quantitative

- Reduce costs
- Increase savings (carbon reduction and energy savings)
- Ensure appropriate quality and rigor
- Achieve process efficiencies
- Expedite processes and outcomes

Qualitative

- Achieve statewide consistency and standardization
- Foster collaboration through stakeholder engagement
- Create transparency
- Streamline and simplify
- Achieve statutory and regulatory compliance, unless Cal TF is recommending changes to the regulatory framework
- Align goals to balance all stakeholder interests (including, but not limited to, ratepayers, vendors, implementers, utilities, etc.

About Cal TF's 5-Year Roadmap

The California Technical Forum (Cal TF) 5-Year Roadmap fosters longer-term strategic planning (beyond a one-year time horizon) and multi-year initiatives. This first 5-Year Roadmap was developed pursuant to Cal TF's 2023 Business Plan and covers the years 2024 through 2028.

The Roadmap is intended to be a framework, not a comprehensive document, that describes how a particular initiative will be developed. Detail on particular initiatives will be set forth in annual Cal TF Business Plans, Technical Position Papers, White Papers, and individual Work Plans.

Finally, this 5-Year Roadmap is a living document. Cal TF Staff will update the Roadmap annually in consultation with the Cal TF Members and PAC. Cal TF Staff will seek affirmation of updates by the Cal TF PAC prior to the start of a new year.

The Roadmap is intended to be consistent with the approved Cal TF Business Plan for the next calendar year. The goals and metrics in approved Cal TF Business Plans are firm commitments, unless they are adjusted by the Cal TF PAC. The goals, metrics, and objectives contained in the Roadmap for subsequent calendar years are intended to be *proposed*. The value of identifying proposed goals, metrics, and objectives describe how tasks in one year relate to proposed tasks in future years to help foster intentional multi-year planning. Tactics and benefits of each goal and sub-goal are developed for each annual Cal TF Business Plan and are not contained in the Roadmap.

Content and Organization

Cal TF Initiatives

Cal TF initiative descriptions are organized to be consistent with the organization of the Cal TF Business Plan goals, as follows:

- Goal 1: eTRM Management and Development
- Goal 2: Measure Management
- Goal 3: New Measure Rapid Screening, Evaluation and Development
- Goal 4: Data Integration and Data Analytics
- Goal 5: Custom Initiative
- Goal 6: Technical Issue and Technical Policy Analysis
- Goal 7: Cal TF, PAC and Stakeholder Engagement and Management

Cal TF Budget

The Cal TF budget covers all items in the approved Cal TF Business Plans. Core funding for Cal TF is managed through the Cal TF Funders (currently SCE, SDG&E, PG&E, SCG, and LADWP) and has been budgeted through 2027 in IOU business plans. With the approval of the Cal TF Funders, unspent funds

can “roll-over” to the next calendar year, and funds can be “fungible” between Cal TF and eTRM activities.

Certain areas of this roadmap identify objectives that are not currently part of the core funding for Cal TF (i.e., work outside of the scope of the energy efficiency portfolio or larger initiatives not covered by the core budget.) Work on these additional objectives is, therefore, contingent on securing appropriate funding for these activities.



Goal 1: eTRM Management and Development

Description / Problem Statement

The California electronic Technical Reference Manual (eTRM) is an 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 will streamline the program design and reporting workflow.

All CPUC-approved statewide 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

Furthermore, the eTRM user base continually grows, surpassing the 3,000-user level in mid-2023. As users grow and diversify and as more data is made more available and connected, other uses may be developed for the eTRM. Not only are their opportunities presenting themselves to save time/dollars on data management, but also opportunities associated with more/better measures, quality installation, streamlined processes, workload management, and visualization continue to present themselves.

During the 2024 eTRM Roadmap development process, Cal TF plans to solicit stakeholder feedback on whether the eTRM should cover other energy-related resources that could be used at a customer site, including dispatchable resources, batteries, low-income measures, solar and EV. Extending the eTRM to other energy-related resources could enable cross-resource comparisons to facilitate optimal choices for reducing the carbon footprint and optimizing grid use at the customer and/or community level.

