



Workpaper Development Training

Presenter	Topic	Start Time
Host IOU	Opening & Safety	10:00
CPUC	Workpaper History & Regulatory Framework	10:10
Martin Vu, RMS	Workpaper Development & Roles	10:40
--	LUNCH	12:00
Martin Vu, RMS	Roles (Continued)	12:45
Martin Vu, RMS	Process & Timing	1:25
Host IOU	IOU Solicitation Workpaper Review Process	2:25
Susan Haselhorst, EAR	Commission Workpaper Approval Process	3:25
Ayad Al-Shaikh, CalTF	eTRM Demo	4:10



Workpaper History and Regulatory Framework

Presented by CPUC
California Public Utilities Commission





What is a Workpaper?

A workpaper is a technical document that provides all necessary supporting information to develop forecasted values/ savings for **deemed energy efficiency measures** that are not completely covered by the **Database of Energy Efficiency Resources (DEER)**





What are deemed energy efficiency measures?

Estimates of energy savings for a single unit of an installed EE measure is –

- 1. developed from data sources (such as prior metering studies) and analytical methods**
- 2. applicable to the situation under which the measure is being implemented.**





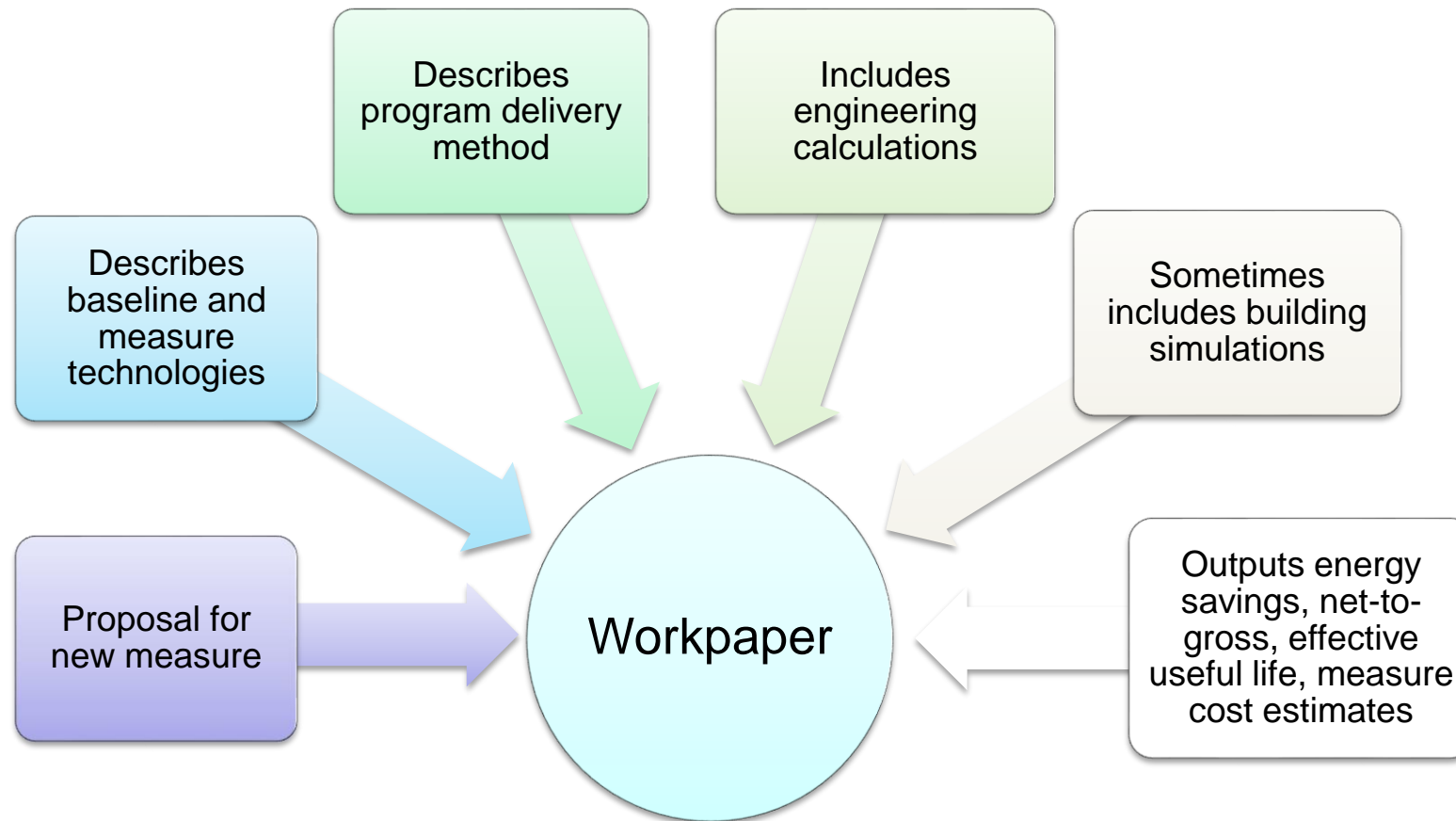
What is DEER?

- **It is the database of energy efficiency resources**
 - ❖ Database on costs and benefits of energy-efficient measures.
- **What kind of information can you find in DEER?**
 - ❖ Measure ID/ IOU
 - ❖ Energy Impacts
 - Net-to-Gross reference
 - Effective Useful Life (EUL)
 - Gross Savings Adjustment reference (installation rate)
 - ❖ Measure Application Type
 - ❖ Delivery Type





Components of a workpaper





Why do workpapers matter?

Workpapers are the only way program administrators can introduce new deemed measures into the portfolio

All deemed measures need an approved workpaper before they can be offered in a program

Ex ante estimates from workpapers feed into measure/program/portfolio cost-effectiveness analysis

Lessons learned from program implementation and impact and market characterization studies can feed into workpaper updates





Purpose of reviewing forecasted savings, including workpapers

- **The program administrators strive to meet energy savings goals that are cost effective on an overall portfolio basis.**
- **The program administrators – primarily the utilities get credit for energy savings due to their efforts beyond what would have happened if they did nothing.**
- **The question is how much did they contribute to obtaining these savings and how much would have happened anyways.**





CPUC Regulatory Background

- **CPUC Decision (D.) 09-09-047**
 - Authority to review and approve workpapers
 - Process for submittal, review and freezing of workpaper values.
- **Application 08-07-021 (a Ruling)**
 - Phase 1 and Phase 2 reviews and approval for workpapers (11/18/2009)
- **CPUC Decision (D.) 12-05-015**
 - Bus stop schedule
 - Defines interim approval
 - Encourages new measures and follow-up research





More Regulatory Background

- **CPUC Decision (D.) 15-10-028 (Rolling portfolio)**
 - Replaced a three year regulatory cycle with an annual cycle
- **Resolution E-4795 (DEER2017/2018 update)**
 - New Code Update or Code Update Not Covered in Previous DEER Updates
 - Required changes in workpaper parameters
 - Updates Based on Evaluation Results
- **Resolution E-4952 (DEER2019/2020 update)**
 - Updated DEER values including shift in peak power periods
 - Addition of New Measures
 - Required changes in workpaper parameters
 - New Code Update or Code Update Not Covered in Previous DEER Updates
 - Policy Directed Updates Supported by Prior Evaluation Reports and Findings





More Regulatory Background

- **Resolution E-4818 (T1WG)**

- Adopts measure-level baseline assignments
- Adopts tiered approach to preponderance of evidence (POE) for accelerated replacement baseline treatment but not the proposed T1WG requirements.

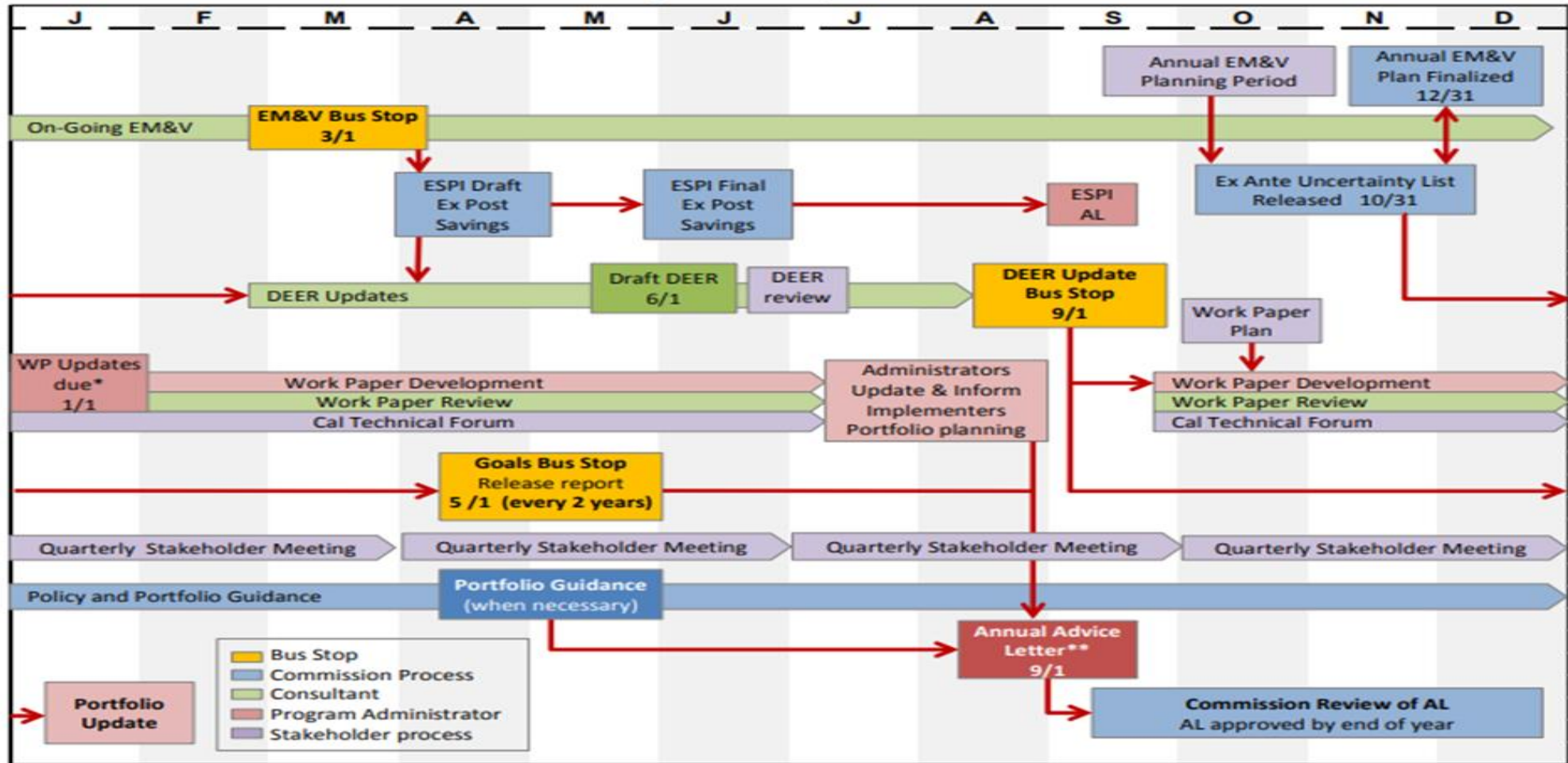
- **Resolution E-4939 (T2WG)**

- Adopts the standard practice baseline definition and baseline selection process
- Adopts a single preponderance of evidence (POE) requirement process for all accelerated-replacement measure types.
- Adopts a small-sized business customer definition pathway for accelerated replacements.





