Cal TF Custom Subcommittee Meeting #5

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Agenda & Goals

- **Meeting Agenda**
  - eTRM Phase 1 for Custom Measures [60 min]
  - White Paper Topics [15 min]
  - Workplan: Providing clear CPUC guidance on custom projects (including disposition database) [15 min]
  - Custom Activity Updates [25 min]
    - Measure-specific working groups
    - Custom Measure List
    - Custom Measure Names (tentative)
  - Review Action Items [5 min]

- **Meeting Goals**
  - Custom stakeholder feedback on eTRM wireframes and specs
  - Updates on other custom activities

eTRM Options for Custom

Objective: provide input on Cal TF Staff analysis of how existing eTRM tools can be used to standardize and streamline custom projects

- **eTRM for Custom**
  - Custom Measures – Information/Resources ("Phase 1")
  - Custom Measures – Calculations
  - Custom Projects
  - Custom Project Review Workflows
- Activities
  - Custom Subcommittee provided input to shape "Phase 1" functional specifications
  - 1/23 – Presented wireframes to eTRM development team
  - 2/1 – Present/discuss wireframes to Custom Subcommittee
- ACT:
  - Provide feedback on wireframes & Functional Specs by Friday 2/3

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eTRM “Phase 1” Development

- Phase 1 Scope
  - Creates **Custom Measures** in the eTRM to host information on calculation methods and calculation tools for common custom measures
  - Creates **Custom Library** in the eTRM to host calculation tools, templates, and other key statewide resources
  - Does **not** include site-specific data or measure/project tracking

- Phase 1 Materials
  - Custom eTRM Design 1.2 (Phase 1 Wireframes)
  - Custom eTRM Phase 1 Functional Specs

Custom eTRM Wireframes

Presentation by OMBU

OMBU + CALIFORNIA TECHNICAL FORUM

eTRM Custom Measures

Design | Version 1.2 | 01/24/2023

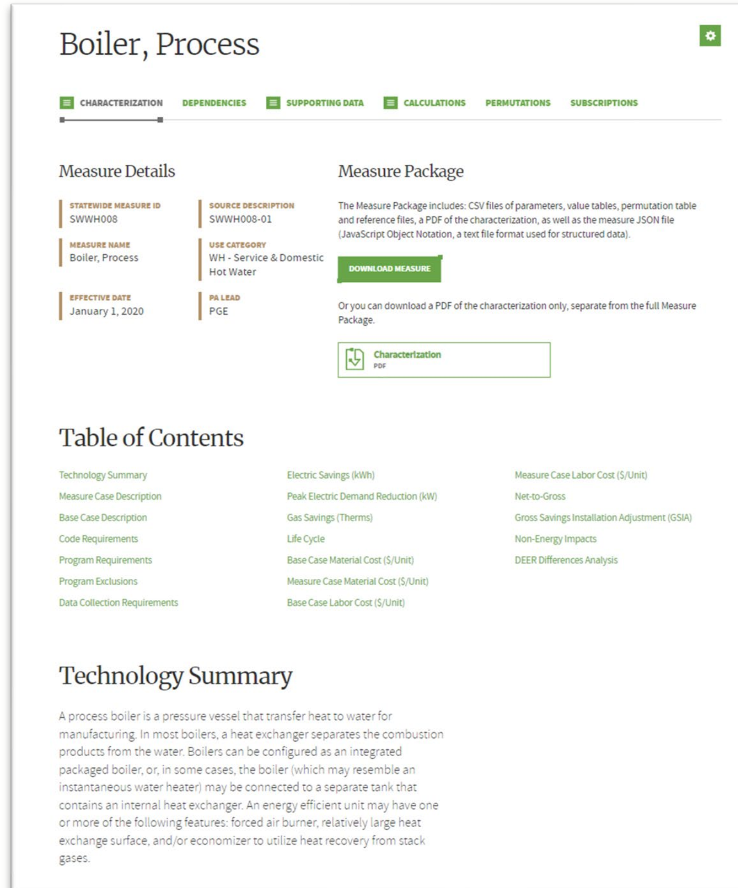
This "Phase 1" of eTRM development for Custom creates a new measure type – Custom Measures – to host custom measure information (e.g., custom measure characterizations, savings calculation methods, etc.) and custom calculation tools for use in calculating custom measure savings. These developments focus on the eTRM as a source for calculation guidance and tools for custom measures; they do NOT include any functions related to intake, storage, or tracking of site-specific data.

Custom Measures are a type of measure that do not have pre-calculated savings values but instead document data requirements and calculation methods to determine energy savings when a custom project is implemented.

