Seeking the Measure List Unicorn
Myth or Reality?

Moderator: Lauren Gage, Apex Analytics
Panelists: Steven Schiller, Lawrence Berkeley National Laboratory
Jennifer Light, Regional Technical Forum
Tim Melloch, Future Energy Enterprises

Agenda

- Overview
- National Overview of TRM issues
- RTF approach
- Case Studies
  - Illinois
  - California
  - Massachusetts
  - Arkansas
- Is there a Unicorn?

Introductions

Background

What we all want

What it feels like…

Key issues

- How are measures developed?
  - Who does the primary research?
  - Who does the analysis?
- How are measures approved?
  - Who reviews the measure analysis?
  - Who makes the final decision for approval?
  - How do you deal with uncertainty?
- How are measure updated?
  - Frequency
  - Who?
- Successes – What works well
- Challenges with these – What's hard

National TRM Guidance

Energy Technologies Area Lawrence Berkeley National Laboratory

Technical Reference Manuals (TRMs) Overview
or
You can't always get what you want,
But if you try sometimes you just might find
You'll get what you need

Efficiency Exchange 2019 Coeur d'Alene, Idaho

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Electricity Markets and Policy Group

Lawrence Berkeley National Laboratory

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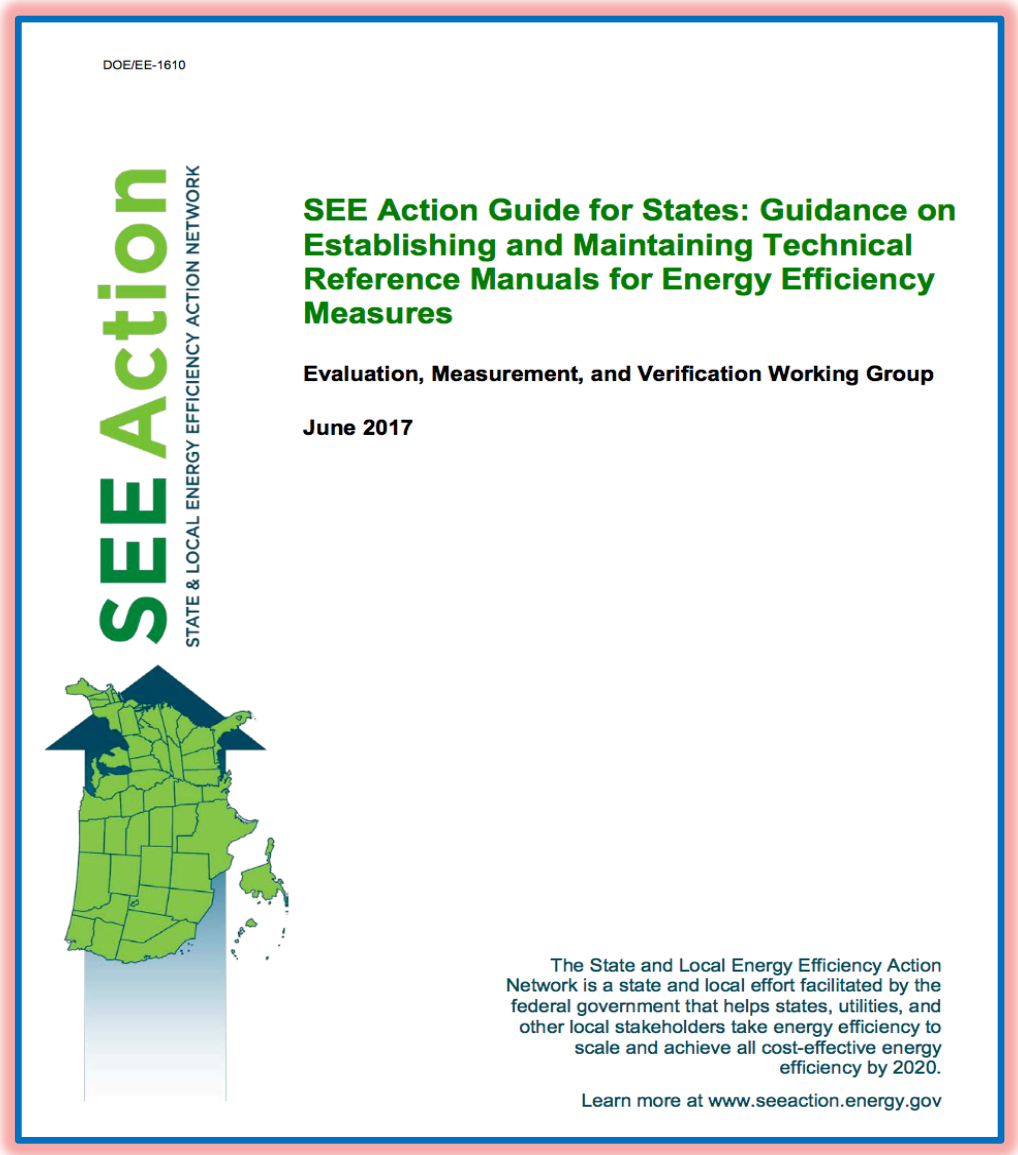
1. Berkeley Lab and Some Resources

Berkeley Lab – Technical Assistance

- The Berkeley Lab is supported by the U.S. DOE to conduct non-classified research, operated by the University of California
- The Berkeley Lab provides technical assistance to state utility regulatory commissions, state energy offices, etc. on wide range of topics, e.g.:
  - Energy efficiency (e.g., EM&V, utility programs, behavior-based approaches, cost-effectiveness, program rules, planning, cost recovery, financing)
  - Renewable energy resources
  - Smart grid and grid modernization
  - Utility regulation and business models (e.g., financial impacts)
  - Other electricity related decision making related topics
- Assistance is independent and unbiased
- LBNL Tech Assistance website: https://emp.lbl.gov/projects/technical-assistance-states
- US DOE Tech Assistance gateway: http://energy.gov/ta/state-local-and-tribal-technical-assistance-gateway

SEE Action Guide on TRMs



TRM Guide can be found at: https://www4.eere.energy.gov/seeaction/system/files/documents/TRM%20Guide_Final_6.21.17.pdf

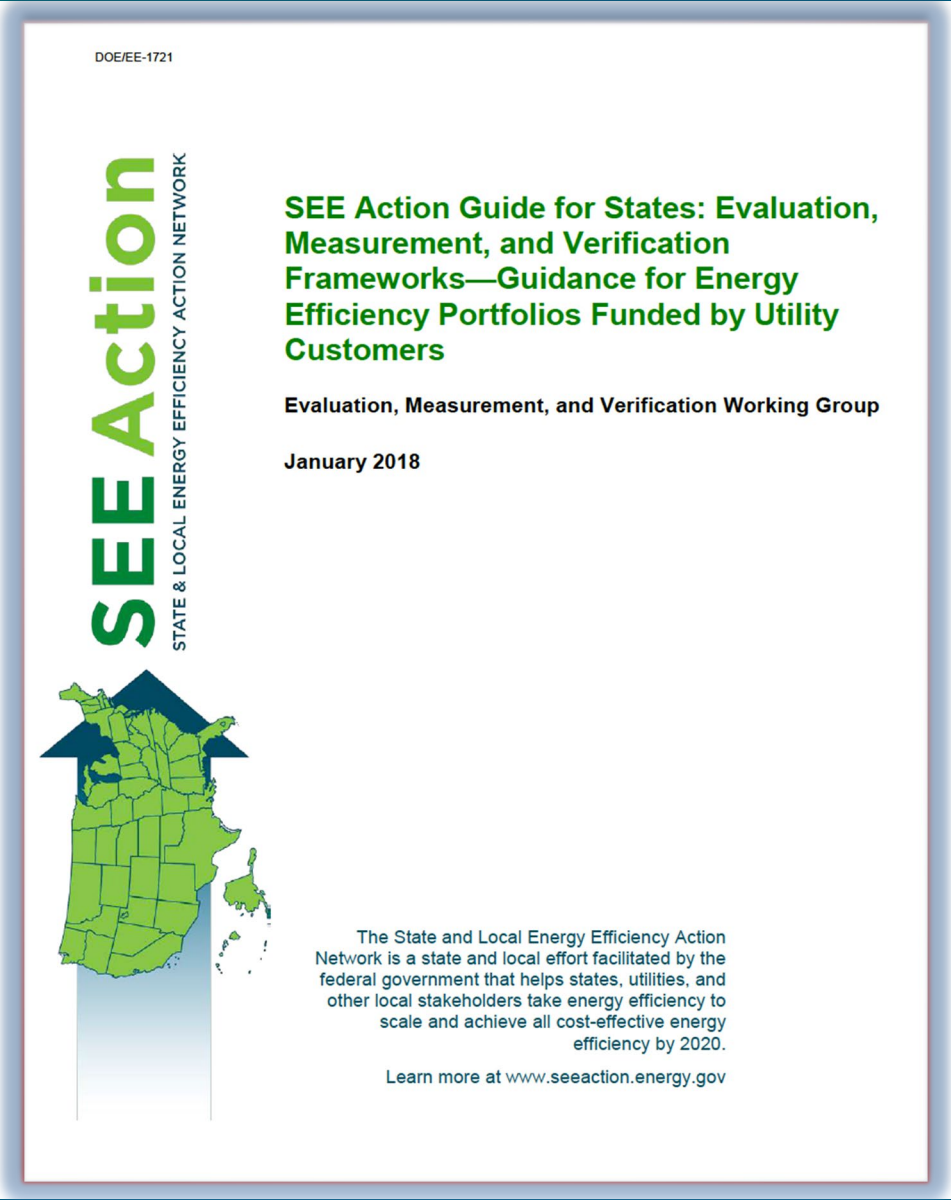
Or just search for:

"SEE Action TRM Guide"