Rolling Portfolio Review Process



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





Why does the Rolling Portfolio Matter to the CPUC workpaper (ex ante) review team?

- **BUS STOPS** were adopted in a Commission Decision
- **Define Workload management**
- **If we miss the bus stop then wait and get on the next bus stop date**





Role of CPUC staff

Not to supplement the utility reviewer

Review and help improve the PA's internal review efforts to accomplish the Commission's goals:

- Improving the reliability of the savings estimate
- Savings are a primary driver of program cost-effectiveness
- Ensure compliance with CPUC rules and policies





CPUC Resources and Information

- **Energy Efficiency CPUC web site**
 - <http://www.cpuc.ca.gov/egyefficiency/>
- **Ex-ante Review material**
 - <http://www.cpuc.ca.gov/General.aspx?id=4132>





Dispute Resolution Process

1. Disputes over Staff Recommendations - D.12-05-015

(page 335) includes a dispute resolution process –

- a) CPUC staff and PA will meet to reach an agreement (bi-weekly PA and statewide meetings)
- b) Every six months Commission staff can draft –
 - A resolution that identifies disputed values
 - PAs can submit comments on the draft resolution





Dispute Resolution Process

2. Third parties disagree with the program administrators –

- Tap in to resources – CALTF, if still no resolution with the PA, then
- Third Parties can present their case to CPUC (ex ante supervisor and staff lead)
- CPUC Staff will discuss at the bi-weekly workpaper coordination meeting (Step a-previous slide)
- Ex ante team's guidance and recommendation will be final until the program administrators submit the workpaper and if there is disagreement, then staff will follow Step b (previous slide).





Industrial/ Agricultural Programs and Portfolio Forecasting Section

Ex Ante Staff Lead

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Workpaper (WP)Development Training

Thursday November 29, 2018



Agenda

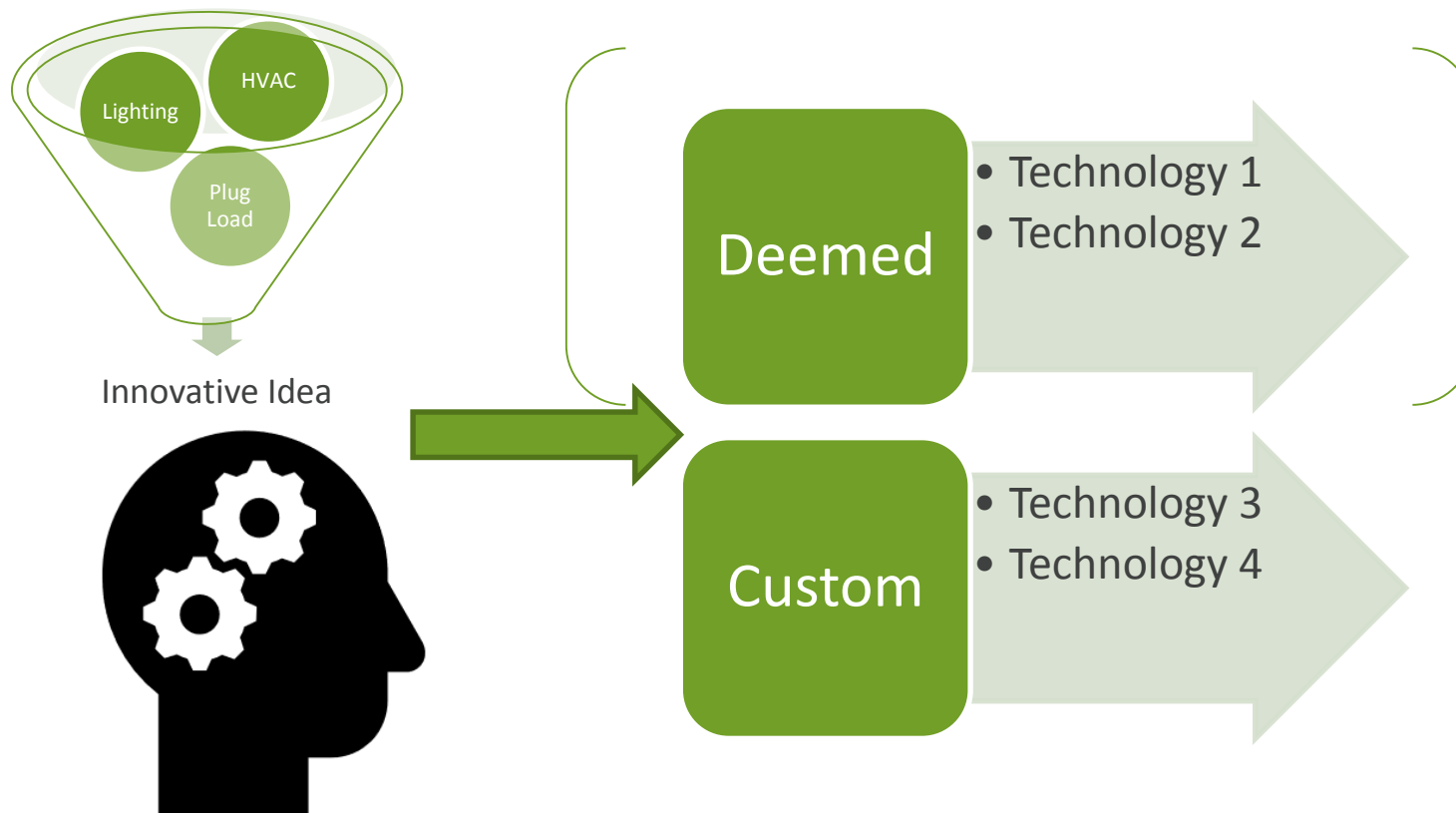
- Objectives:
 - Introduce 3rd Party Implementers (3Ps) to the tools/information they need to develop their own Workpapers (WPs)
 - Clarify roles & responsibilities around WP development
 - Describe the process and timing for review and approval of 3P WP

Tools/Information Needed to Develop WPs

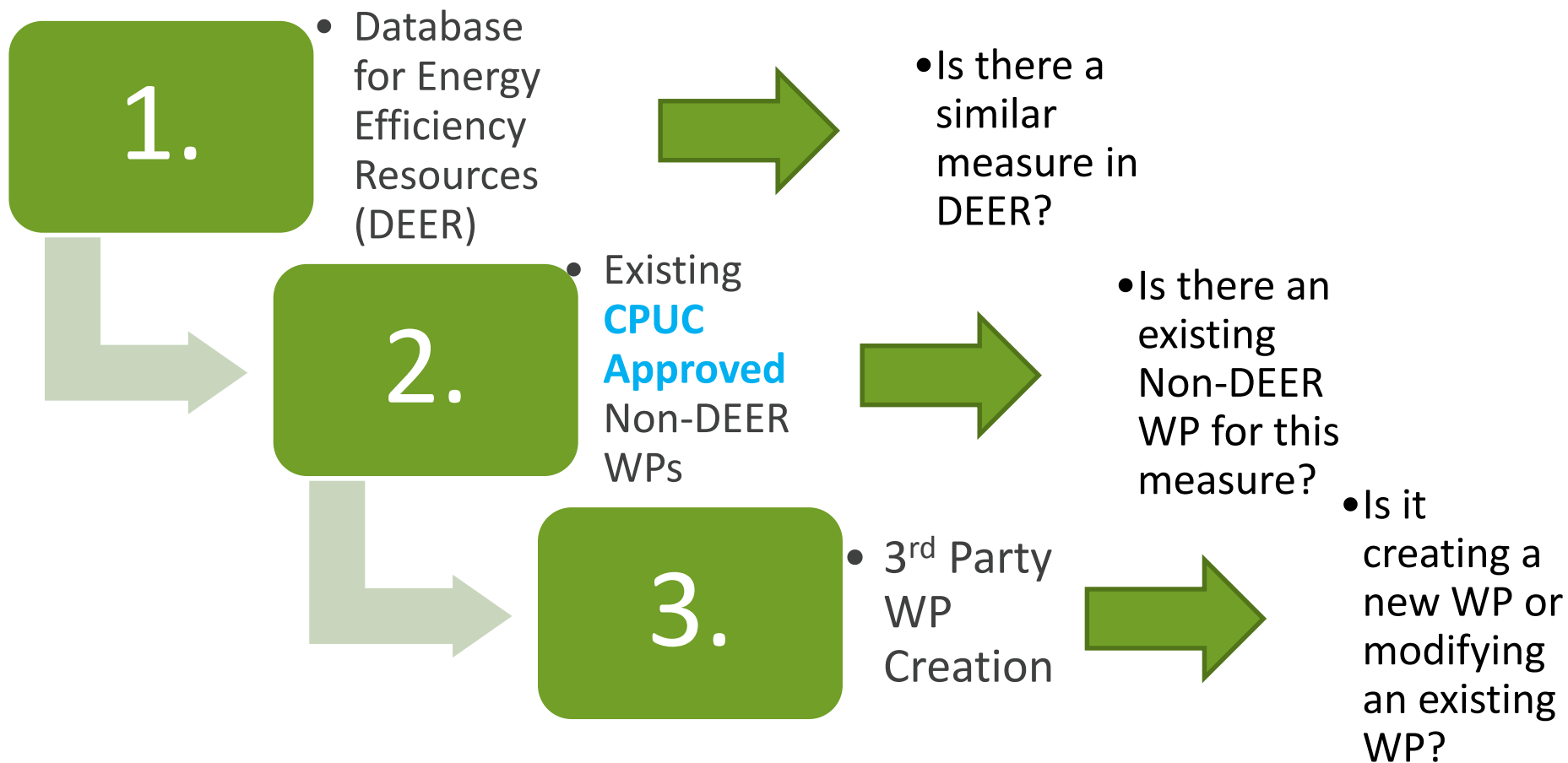
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You Have an Innovative Idea...Now What?



