

Cal TF White Paper Selection Process & Topics

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Agenda

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Overview of topics

- Emerging Measures
- Crosscutting Technical and Policy

Process for selecting white papers to develop in 2020

Preview of white paper topics

Ongoing white papers from 2019

Asks:

- Help us further define “Key Characteristics” and “Key Policy Considerations”
- Provide comments on “Impact/Importance” to portfolios

Overview: Emerging Measure Types

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- With the launching of the New Measure Process to 3Ps, it's highly likely new measure types will be submitted.
- Discussing new measure types before the measure development/review process begins will:
 - ✓ Reduce delays
 - ✓ Help to categorize proposed measures quickly
 - ✓ Improve our ability to evaluate new measures consistently
- Objectives of white paper topics of emerging measure types are:
 - ✓ Provide recommendations for measure documentation
 - ✓ Provide clarity on key considerations and technical and policy issues.

Overview: Emerging Measure Types

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EE Measure Types

- Procedural measures
- Targeted measures
- Bundled EE measures
- Measures with savings predominantly from software
- BRO & service measures - modifying existing parameters
- Codes & Standards
- EUL extender measures
- Industrial measures
- Fuel Substitution – site to source energy

Bundled Measure Types

- Generation + EE
- Demand Response + EE
- Storage + EE

White Paper Statement:

- *Definition of Measure Type*
- *Key Characteristics*
- *Key Policy Considerations*
- *Impact/Importance*

Overview: New Crosscutting Technical/Policy Issues

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- EUL/RUL Policy Guidance for AOE measures
- Guidance for Load shapes
- Classification of a Measure as ET vs. Custom vs. Deemed

White Paper Statement:

- *Current State*
- *Current Challenges*
- *Key Considerations*
- *Impact/Importance*

Process for Selecting Topics

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1. Understand white paper topics (today)
2. Vote for 3 topics & indicate which subcommittees you want to participate in
 - By March 16th
 - See email with link to survey
3. Cal TF Staff will select short list of topics and schedule subcommittee meetings
4. Each subcommittee will complete a white paper template
 - Completed templates will be used to determine viability of white paper topics and final selection (*show example at end*)
5. Cal TF Staff circulate final white paper topics to Cal TF for final review/comment.

1. Procedural Measures

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| Definition | <ul style="list-style-type: none">• Ex ante per-unit savings for a procedural measure are adjusted as a result of ex post evaluation.• Example: Universal Audit Tool |
| Key Characteristics | <ul style="list-style-type: none">• A clear set of assumptions must be established to estimate ex ante savings.• A clear procedure must be established for how the ex post energy savings will be calculated.• All other impacts are documented and agreed upon during the measure development process. |
| Key Policy Considerations | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

2. Targeted Measures

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| Definition | <ul style="list-style-type: none">• Measure is not applicable across entire state, but only to select geographic areas and/or select customer or building types, or other definable characteristics. |
| Key Characteristics | <ul style="list-style-type: none">• Focused delivery so that measure can be offered cost-effectively in clearly-defined circumstances.• Baseline variations can often exist that will be unique to the targeted segment.• Measure cost-effective only in specific situations, not generally cost-effective.• Likely measure application type to allow the use of existing conditions (AR, BRO, or AOE) therefore documentation requirements should be included.• Not intended to force program design elements, but instead to increase number of cost-effective measures. |
| Key Policy Considerations | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

3. Bundled EE Measures

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| Definition | <ul style="list-style-type: none">• Multiple EE measures are installed concurrently as a bundled package. |
| Key Characteristics | <ul style="list-style-type: none">• Encourage implementers to group projects to get deeper savings• Can simplify implementation b/c multiple measures are installed together.• Areas of concern are calculating EUL, NTG, and other parameters that may differ across the individual measures that are bundled. |
| Key Policy Considerations | <ul style="list-style-type: none">• Measure bundles support statewide policy goals such as:<ul style="list-style-type: none">– Decarbonization– Zero net energy (ZNE)– Reaching stranded savings |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