TRM Guide Contents

Information Category	Chapters	Content
1. Summary	Executive Summary	Overview of guide content and recommendations
2. Background	Chapter 1: Introduction to TRMs	TRM objectives and benefits, jurisdiction coverage options, and contents
	Chapter 2: Savings Taxonomy and Interactions; EM&V Methods; Prescriptive and Custom Measures	Relationship between efficiency measures, projects, and programs; EM&V basics and key definitions of deemed savings related terms; and the differences between prescriptive and custom efficiency measures
3. Current Practices	Chapter 3: TRM Content, Structure, and Development Options	Descriptions of the content, structure, and development (and updating) processes used in existing TRMs
4. Recommended Practices	Chapter 4: Suggested Practices for the Deemed Savings Method and Developing and Maintaining TRMs and Recommendations for Further Research	Recommendations associated with the deemed savings method and development and updating of TRMs. Opportunities for improvements through research.
5. Resources	References	Citations for references listed in the guide
	Appendix 1: TRMs in the United States	Summary information on the existing TRMs in the US
	Appendix 2: Common Deemed Values, Variables, and Factors Contained in TRMs	Definitions, descriptions, and key issues associated with the most common data types found in TRMs
	Appendix 3: Industry Standard Energy Efficiency EM&V Resources and Protocols	Lists of industry standards resources for project- and program-level EM&V

Related Guide on EM&V Frameworks

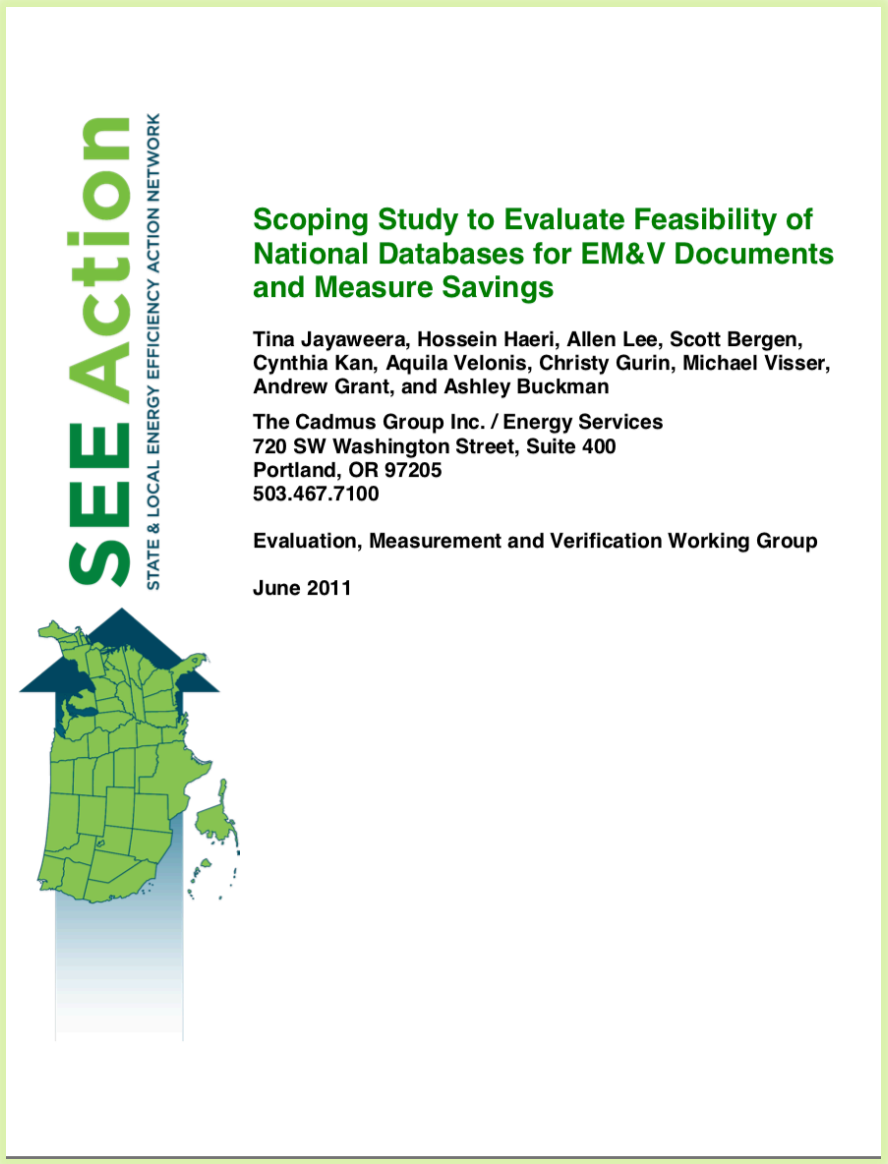


Framework Guide can be found at: https://www4.eere.energy.gov/seeaction/system/files/documents/EMV-Framework_Jan2018.pdf

Or just search for:

"SEE Action TRM Guide"

Related Scoping Study for Regional TRMs


SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Scoping Study to Evaluate Feasibility of National Databases for EM&V Documents and Measure Savings

Tina Jayaweera, Hossein Haeri, Allen Lee, Scott Bergen, Cynthia Kan, Aquila Velonis, Christy Gurin, Michael Visser, Andrew Grant, and Ashley Buckman

The Cadmus Group Inc. / Energy Services
720 SW Washington Street, Suite 400
Portland, OR 97205
503.467.7100

Evaluation, Measurement and Verification Working Group

June 2011

Scoping Study can be found at:
http://www4.eere.energy.gov/seeaction/system/files/documents/emvscoping_databasefeasibility.pdf

Or just search for:

"SEE Action TRM Scoping Study"

II. World's Quickest Introduction to EM&V and TRMs

Introduction to Impact Evaluation Methods

Impact evaluation methods for efficiency programs include:

- Measurement and verification (M&V) - applied at the project site level, with results expanded to the program level - See IPMVP Options A, B, C and D (www.evo-world.org)
- Deemed savings - installations and key parameters may be verified by the evaluator, but no direct measurement of performance
- Comparison groups - Analysis of energy consumption data for program participants and a comparison group to determine savings for the program as a whole

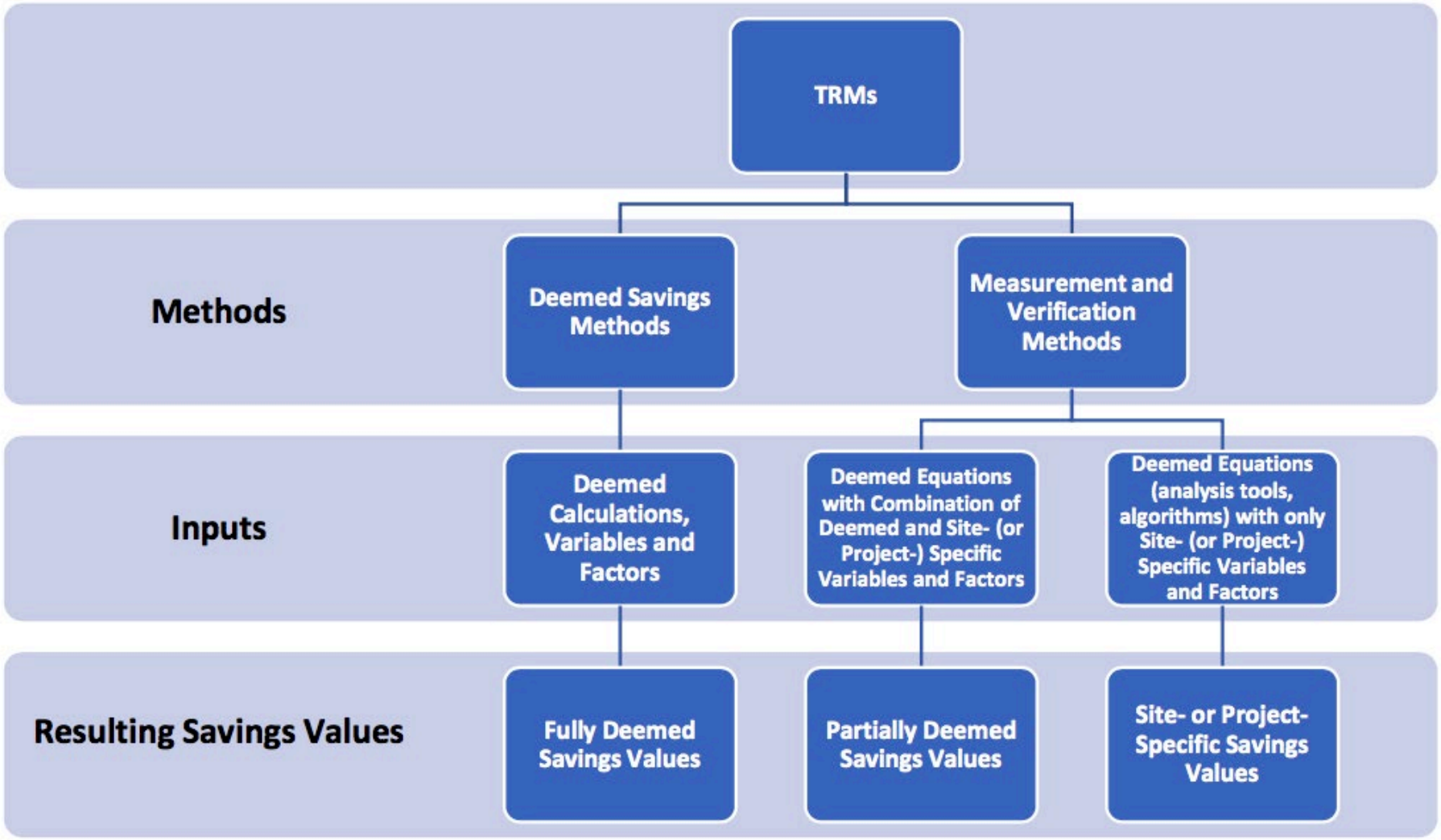
*Anecdotal information indicates that on the order of **50% to 90% of energy savings** from measures implemented in utility customer-funded efficiency programs are **based on fully or partially deemed savings values or some form of deemed calculations, variables, and factors***

*The **information in TRMs is typically used for the M&V and deemed savings impact evaluation methods***

