# Memorandum

To:     Dave Gamson, Chief of Staff to Commissioner Carla Peterman

Re:     Proposal for development of California Electronic Technical Reference Manual

From:  Annette Beitel; California Technical Forum Staff
        Pete Skala, Katie Wu, and Carmen Best; CPUC Staff

Date:   August 16, 2016

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On February 17th of this year, at the conclusion of a meeting with Cal TF and CPUC Staff, Commissioner Peterman's Chief of Staff David Gamson requested that Annette Beitel and Pete Skala work together on a follow up document describing how Cal TF and Commission staff will work together on a "best in class" electronic Technical Reference Manual (eTRM) for statewide use. This memorandum summarizes Commission and Cal TF staffs' high level strategy to implement Mr. Gamson's request. Note that this memorandum is not intended to be a comprehensive work plan for development of an eTRM. The development of a detailed implementation proposal has been underway over the past year, and has been informed by extensive best practices research.[1] Furthermore, several key elements of the implementation work plan have been widely disseminated for comment, and also reviewed both by the Cal TF and CPUC staff. As noted at the end of this memo, some key questions remain to be answered and broadly vetted for stakeholder comment. These remaining questions will be addressed in a follow up memo which will both address the key questions and also contain a detailed work plan that identifies and summarizes roles, responsibilities, budget, and timeline to develop the eTRM

## I. Purpose of the eTRM

The purpose of the eTRM is to consolidate California ex ante savings information currently contained in the Database of Energy Efficiency Resources (DEER), non-DEER workpapers, and the publicly owned utility (POU) TRM into a user-friendly, well-documented repository. The repository will contain all methods used to calculate energy savings for all deemed measures in California, as well as all final ex ante savings values and associated parameter values (measure life, cost, net-to-gross values, expected useful life, etc.), and sources for all values and methods. Upon completion of the project, the eTRM will replace the existing Ex Ante Database and DEER as the only repository of Commission-approved deemed measure values. The expectation is that the repository will be used by all administrators and implementers, including

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[1] The following documents relating to eTRM implementation are posted on the Cal TF website:  TPP2: Electric TRM Proposal; Measure Consolidation Checklist and Template; eTRM "one-pager"; eTRM Powerpoint Deck Describing eTRM; eTRM Technical Issues; eTRM Process Issues; TPP 3:  Modeling Engine Comparison.  The best practices research informing development of the California eTRM can be found in an ACEEE 2016 Summer Study paper:  Beitel, Melloch, Mejia, Harley, *TRM Best Practices from Across the Nation to Inform the Creating of a California eTRM* (2016 ACEEE Summer Study Compendium, to be released).

publicly owned utilities (POUs).

The statewide eTRM will:

- Be an easily understood and searchable tool that takes advantage of current relational database technologies;
- Provide easily accessible source(s) of data underlying each parameter (including any relevant regulatory authority for parameters with regulatory origins);
- Consolidate and replace overlapping measures that currently exist in the various Program Administrator and implementer portfolios with one set of measures and savings parameter values;
- Clearly identify each measure's "regulatory status" (e.g., reviewed and approved, passed-through so not as-of-yet reviewed, interim approval);
- Clearly identify the measure savings certainty (i.e., whether the measure possesses stable, well-established and verified parameter values versus newer, less-established or verified savings parameters);
- Facilitate measure "vintaging" and regular, scheduled approval, updating, and sunsetting of savings parameter values by POUs and the Commission (or Commission staff, in cases of Commission-delegated authority); and
- Allow for a smooth transition away from the various deemed measure repositories (Ex Ante Database, READI, IOU workpapers, and the various POU platforms) currently used in California.

## II. Proposed eTRM Development Process

Cal TF will work with CPUC staff on all aspects of the eTRM development, including eTRM structure and interface with other Commission tools, existing measure review, and measure development guidelines. Cal TF will also give CEC staff the opportunity to provide input on all aspects eTRM development, as well, but the CEC may face resource constraints that would preclude the same level of engagement as CPUC staff.

While there will be some sequencing of the steps listed below, there will also be overlap of several key activities as the eTRM is created and populated. This will be done in order to maximize available resources and successfully meet the project's two-year implementation goal.

### 1. eTRM Repository

Cal TF staff will work with IOU and POU technical leads, Cal TF subcommittees, and Commission staff to finalize the applicable data fields and structure for the eTRM, vet commercially available products, and identify and continue to make recommendations on technical and process issues that should be addressed at the beginning of and during eTRM development, so issues can be handled consistently and efficiently.

Key issues associated with the eTRM structure are discussed below.