WP Development Hierarchy



1. What is DEER?



- DEER – Database for Energy Efficiency Resources
 - Administered and Maintained by the CPUC
 - Provides estimates of energy savings potential for typical energy efficiency measures commonly installed in the marketplace
 - URL: <http://deeresources.com/>

1. What is DEER?



- DEER – Database for Energy Efficiency Resources
 - URL: <http://deeresources.com/>
 - DEER prototypes, underlying workbooks and calculators used with MAS Control system for core set of deemed/prescriptive measures
 - READi tool provides an interface to DEER
 - Developed, ran and maintained for the CPUC

1. Where to Find DEER References?

URL: <http://deeresources.com/index.php/deer-versions/readi>

Program Installation

Download the [latest version of READI](#) and save the ZIP file to your computer. Open the ZIP file and extract or copy the three files inside to any directory on your computer. If your computer is not behind a corporate firewall and you are not required to use an SSL connection, the only file you need is the READI executable file. Double-click on the READI executable file to start the program.

READI Start-up Options

Select the Ex Ante data to access during this session:

Official Ex Ante database Preliminary Ex Ante Review database

Select data valid during this period:

Period begins: 1/ 1/2013

Period ends: 1/ 1/2021

Select the period based on DEER versions:

DEER2011/14 1/1/2013 - 12/31/2014

DEER2015/16 1/1/2015 - 12/31/2016

DEER2017 1/1/2017 - 12/31/2017

DEER2018 1/1/2018 - 12/31/2018

DEER2019 1/1/2019 - 12/31/2019

DEER2020 1/1/2020 (no expiry)

Include these types of data:

Proposed Data

Non-DEER Ex Ante Data

PG&E

SCE

SoCalGas

SDG&E

Other PAs

Cancel Don't use saved table preferences Okay

NTG	Version	StartDate	ExpiryDate	NTG_Measure_Type	NTGR_kWh	NTGR_therm
▶ Agric-Default>2yrs	DEER2014	1/1/2013		All other EEMs with no evaluat	0.6	0.6
Agric-Sprklr-All	DEER2016	1/1/2016	12/31/2018	Agricultural water conserving s	0.4	0.4
Agric-Sprklr-All	DEER2019	1/1/2019		Agricultural water conserving s	0.5	0.5
Agricult-Default-HTR-di	DEER2014	1/1/2013		All other EEM with no evaluat	0.85	0.85
All-Default<=2yrs	DEER2014	1/1/2013		All other EEM with no evaluat	0.7	0.7
Com-Default>2yrs	DEER2014	1/1/2013		All other EEMs with no evaluat	0.6	0.6
Com-Default-HTR-di	DEER2014	1/1/2013		All other EEM with no evaluat	0.85	0.85
ConstrainedAreaProgram	DEER2015	1/1/2015		All programs targeting local T&	0.85	0.85
ET-Default	DEER2014	1/1/2013		Emerging Technologies appro	0.85	0.85
EUC-Default	DEER2014	1/1/2013	12/31/2015	Energy Upgrade California	0.85	0.85
EUC-Default	DEER2016	1/1/2016		Energy Upgrade California	0.7	0.7
Ind-Default>2yrs	DEER2014	1/1/2013		All other EEMs with no evaluat	0.6	0.6
Ind-Default-HTR-di	DEER2014	1/1/2013		All other EEM with no evaluat	0.85	0.85
K-12School-ComCollege	DEER2015	1/1/2015		All K-12 and community colleg	0.85	0.85
K-12School-ComCollege	DEER2015	1/1/2015		All K-12 and community colleg	0.85	0.85
K-12School-ComCollege	DEER2015	1/1/2015		All K-12 and community colleg	0.85	0.85
K-12School-ComCollege	DEER2015	1/1/2015		All K-12 and community colleg	0.85	0.85
NonRes-sAg-mCust-ci	DEER2014	1/1/2013		All other custom either electric	0.7	0.7

Intro & Help Classificatio

Cost Effectiveness

NTG Ratio

GSIA

EUL Basis

EUL HOU

Full EUL and RUL

» Applicability Tables

» Measure Definition

» Measure Cost

» Energy Impacts

» Measure Catalog

» Other Tables

Technology Groups & Types

Technology Tree

<enter search text> Search

- > Air Compressor
- > Building Shell (Opaque)
- > Liquid Chilling Equipment
- > Cleaning Equipment
- > dx AC Equipment
- > dx HP Equipment
- > Business and Consumer Electronics
- > Evaporative Cooling Equipment
- > Fenestration
- > Food Service
- > Heat Rejection Equipment
- > HVAC Air Distribution
 - > Air Economizer
 - > Duct System Insulation - Commercial
 - > Duct System Integrity - Residential
 - > Duct System Integrity - Commercial
 - > Flow Control
 - > Heat Recovery
 - > HVAC Return Fan - General Purpose Motor
 - > HVAC Supply Fan - General Purpose Motor
- > HVAC Technology
- > Irrigation Equipment
- > Liquid Circulation
- > Lighting - Controls
- > Lighting - Fixtures
- > Lighting - Lamps
- > Lighting - Lamps + Ballasts
- > Lighting - Plug-in
- > Motor Speed Control (Non-HVAC)
- > Pool and Spa Equipment
- > Refrigerated Storage
- > Space Heating Equipment
- > Steam Heating Equipment

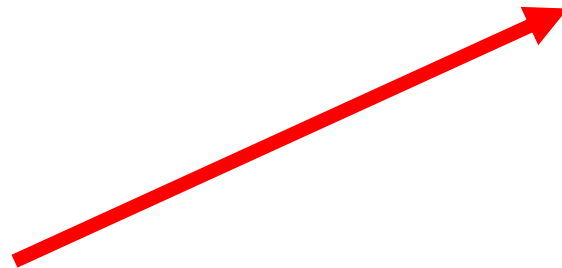
1. Questions About DEER and REAdi?

URL: <http://deeresources.com/index.php/deer-versions/readi>

Archive Version of DEER2011 and DEER2014

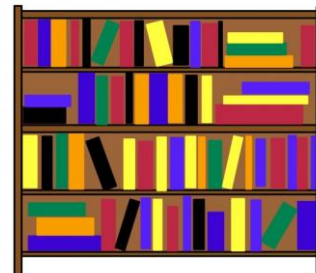
DEER2011 and DEER2014 data are included in the current ex ante database. As of 1-June-2016 access to the original DEER2011 and DEER2014 databases is no longer available.

Questions about DEER database and READI: [READI Help](#)



2. What is an Existing Non-DEER WP

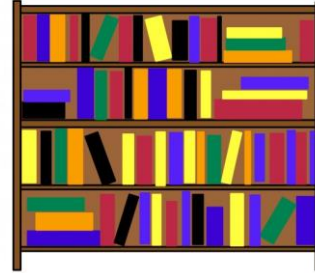
- Documentation prepared to substantiate the
 - Data, methods, and rationale used for ex-ante values
- Ex-Ante Values:
 - Estimated values used to support energy savings claims before impact evaluation is conducted
- Non-DEER WPs are generated when
 - DEER values, assumptions and methods are not available
- URL: <http://www.deeresources.net/>



Sector	Any ▼	Use Category	Any Appliance or Plug Load Building Envelope Commercial Refrigeration ▼	PA	Any Statewide (All) SCG SCE ▼	Technology Group	Any Air Compressor Anaerobic Digester Audit, Information, Testing Services Building Shell (Opaque) Liquid Chilling Equipment Cleaning Equipment Cooking Equipment dX AC Equipment dx HP Equipment Business and Consumer Electronics Evaporative Cooling Equipment	Disposition	Any ▼
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2. What is an Existing Non-DEER WP

- Document Archive of Ex-Ante Resources
 - Workpaper Disposition & Archive Site
 - URL: <http://www.deeresources.net/>
 - Inventory of Non-DEER WPs and Dispositions
 - CPUC selects and vets fully developed WPs, then dispositions or approves
 - WP measures sometimes are migrated into DEER (WP Retired)



=> Annual DEER Update process impacts both DEER and WPs

3. Third Party (3P) WP Creation?

Create New
or Modify
Existing WP?



Considerations



1. Was the Hierarchy Followed?

2. Do I have sufficient data to support the wp for consideration?

3. Do I have the resources and expertise to do this?

3. Third Party (3P) WP Creation?



Considerations



1. Was DEER or CPUC Approved WPs Referenced?

2a. Deviating from DEER or WPs?
2b. Sufficient data to support the wp development?

3a. Appropriate staff and competency to develop the wp?
3b. Outsource?