This document outlines the supporting views and functionality for this new type of measure in eTRM.

Measure Characterization Fields

- Technology Summary
- Measure Case Description
- Base Case Description
- Code Requirements
- Program Requirements/Exclusions
- Data Collection Requirements
  - M&V Requirements
- kWh, kW, and Therms Savings (TBD)
- Life Cycle (EUL)
- Base Case Material Cost ~~($/Unit)~~
- Measure Case Material Cost ~~($/Unit)~~
- Base Case Labor Cost ~~($/Unit)~~
- Measure Case Labor Cost ~~($/Unit)~~
- Net-to-Gross
- ~~Gross Savings Installation Adjustment (GSIA)~~
- Gross Realization Rate
- Non-Energy Impacts
- DEER Differences Analysis



Boiler, Process

CHARACTERIZATION DEPENDENCIES SUPPORTING DATA CALCULATIONS PERMUTATIONS SUBSCRIPTIONS

Measure Details

STATEWIDE MEASURE ID
SWWH008

SOURCE DESCRIPTION
SWWH008-01

MEASURE NAME
Boiler, Process

USE CATEGORY
WH - Service & Domestic Hot Water

EFFECTIVE DATE
January 1, 2020

PA LEAD
PGE

Measure Package

The Measure Package includes: CSV files of parameters, value tables, permutation table and reference files, a PDF of the characterization, as well as the measure JSON file (JavaScript Object Notation, a text file format used for structured data).

DOWNLOAD MEASURE

Or you can download a PDF of the characterization only, separate from the full Measure Package.

Characterization
PDF

Table of Contents

Technology Summary

A process boiler is a pressure vessel that transfer heat to water for manufacturing. In most boilers, a heat exchanger separates the combustion products from the water. Boilers can be configured as an integrated packaged boiler, or, in some cases, the boiler (which may resemble an instantaneous water heater) may be connected to a separate tank that contains an internal heat exchanger. An energy efficient unit may have one or more of the following features: forced air burner, relatively large heat exchange surface, and/or economizer to utilize heat recovery from stack gases.

See examples of Measure Characterizations for deemed measures in the eTRM

Future eTRM Exploration

- **Discuss future eTRM development within Custom Roadmap (5B)**
  - Hosting dispositions, ISP studies, other resources
  - Power query connections to link eTRM and external workbooks
  - Savings Calculations
  - Site-Specific Custom Measures
  - Custom Projects
  - Measure and Project Review Workflows

BP Metric 6B, White Papers

White Paper – comparable to scoping a memo, to define a problem and/or present ideas and potential solutions.

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- Potential WP Topics
  - **ISP Process for Custom Measures/Projects**
    - Topic affirmed in January TF Meeting
  - GHG Calculation Approach and Data Sources with Recommendations for eTRM
  - Load Shape Development and Use
  - Dual fuel gas and electric measures
  - Integrated Data Flow for Energy Efficiency
  - Measure lifecycle integration into eTRM (Potential and Goals, ETP, EM&V, and C&S)
  - **Hybrid/Semi-Deemed Measures**
  - **Custom Review Process**
  - Streamlining Measures (to reduce the number of deemed permutations)
- ACT:
  - Provide input on custom-specific topics
  - Propose additional topics for TF to consider at the February TF meeting

White Paper: ISP Process for Custom

- Background
  - "This paper will develop and propose an improved process for establishing and sharing ISP baseline information, including the potential of using the eTRM to host ISP results and CPUC determinations."
  - See WP ISP Brainstorm at December TF meeting
- Scope
  - Review current ISP process and outcomes; recommend improvements
  - Compile/review existing ISP research and status; recommend updates
  - Review ISP communication/sharing/transparency practices; recommend improvements
  - Identify ISP research needs (e.g., specific markets or products)
- ACT
  - Discuss key considerations
  - Identify White Paper Champions

Providing clear guidance on custom projects

Workplan Part 1 – Problem Statement, Goals, Benefits

Workplan Part 2 – Scope, Deliverables, Schedule, Team

Notes from previous brainstorms

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- Problem Statement
  - There is no single, central, up-to-date source of policy/guidance regarding customs measures.
  - Stakeholders have different access to regulatory information (e.g., disposition decisions)
  - Existing regulatory communication efforts are resource-intensive and involve redundant efforts.
  - Regulatory information comes in various information streams, including through ad hoc communication and confidential project-specific discussions.
- Goals, Metrics, Objectives
  - Propose improvements that will:
    - make current/future guidance clear and accessible to all stakeholders
    - keep guidance documents clear and current
    - Improve access and searchability to policy/guidance
    - improve understanding of guidance and predictability of project outcomes
    - facilitate clarification with regulatory authorities when needed
  - Any quantifiable metrics?
- Stakeholder Benefits
  - **Cost Savings**, by reducing individual stakeholder resources required to aggregate guidance info
  - **Time Savings**, by improving awareness of policy/guidance at the start of measure development
  - **Transparency**, by making the statewide summary publicly accessible
  - **Clarity and Compliance**, by improving stakeholder access to and understanding of all relevant regulatory policy/guidance.

