

# Existing Measure Updates



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# eTRM Measures

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- eTRM Deemed Measure Workflow
- Total Number of Measure Versions

## Types of Updates

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Building Types</li><li>• Building Vintages</li><li>• Climate Zones</li><li>• Costs</li><li>• Delivery Types</li><li>• Energy Savings</li><li>• Effective Useful Life</li></ul> | <ul style="list-style-type: none"><li>• Measure Application Type</li><li>• Net-To-Gross</li><li>• Offerings</li><li>• Refrigerant Avoided Cost Calculator (RACC)</li><li>• Water-Energy Calculator 2.0/Water Savings</li></ul> |
|--|--|

- New Measures (8)

# eTRM Deemed Measure Workflow

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- Measure Contributor Roles
  - Measure Developer
  - Measure Reviewer
  - Measure Manager
  - Cal TF Staff Reviewer
  - CPUC Reviewer
- Measure Status
  - Draft
  - Peer Review
  - Manager Review
  - Cal TF Staff Review
  - Cal TF Affirmation
  - Submitted to the CPUC
  - CPUC Review
  - CPUC Approved

# eTRM Deemed Measure Workflow

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- **Transparency and Consistency**

## STATEWIDE DEEMED MEASURE DEVELOPMENT TEMPLATES & TOOLS

→ **Statewide Measure Characterization Template** (v2.0, updated April 30, 2021)

→ **Statewide Measure Development and QA/QC Guidelines** (v2.3, updated April 15, 2022)

→ **Statewide Measure Development Style Guide** (v3.0, updated February 25, 2022)

**Exclusion Table Examples** (updated August 26, 2021)

→ **Workflow Conventions and Standards “Cheat Sheet” for Measure Contributors** (v1, updated November 3, 2021)

# eTRM Measure Updates

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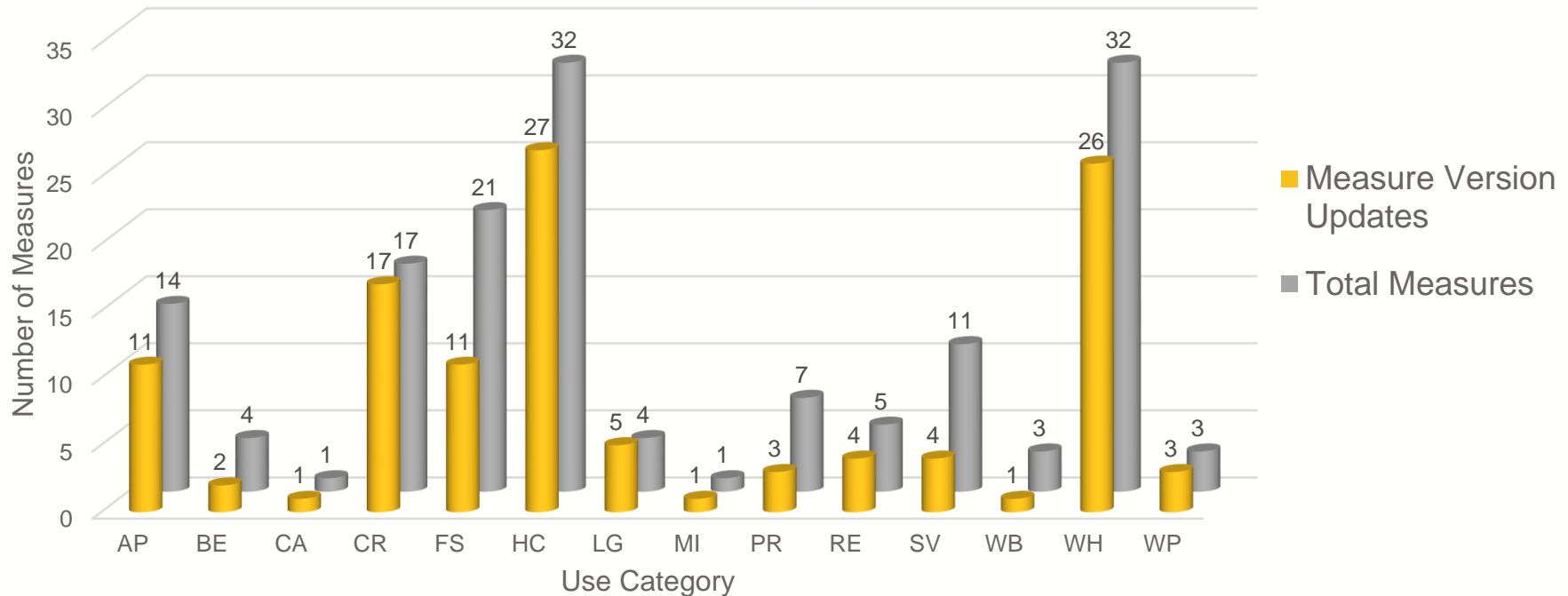
- Total Number of Measure Versions: **116**