Mechanics for Development of Successful WP

- Statewide WP Templates and Tools

- Word Document



Microsoft Word Document

- Excel Data Spec

- QA/QC Checklist



- PG&E Rulebook



Measure Data Field	Measure Value
MeasureAppType	
BldgType	
BldgVintage	
BldgLoc	
NormUnit	
EUL ID	
RUL ID	
NTGR	
DeliveryType	
GSIA	
Electric Load Shape	
Gas Load Shape	
Sector	
PA/POU	
BldgHVAC	
HOU	
IE Factor	
IETableName	
Use Category	
SubUseCategory	
TechGroup	
TechType	
Cost Adjustment Type	
EnImpCalcType	
MeasImpactType	
MeasQualifierGroup	
Upstream Flag	

Important Note: Measure Application Type (MAT)

- A categorization of energy efficiency measures based on measure attributes
- Each MAT has its own baseline treatment, cost basis, eligibility, and documentation requirements. There are six approved measure application types, which include:
 - 1. Accelerated Replacement**
 2. Add-On Equipment
 3. Behavioral, Retrocommissioning and Operational (BRO)
 4. New Construction/New Capacity,
 - 5. Normal Replacement**
 6. Weatherization

Important Note: Measure Application Type (MAT)

Table 1.1 Measure Level Baseline Guidance

Alteration Type	Delivery	Savings Determination	Customer Class	Installation Type	
				Weatherization / Add On / BRO	Efficient Equipment (ER/NR)
No Existing Condition	All			Code	
Existing Buildings	Upstream/midstream	All		Code	
	Downstream	NMEC, RCT, exp. design		Existing	
		Calculated		Existing	Direct-to-Decision/ Direct-to-Default POE**
Deemed		Existing		Deemed POE	
Non-Building projects including industrial and agricultural processes	SEM* programs	NMEC	All	Existing	
	Other (not-SEM) programs	All		Existing	Direct-to-Decision/ Direct-to-Default POE**

Resolution E-4818.

Measure level baseline assignment and preponderance of evidence (POE) guidance to establish eligibility for an accelerated replacement baseline treatment

The MAT also dictates other ex ante values, as summarized below:

Table 4 - Ex Ante Values Dictated By MAT

MAT	Baseline	Measure Cost	EUL	RUL
New Construction	Code / Standard Practice	IMC	Measure EUL	0
Normal Replacement	Code / Standard Practice	IMC	Measure EUL	0
Accelerated Replacement	Dual	ERC	Lesser of measure EUL or RUL of existing	RUL of existing
Add-On Equipment	Existing	FMC	RUL of existing	0
Behavioral, Residential	Existing	FMC	1	0
Behavioral, Non-Residential	Existing	FMC	2	0
Retrocommissioning and Operational	Existing	FMC	3	0
Weatherization	Existing	FMC	Measure EUL	0

Walk Thru of Normal Replacement (NR) Example

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Example Normal Replacement Measure

- MAT: **Normal Replacement (NR)**
 - Formerly Known as Replace on Burnout (ROB)
- A majority of the deemed portfolio offering wps support this MAT
- Example WP: **Commercial Foodservice: Griddles**

Example Normal Replacement Griddle Measure

- MAT: Normal Replacement (**NR**)
 - Includes measure installations where the existing equipment has failed or no longer meets current or anticipated needs or is being replaced due to remodeling, upgrading, or replacement activities that are undertaken in the normal course of business.
 - Measure installations where the existing equipment is still functional but does not qualify for Accelerated Replacement fall into this category.
 - Commercial Foodservice Griddles are NR measures

Walk Thru of Normal Replacement (NR) Example – Data Fields

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Example Normal Replacement Griddle Measure (SUMMARY)

- Building Type: **Any**
 - Refers to applicable building types
- Building Vintage: **Any**
 - Refers to the applicable building vintage year
- Building Location: **Any**
 - Refers to the applicable CEC Climate Zones
- EUL ID: **Cook-ElecGriddleCook-GasGriddle**
 - Refer to the DEER Database EUL Support Tables
- RUL ID: **N/A**
 - Refer to the DEER Database EUL Support Tables

Example Normal Replacement Griddle Measure

- Building Type: **Any**
 - Workpapers must indicate which building types are eligible for the measure and include the associated savings for each eligible building type.
 - Eligible DEER building types can be found in the READI database.
 - New building types may be proposed to the CPUC for consideration.
 - Refers to applicable building types

Example Normal Replacement Griddle Measure

- Building Vintage: **Any**
 - Refers to the applicable building vintage year
- Building Location: **Any**
 - Refers to the applicable CEC 16 Climate Zones
- Normal Unit: **Len-Ft.**
 - Refers to applicable cost and energy common unit type.

Example Normal Replacement Griddle Measure

- Effective Useful Life (EUL ID): **Cook-ElecGriddleCook-GasGriddle**
 - An estimate of the median number of years that the measures installed under the program are still in place and operable.
 - Refer to the DEER Database EUL Support Tables
- RUL ID: **N/A**
 - An estimate of the median number of years that a measure being replaced under the program would remain in place and operable had the program intervention not caused the replacement.
 - Refer to the DEER Database EUL Support Tables

Example Normal Replacement Griddle Measure

- Net to Gross Ratio (NTGR): **Com-Default > 2yrs**
 - A ratio or percentage of net program impacts divided by gross or total impacts. Net-to-gross ratios are used to estimate and describe the free-ridership that may be occurring among energy efficiency program participant.
- Refers to appropriate net-to-gross ratio in DEER READI

Example Normal Replacement Griddle Measure

- Delivery Channel: **PreRebUp**
 - Upstream – rebate goes to the manufacturer
 - Type of program delivery in which an incentive goes to the manufacturer to encourage production and promotion of energy efficiency products in the market.
 - Incentive may or may not be passed to the end-use customer
- Delivery Channel: **NonUpStrm**
 - Midstream – rebate goes to the retailer
 - Type of program delivery in which incentive goes to the distributor or retailer to encourage promotion of energy efficiency products in the market.
 - Incentive may or may not be passed to the end-use customer. Incentive may or may not be passed to the customer. Does not include programs partnering with contractors or installers

Example Normal Replacement Griddle Measure

- Delivery Channel: **PreRebDown**
 - Downstream – rebate goes to the end use customer
 - Classification of program delivery in which program is delivered by agents or representatives (including installation contractors) that have direct interaction with end-use customers or through a program website.

- Delivery Channel: **DirInstall**
 - Direct Install – Labor and material costs goes to the implementer
 - Energy efficiency solutions provided directly to the customer at little or no cost through installation contractors provided and managed by an Implementer

Example Normal Replacement Griddle Measure

- Gross Savings Installation Adjustment (GSIA): **Def-GSIA**
 - The GSIA is a DEER adjustment factor that combines the Realization Rate and Installation Rate. It is dependent on both the measure technology and how the measure is delivered and represents the percentage of units for which incentives were paid but not installed.
 - The default is **typically 1.0** unless an ex-post impact evaluation, disposition, resolution or DEER Update indicate otherwise

Example Normal Replacement Griddle Measure

Electric and Gas Load Shapes:

- Commercial Griddle Electric: **Currently varies by PA**
 - Commercial Griddle Gas: **Annual**
-
- Load shapes are used for portfolio lifecycle cost analysis. A load shape indicates the distribution of a measure's energy savings over one year.
 - A load shape is a set of fractions summing to unity, with one fraction per hour (or other time period). Multiplying a savings value by the load shape value for any particular hour yields the energy savings for that particular hour.
 - Implementers may use and report only load shapes provided in DEER.
 - Alternatively, a weighted blend of DEER load shapes based on metered data may be calculated and provided.

Example Normal Replacement Griddle Measure

- Sector: **Ag, Com, Ind**
 - Customer groups sharing common characteristics and barriers that are building blocks to each Program Administrators' portfolios including:
 1. Residential (Res)
 2. Commercial (Com)
 3. Public (Pub)
 4. Industrial (Ind)
 5. Agricultural (Agr)
 6. Cross-Cutting (CC)
- PA/POU: **Any**
 - Identifies applicable program administrators participating in this deemed measure.
- Bldg HVAC: **Any**
 - Identifies applicable HVAC system for that building type
 - Refer to the DEER Database for applicable HVAC systems

Example Normal Replacement Griddle Measure

- Hours of Use (HOU): **Blank**
 - For applicable measures (i.e. lighting), hours of use or operation are documented.
 - Use the operating hours values and methods from the most recent version of DEER if the measure values are available.
- Interactive Effect (IE) Factor: **No**
 - The secondary energy and demand impacts that result from a measure to a or Interactive Effects secondary system or equipment not directly involved in the retrofit activity (e.g., cooling or heating energy impacts resulting from the installation of efficient lighting fixtures).
- Interactive Effects Table Name: **Blank**
 - Identify the applicable IE table name, otherwise if not applicable leave blank.

Example Normal Replacement Griddle Measure

- **Ex-Ante Data**
 - Estimated savings, cost, incentive, effective useful life, net-to-gross ratio, and other values that are the basis of the savings claim. These values reflect the Program Administrator's (PA's) reported savings, which may be revised with an impact evaluation
- **Additional Ex-Ante Data Fields**
 - Use Category: **FoodServ**
 - SubUseCategory: **Cooking**
 - TechGroup: **Cook equip**
 - TechType: **Griddle**
 - Cost Adjustment Type: **EL50 or None**
 - Energy Impact Calculation Type: **Standard**
 - Measure Impact Type: **Deemed, Standard or IOU-Deemed**
 - Measure Qualifier Group: **None**
 - Upstream Flag: **No Value**

Walk Thru of Accelerated Replacement (AR) Example

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Example Accelerated Replacement Measure

- MAT: Accelerated Replacement
 - Formerly Known as Early Retirement (ER) or Retrofit (RET)
- Very few deemed portfolio offering wps support this MAT
 - Burden of Proof: Preponderance of Evidence (POE)
 - Evidence shows a Perceptible Tipping of the Scales
- Example WP: **Residential Pool Pump VFD**

Example Accelerated Replacement Measure

- MAT: **Accelerated Replacement (AR)**
 - Early Retirement (ER)
 - The ER category is a sub-type of the larger Accelerated Replacement category, which includes replacements of existing equipment with nominally higher efficiency equipment and where there is more evidence than not that
 - » a) the existing equipment would have remained in operation for at least the remaining life of the existing equipment, performing its current service requirement and
 - » b) the energy efficiency program activity induced or accelerated the equipment replacement. The existing equipment must have at least one year of remaining useful life to qualify as Early Retirement.