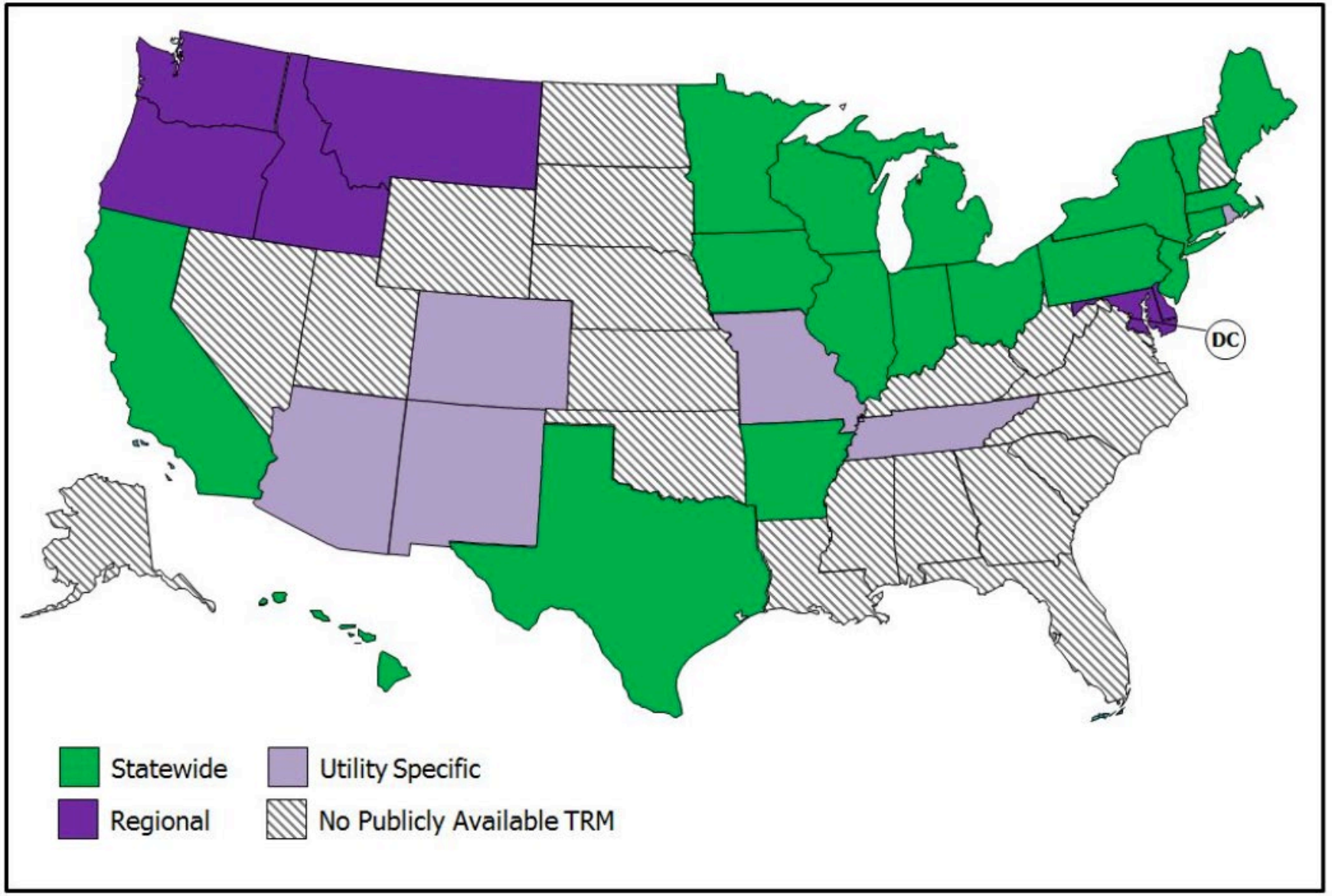
TRM Introduction

- ✓ "Technical Reference Manual" and "TRM" are terms of art in the efficiency industry for:
  - ✓ Repository of information that documents how efficiency measure impacts are calculated and the sources of information used in these calculations
  - ✓ Technical resource that contains efficiency measure information used in program planning, implementation, tracking, and reporting and evaluation
- ✓ TRMs serve as a common reference, providing transparency and consistency to interested stakeholders
- ✓ Information can include deemed savings values, factors and variables and calculations
- ✓ Typically available as a document, spreadsheet, or an electronic database
- ✓ TRMs are mostly associated with utility customer-funded natural gas and electricity efficiency programs
- ✓ TRMs are living documents that should be updated:
  - ✓ As impact analyses and procedures evolve and new data are collected
  - ✓ To account for changes in codes and standards
  - ✓ Introduction of new EEMs
  - ✓ Changes in available product efficiencies of existing efficiency measures
- ✓ TRMs tend to be initiated by state utility regulatory commissions and, in some cases, are formally approved by those commissions
- ✓ Most TRMs are prepared by consulting firms

Summary of Methods – in Context of TRM Content



TRMs in the United States
(as of 2017 Survey)



TRM Objectives and Benefits

TRMs provide a central reference document for regulatory agencies and other stakeholders to consistently, reliably, and transparently calculate electric and natural gas savings from well-understood efficiency measures.

Benefits include:

- Streamlining the planning and reporting functions of programs
- Facilitating savings calculations, standardizing reporting processes, and promoting greater transparency and predictability in claimed savings
- Encapsulating what has been cumulatively learned from assessing efficiency activities. *Leveraging existing knowledge*

III. Context:
~~TRM~~ EM&V Issues

(or how many evaluators does it take to count a light bulb)

The Big Issues of EM&V

As Compared to What?

- First – Define a baseline against which efficiency actions are compared for determining energy savings and whether attribution should be considered—the counterfactual
- Second – Establish level of performance confidence and risk for efficiency relative to other options for meeting goals

How Long Do Savings Last?

- Most EM&V focuses on first year savings and there is a lack support for analyses of savings persistence
- And when lifetime savings is assessed focus has been on quantifying the lifetimes of savings and not on estimating savings persistence (or degradation) over the savings lifetime
- More focus and research is needed, particularly on measures strongly influenced by behavior

The Really Big Issue of EM&V (and TRMs)

How good is good enough?

- Fundamental issue of EM&V
- How certain does one have to be of savings estimates and is that certainty balanced against the amount of effort utilized to obtain that level of certainty?
- EM&V investments should consider risk management principles—balance the costs and value of information derived from EM&V (i.e., EM&V should be cost-effective).

EM&V and TRMs are about:
Transparency
Confidence
Certainty
Risk Management

Summary - TRM Challenges

- TRMs do not eliminate the **need for the fundamental research and analyses of efficiency measures** and their impacts, which form the basis for the TRM information

- The TRM challenges tend to be the same as those found when evaluating efficiency programs in general:
  - **Time and funding requirements**
  - **Absence of a driving policy that mandates verification (such as an EERS)**

- For TRMs, the most specific barriers may be:
  - **Limited access to reliable data sources for developing TRM content**
  - **Lack of consensus among stakeholders on key topics**

- And, the demand side management world is changing
  - EM&V - More data, more analytics, real time – M&V 2.0
  - iDSM – more complex measures, flexible buildings, performance contracting, and more rigorous codes and standards, etc.

IV. Commentary and Recommendations

(or suggestions on balancing it all)

Based on review of TRMs and interviews with practitioners, Berkeley Lab's TRM report has 9 recommendations on deemed savings and 10 TRM recommendations

For this presentation, I am covering just a few of these recommendations that seem relevant to discussion about the RTF

Recommendations: Some Suggested Practices for the Deemed Savings Method

- Adopt and adhere to clear and transparent deemed savings guidelines (agreements), using:
  - Industry standard assumptions and calculation methods
  - Current information
  - Independent peer-reviewed process with publicly accessible documentation

- Deemed savings values, calculations, factors, and variables should be based on reliable, traceable, publicly available, and documented sources of information – transparency

- Deemed savings values and deemed calculations should be based on input assumptions that are realistic and not necessarily conservative or optimistic

Recommendations: Some Suggested Practices for Developing and Maintaining Technical Reference Manuals

- To avoid the potential for undue bias because of financial or other considerations, provisions should be made to have **TRM content reviewed by an independent, unbiased body that abides by a transparent conflict of interest policy -** Consultants and others that prepare and/or update TRM content should be independent
- **TRMs should have regular, scheduled processes in place for periodically reviewing and updating TRM content**
- **TRMs are most useful when they are (1) well documented** with transparent indications of calculations and assumptions, (2) prepared using **credible, standardized calculations and data-based assumptions**, and (3) designed for **ease of operation/compatibility with program tracking and reporting systems**
- TRMs should strive to **use data and tools that are "best available"** (i.e., accurate, relevant, and current)
- Decide - "Should the **deemed savings value be adjusted retroactively to the current program year or only applied going forward**?"

Recommendations: Some Suggested Practices for Developing and Maintaining Technical Reference Manuals - continued

- **The roles, responsibilities, and processes for developing, approving, and maintaining a TRM should be clearly defined** - while not a consensus opinion, many in the industry believe that state utility commissions should participate in or oversee the development and maintenance of TRMs used for investor-owned utility (IOU) customer-funded programs – and approve them to provide certainty
- **Regional TRMs can be excellent opportunities** for states that do not have their own TRMs or that are contemplating expansions of the coverage of their TRMs
- **It is usually best to develop TRMs with a public, collaborative process**
  - Include program administrators, implementers, evaluators, and independent technical experts, as well as stakeholders and active regulatory staff participation (for TRMs involving IOU customer-funded programs).
  - TRM development collaborative members should have sufficient technical expertise and time, have defined roles and responsibilities, and agree to adhere to a conflict of interest policy

Concluding Comments

- TRMs can be very cost-effective and reliable sources of efficiency measure impacts….but they have to be developed and used appropriately

- Preparing TRMs and conducting EM&V are about balancing cost, time and quality - and quality includes reliability and transparency
  - The RTF provides an example of high quality, high effort processes and products
  - It comes down to 'as compared to what' – other TRMs are less effort, but have transparency and quality issues — and thus raise issues with respect to confidence"

- In the future, more complex integrated DSM measures and the introduction of more data (and real time data) may reduce the use of deemed savings and change the nature of TRMs as EM&V guidance documents

Thank You

- TRM Guide and other EM&V resources available at SEE Action website: https://www4.eere.energy.gov/seeaction/

- For more information: Steve Schiller, Senior Advisor, Lawrence Berkeley National Lab, srschiller@lbl.gov

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Regional Technical Forum (RTF)

How Does it Work in the Northwest?