Providing clear guidance on custom projects

Workplan Part 1 – Problem Statement, Goals, Benefits

Workplan Part 2 – Scope, Deliverables, Schedule, Team

Notes from previous brainstorms

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- Scope
  - Review workplan with CPUC; ID any concurrent CPUC efforts
  - Understand current condition: define existing types, formats, frequencies of regulatory guidance
  - Compile and organize current guidance materials
  - Survey stakeholders to identify areas to improve clarity, access, consistency, etc.
  - Develop recommendations for:
    - Improving clarity and access to current guidance
    - Distinguishing current from past/outdated guidance
    - Communicating policy guidance updates to all stakeholders
- Considerations
  - A centralized resource must be "official"
- Deliverables
  - Memo/presentation with recommendations on guidance materials (e.g., disposition database) and process
- Schedule
  - discuss
- Stakeholders and Team Members
  - IOUs, Implementers, Project Developers
  - CPUC Staff, Ex Ante and Ex Post Consultants

- ACT
  - Discuss key considerations
  - Identify White Paper Champions

5A. Develop proposal to improve approach to summarizing and providing clear CPUC guidance on custom projects

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- Problem statement
  - Current guidance approach is like "case law"
  - Project-specific dispositions may have an interpretation of guidance/decision that relevant to all stakeholders but not actively communicated to all stakeholders
  - Disposition database is a repository of information (dispositions, ISP, EOs) that may have important information but is not easy to find/identify
  - Dispositions are redacted, organized differently; newer formats of dispositions don't provide level of detail to make the guidance useful
  - Not clear what guidance/disposition information is current/outdated
  - First step of Res on ISPs is to identify existing ISP or disposition.
  - Stakeholders individually navigate/summarize/find information
  - Communications between CPUC and PAs with general guidance infomration (e.g., information transmitted in an email) may not be available to other stakeholders; stakeholders may not be aware. Ex. Memo on EU California
  - Many sources of guidance; difficult to keep track
  - Some guidance is left to engineering judgement; too much judgement involved – different reviewers may have different determinations
- Goals/objectives
  - Define an approach to make current regulatory guidance clear and accessible
  - Identify where there may be conflicts/inconsistency or outdated information in guidance documents; keep guidance documents clear and current
  - Implementers should have same access to guidance as project reviewers
  - Guidance information should be visible
- Scope of the initiative
- Expected benefits to stakeholders
- Potential obstacles and preliminary solutions
  - "Digest" of relevant disposition findings; use digest to clarify guidance going forward
  - Running list of guidance/interpretations from dispositions; provide a single source of information
  - See PG&E rulebook as a good example
  - Need ways to sort though / navigate disposition and guidance information
  - Opportunity for Ex post or Ex ante consultants to share input on the front end of project development – could reduce uncertainty in interpreting guidance (may be difficult for ex post to be involved) – consider opportunity to improve this process; to improve alignment between ex ante and ex post expectations
  - Look at what other jurisdictions do to better integrate ex ante and ex post (examples - TVA, PEPCO)
  - SBW 2019 ex post eval developed a worksheet of all the rules and guidance for 2019 evaluation year – something to consider as a concise, well-organized guidance resource
- Schedule considerations
  - Explore how to break this down into phases – e.g., start with review of all existing guidance; in parallel, could consider which fields/tags to track and sort information.
- Interested/required stakeholders

For reference: These are the brainstormed notes from December 2022 TF meeting

6D. Provide relevant regulatory updates to support Cal TF membership in staying informed with regulatory requirements