Example Preponderance of Evidence Requirements

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Example Accelerated Replacement Measure

- MAT: **Accelerated Replacement (AR)**
 - **Examples on How to Demonstrate POE Requirements for AR Measures**
 1. Include dialogue from previous customer/IOU meetings showing how the IOU accelerated the early retirement of the existing measure.
 - Include meeting dates and participant names.
 - Provide details on the high efficiency measure/s that were proposed by the IOU.
 - State some of the program features that the IOU educated the customer/s on that they were previously unaware of.
 2. Provide simple payback calculations with and without the IOU incentive.
 3. Provide documentation of any additional drivers for the project not related to energy efficiency.
 4. Provide documentation of any preliminary measurements performed for the customer by the IOU.

Example Accelerated Replacement Measure

- MAT: **Accelerated Replacement (AR)**
 - Examples on How to Demonstrate POE Requirements for AR Measures
 - General Customer Information
 - Existing Equipment – collected for Early Retirement Install Type Only
 - Brand
 - Model Number
 - Horsepower
 - Filtration Settings
 - Customer Acknowledgement of Pool Pump Settings
 - Installation Contractor Declaration

Example Accelerated Replacement Measure

- MAT: **Accelerated Replacement (AR)**
 - Examples on How to Demonstrate POE Requirements for AR Measures
 - Preponderance of Evidence (POE) Questionnaire – collected for Early Retirement Install Type only
 - Questionnaire to answer POE concerns related to the installation of the Pool Pump.

Walk Thru of Accelerated Replacement (AR) Example – Data Fields

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Example Accelerated Replacement Residential Pool Pump VSD (SUMMARY SLIDE)

- Building Type: **MFm (Multifamily)**
 - Refers to applicable building types
- Building Vintage: **Any**
 - Refers to the applicable building vintage year
- Building Location: **Climate Zone 9**
 - Refers to the applicable CEC Climate Zones
- EUL ID: **OutD-PoolPump**
 - Refer to the DEER Database EUL Support Tables
- RUL ID: **OutD-PoolPump**
 - Refer to the DEER Database EUL Support Tables

Example Accelerated Replacement Residential Pool Pump VSD

- Building Type: **MFm (Multifamily)**
 - Workpapers must indicate which building types are eligible for the measure and include the associated savings for each eligible building type.
 - Eligible DEER building types can be found in the READI database.
 - New building types may be proposed to the CPUC for consideration.
 - Refers to applicable building types

Example Accelerated Replacement Residential Pool Pump VSD

- Building Vintage: **Any**
 - Refers to the applicable building vintage year
- Building Location: **Climate Zone 9**
 - Refers to the applicable CEC 16 Climate Zones
- Normal Unit: **Pump**
 - Refers to applicable cost and energy common unit type.

Example Accelerated Replacement Residential Pool Pump VSD

- Effective Useful Life (EUL ID): **OutD-PoolPump**
 - An estimate of the median number of years that the measures installed under the program are still in place and operable.
 - Refer to the DEER Database EUL Support Tables
- RUL ID: **OutD-PoolPump**
 - An estimate of the median number of years that a measure being replaced under the program would remain in place and operable had the program intervention not caused the replacement.
 - Refer to the DEER Database EUL Support Tables

Example Accelerated Replacement Residential Pool Pump VSD

- Net to Gross Ratio (NTGR): **Res-Default>2**
 - A ratio or percentage of net program impacts divided by gross or total impacts. Net-to-gross ratios are used to estimate and describe the free-ridership that may be occurring among energy efficiency program participant.
 - Refers to appropriate net-to-gross ratio in DEER READI

Example Accelerated Replacement Residential Pool Pump VSD

- Delivery Channel: **PreRebDown**
 - Downstream – rebate goes to the end use customer
 - Classification of program delivery in which program is delivered by agents or representatives (including installation contractors) that have direct interaction with end-use customers or through a program website.

Example Accelerated Replacement Residential Pool Pump VSD

- Gross Savings Installation Adjustment (GSIA): **Def-GSIA**
 - The GSIA is a DEER adjustment factor that combines the Realization Rate and Installation Rate. It is dependent on both the measure technology and how the measure is delivered and represents the percentage of units for which incentives were paid but not installed.
 - The default is **typically 1.0** unless an ex-post impact evaluation, disposition, resolution or DEER Update indicate otherwise

Example Accelerated Replacement Residential Pool Pump VSD

Electric and Gas Load Shapes:

- Residential Pool Pump VSD Electric: **Residential Pool Pumps**
 - Load shapes are used for portfolio lifecycle cost analysis. A load shape indicates the distribution of a measure's energy savings over one year.
 - A load shape is a set of fractions summing to unity, with one fraction per hour (or other time period). Multiplying a savings value by the load shape value for any particular hour yields the energy savings for that particular hour.
 - Implementers may use and report only load shapes provided in DEER.
 - Alternatively, a weighted blend of DEER load shapes based on metered data may be calculated and provided.

Example Accelerated Replacement Residential Pool Pump VSD

- Sector: **Res**
 - Customer groups sharing common characteristics and barriers that are building blocks to each Program Administrators' portfolios including:
 1. Residential (Res)
 2. Commercial (Com)
 3. Public (Pub)
 4. Industrial (Ind)
 5. Agricultural (Agr)
 6. Cross-Cutting (CC)
- PA/POU: **SCE**
 - Identifies applicable program administrators participating in this deemed measure.
- Bldg HVAC: **Any**
 - Identifies applicable HVAC system for that building type
 - Refer to the DEER Database for applicable HVAC systems

Example Accelerated Replacement Residential Pool Pump VSD

- Hours of Use (HOU): **Blank**
 - For applicable measures (i.e. lighting), hours of use or operation are documented.
 - Use the operating hours values and methods from the most recent version of DEER if the measure values are available.
- Interactive Effect (IE) Factor: **No**
 - The secondary energy and demand impacts that result from a measure to a or Interactive Effects secondary system or equipment not directly involved in the retrofit activity (e.g., cooling or heating energy impacts resulting from the installation of efficient lighting fixtures).
- Interactive Effects Table Name: **Blank**
 - Identify the applicable IE table name, otherwise if not applicable leave blank.

Example Accelerated Replacement Residential Pool Pump VSD

- **Ex-Ante Data**
 - Estimated savings, cost, incentive, effective useful life, net-to-gross ratio, and other values that are the basis of the savings claim. These values reflect the Program Administrator's (PA's) reported savings, which may be revised with an impact evaluation
- **Additional Ex-Ante Data Fields**
 - Use Category: **Recreate**
 - SubUseCategory: **Pool**
 - TechGroup: **PoolSpa_eq**
 - TechType: **PoolPump**
 - Cost Adjustment Type: **M50**
 - Energy Impact Calculation Type: **Standard**
 - Measure Impact Type: **Deemed**
 - Measure Qualifier Group: **None**
 - Upstream Flag: **No Value**

Walk Thru of WP Word Document Sections

Thursday November 29, 2018



Microsoft Word
Document

Let's revisit our tools
and templates



Roles and Responsibilities

Thursday November 29, 2018



Roles and Responsibilities

- **Relevant Stakeholders**

- CPUC Energy Division Staff and Ex-Ante Review (EAR) Team
- Program Administrators
 - Investor-Owned Utilities (IOU)
 - Regional Area Networks (RENs)
- California Technical Forum (CalTF) Members and Staff
 - **Serve as a support role at this time only**

Roles and Responsibilities

- To Develop or Outsource WP Development?
 - Develop
 - Pros: In-house institutional knowledge gained
 - Cons: 3P's own time and money
 - Outsource
 - Pros: Consulting entity are familiar with content and process requirements
 - Cons: Costs and no in-house institutional knowledge gained
- PA WP Development Support (**Scope Limited Solicitation Purposes Only**)
 - Pros: No costs to the 3P
 - Cons: Timing of wp development may be shifted based on priorities
 - Remember: **This is a partnership between the PAs and the 3rd Party Implementer**

Roles and Responsibilities

- Who Maintains the WP after Development and Approval
 - Depends on New DEER, Code, Disposition or Resolution Updates

– 4-Ex-Ante Tables

- PAs will maintain
- <https://deeresources.info/wpa/tree>

The screenshot shows the 'Energy Division Workpaper Project Archive' website. The header includes the CPUC logo and navigation links: Home, WPA base, Project tree, My projects, and a search bar. The user is logged in as Martin Vu. The main content area is titled 'Project Tree View' and lists four categories: 2010-2012 Cycle, 2013-2016 Archive, Current Workpaper Project Archive, and CPUC Ex Ante Data Update Notifications. A search bar is located below the list. The footer contains a navigation menu with links for Home, WPA base, Projects tree, My projects, Logout, Change password, and User Guide. It also includes a notice about IOU Restricted Folders and a disclaimer regarding the use of confidential information.

Process and Timing of WP Review and Approval

Thursday November 29, 2018



Process and Timing of WP Review and Approval

- New Measures, Consolidated Measures
- e-TRM Spec and Matrix
 - Timing of Consolidated Measure List Release and Impact to 3P WP Development

Technology Category	# Measures*	Submission Date
Food Service	11	Oct-18
Commercial Refrigeration	~5	Nov-18
Appl or Plug Load & Com Refrig	~14	Dec-18
Food Service & Com Refrig	~13	Jan-19
Water Heating - Flow Restrictors	~7	
Water Heating - Non-Flow Restr	~16	Feb-19
Agriculture	~7	Mar-19
Building Envelope	~4	
Pools & Miscellaneous	~4	
Process	~5	
Lighting	~13+	Apr-19
HVAC - Residential	~19	May-19
HVAC - Commercial	~32	Jun-19

Process and Timing of WP Review and Approval

- Consolidated Measures List
 - Measures will be submitted in phases through beginning of 2019
 - Expected approval of all by end of July 2019
 - For use starting January 1, 2020
 - 3Ps will have access to this list after they are CPUC approved
 - Approval is expected 45 days after (or 2 months)
 - Conclusion: Consider waiting for approvals before using this in 3P submittal