1. How are measures developed?

2. How are measures approved?

3. How are measures maintained?

1. Measure Development and Analysis

Primary Researchers

- RTF does not have funding to do primary research
- Rely on research from:
  - Regional utilities and BPA
  - NEEA
  - National labs
  - Other jurisdictions

Data Analyzers

- RTF has six analysts that conduct the analysis
- Provide recommendations on:
  - How to define the measure baseline?
  - What are the savings?
  - How reliable is the data supporting the estimates?
  - Is there a need for more research?

1. Measure Development and Analysis

Primary Researchers

Data Analyzers

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  - Is there a need for more research?

1. Measure Development and Analysis

Primary Researchers

Data Analyzers

1. Measure Development and Analysis

RTF Manager / Chair / Cat Herder

2. Measure Approval and the RTF

- 30 individuals that make up the RTF ultimately are the approvers of the what is an “RTF” measure
- Collectively they review, debate and consider the CATS recommendations
  - Is the proposed methodology approach?
  - Does the answer represent the best practical estimate based on the available data?
  - What collective judgement is needed to fill in the gaps in data?
  - Is it practical to conduct more research to reduce that uncertainty, and what would that look like?

2. Measure Approval and the RTF

The RTF Voting Members

2. Measure Approval and the RTF

Corresponding Members and Public Stakeholders

But this is not done in a vacuum!!

2. Measure Approval and the RTF

- It is also important to note that the RTF is not the decision-maker when it comes to:
  - Whether and how to use RTF measures
  - When to implement measure updates approved by the RTF
  - Whether an individual utility has sufficient dealt with the recognized uncertainty in a measure
  - And more…

2. Measure Approval and the RTF

Commissioners (and the like)

3. How are Measures Maintained

- RTF establishes sunset dates, before which time the RTF must reconsider the measure
- Length of sunset dates can vary from 1-5 years depending on:
  - Pace of market change
  - Likelihood of new data to inform savings updates
  - Anticipated updates to codes, standards, or specifications
  - Measure potential

The Question Is…

Does


+

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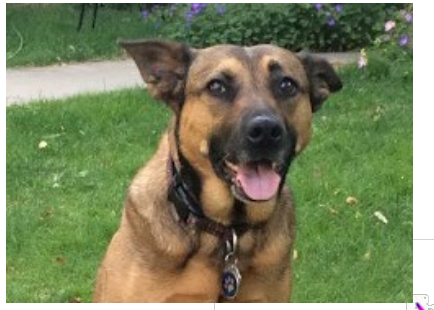
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Nearing the Measure List Unicorn??

Successes

- Detailed, thoroughly vetted analysis relying on best available data
- Public process and material aiming for full transparency
- Statements on reliability and need for research to reduce uncertainty
- Regulators are bought into the values coming out of the RTF
- Economies of scale

Challenges

- Takes time and can be slow to move through the machine
- Complexity inhibits the actual transparency for some
- Lack of funding pushes research onto other entities to complete
- May limit flexibility of utilities interested in a different path

Two Case Studies: Illinois and California

Energy Efficiency in Illinois

The Energy Efficiency Portfolio Standard (EEPS) passed in 2007 by Illinois General Assembly

- Illinois Stakeholder Advisory Group (SAG) was created at the direction of the Illinois Commission
- SAG acts in advisory capacity and seeks consensus on policy and technical issues

Illinois TRM

- Commission directed SAG to develop TRM
- Also directed SAG to develop Energy Efficiency Policy Manual, including:
  - Purpose of the TRM
  - TRM update process
  - How to apply TRM

Illinois TRM

Purpose of Illinois TRM:

- To provide transparency of and consistency in the applicability of measure values so that all stakeholders have a common reference document for measure, program and portfolio savings
- To provide a consistent basis for savings calculations, and to create stability and certainty for program administrators as they make program design and implementation decisions

Illinois TRM

To support SAG, TRM Administrator was hired and a Technical Advisory Committee (TAC) was formed

- IOUs hire TRM Administrator, share cost
- TAC responsibilities:
  - Allow interested parties to recommend TRM updates
  - Review those recommendations
  - Facilitate consensus
- TAC includes utilities, evaluators, and other interested stakeholders
  - Membership open to anyone who expresses interest, except “vendor/product representatives” (unless specifically invited)
- Decision-making by consensus with final decision by Commission
  - Non-consensus, Administrator documents issue(s), submits to Commission for decision (separate proceeding)

Illinois TRM Updates

TRM is PDF; chapters for Residential, Non-Res, Cross-cutting

Includes prescriptive algorithms and inputs to use in savings calculations. Utilities must translate to measure lists

Updates driven by several factors including:

- New/updated measures, inputs or algorithms (often based on evaluation results)
- Baseline changes (e.g., Code or industry standard practice) or legislative changes
- Changes to program designs and measure eligibility criteria

Stakeholder Roles & Responsibilities

- Any party is free to recommend TRM updates
- Measure requests require the preparation of a workpaper, which include equations, values, assumptions, and references necessary to support the request
  - This work is generally the responsibility of the requestor
  - On limited basis, TRM Administrator can provide some technical support for parties that are “engineering-challenged”

Illinois TRM Update Timeline & Process

TRM update occurs annually to allow for application in upcoming program year

- Work occurs between March 1st and Oct 1st
- Teleconferences held weekly with TAC.
- To ensure enough review time, updated TRM has to essentially be in final draft form by mid-August
- Aggressive update schedule can limit number of measures that can be addressed in a given year
- TRM is transmitted to the ICC Staff and SAG by Oct 1st
- Approval of the updated TRM is the responsibility of the ICC

What About Measures Not in the TRM?

Utilities required to use prescriptive savings algorithms and inputs specified in the TRM with a few exceptions:

- Savings are calculated on customized basis
- TRM measure definition or prescriptive savings inputs do not correctly characterize a measure that is already implemented in an existing program
- Measure does not yet exist in the TRM

When utilizing the above exceptions, utilities are subject to retrospective evaluation risk.

Has Illinois Found the Measure List Unicorn?

Successes

- Well defined and documented process
- Allows several parties to participate in the discussion and have a voice in the consensus process
- Provides certainty to utilities regarding deemed savings
- Provides some flexibility to PAs if they are willing to take on retrospective risk

Challenges

- Aggressive update schedule can limit how many measures can be addressed in a given year
- Previously, the TRM Administrator has experienced challenges reaching consensus due to participation of vendors. In 2018 a policy was put in place to limit vendor participation.
- Because the TRM has become so voluminous (~1,000 pages), maintaining all data, text and equations is challenging.
- Utilities must calculate savings for many measures

Electronic Technical Reference Manual (eTRM): Path to the New California "Database of Record"

TIM MELLOCH

MAY 14, 2019

The California Technical Forum (Cal TF)

What is the Technical Forum?

A group of in-state and out-of-state technical experts that work in a collaborative and transparent way to review new and updated energy efficiency measures and other technical information related to California's integrated demand-side management portfolio.

The Cal TF
A Broad Collaborative

CPUC Office of Ratepayer Advocates

What is the eTRM?

- The California electronic Technical Reference Manual (eTRM) will serve as the repository for California statewide deemed energy efficiency measures
  - Replacement for utility workpapers & POU TRM
- An online relational database, will significantly improve workflow (planning, reporting, measure development/updates) and accuracy
- Conforms to (exceeds) TRM best practices
- Populated with statewide “consolidated” measures developed through a collaborative process with utilities (IOUs/POUs) & industry experts
  - Utility-specific workpapers (already approved) are being “harmonized” and standardized

eTRM: Why Now?

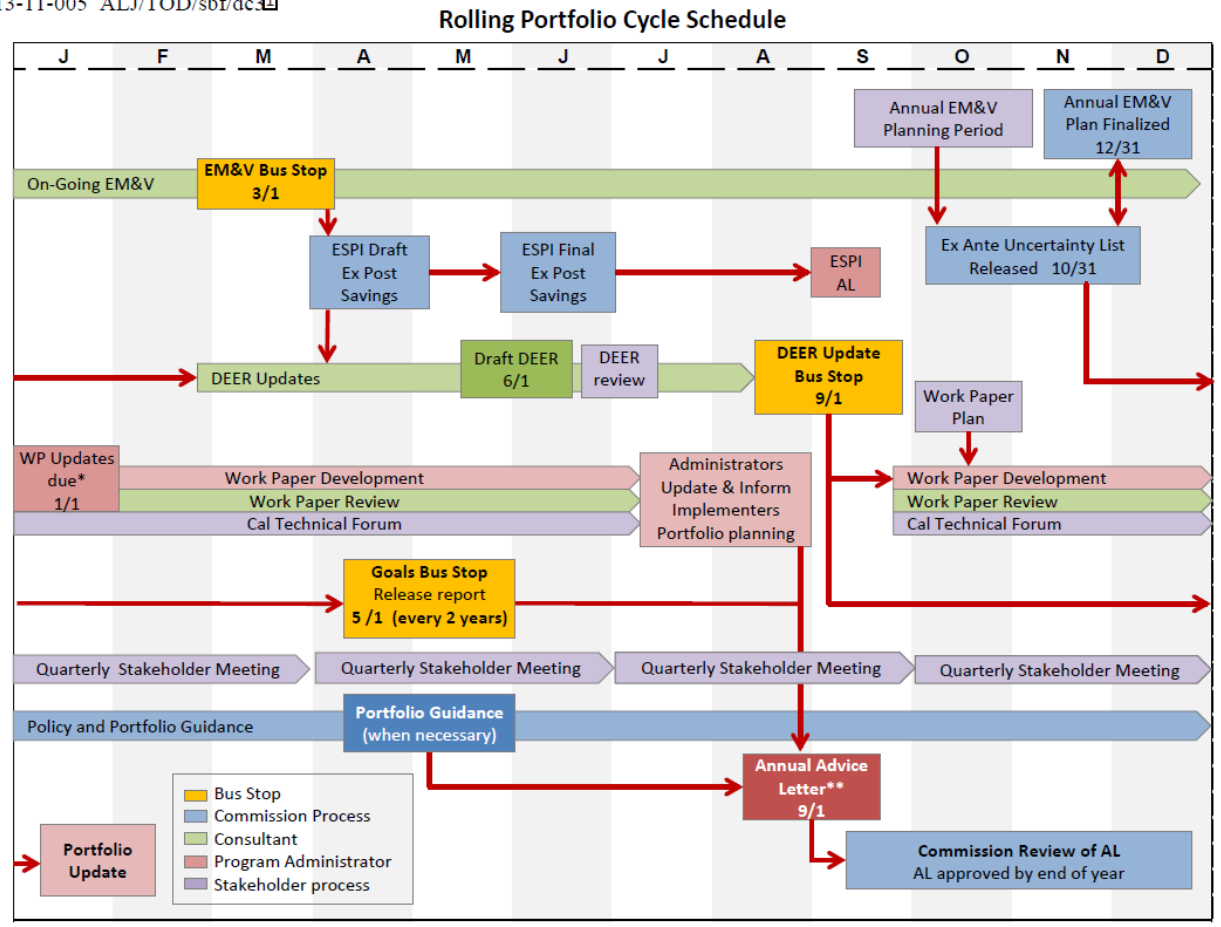
- California IOUs have a long successful history providing energy efficiency programs to their customers
- As a result, there exist many legacy systems and processes that make it challenging to understand the deemed measure process
- Broad support for addressing long standing issues as CA tries to meet challenging EE goals in the future
- The Commission has directed IOUs to develop statewide workpapers