Goals, Metrics, Objectives/Stakeholder Benefits

Goal	Metric	Objective/Stakeholder Benefits
Develop eTRM Roadmap (Q1, Q2 - 2024)	<ul style="list-style-type: none"> Roadmap complete 	<ul style="list-style-type: none"> Clear path forward for eTRM that is based on input from the broad range of users rather than just the core stakeholder.
Develop annual eTRM Work Plan (Q1, Q2 – 2024, annual update thereafter)	<ul style="list-style-type: none"> Workplan complete by Q4 of prior calendar year 	<ul style="list-style-type: none"> Transparency and “buy-in” from broad range of stakeholders.
Create and Update eTRM Measure Curriculum; Conduct ongoing eTRM training; Manage Measure Developer accountability for adhering to guidelines and standards. (Ongoing)	<ul style="list-style-type: none"> eTRM Measure Development curriculum, including Guidelines, Checklists, videos and periodic in-person trainings. 	<ul style="list-style-type: none"> Meet the training needs of a wide range of users Improve user experience by enabling users to access what they need efficiently Develop and monitor eTRM Measure Developer performance according to requirements and guidelines.
All behind-the-meter resources (e.g., DR, solar, battery, EV, Low Income)	<ul style="list-style-type: none"> Customer-side “resource” added to eTRM 	<ul style="list-style-type: none"> One technical repository for all customer-side resources will facilitate common tracking, comparison, cost-effectiveness analysis, claims review and analysis
Analytic tools and mobile platform to support trade allies and customers to optimize IDSM choices	<ul style="list-style-type: none"> (2024) Solicit input from customer, trade allies, implementers. If interest, price and/or explore off-the-shelf solution. (2025) Build pilot web application that can be accessible through hand-held devices. 	<ul style="list-style-type: none"> Tools to allow more market users to readily access and make use of eTRM data

Budget Considerations

eTRM management and development is part of the core budget. Blue items indicate additional budget required.



Goal 2: Measure Management

Description / Problem Statement

Measure packages are regularly updated due to regulatory requirements, state and federal code updates, weather updates, and EM&V findings, not to mention market driven changes such as new efficiency tiers and updated costs. Cal TF fosters statewide coordination and develops tools, templates, guidelines and training to help Measure Developers update measure packages.

Goals, Metrics, Objectives

Goal	Metric	Objective/Stakeholder Benefits
Solicit stakeholder input on current deemed measure development and updating process, then track/report on relevant metrics <ul style="list-style-type: none"> Survey and/or talk with stakeholders (Q1, 2024) Develop draft and final Metrics for deemed measure development and updating process (Q2, 2024)	Track and report on agreed-upon metrics (Q3 – Q4)	<ul style="list-style-type: none"> Transparency, measure development speed and quality.
Coordinate, conduct, and organize all measure management and updates (ongoing)	<ul style="list-style-type: none"> Track and report metrics for existing measure updates that could include: <ol style="list-style-type: none"> Number of measures updated in the eTRM Time (Draft to Submit to CPUC and Submit to CPUC to Publish) Time (Time spent updating measure – internal and consultant) Completeness & Accuracy Nature of Updates 	<ul style="list-style-type: none"> Facilitate statewide coordination to drive consistency and efficiency Improve measure package quality through clarity and transparency of the measure package data and characterization Reduce measure development cost and end-to-end time through clarity in the process and workflow automation
Communicate updates to eTRM users	<ul style="list-style-type: none"> Create tools and training to address stakeholder feedback 	<ul style="list-style-type: none"> Improve transparency by streamlining access to the data that eTRM users need Encourage stakeholder engagement and filling gaps in communication

Budget Considerations

Measure management is part of the core budget.