IOU Solicitation WP Review Process

Statewide Workpaper Process for Third Parties

November 2018

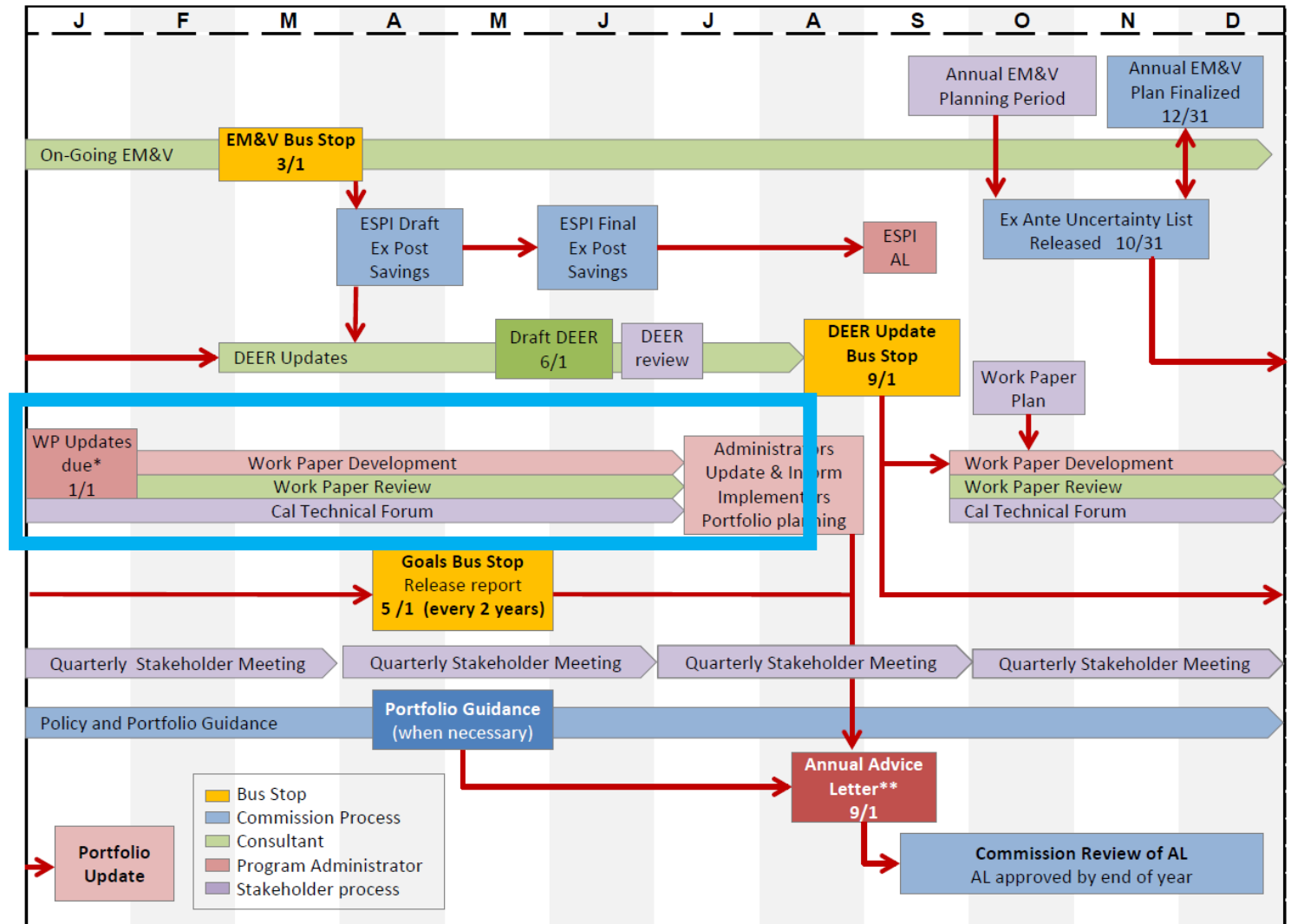


Workpaper (WP) Approval Timing

Question	Response
<p>When are workpapers (WPs) for new measures required to be submitted and approved?</p>	<p>Solicitation process for workpapers will vary by IOU.</p> <p>SCE: Solicitation respondents must use approved WP and/or DEER values to justify energy efficiency savings in their proposal. In the RFA stage, SCE may consider abstracts with non-approved workpapers (WPs) or WP updates that are currently in process. These RFA proposals will be reviewed on a case-by-case basis.</p> <p>WPs need to be approved by the CPUC <u>prior to an RFP proposal being submitted</u>.</p> <p>SCE will not contract 3rd Parties without CPUC approved WPs.</p>
<p>Specifically, are approved measures required for program proposals?</p>	<p>SCG, PG&E, and SDG&E: Solicitation respondents must use approved WP and/or DEER values to justify energy efficiency savings at the time of program launch. In the RFA and RFP stage, SCG, PG&E, and SDG&E, may consider abstracts with non-approved workpapers (WPs) or WP updates that are currently in process. These RFA & RFP proposals will be reviewed on a case-by-case basis dependent upon risk of program delivery.</p> <p>WPs need to be approved by the CPUC <u>prior to use in a program</u>.</p>

Workpaper (WP) Development Timing with IOUs

- 3rd Parties should plan enough lead time to work with IOUs to submit WPs to CPUC
- WP development time should occur before July to allow IOUs to prepare and submit Annual Advice Letters.
- Workpaper submissions to CPUC should be targeted for no later than July 1st.
- Third-Party Solicitation Information
 - Joint IOU Solicitation Timeline



Workpaper (WP) Development Timing with IOUs

The IOUs development timeline will vary by workpaper. In general, the workpaper development timeline is 8 – 10 months which includes the following activities:

- IOU internal governance to assess measure viability for EE portfolio
- Possible need for a workpaper plan (new workpapers are expected to propose a workpaper plan to CPUC before drafting workpaper)
- Data collection or studies
- Preparation of calculations
- Preparation of write-up
- QA/QC and additional internal governance to confirm measure viability for EE portfolio
- Other items to be completed to be ready for CPUC (e.g., ex-ante data tables, IOU system readiness)
- CPUC review and approval process
- CPUC disposition follow-up

Workpaper (WP) Funding

Question	Response
Who funds the WP development for new measures?	<p>IOUs will fund the development of new WPs and modification of existing WPs, provided that the workpaper is viable for the Energy Efficiency portfolio. For SDG&E only, WPs will be funded for 3rd parties provided that their proposal has been accepted and the contract has been awarded.</p> <p>If a 3rd party chooses to develop their own WP, they assume the cost of developing it. IOUs will assume the cost of reviewing, providing review comments, submitting the paper to the Energy Division, and maintaining the workpaper once CPUC approved.</p>

Workpaper (WP) Data Specifications

Question	Joint Response
Do you have IOU-specific data specifications?	<p>Yes, IOUs each have unique data specifications to support internal IOU systems. However, IOUs will be responsible for their own unique data specifications.</p> <p>3rd Parties developing their own workpaper must use the Statewide Workpaper Template, which is available on the CalTF website (http://www.caltf.org/tools/). If the proposed workpaper or workpaper update is viable for the Energy Efficiency portfolio, IOUs will separately develop their unique data specifications and create the CPUC's required ex ante table specification.</p>

Workpaper Requests - IOU Intake Process

Question	Joint Response
What is the intake process?	This is unique to each IOU. 3rd parties will need to comply with each IOU's solicitation requirements. 3 rd parties should also reference the Statewide IOU lead for workpaper requests.

Statewide IOU Leads

IOU	SW/Local	Sector	Description
PG&E	SW	Residential	Residential New Construction
PG&E	SW	Commercial	Non-Residential New Construction
PG&E	SW	Cross-cutting	WE&T Career and Workforce Readiness
PG&E	SW	Cross-cutting	WE&T K-12 Connections
PG&E	SW	Public	State of CA / Dept. of Corrections
PG&E	SW	Cross-cutting	Codes & Standards - Appliance Standards
SCE	SW	Residential	Residential Lighting Program
SCE	SW	Public	SW - Gov. & Inst. Partnerships and Water/Wastewater Pumping
SCE	SW	Crosscutting	Electric Emerging Technologies
SDG&E	SW	Commercial/Residential	Commercial/Residential HVAC
SDG&E	SW	Residential	PLA
SDG&E	SW	Residential	SW Downstream Residential HVAC Pilot
SoCalGas	SW	Cross-Cutting	SW - Gas Emerging Technologies
SoCalGas	SW	Commercial	SW - Foodservice POS
SoCalGas	SW	Commercial	SW - Midstream Water Heating

Public Posting of Workpapers in Progress

Question	Response
<p>Is there a public process for listing which WPs/measures are under development?</p>	<p>To maintain the confidentiality of 3rd Parties during the RFP process, the workpapers/measures under development at the request of 3rd Parties will not be publicly listed, until the workpapers/measures are approved and posted to CPUC's website, http://deeresources.net/workpapers.</p>
<p>Will there be a central, public submission process so I know what measures are in development or in the process of updating?</p>	<p>The IOUs will continue to be responsible for maintaining existing WPs. These WPs are public and as such, the IOUs will provide 3rd parties access to a running list that are under revision. IOUs will post a monthly update to updates to existing WPs or IOU new workpapers on the CalTF website (http://www.caltf.org/statewide-measure-list/)</p>

Workpapers for a Proprietary Technology

Question	Response
Can I develop a workpaper for a proprietary technology? If you are working on a product, is it product centric or product category centric?	Yes. Third Parties may submit a workpaper for a proprietary technology. The workpaper should focus on the technology, rather than the product/brand . Once a workpaper is approved by the CPUC, the workpaper and supporting data are publicly available.