CA Past Practice

- The Database for Energy Efficient Resources (DEER) contains data for some deemed measures but many are not included
  - Ex Ante consultant responsible for developing values
  - Not transparent, limited opportunities to review/revise
- For measures not addressed in DEER, each IOU had to develop their own workpaper
  - Could be multiple workpapers approved (sometimes with different savings values) for the same measure
  - To develop these workpapers, the IOUs were responsible for the primary research

Rolling Portfolio Cycle Schedule

R.13-11-005 ALJ/TOD/sbf/dc3



*Work papers for existing measures that are impacted by DEER updates shall be submitted by 1/1, to provide sufficient time for review

**In years that business plan is filed, advice letter filing should be filed concurrently for budget review. Portfolio guidance and business plans are not defined by a set schedule

CA Challenges

- Legacy process confusing for measure developers
  - Data spec was unclear & requirements changed frequently
  - Each IOU had a different governance process
- Legacy process confusing for implementers
  - No way to download a full set of measures
  - Historically little access to documentation
- The DEER is incomplete which resulted in many workpapers being developed to supplement DEER measures
- In many cases references are dated, tied to broken links or missing entirely
- Many measures are no longer cost effective due to codes and standards or industry standard practice
  - May be a future opportunity to revive retired measures where it is appropriate to use an existing conditions baseline

CA Successes

- Despite many challenges, CA has continued to deliver impressive energy savings results
- All IOUs and POUs have actively engaged in the statewide measure consolidation process
- Communications between the CPUC Staff, new ex-ante consultant, IOUs and CalTF Staff have enhanced the measure update process

CA Deemed Process

- The annual DEER updates incorporate items like codes and standards changes, updates to ISP, and changes based on program evaluation
- Going forward more third parties may invest in primary research as they are tasked with delivering a much greater percentage of the CA portfolio.
- eTRM consolidated measures process have all undergone Cal TF review and affirmation before submission to the Commission
- CPUC Staff Ex Ante Consultant is responsible for final review and approval of DEER and non-DEER measures
- Public utilities plan to use CalTF affirmed measures contained in the eTRM database

Benefits of the eTRM

- All Measures are Fully Documented and Reproducible
- Automates Measure Updates when Inputs Change—Weather Files, Code Updates, Etc.
- Clear and Documented Workflow Management
- Generates All Key Outputs (Ex Ante Data)
- Differential Access

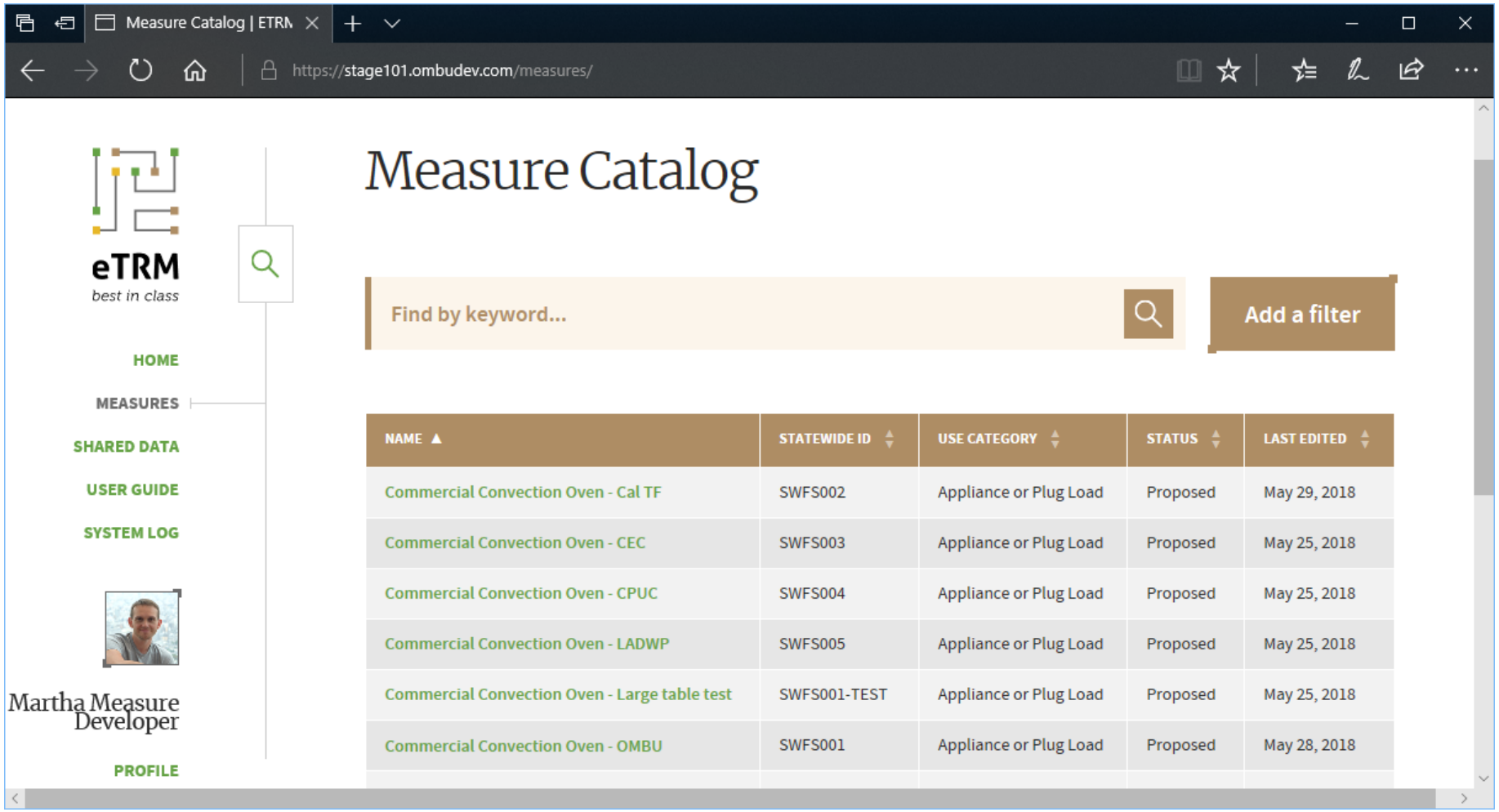
Benefits to Implementers

- Statewide Applicability & Consistency
- Transparent and Fully Documented
  - Full documentation of input parameters, assumptions, models
  - Clear, concise explanations of impact and cost analyses and key measure information
  - Reference library contains source documents - no broken links
- Easily Accessible
  - User-friendly interface
  - All measure values/information, review disposition, etc. in a single platform

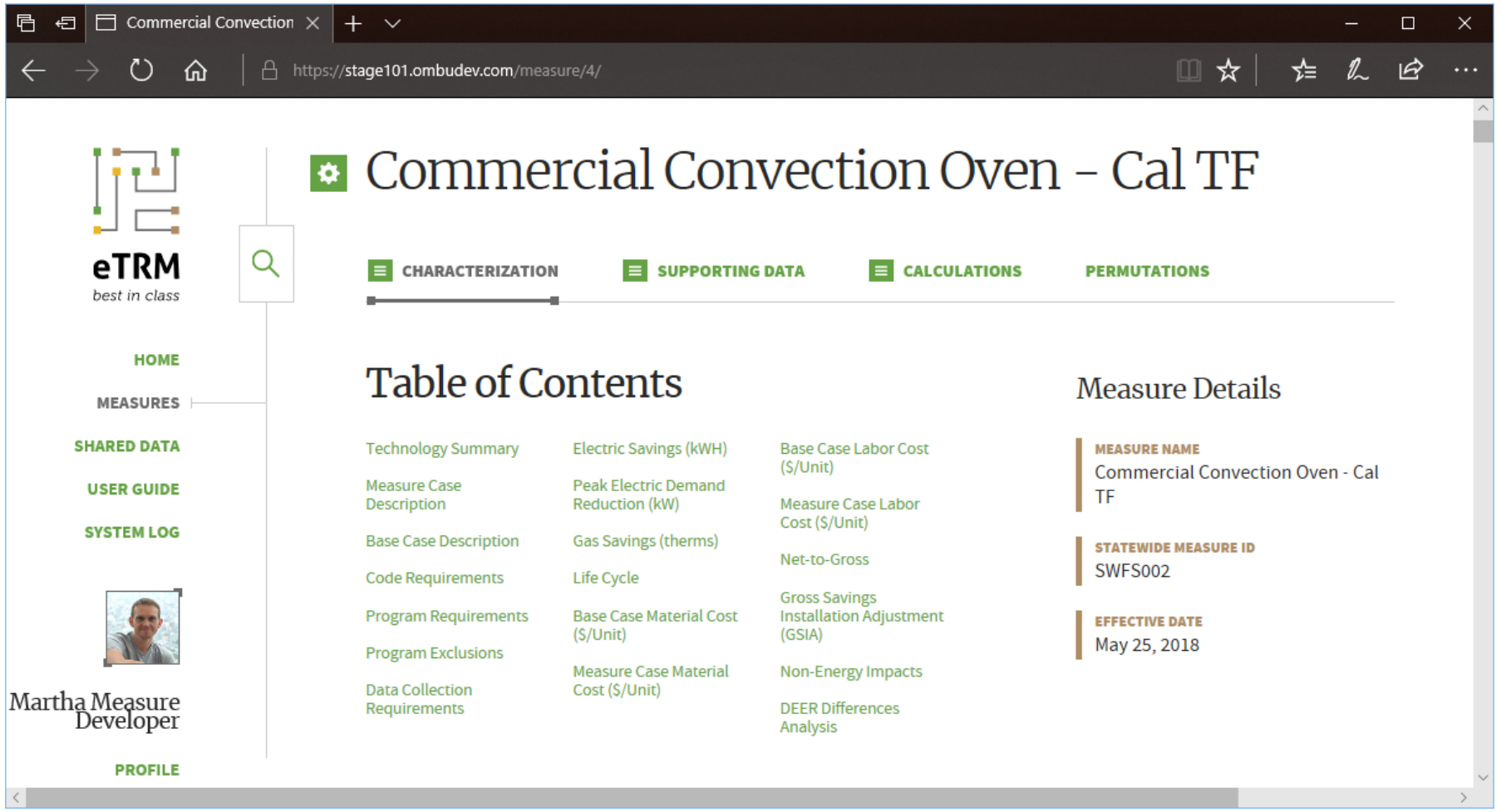
The eTRM
Benefits to Measure Developers/Users