4. Software Measures

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| Definition | <ul style="list-style-type: none">Measures for which a significant portion of savings result from software or algorithms. |
| Key Characteristics | <ul style="list-style-type: none">Software or algorithms not available for inspection or are so complicated that it is not possible to validate savings without performance-based testing.Need to agree on acceptable testing protocol and testing organization. |
| Key Policy Considerations | <ul style="list-style-type: none"><i>(subcommittee to complete)</i> |
| Impact/Importance | <ul style="list-style-type: none"><i>(subcommittee to complete)</i> |

5. BRO & Service Measures

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| Definition | <ul style="list-style-type: none">• The BRO measure type defined in D.16-08-19 & E-4818• E-4952 reclassified additional “service” measures as BRO (duct sealing, QI/QM measures, etc.)• Additional measures that are behavioral and/or RCx can be developed as statewide measures. |
| Key Characteristics | <ul style="list-style-type: none">• These measures may require additional documentation to:<ul style="list-style-type: none">– Document existing conditions– Verify quality installation– Verify persistence of savings– Document true measure life |
| Key Policy Considerations | <ul style="list-style-type: none">• E-4818 established EUL and other parameters as rebuttal presumption• Under what circumstances should E-4818 parameters be modified? |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

6. Codes & Standards Measures

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| Definition | <ul style="list-style-type: none">• Savings result from change to CA code or standard |
| Key Characteristics | <ul style="list-style-type: none">• Codes and standards (C&S) measures are calculated and claimed differently than traditional deemed or custom measures. |
| Key Policy Considerations | <ul style="list-style-type: none">• Is there value in trying to document codes and standards measures in the eTRM?• If so, what fields in template would need to be modified? |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

7. EUL-Extender Measures

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| Definition | <ul style="list-style-type: none">• Measures provide benefits that can extend the life of another measure.• Examples: additional monitoring points, QM service plan |
| Key Characteristics | <ul style="list-style-type: none">• XXX |
| Key Policy Considerations | <ul style="list-style-type: none">• Conventions on how an EUL-extender measures should be evaluated for cost effectiveness will be required to ensure that benefits can be considered appropriately.• Does this measure require a policy change? |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

8. Industrial Measures

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| Definition | <ul style="list-style-type: none">• Industrial measures provide energy efficiency benefits at a specific industrial site. |
| Key Characteristics | <ul style="list-style-type: none">• Normalized units are not simply kWh but are linked to a production metric such as kWh/widget, kWh/cfm, kWh/gallon-of-product, etc.• Similar to energy savings measurement approach for strategic energy management (SEM), for which usage is estimated and analyzed at the site or system level. |
| Key Policy Considerations | <ul style="list-style-type: none">• Conventions on how an industrial deemed measures should be evaluated for cost effectiveness is required to ensure that benefits can be considered appropriately. |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

9. Fuel Substitution Measures (Site to Source Energy)

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| Current State | <ul style="list-style-type: none">• CPUC has adopted new fuel substitution rules that must be applied clearly and consistently for development of deemed fuel substitution measures. |
| Current Challenges | <ul style="list-style-type: none">• There are three sets of calculations/values emerging from the new fuel substitution rules that do not fit into the current measure and claims reporting process:<ul style="list-style-type: none">– Source energy comparison of base & measure case technologies (fuel substitution requirement).– Unit energy consumption (UEC) for base & measure cases (CPUC decision directing the reduction of EE goal for base case fuel).– Site energy comparison between different fuels as done in typical measure savings calculation.• It is unclear how to report the measure savings and how to apply UECs to the EE goals. |
| Key Considerations | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

11. DR + EE Bundled Measures

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| Definition | <ul style="list-style-type: none">• DR and EE measures are installed concurrently as a bundled package. |
| Key Characteristics | <ul style="list-style-type: none">• DR and EE measures may interact so that kWh and kW impacts are not additive. |
| Key Policy Considerations | <ul style="list-style-type: none">• Are there any existing policies on bundled EE and DR measures? |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

10. Generation + EE Bundled Measures

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| Definition | <ul style="list-style-type: none">• On-site generation and EE/DR measures are installed concurrently as a bundled package.• Example: Cow Cooling Fans with VFD + PV; They typically only run above a certain temperature. |
| Key Characteristics | <ul style="list-style-type: none">• Installing on-site generation and EE/DR concurrently will likely reduce available savings from EE and DR measures.• Method would address how to reduce savings from EE/DR when installed concurrently with generation. |
| Key Policy Considerations | <ul style="list-style-type: none">• Conventions on how these measures should be evaluated for cost effectiveness is required to ensure that benefits can be considered appropriately.• Are there any existing policies on these measures? |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