Confidentiality of Proprietary Data

Question	Response
How do I assure that my proprietary data (or program approach or modeling tool) will be kept confidential?	<p>The IOUs take Intellectual Property protection very seriously and are fully committed to keeping bidder proposals confidential before, during, and after the two-stage solicitation process has concluded. In addition, the IOUs are no longer in the position of being the primary program designer, they have an obligation to dedicate a minimum of 60 percent of their portfolios to third-party proposed, designed, and delivered programs. Therefore, there would not be an opportunity for the IOUs to incorporate items from the solicitations into their own programs and meet these compliance requirements. The IOUs expect to need to justify any in-house implementation; it would be difficult for an IOU to justify implementing an offering that was substantially similar to a rejected proposal. Last, there is explicit language in the RFA/RFP and eventual contract that outlines the legal obligations around intellectual property that protects bidders from such an occurrence and provides an opportunity for recourse in the unlikely event there has been a breach. The IOUs will be hosting bidder's conferences for each RFA to ensure that bidders are informed of these steps to protect intellectual property and have an opportunity to ask questions like this to the solicitation teams.</p> <p>With respect to a bidder's workpapers, in particular, only Commission-approved WPs become public as they are implemented in approved programs and posted on the public website for all approved workpapers and reported in California Energy Data and Reporting System (CEDARS).</p>

Q&A

Additional information can be found in
Workpaper FAQs located here:

<https://www.pepma-ca.com/Public/Default.aspx>



Commission WP Approval Process

Presented by CPUC
California Public Utilities Commission





Outline

- **WP Process**
 - WP submission cycle
 - WP review and disposition cycle
 - Outcomes
- **WP Review Content**





PROCESS: WP SUBMISSION TIMING

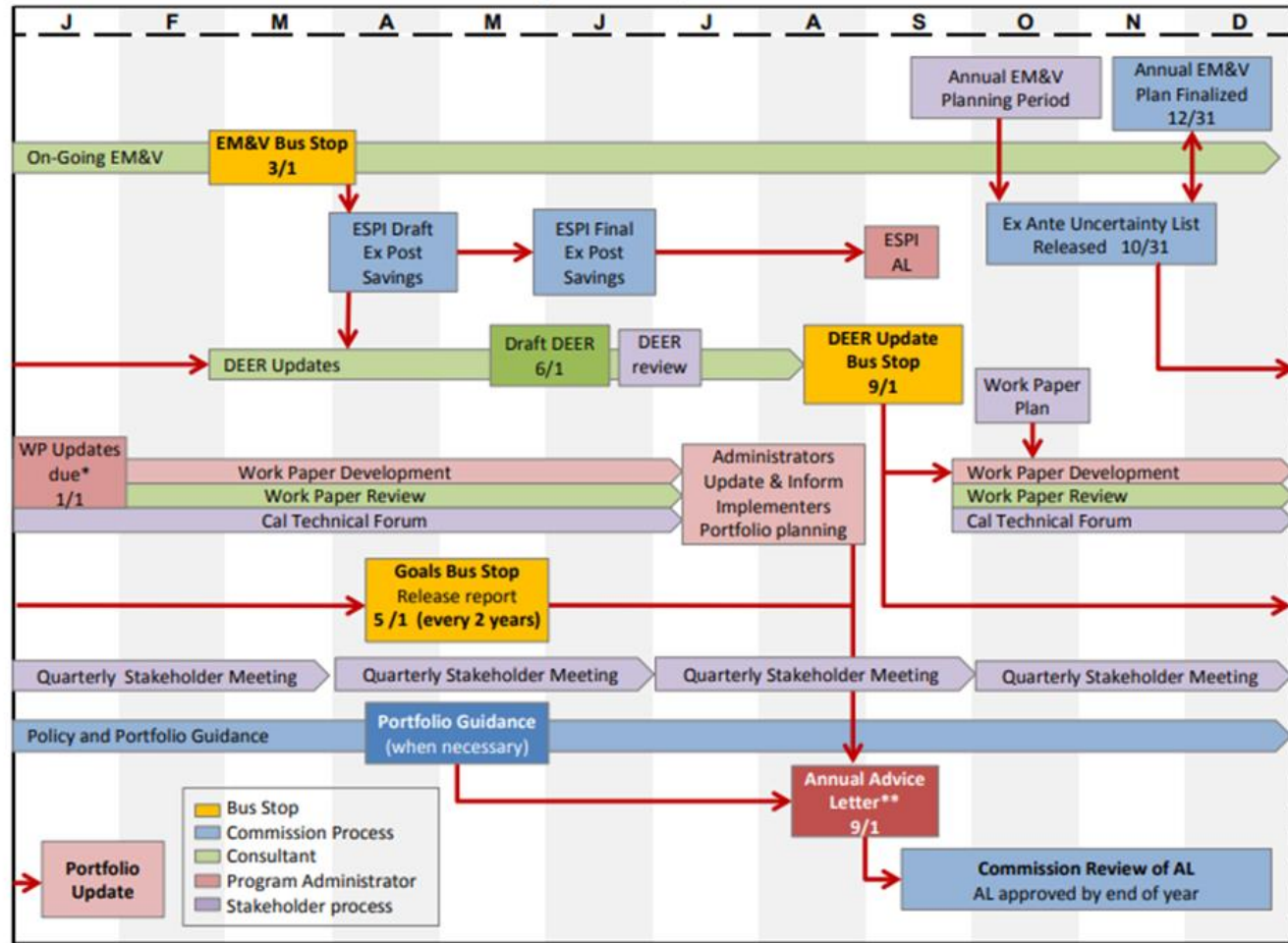
The timing of WP submissions by PAs is regulated by Phase 1 and Phase 2 criteria





Workpapers and the rolling portfolio schedule

Workpapers are submitted and reviewed under two tracks: Phase 1 and Phase 2

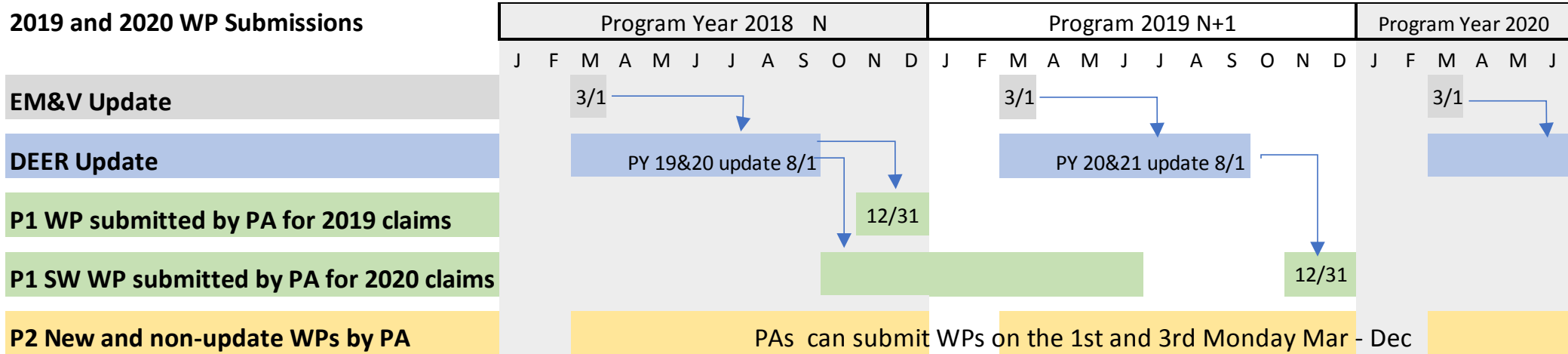


*Work papers for existing measures that are impacted by DEER updates shall be submitted by 1/1, to provide sufficient time for review





Management of WP Submission Flow



- **November 18, 2009 ALJ Ruling in A.08-07-021 established the Phase 1 and Phase 2 as a method to manage the WP review process**
- **Record of steady refinements in subsequent guidance.**





What a 3P should know about WP submission timing

- **There is an orderly process for updating workpapers each year to reflect EM&V results, market, codes/standards and other changes**
- **WP submissions are subject to review by CPUC's Ex Ante Team**
- **All existing WP are subject to revisions each year due to a DEER update or a resolution outcome**
- **New WPs can be submitted March through December twice a month or as part of Phase 2**





MYTH – Workpaper review takes a long time

- **A well-founded and complete workpaper**
 - Submitted to CPUC by Jan 1 as a Phase 1 workpaper
 - Reviewed and approved by March 1.
 - Submitted to CPUC March – December as a Phase 2
 - Reviewed and approved or receives an interim approval within 25 days.
- **PAs procedures may add to the review cycle**
 - CPUC meets with PAs to discuss workpapers in bi-weekly meetings