- **Streamlined Workflow**
  - Measures are developed within the eTRM
  - All development and review documentation and results stored within the eTRM platform, easily accessible and always available
  - Roles and permissions defined for developers vs reviewers vs approvers (will separately indicate Cal TF vs CPUC approval)
- **Fully Documented**
  - Methodology & calculations
  - Linkages between input values & original sources (not other TRMs)
  - eTRM Reference library
    - All documentation uploaded and stored in eTRM, readily available, no broken links
    - Quality of documentation assessed
  - QA/QC guidelines for developers help to ensure review requirements are met

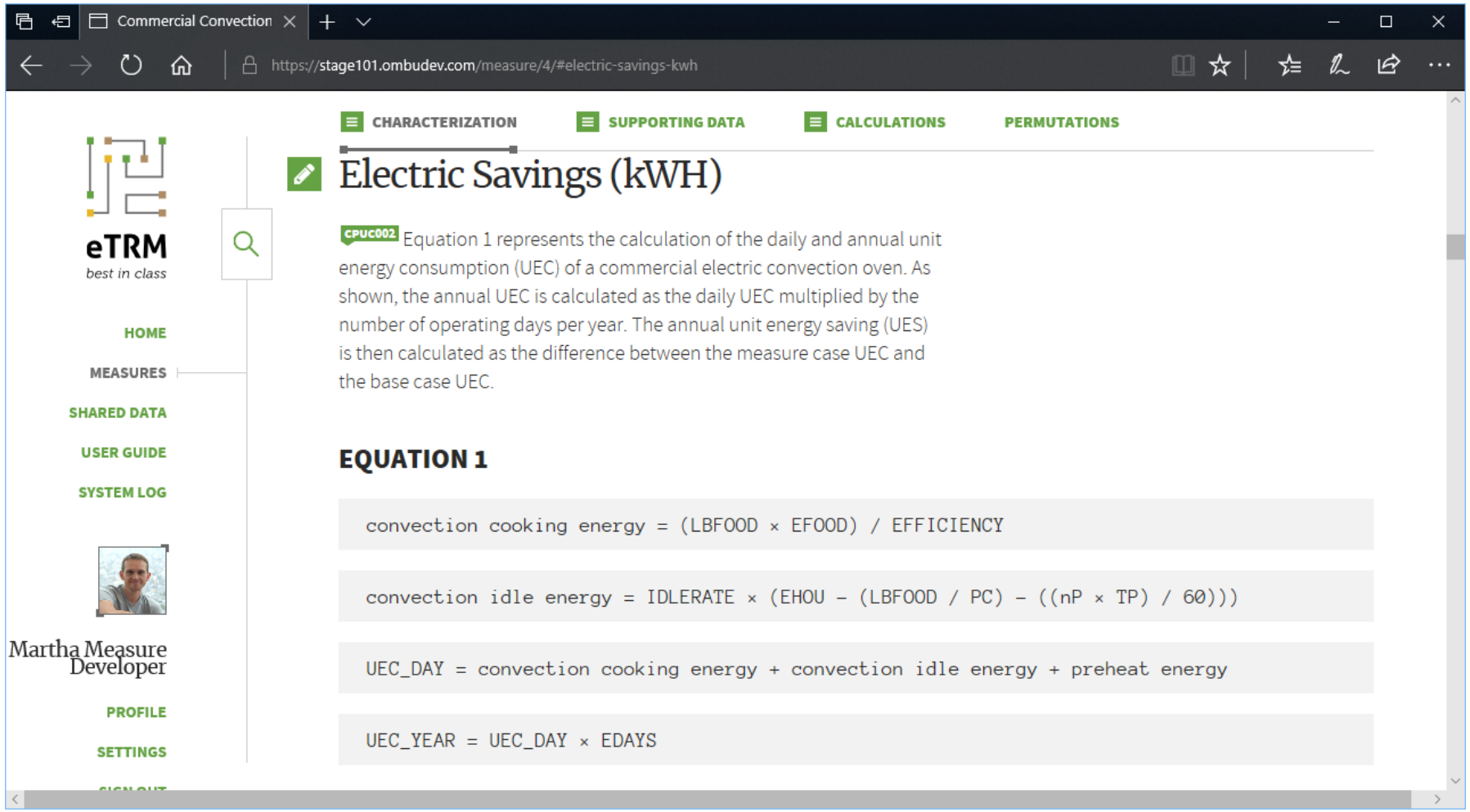
Measure Catalog



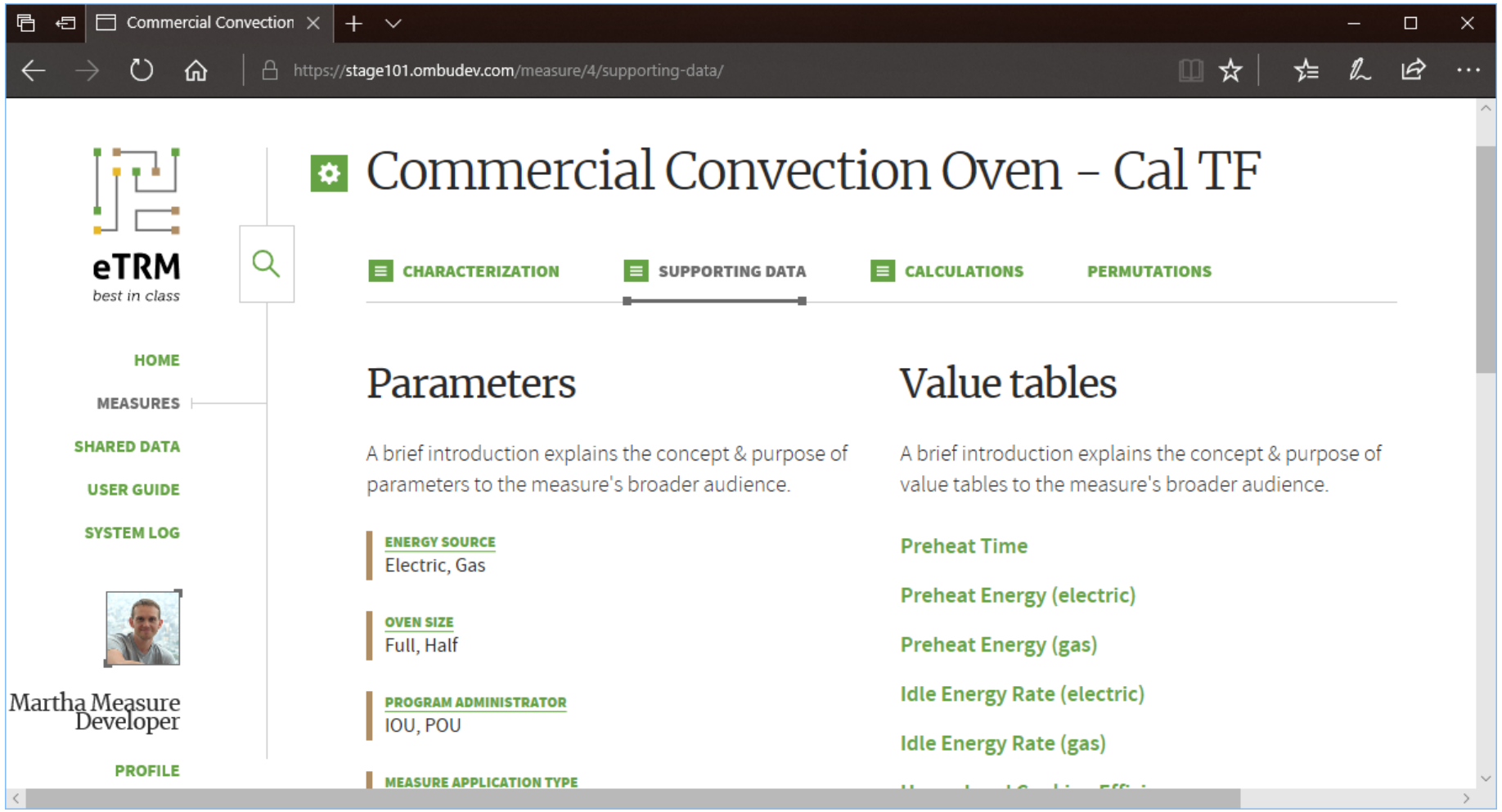
Measure Characterization



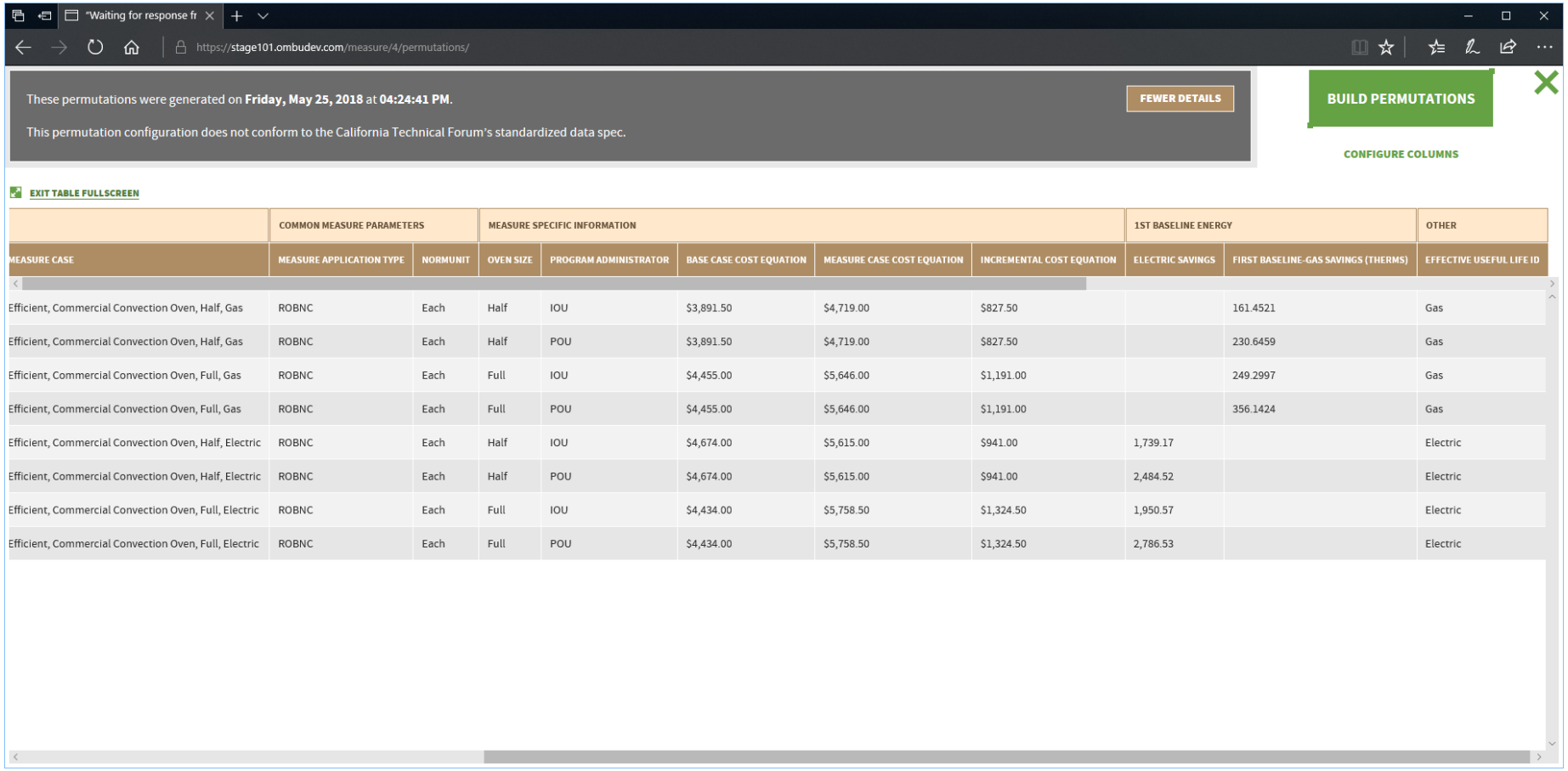
Measure Characterization



Supporting Data

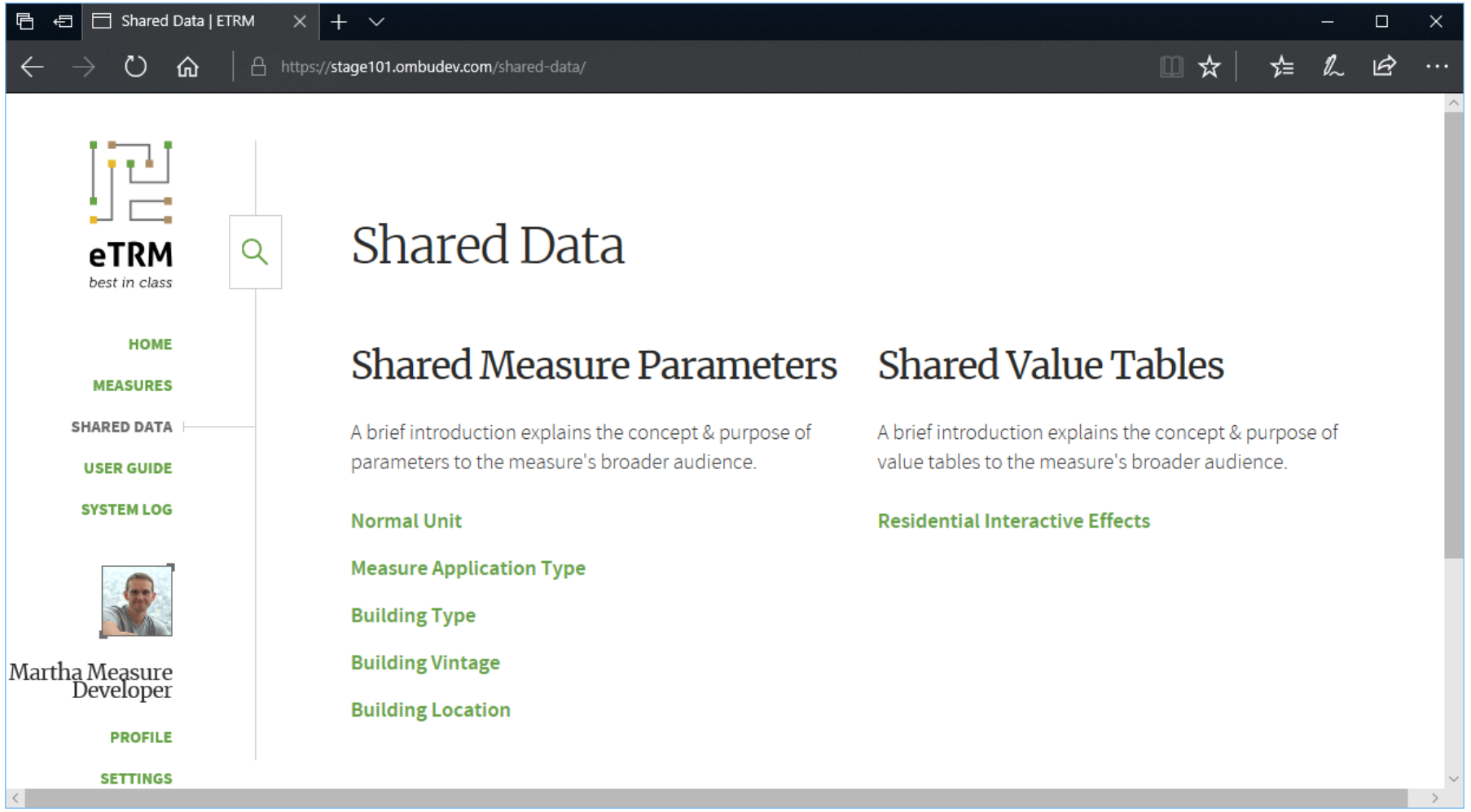


Permutations – Expanded View

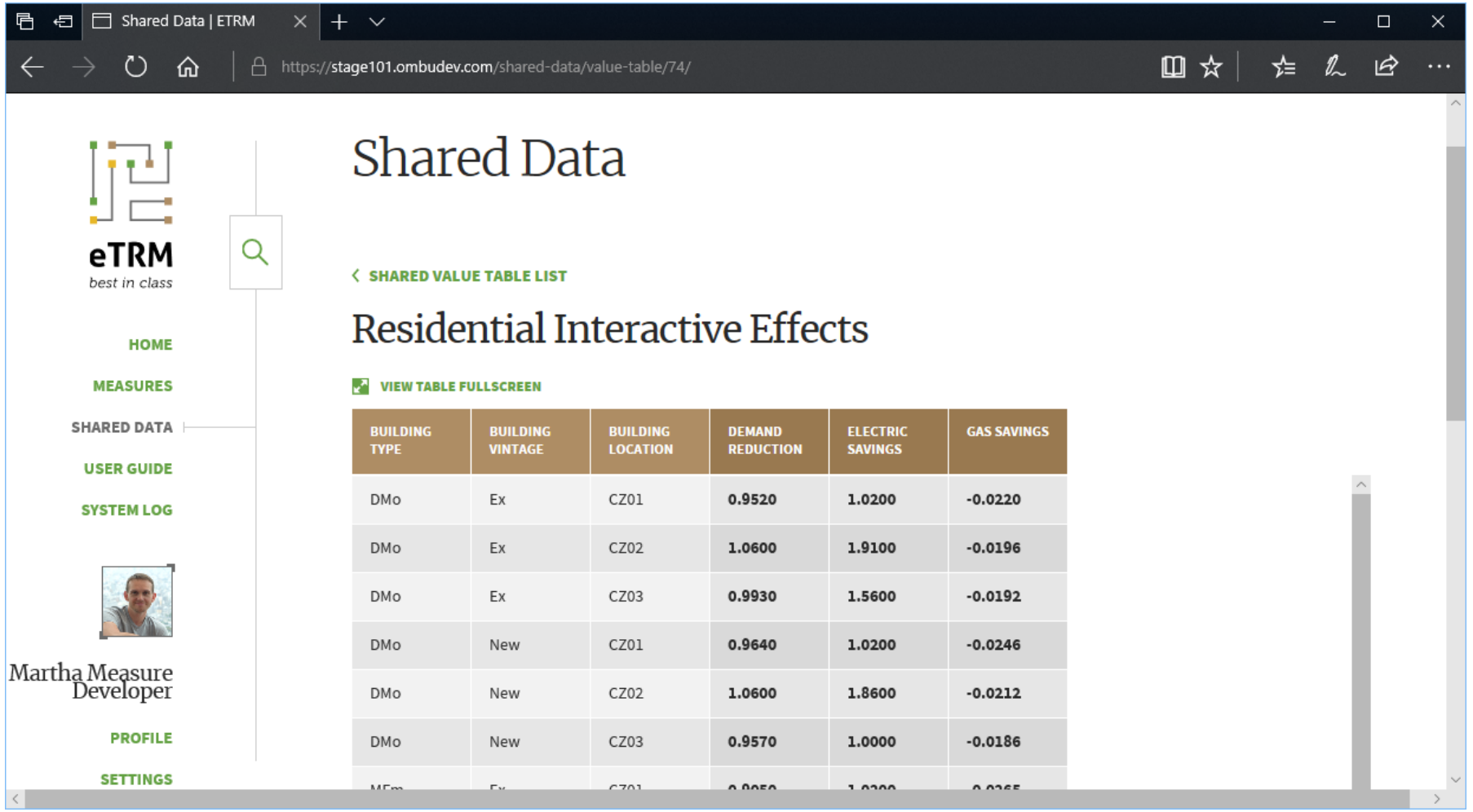


	COMMON MEASURE PARAMETERS		MEASURE SPECIFIC INFORMATION					1ST BASELINE ENERGY		OTHER
MEASURE CASE	MEASURE APPLICATION TYPE	NORMUNIT	OVEN SIZE	PROGRAM ADMINISTRATOR	BASE CASE COST EQUATION	MEASURE CASE COST EQUATION	INCREMENTAL COST EQUATION	ELECTRIC SAVINGS	FIRST BASELINE-GAS SAVINGS (THERMS)	EFFECTIVE USEFUL LIFE ID
Efficient, Commercial Convection Oven, Half, Gas	ROBNC	Each	Half	IOU	$3,891.50	$4,719.00	$827.50		161.4521	Gas
Efficient, Commercial Convection Oven, Half, Gas	ROBNC	Each	Half	POU	$3,891.50	$4,719.00	$827.50		230.6459	Gas
Efficient, Commercial Convection Oven, Full, Gas	ROBNC	Each	Full	IOU	$4,455.00	$5,646.00	$1,191.00		249.2997	Gas
Efficient, Commercial Convection Oven, Full, Gas	ROBNC	Each	Full	POU	$4,455.00	$5,646.00	$1,191.00		356.1424	Gas
Efficient, Commercial Convection Oven, Half, Electric	ROBNC	Each	Half	IOU	$4,674.00	$5,615.00	$941.00	1,739.17		Electric
Efficient, Commercial Convection Oven, Half, Electric	ROBNC	Each	Half	POU	$4,674.00	$5,615.00	$941.00	2,484.52		Electric
Efficient, Commercial Convection Oven, Full, Electric	ROBNC	Each	Full	IOU	$4,434.00	$5,758.50	$1,324.50	1,950.57		Electric
Efficient, Commercial Convection Oven, Full, Electric	ROBNC	Each	Full	POU	$4,434.00	$5,758.50	$1,324.50	2,786.53		Electric

Shared Data


Shared Data | ETRM