Goal 3: New Measure Rapid Screening, Evaluation and Development

Description / Problem Statement

To help meet California’s ambitious energy savings and decarbonization goals, the Cal TF Business Plan (BP) includes a focus on identifying, rapidly screening, and developing new measure opportunities for the eTRM. Having a robust set of new measures for the eTRM helps portfolio administrators and implementers meet the ever-evolving needs within California will give programs the best chance meet and exceed goals with cost-effective programs. Equally important to new ideas is the efficient process for existing measure update to:

- Engage program administrators and implementers to understand portfolio gaps and needs
- Identify prospective new measures to meet needs and fill gaps
- Support measures-of-interest through measure development and early uptake

Goals, Metrics, Objectives/Stakeholder Benefits

Goal	Metric	Objective/Stakeholder Benefits
Identify and engage with new entities and organizations to increase pool and accelerate development of new measures (2023 – on)	<ul style="list-style-type: none"> • Number of entities or organization included in the 'pull' strategy • Number of measures identified and screened through the 'pull' strategy 	<ul style="list-style-type: none"> • Increase the number of new measure proposals • Communicate the need for new measures and new measure types • Increase the number of proposals from high priority measures or measure types
Develop and add decarbonization/CO2/GHG measures	<ul style="list-style-type: none"> • Establish annual target to add/improve additional measures 	<ul style="list-style-type: none"> • Focused outreach and scanning needed to continue to feed the new measure pipeline • Prioritize development to best meet statewide targets
Develop and add Low Income and/or Equity measures	<ul style="list-style-type: none"> • Number of measures consolidated and uploaded into the eTRM 	<ul style="list-style-type: none"> • Build consensus and consolidate low income measures • Make measures available through the eTRM that can support future statewide programs and streamlined reporting • Create an affirmation process for Low Income measures
Facilitate, oversee, and develop new measures and measure updates by Cal TF Staff	<ul style="list-style-type: none"> • Time (hrs) to develop a new measure package • Time (hrs) to update an existing measure package 	<ul style="list-style-type: none"> • Drive quality and consistency in measure packages and track resources through consolidated contracting • Promote development visibility for planning across IOUs, CCAs, RENs, and implementers by planning centrally
Submit new measures and measure updates by Cal TF Staff directly to regulatory agencies	<ul style="list-style-type: none"> • Calendar days from submittal to approval • Time (hrs) from submittal to approval 	<ul style="list-style-type: none"> • Drive consistency in feedback and responses across measure packages • Drive reasonableness in review to balance rigor (cost) with risk mitigation (benefit) for deemed measures

Budget Considerations

New measure management is part of the core budget. **Blue** items indicate additional budget required.



Goal 4: Data Integration & Analytics

Description / Problem Statement

Efficient and error-free transmission of data from a customer site to the CPUC data repository and, if applicable, any CEC data repositories is essential. Furthermore, to permit efficient portfolio and program planning, implementation and evaluation, project and measure data needs to be available (with caveat that Personally Identifiable Information must be protected consistent with legal requirements).

Cal TF will work with stakeholders to map data flow from customer site through the measure journey, identify data challenges and provide recommendations on streamlining data flow and improving data access to allow data analysis using common commercially available data analytics tools (such as PowerBI and Tableau). In addition, Cal TF will work to identify other data sources available at the state and federal level that could be merged with energy efficiency program data to improve portfolio and program planning, targeting and evaluation.

Goals, Metrics, Objectives

Goal	Metric	Objective/Stakeholder Benefits
Complete the “Data Charettes” started in 2023 (2024)	<ul style="list-style-type: none"> Data Charette Report 	<ul style="list-style-type: none"> Identify opportunities to streamline, automate and better analyze data
Identify approaches to streamlining data flow and reporting to minimize manual data management and improve data quality throughout measure journey (2024)	<ul style="list-style-type: none"> Data Charette Report 	<ul style="list-style-type: none"> Identify opportunities to streamline, automate and better analyze data.
Integrate non-EE data (e.g., solar maps, EnviroScreen/DAC, census data, market data) to enable data analytics	<ul style="list-style-type: none"> eTRM integration with other applicable databases 	<ul style="list-style-type: none"> Improved program and portfolio design, planning and implementation
Incorporate potential data at measure level to track progress and identify shortfalls	<ul style="list-style-type: none"> eTRM reports 	<ul style="list-style-type: none"> Transparency
Integrate cost effectiveness tool (CET and ESPPortfolios™) into eTRM	<ul style="list-style-type: none"> eTRM integrated with CET and ESPPortfolios™ 	<ul style="list-style-type: none"> Cost and time efficiencies

Budget Considerations

Data integration and analytics is part of the core budget. [Blue](#) items indicate additional budget required.