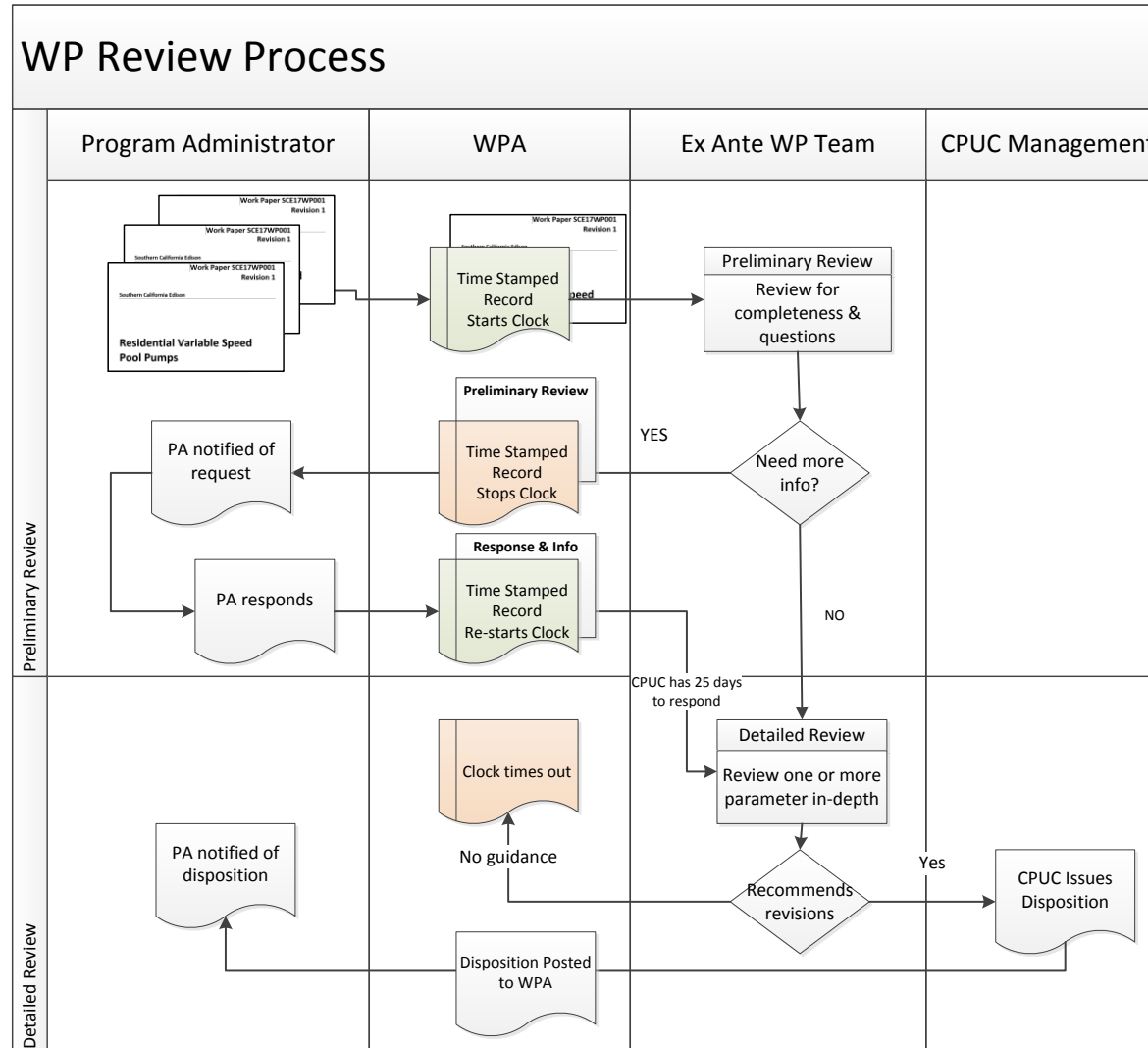
PROCESS: REVIEW CYCLE AND OUTCOMES





Review Cycle

- The “Workpaper Archive” (WPA) maintains files and timestamps of record
- Submissions are uploaded and acknowledged through WPA





Elements of the review cycle

-	Workpaper Purpose	PA Submission Schedule	CPUC Review Period	Effective Date
Phase I	Update WPs affected by DEER (years N+1 and N+2) and resolution changes New WPs with 1/1 PY N+2 start date	By Jan 1, but may also submit in November and December	CPUC has through Mar 1 to review. WPs that have not been reviewed receive interim approval.	Approved workpapers effective Jan 1
	Contingency for late P1 WP or when guidance is issued for a P1 WP prompting a revision* *Pending CPUC management approval	PA may resubmit a WP revised due to P1 guidance 1 st and 3 rd Monday of month	CPUC has 25 days or by 3/1 to review, whichever is later. WPs that have not been reviewed receive interim approval.	Approved workpapers Effective Jan 1
	For SW 2020 papers only, submission period has been extended beyond Jan 1	Agreed upon monthly submission plan	CPUC has 45 days after WPA Monday time stamp to review. WPs that have not been reviewed receive interim approval.	Approved workpapers effective 1/1/2020, subject to further DEER or resolution updates in 2019
Phase II	New WP or WP revisions due to non-DEER/resolution changes	1 st and 3 rd Monday of month with a holiday clause	CPUC has 15 days after WPA Monday time stamp to request additional information (a preliminary review) stopping the clock. The CPUC has an additional 10 days to issue a disposition when there is no outstanding preliminary review request. WPs that have not been reviewed receive interim approval.	Approved workpapers effective upon approval date or upon interim approval date





Outcomes of the review

CPUC Review Status Outcome	Description	Notification
Approval	CPUC issues disposition approving WP as submitted. May include direction for future revisions.	PA notified via WPA message. Uploaded to www.deeresources.net as an approved WP.
Interim approval	CPUC chooses not to review WP and the review period times-out. Workpaper subject to future CPUC review with prospective application of results.	Uploaded to www.deeresources.net as an approved WP.
Resubmission required	CPUC issues disposition identifying additional information or specific revisions or additions for ED to make an approval recommendation. May include direction for future revisions.	PA notified via WPA message. Disposition uploaded to WPA and selectively to www.deeresources.net
Rejection	CPUC concludes the measure does not fall within the definition of an energy efficiency measure or does not meet CPUC requirements for inclusion into a utility portfolio.	PA notified via WPA message. Disposition uploaded to WPA and selectively to www.deeresources.net





What a 3P should know about the WP review cycle

- The PAs are the entity responsible for the quality of WPs they submit
- Communications regarding WPs occurs between the submitting PA and the CPUC via the WPA system
- WP review cycles vary in length depending upon the Phase and whether the review is a preliminary or detailed review
- Review outcome may require further modification to the workpaper either immediately or in the future
- Approved WPs are posted on www.deeresources.net





Phase 1 and Phase 2 Summary

Phase 1

- Phase 1 WPs are
 - Revised WPs due to DEER updates (both years) or resolution updates with a 1/1 start date in N+1
 - New WPs with a 1/1 start date in N+2
- All WPs are due by 1/1. Submission can occur Nov-Dec.
- The Ex Ante Team review period is through 3/1. Those WPs without a formal disposition by 3/1 receive interim approval
- Approved WP applies to claims beginning on 1/1 N+1

Phase 2

- Phase 2 WPs are
 - Revised WP due to non-Deer/resolution changes
 - New WPs with a start date other than 1/1 for PY N+2
- Submitted March – December
 - Downloaded by CPUC 1st and 3rd Monday of the month at which time they are time stamped
 - No P2 WPs accepted Jan-Feb
- Ex Ante Team review can include
 - Preliminary review (15 days after upload). The clock stops with a request for additional information
 - Detailed review (25 days after upload)
 - Interim approval granted if no guidance is issued
- Applies to claims on the WP approval date





Preliminary Review

Detailed Review

Ex Ante Team Considerations

WP REVIEW CONTENT





Phase 2 - Preliminary and Detailed Review

Preliminary review

- Request additional information needed to complete a review of the WP
- Preliminary review can also result in a disposition that approves, requires revisions, or rejects WP
- Issuing a *preliminary review disposition* stops the review clock. A 25-day clock is restarted with submission of requested information.

Detailed Review

- Detailed review of one or more of the WP assumptions or methods
- Detailed review can result in a disposition that approves, requires revisions, or rejects the WP
- A single disposition may affect multiple workpapers
- If a *detailed review disposition* is not completed before the clock times out, the WP receives *interim approval*





Structural considerations

- **Elements of this may be included in the preliminary review**
- **Is this WP necessary?**
 - Is the measure captured in DEER or in another WP?
 - Alternate estimates for existing WPs must meet a high bar for admittance as evidence
 - Is this a good measure for a deemed approach?
- **Is the MAT (measure application type: NR, AR, etc.) applicable to this measure?**
 - Is the baseline consistent with the MAT?
- **What are the references?**
 - Is there a related WP and what is different in this WP?
 - If this is a new measure, is it recognized by another authoritative sources?
 - Was DEER used for EUL, NTGR, installation rate, other
 - Was any previous related disposition guidance acknowledged and addressed





Technical considerations

- **A subject matter expert (SME) will review WPs.**
- **DEER parameters used appropriately**
- **Credible parameters**
 - Are the parameters representative of the target population?
 - Is the source of population level data reasonable, large enough, and representative of the target population?
 - Raw data should be included with WP submittal
- **Credible methods**
 - Is the methodology appropriate for the measure?
- **Preponderance of evidence (PoE)**
 - Viable data collection process which provides definitive evidence of pre-existing conditions





What a 3P should know about WP content

- **CPUC reviewers expect reviewable and credible data to support population average estimates**
- **Modification to existing WP parameters and methods must be supported with data that is more recent and of similar or better quality than the prior WP**





Questions?



eTRM Demo

Presented by Cal TF
California Technical Forum

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



**AYAD AL-SHAIKH
ANNETTE BEITEL
NOVEMBER 29, 2018**

The California Technical Forum (Cal TF)



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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

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What is the eTRM?

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- The California electronic Technical Reference Manual (eTRM) will be a **single repository** for all California statewide deemed energy efficiency measures
 - **Single repository** for all approved deemed measures and associated information (DEER, non-DEER workpapers)
 - Also includes POU TRM information
- An online relational database, will significantly improve **deemed measure transparency**, development and updating.

The eTRM Supports Policy Objectives

Since 2012, the Commission has directed utilities to prepare *statewide* workpapers.

We agree that **similar measures delivered by similar activities should have single statewide values** [emphasis added] unless recent evaluations show that a significant variation between utilities and that difference is supported by a historical trend of evaluation results. (D.12-05-015, p. 54)

Commission Staff guidance to utilities for 2017 workpapers in the Ex Ante Team 2017 Workpaper Guidance Memo:

Statewide Workpapers: Only one workpaper may be submitted for each set of programs/measures which are adopted by more than one program administrator; such workpapers have been termed “statewide workpapers” and program administrators have been directed to collaborate on such efforts. (p.7)

Direct regulatory support is contained in the Phase 2A decision in the Rolling Portfolio proceeding

“.. to improve the usability and transparency of all ex ante values... a **common platform** for all PAs to compose savings estimates transparently and consistent with Commission direction... should be focused on opportunities **to facilitate transparency and collaboration.**”

Key eTRM Benefits

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- **Single Repository for All Deemed Measures**
 - No more Steps 1,2,3
- **Single Set of Statewide, Deemed Measures**
 - No more multiple different workpapers for a single measure.
- **All Measures are Fully Documented and Reproducible**
 - All measure parameters for a single measure linked (savings, EUL, NTG, delivery, etc)
 - Measure parameters linked to supporting sources
 - Source documents are clearly cited and hosted in the eTRM

Key eTRM Benefits

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- **Automatic Updating**
 - No more manual updating of individual utility workpapers
 - Changes that apply to multiple measures or all measures will occur automatically
 - Includes clear update and revision histories for each measure
- **Clear and Documented Workflow Management**
 - Identifies who has updated and/or reviewed a measure
- **Statewide Consistency**
 - Consistent baselines and measure definitions, units, methods, adjustment factors, etc.
 - Statewide naming conventions
 - Consistent, detailed descriptions

Demo Summary

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- Single Repository for All Deemed Measure
- Single Set of Statewide, Deemed Measures
- All Measures are Fully Documented and Reproducible
- Automatic Updating
- Clear and Documented Workflow Management
- Statewide Consistency

Feedback

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We welcome your feedback on eTRM platform

www.CalTF.org