12. Storage + EE Bundled Measures

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| Definition | <ul style="list-style-type: none">Storage and EE Measures are installed concurrently as a bundled package. |
| Key Characteristics | <ul style="list-style-type: none">Storage measures provide benefits from a carbon-reduction perspective by shifting when energy is used.By taking advantage of 8,760 carbon tables, carbon savings can be calculated for load shifting measures that may also use more or less energy in the process.How can storage and EE measures be bundled to increase savings so they are greater than the savings that would result if they were installed individually? |
| Key Policy Considerations | <ul style="list-style-type: none">Conventions on how carbon-reduction measures should be evaluated for cost effectiveness is required to ensure that benefits can be considered appropriately. |
| Impact/Importance | <ul style="list-style-type: none"><i>(subcommittee to complete)</i> |

13. EUL/RUL Policy Guidance for AOE Measures

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| Current State | <ul style="list-style-type: none">• The EUL of the AOE measure is equal to the lower of the RUL of the modified host system/equipment or the EUL of the AOE measure itself. |
| Current Challenges | <ul style="list-style-type: none">• Current EUL/RUL definition for AOE measures assumes AOE measure is integral to host equipment and this is not true for all AOE measures• RUL-IDs for AOE measure application types are often not available• Some “good” measures are no longer cost effective. |
| Key Considerations | <ul style="list-style-type: none">• If the AOE measure is not “integral” to the host equipment, the RUL should not be based on the EUL of the host equipment• If the AOE measure cost is high relative to savings, the RUL should not be developed from that host equipment |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

14. Guidance for Load Shapes

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| Current State | <ul style="list-style-type: none">• The load shape is part of the electric impact profile that feeds into the cost-effectiveness calculator• The load shape is an important parameter for program design. |
| Current Challenges | <ul style="list-style-type: none">• The list of statewide 8,760 electric load shapes is currently very limited (7 com and 14 res)• The list of statewide electric load shapes has gaps. |
| Key Considerations | <ul style="list-style-type: none">• Several ongoing activities by DOE, CEC, and the RTF are producing or updating end-use profiles.• Guidance should be established to ensure that we achieve the right level of detail to meet immediate and long-term needs (cost-effectiveness, GHG calcs, peak-period estimation, etc). |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

15. Classification of a Measure as ET vs. Custom vs. Deemed

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| Current State | <ul style="list-style-type: none">• Entrepreneurs, vendors and implementers are not always clear on how to get a new measure into the EE portfolio, and if/when to pursue the ET, Custom, or Deemed path. |
| Current Issues | <ul style="list-style-type: none">• Develop clear definitions for:<ul style="list-style-type: none">- Deemed Measure- Custom Measure- ET Measure- R&D Measure• Once measure is correctly categorized, describe path for how it should be considered by IOUs & POUs.• Important to have clear path for upcoming launch of New Measure Review process so we can provide clear and consistent feedback and alternative path for measures that are not to be eligible for “deemed measure status.” |
| Key Considerations | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |
| Impact/Importance | <ul style="list-style-type: none">• <i>(subcommittee to complete)</i> |

Ongoing White Papers from 2019

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- **GHG Calculation Approach and Data Sources; Recommendation for eTRM**
 - ✦ Cataloguing current approaches for calculating GHG in CA
 - ✦ Cataloguing data sources
 - ✦ Cataloguing use cases for GHG reductions by CEC and CPUC
 - ✦ Recommending a statewide consistent approach for calculating GHG reductions of deemed measures, plus other use cases if appropriate.
 - ✦ Finalize recommendation for calculating GHG in eTRM
- **Deemed Measure Cost Savings**
 - ✦ Cataloguing current approaches
 - ✦ Recommending consistent approaches for going forward.
- **Deemed Measure Savings Calculation Approaches**
 - ✦ Cataloguing current approaches
 - ✦ Recommending for current approaches going forward.
- **Creating Tighter Linkage Between Deemed Savings Updates and EM&V Planning**
- **Next Steps:** We will be seeking volunteers (Cal TF Members and Non-Members) to participate in subcommittees to support completing these 2019 white papers.