https://stage101.ombudev.com/shared-data/
eTRM
best in class
HOME
MEASURES
SHARED DATA
USER GUIDE
SYSTEM LOG
Martha Measure Developer
PROFILE
SETTINGS
Shared Data
Shared Measure Parameters
A brief introduction explains the concept & purpose of parameters to the measure's broader audience.
Normal Unit
Measure Application Type
Building Type
Building Vintage
Building Location
Shared Value Tables
A brief introduction explains the concept & purpose of value tables to the measure's broader audience.
Residential Interactive Effects

Shared Value Table



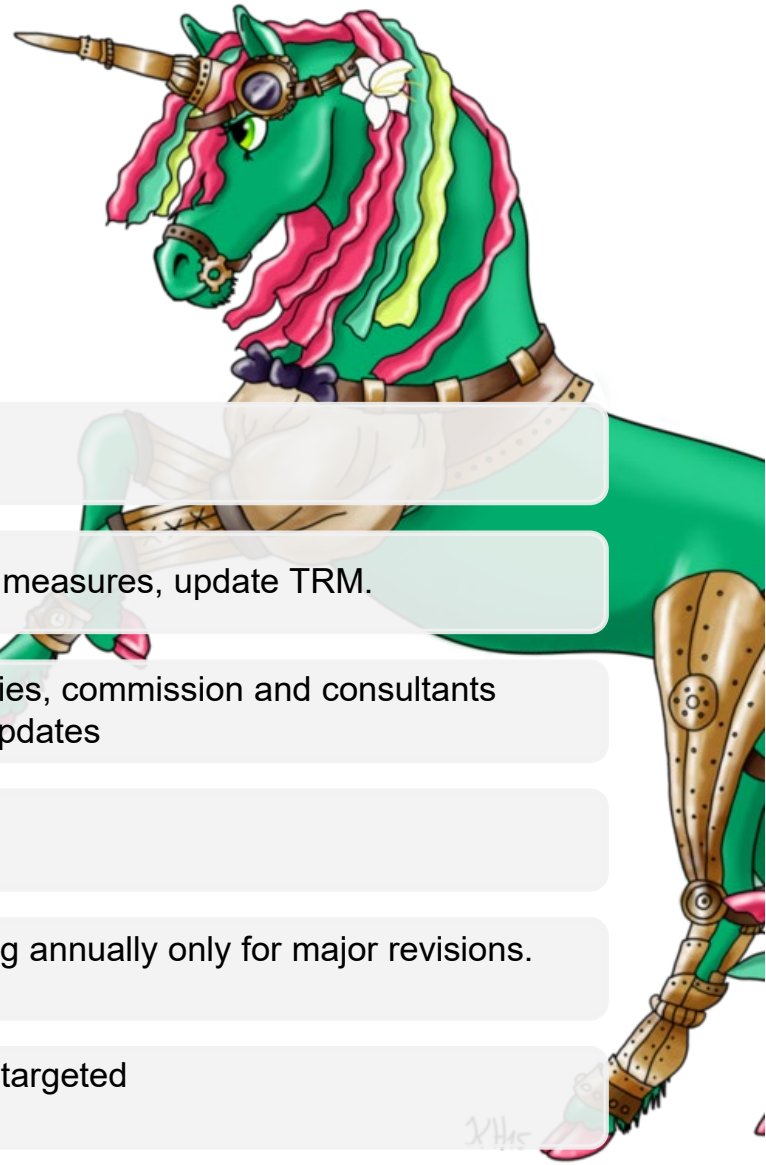
Massachusetts and Arkansas

Are you my Unicorn?
Massachusetts

Who does the primary research?	• PAs sponsor statewide evaluations, with oversight by Commission delegates
Who does the analysis?	• PAs develop TRM using evaluation results into electronic version
Who reviews the measure analysis?	• Collaborative review of the evaluations (i.e., TRM inputs)
Who makes the final decision for approval?	• Collaborative research area team oversees evaluations, with commission delegate as final decider
How are measure updated?	• As evaluation results completed (ongoing). Evaluations prioritized: uncertainty, size, etc. • Commission requires at least every 4 years.
Successes	• Very thorough evaluation processes and research activities
Challenges with these	• Struggle with eTRM

Are you my Unicorn?

Arkansas



Who does the primary research?	• Utility-sponsored evaluations
Who does the analysis?	• Commission hires team of experts (IEM) to analyze measures, update TRM.
Who reviews the measure analysis?	• Collaborative review of the TRM itself, includes utilities, commission and consultants • Weekly meetings for a few months to review TRM updates
Who makes the final decision for approval?	• IEM team, Commission approval
How are measure updated?	• TRM used to have annual updates, but now updating annually only for major revisions. Otherwise, every 3 years
Successes	• Relatively quick, centralized system, prioritized and targeted • Transparent with stakeholders
Challenges with these	• Timing of updates – what triggers an update • Only Word/PDF document of how to estimate savings– PAs translate into measure list

Jurisdictional Comparison

Similarities

- Open, stakeholder review
- Some guidance on measures and defined update times