Goal 5: Custom Initiative

Description / Problem Statement

Over the past decade, custom stakeholders have invested significant resources towards streamlining custom processes and improving outcomes. Custom stakeholders have convened working groups, developed guidance documents and resources, instituted process improvements, and implemented internal initiatives. Despite these efforts, custom project stakeholders continue to report challenges, and participation and savings in the custom program continues to decline.

Reported custom program challenges include:

- Accessing, understanding, and staying up to date with current regulatory policy and guidance;
- Uncertainty and perceived inconsistencies in the data and documentation requirements and application of policy for custom measures;
- Extensive and prohibitive time periods, processes, and costs to develop, review, and implement custom projects;
- Lost and limited opportunities, especially for small measures and projects, due to the high cost of developing custom projects;
- Different systems, tools, processes, and policy interpretation across PAs and technical reviewers; and
- Evolving policy and practices that have increased barriers, complexity, and cost of custom measures and reduced customer and market participation in the custom programs.

In 2023, Cal TF launched the Custom Initiative to engage custom stakeholders and develop solutions to address custom program challenges. Many of the reported challenges are similar to challenges experienced with deemed measures and programs and addressed through successful Cal TF efforts such as workpaper consolidation, regulatory reviews, and eTRM development and implementation. The Cal TF Custom Initiative builds on successful Cal TF strategies and tools to engage key stakeholders, understand challenges, develop and implement solutions, and achieve broad benefits for all custom stakeholders.

The Custom Initiative includes custom measures as well as projects and programs using NMEC, SEM, and other non-deemed measure types.

Goals, Metrics, Objectives

Goal	Metric	Objective/Stakeholder Benefits
Centralize, Organize, and Summarize CPUC Policy and Simplify Regulatory Guidance and Resources related to Custom Measures (2024)	<ul style="list-style-type: none"> • Publicly-accessible library of custom policy and guidance materials 	<ul style="list-style-type: none"> • Consistency/Standardization • Cost Savings • Customer Experience • Quality Control • Stakeholder Engagement

	<ul style="list-style-type: none"> • Strategy to improve all stakeholder awareness and understanding of new/updated policy and resources • Simplified, up-to-date guidance resources 	<ul style="list-style-type: none"> • Time Savings
Custom Policy Initiative (2024)	<ul style="list-style-type: none"> • Summary of key policy issues and challenges hindering custom programs • Summary of regulatory policy and requirements (distinguished from interpretation, guidance, and common practice) • Develop and Recommend Consensus-based solutions to key policy issues • Regulatory tools to resolve policy issues and implement solutions 	<ul style="list-style-type: none"> • Cost Savings • Customer Experience • Stakeholder Engagement • Time Savings
Identify, Consolidate, and Develop Statewide Custom/Hybrid Measures and Tools (2024)	<ul style="list-style-type: none"> • Statewide Custom Measure Packages • Statewide Custom Tool Library • Manage/update Custom Measure Packages and Tools as needed • Streamlined review pathway for Hybrid Measures • Establish Ownership and Management Plan for Custom Measure Packages 	<ul style="list-style-type: none"> • Consistency/Standardization • Cost Savings • Quality Control • Stakeholder Engagement • Time Savings
Develop Statewide Custom Templates and Data Structures (2024)	<ul style="list-style-type: none"> • Statewide Custom Measure Codes • Statewide Custom Project Templates that support consistent and streamlined data organization and statewide data aggregation • Statewide Custom Review Tools • Statewide Custom Datasets 	<ul style="list-style-type: none"> • Consistency/Standardization • Cost Savings • Customer Experience • Quality Control • Time Savings
Add Custom measures and tools in the eTRM (2024)	<ul style="list-style-type: none"> • eTRM Custom Library • eTRM Module for Custom Measure Packages • eTRM Module for Hybrid measure calculations 	<ul style="list-style-type: none"> • Consistency/Standardization • Cost Savings • Customer Experience • Quality Control • Time Savings
Develop and review custom projects in eTRM	<ul style="list-style-type: none"> • eTRM Module for project measures and custom projects • eTRM hosts custom measures, projects, and review information 	<ul style="list-style-type: none"> • Consistency/Standardization • Cost Savings • Customer Experience • Quality Control • Time Savings
Centralize Project Review/QA at Cal TF	<ul style="list-style-type: none"> • Statewide standard technical review templates and process • Custom projects hosted in central, access-controlled location • Cal TF perform technical review • Automated review and compilation of technical review findings and outcomes 	<ul style="list-style-type: none"> • Consistency/Standardization • Cost Savings • Customer Experience • Time Savings • Quality Control