1. Data Fields/Structure

The data specification for the repository tool is already being developed with input from all IOUs and POUs who are represented on the Policy Advisory Committee (including Los Angeles Department of Water and Power (LADWP), Sacramento Municipal Utility District (SMUD), the Northern California Power Agency (NCPA), and the Southern California Public Power Association (SCPPA)). The goal is to develop a specification that is used and useful to all regulators, administrators and implementers in the state. For the IOUs and CPUC, a key consideration in the eTRM structure will be that it covers all ex ante information that is truly useful to CPUC Staff for determining ex ante portfolio savings claims and calculating program cost-effectiveness, while removing fields that are not useful or necessary, or are expensive to collect and maintain relative to the value they provide. This is likely to be a subset of the data fields currently being captured; however, care will be taken to ensure that the final eTRM specification will not disrupt the functionality of other data tools (i.e CEDARS).

Cal TF staff has reviewed the data fields contained in the "April 1" specification, and also the data needs of all PAs. To streamline the data structure, data fields that do not appear necessary for reporting or cost-effectiveness analysis have been identified as candidates for elimination or modification. Cal TF staff will seek review from Commission staff and the IOUs of the common, smaller number of data fields.

Once a common set of data fields is agreed-upon, Cal TF staff will prepare, for review, a data dictionary and data structure map on how the fields should be structured and will relate to each other, as well as identify common data sets that multiple measures will need to pull from (such as building prototypes). This eTRM data structure will be used to replace the current Ex Ante Database with a functional relational database.

2. eTRM Procurement

Cal TF staff has identified commercial providers of eTRMs and also entities with experience in eTRMs that could develop a unique, customized eTRM. Once the data fields/structure document, data dictionary, common data sets and data relation structure is finalized and agreed-upon by Commission staff, POU and IOU staff, Cal TF staff will release an RFP to procure and/or develop an eTRM. Cal TF staff assumes that the bid reviewers would be the PA representatives (including both IOUs/POUs) and possibly Commission (CPUC and CEC) staff, if resources allow. The final eTRM repository would be selected based on bid evaluation criteria.

3. eTRM User Training

Cal TF staff envisions that eTRM training would be provided by the developer of the eTRM repository. Any ongoing training could be built into the contract that will be needed for ongoing eTRM hosting and support.

**2. Existing Measure Review/Consolidation/Preparation for eTRM**

Cal TF Staff estimates that California currently has about 180 distinct measures (including DEER, non-DEER IOU WPs, and the POU TRM). CalTF developed a process, checklist, and templates describing how measures will be reviewed, consolidated (in cases where there is a considerable number of overlapping measures), and prepared for populating the eTRM. Cal TF staff will be preparing a Technical Position Paper that incorporates the Cal TF-approved approach for measure consolidation and seek CPUC staff review/approval of this TPP.

Cal TF staff will seek Commission staff approval of "groups" of measures as they are being documented in the eTRM format. Once the full eTRM is complete and populated, all eTRM values would need to be approved via Commission decision for before they become effective for the IOUs. This would occur once yearly at the Rolling Portfolio's September 1st "bus stop" deadline. This would allow the current Rolling Portfolio schedule to be streamlined further, by removing the need to update and approve existing workpapers on a yearly basis. Attachment B compares the current ex ante portion of the Rolling Portfolio schedule to how the new eTRM yearly update process would function. The POUs do not require regulatory approval of their energy savings values, and could begin to use the TRM as soon as the eTRM is complete.

### 3. Measure Development Guidelines

CalTF and Commission staff plan to continue collaboration on measure development guidelines with which the eTRM structure and contents should conform. Examples of guidelines that have already been developed include:

- Dealing with Measure Complexity[2]
- Defining Best Available Data[3]

As with past guidelines, additional guidelines will be developed through Cal TF subcommittees, reviewed by the full TF, then submitted to Commission staff for their review and approval. The CalTF will leverage existing guidance documents relating to dealing with measure complexity and defining best available data.

### III. Critical Path Questions and Next Steps

In order for the eTRM to be successful, it must be a primary resource in the IOUs' and POUs' energy savings estimation processes. For the IOUs, the eTRM must be approved by the California Public Utilities Commission because, currently, the IOUs are mandated to use the DEER as a primary resource in savings estimation. Some critical path questions that must be resolved prior to implementation of the TRM include:

1. Which entity will release the RFP to procure an eTRM? Would this be a short-term contract limited to eTRM development or a long-term contract that includes long-term maintenance and updating of the eTRM?
2. How will development and maintenance of the eTRM be funded?
3. What existing data and resources can be leveraged to limit redundant work and

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[2] The Cal TF-approved guideline is available at http://www.caltf.org/2015-subcommittees/
[3] Ibid.

avoid "reinventing the wheel"?

4. How exactly would the transition to the eTRM function? What existing information could be leveraged and what would need to be modified?
5. How would the eTRM fit in with other existing CPUC savings estimation and claims processing tools and activities?
6. What role does the CPUC's energy efficiency proceeding (R.13-11-005) play in this process, if any?

The Cal TF, Commissions (CPUC and CEC), Commission staff, IOUs, and POUs would need to resolve responses to the critical path questions listed above. Cal TF and CPUC staff have begun to address these issues. Once the questions are resolved, the immediate next step would be to finalize a detailed work plan that identifies and summarizes roles, responsibilities, budget, and timeline to develop the eTRM.