Differences

- Which stakeholders can do deep dive review?
- Role of commissions/approvers
- Output: Word document vs eTRM
- Frequency of updates

Discussion: Is there a Unicorn?

Extra Slides for Recommendations Section

TRM Jurisdiction Coverage Options

- TRMs are developed for and applicable to:
  - Specific utility or efficiency program administrator service territory
  - Several utilities in a state, typically those under the jurisdiction of a state regulator
  - A region with multiple state agencies, utilities, or program administrators
- For regional and statewide efforts, TRMs share the advantages of other types of statewide or regional efficiency coordination, including:
  - Potential for reduced program administrator and implementer transaction costs
  - Additional resources for creating high quality products and services
  - Consistency in terminology, and consistent reporting format and content

    Reduced program-related evaluation costs and improvements in consistency and quality can also support higher levels of efficiency activity
- There are also potential disadvantages to any coordination effort, including:
  - Possible loss of some control by individual program administrators
  - “Lowest common denominator” efforts that do not meet the needs of some TRM users
  - Additional costs and delays due to coordination inefficiencies or failures.

    Mitigating these issues is discussed in the TRM Guide

TRM Development and Updating Options

TRM development and updating is discussed in the TRM Guide

Development

- Some elements discussed in the Guide with respect to development are:
  - Using other jurisdictions' TRM data
  - Involving stakeholders – e.g., regulators, administrators, implementers - collaboratives
  - Developing work plans and addressing threshold issues, such as content, approaches to developing data, and approval processes

Updating

- Current industry practice for maintaining TRMs involves updating with new information, preferably based on current data and analyses, with regard to one or more of the following:
  - Adding additional measures or removing measures
  - Updating existing deemed savings values, variables, calculations
  - Adding new metrics or parameters to the TRM

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