Budget Considerations

The Custom Initiative is part of the core budget. **Blue** items indicate additional budget required.



Goal 6: Technical Issue and Technical Policy Analysis

Description / Problem Statement

Cal TF’s White Papers and Technical Position Papers (TPPs) serve to:

1. Characterize, analyze and develop recommendations for challenging technical and technical policy issues, and
2. Describe and provide business and technical justifications for new Cal TF strategic initiatives, which may include proposed policy changes, process changes, and new tool development.

Goals, Metrics, Objectives

Cal TF develops TPPs and White Papers annually, with input from Cal TF members and stakeholders. The “measure of success” is whether the recommendations contained in the White Papers and/or TPPs are used and useful, and ultimately implemented.

Goal	Metric	Objective/Stakeholder Benefits
Complete at least one TPP annually	<ul style="list-style-type: none"> • One completed TPP 	<ul style="list-style-type: none"> • Fosters extensive and broad-based stakeholder input and requires analysis prior to large new initiatives
Complete at least one White Paper annually	<ul style="list-style-type: none"> • One completed WP 	<ul style="list-style-type: none"> • Fosters Cal TF member input on technical issues, policies, tools, processes while scoping new potential issues for Cal TF

Budget Considerations

Technical issue and technical policy analysis is part of the core budget.



Goal 7: Cal TF, PAC and Stakeholder Engagement and Management

Description / Problem Statement

As described in the introduction to the Roadmap, the Policy Advisory Committee (PAC) oversees and guides the Cal TF. The California Technical Forum (Cal TF) is the body of technical experts who provide technical recommendations, input and affirm technical recommendations of the Cal TF. The PAC meets a minimum of four times per year, and the Cal TF meets ten times per year, with additional subcommittees formed on topic-specific issues. Communication and input from the PAC and Cal TF occurs through meetings, the Cal TF website (www.CalTF.org) and several very well-developed SharePoint sites for project management.

Furthermore, broad-based and efficiently-managed stakeholder input from a range of stakeholders involved in the integrated demand-side management (IDSM) ecosystem is an essential feature of and foundational to the success of Cal TF.

Stakeholders who typically are engaged in California TF as Members, through subcommittees and/or through regular topic-specific coordination meetings include:

- California Public Utilities Commission (CPUC) Commissioners, Staff, and consultants
- California Energy Commission (CEC) Staff
- California's investor-owned utilities (IOUs)
- California's publicly-owned utilities (POUs), as represented by LADWP, SCPPA, and NCPA
- California's energy-efficiency program implementers and third-party program administrators, implementing and administering the largest energy-efficiency programs in California.
- CalNEXT and GET, the energy efficiency emerging technology administrators
- California and national technical subject matter experts on specific technical issues

Cal TF Staff is beginning to engage the following stakeholders who have not traditionally participated in Cal TF collaboratives:

- California's Senior Policy-Makers
- Community Choice Aggregators (CCAs) and Regional Energy Networks (RENs) who operate energy efficiency programs
- Disadvantaged community and Environmental Justice Community representatives
- Individual Publicly-Owned Utilities (beyond SMUD and LADWP)

- CalMTA, the newly-emerging Market Transformation Administrator
- The Codes and Standards Administrator
- Innovators, incubation hubs, national laboratories, universities, angel/venture capital and other investors who are bringing new measures to market