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- Problem statement
  - Disposition information is not available or shared with all stakeholders; all stakeholders are not aware of discussions/dispositions that may be relevant
  - Harder for implementers to get information than IOUs; smaller and newer implementers may have an even harder time than the large implementers
  - Dispositions come piecemeal and throughout the year; it's not clear when they've come out or what they are applicable too
  - Guidance information comes in different forms
  - Different utilities/stakeholders may have different perspectives on implications/applicability of dispositions
  - There is a statewide rulebook for custom, but it is outdated; there is a process to update the rulebook but requires a stakeholder to go through and request specific updates (this will be a big effort to update; need a way for ongoing updates)
- Goals/objectives
  - Support a living document that is always up to date; any changes should result in an immediate update
- Scope of the initiative
  - **Limit scope to regulatory updates and information related to technical measures – measure development (eligibility, measure values, etc.)**
    - Need to consider how broader discussions and decisions
  - Summarize commission policy on deemed, custom – e.g. organized by technology or other factors
  - Propose approach to keep up to date and to make stakeholders aware
- Expected benefits to stakeholders
  - A centralized resource must be official
- Potential obstacles and preliminary solutions
  - Need to maintain a "rulebook" document to keep it updated over time (no current plan to keep a document up to date over time)
- Schedule considerations
- Interested/required stakeholders
- Notes
  - CPUC took over updating the rulebook this year; perhaps best if they are the ones doing the update since they approve it (Peter B in charge; reviewing an updated rulebook that DNV worked on)
    - CEDARS site has a tab called DEER resources with resources in one place (dispositions, etc)
  - CEDMC provides updates on regulatory discussions re: programs; not at the same level of detail for measure information as Cal TF is looking here.

For reference: These are the brainstormed notes from January 2023 TF meeting

Custom Updates

- Measure-specific working groups
  - Objective: develop standard savings estimation methods, calculation tools, and data requirements for select custom measures
- Custom Measure List
  - Objective: define full list of custom measures (or potential measures) for standard methods/tools, including opportunities for hybrid measures
- Custom Measure Names (tentative)
  - Objective: develop a statewide convention for custom measure codes

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Develop Statewide Methods (5C)

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- Custom Measures
  - Boilers + Boiler AOE
    - Developing approach for steam boilers; plan to include AOE measures
  - Chiller System Upgrade
    - Examining PG&E HVAC Tool, CPUC Chiller Tool, potential for hybrid options
  - Pumps (Pump/VFD/Control Systems)
    - Examining DOE MEASR Tools, PG&E Pump Tool, and potential for hybrid options
  - Retrocommissioning
    - Developing approach with PG&E HVAC Tool
  - VFD on HVAC Fan
    - Exploring need and hybrid options
  - Pump Overhaul
    - Paused based on CPUC Disposition
  - Small HVAC
    - item moved to New Measure Review Process

Activities:

Consolidating guidance and methods for estimating impacts

Identifying areas that need clarification, simplification

Organizing information in the eTRM

Identifying needs and potential strategies for SW workbook management

Other Practical Considerations

- Calculation Tool Development and Management
  - Standardizing tool format(s) (e.g., info and versioning pages)
  - “Linking” tools to eTRM data
  - Tool approval process
  - Ongoing tool updates and management
- Defining consistent rigor levels
- Custom POE Requirements
- CPUC approval process

Custom Measure List

- **Update list of potential measures that could be uploaded and managed in the eTRM (5A)**
  - What existing custom measures would benefit from a more standard protocol (e.g., to make more consistent, efficient)?
  - What opportunities are we not seeing (e.g., due to cost to develop) that a standard/hybrid approach can facilitate?

- **Discuss:**
  - Approach and data sources to examine current portfolio activity to see type and frequency of new measures.
  - Methods to identify opportunities to add measures to portfolio.

SW Custom Naming Convention

- **Develop statewide custom measure/offering IDs**
  - To improve consistency (e.g., same/similar projects are categorized the same way across PA tracking systems)
  - To facilitate statewide analysis of custom measure activity
- Activity:
  - Cal TF Staff reviewing existing custom measure lists, outreach to IOU/LADWP teams to understand approach/considerations
  - Custom Subcommittee will discuss/shape proposals

Wrap-Up & Next Steps

- **Action Items**
  - Send feedback on eTRM Wireframes and Functional Specifications **by Friday, 2/3**
  - Measure Groups continue
  - Identify "champions" for:
    - ISP White Paper
    - Providing clear guidance on custom projects
  - Cal TF Staff outreach for custom measure lists

- **Upcoming**
  - Measure Group meetings
    - 2/2 at 1pm – RCx
    - 2/3 at 1pm – Boilers
    - 2/6 at 9am – Chiller System Upgrade
    - 2/6 at 10am – VFD on HVAC Fans
    - 2/6 at 3pm – Pump Systems
  - 2/23 TF Meeting
    - Oakland, 10am to 4pm

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