Goals, Metrics, Objectives

Goal	Metric	Objective/Stakeholder Benefits
Manage Cal TF and PAC	<ul style="list-style-type: none"> • High-quality technical and technical policy recommendations and affirmations from the Cal TF and PAC 	<ul style="list-style-type: none"> • Broad-based input results in recommendations and technical affirmations that are carefully reviewed by both technical experts and technical leaders to ensure technical rigor and actionable, reasonable, cost-efficient recommendations that balance rigor with cost considerations, implementation considerations and customer impact.
Expand participation with and by POU, RENs, and CCAs.	<ul style="list-style-type: none"> • (2024) – 3 new representatives • (2025 on) – monitor engagement; adjust 	<ul style="list-style-type: none"> • Expanded representation by broader range organizations
Identify and engage DAC representatives.	<ul style="list-style-type: none"> • (2024) – 3 new representatives • Monitor engagement; adjust 	<ul style="list-style-type: none"> • Expanded representation by representatives of populations who are underrepresented
For select issues that could benefit from Ratepayer/Customer input, solicit input	<ul style="list-style-type: none"> • Customer/ratepayer input documented and addressed 	<ul style="list-style-type: none"> • Ultimately, the portfolio needs to benefit the customers/ratepayers as they are paying for the portfolio budget. Customer/ratepayer voices need to be solicited, as appropriate, and addressed.
Engage with other organizations/non-profits doing similar work such as the Climate Registry and Market Transformation.	<ul style="list-style-type: none"> • (2024) All related initiatives/organizations engaged • Monitor engagement/adjust 	<ul style="list-style-type: none"> • Ensure Cal TF work aligned and leveraging other efforts

Budget Considerations

Cal TF, PAC and stakeholder engagement and management is part of the core budget.

Budget – 5 Year and Annual

Successful and stable administration of the Cal TF and eTRM relies on stable annual funding for core activities over the contract period. Since many of the core initiatives and software development require multi-year planning and implementation efforts, stable and predictable funding is required for successful execution. The annual budget for 2023 matched the budget in 2022. Subsequent annual budgets include an escalation rate that is described below.

An escalation rate has been applied to each annual budget to document the following year’s budget. These rates are provided in the table below. While the consumer price index (CPI) has fluctuated at a peak near 7% in 2022 and now closer to 5% in 2023, we are instead referencing the Aruoba Term Structure of Inflation Expectations (ATSIX) from the Federal Reserve Bank of Philadelphia.⁵ The ATSix curve displays inflation expectations over the next 120-month period. This model, using a methodology in Aruba (2016), is regarded by economists as the best source of data to forecast inflation rates. This escalation includes only forecasted inflation and does not include any other escalation factors.

In addition to stability, fungibility between the Cal TF and eTRM implementation budgets is important to maintaining stable staffing levels and respond to evolving and emerging stakeholder needs and priorities. Key Stakeholder needs vary from year to year depending upon the focus of the business plan. To adapt to changing needs, the ability to shift funds between the core elements of the contract may be necessary.

Year	Cal TF Implementation Budget	eTRM Implementation Budget	Estimated Escalation Rate
2023	\$1,789,000	\$1,270,000	
2024	\$1,840,000	\$1,310,000	2.85%
2025	\$1,890,000	\$1,340,000	2.65%
2026	\$1,940,000	\$1,370,000	2.50%
2027	\$1,980,000	\$1,410,000	2.50%

Funds Roll-Over

With the approval of the Cal TF Funders, unspent funds can “roll-over” to the next calendar year, and funds can be “fungible” between Cal TF and eTRM activities.

Cal TF and eTRM Fungibility

With the approval of the Cal TF Funders,

Supplemental Funding

Supplemental business plan elements where additional funding may be required have been identified in blue. Supplemental funding may be funded by some or all current

⁵ <https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/atsix>

fundings, and/or new fundings who may or may not currently be PAC members. The current contract structure allows for separate funding mechanisms to exist. Cal TF Staff will prepare a budget and specific tasks for all Supplemental funding requests.