## Types of Updates\*

- Building Types
- Building Vintages
- Climate Zones
- Costs
- Delivery Types
- Energy Savings
- Effective Useful Life
- Measure Application Type
- Net-To-Gross
- Offerings
- Refrigerant Avoided Cost Calculator (RACC)
- Water-Energy Calculator 2.0/Water Savings

# Breakdown of Measure Version Updates per Use Category

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- AP - Appliance or Plug Load
- BE - Building Envelope
- CA - Compressed Air
- CR - Commercial Refrigeration
- FS - Food Service

- HC - HVAC\*
- LG - Lighting\*
- MI - Miscellaneous
- PR - Process
- RE - Recreation

- SV – Service
- WB - Whole Building
- WH - Service & Domestic Hot Water\*
- WP - Water Pumping / Irrigation

\* Use categories that had multiple measure versions updates

# Existing Measure Updates

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- Deemed Measure Package Draft Changes\*
  - Deemed Platform Quality Control (DPQC) team at PG&E
- Cal TF Reviewed the Available Data:
  - 1<sup>st</sup> Baseline Energy Savings (Peak Demand Reduction, Electric Savings, Gas Savings)
  - 1<sup>st</sup> Baseline Incremental Measure Cost
  - Effective Useful Life (EUL) Years
  - Net-to-Gross

# Measure Updates – Energy Savings

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- Offerings
  - Adding/Removing
- Baseline Updates
- Water-Energy Calculator 2.0/Water Savings
  - IOU Embedded Energy Savings were added, only affect Energy Savings (kWh/yr)
- New Version of Water Heater Calculator
- Weather Data
  - DEER2023
  - Modeling
  - Ground Water Temperatures



# Measure Updates – Costs

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- Offerings
  - Adding/Removing
- Updated Sources
  - Qualified Product Lists
  - ISP Studies
  - Surveys
  - Online Data
- RSMMeans Adjustments
  - Scale costs to current year using cost indices

# Measure Updates – EUL/NTG

- EUL

- Average % change in EUL Years shows an increase
  - ✦ *Resolution E-5152, if the add-on equipment (AOE) equipment is not directly installed on the host equipment and can remain place if the host equipment is replaced, then the AOE equipment's full EUL can be used, even if it exceeds the host equipment's RUL.*
    - SWAP010, SWAP011, SWHC018\*, & SWPR006\*

- NTG

- Average % change in NTG kWh Ratio shows a decrease
  - ✦ Most measures in the data with extreme percent change values where due to the NTG ID being updated (Ex. E-5152)

# Other Important Updates

- Building Types
  - CR (9 measure versions)
  - AP, HC, & WH (5 measure versions)
- Building Vintages
  - WH (14 measure versions)
  - CR (10 measure versions)
  - HC (9 measures versions)
- Climate Zones
  - AP (4 measure versions)
  - CR (4 measure versions)
- Delivery Type
  - CR (6 measure versions)
  - HC & WH (4 measure versions)

# Resources

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- eTRM
  - Measure Level Data
    - ✦ Measure Reports
  - Offering Level Data
    - ✦ Measure Specific Permutations
    - ✦ All Permutations Download
- Tools
  - eTRM Stats (*new*)

# Appendix

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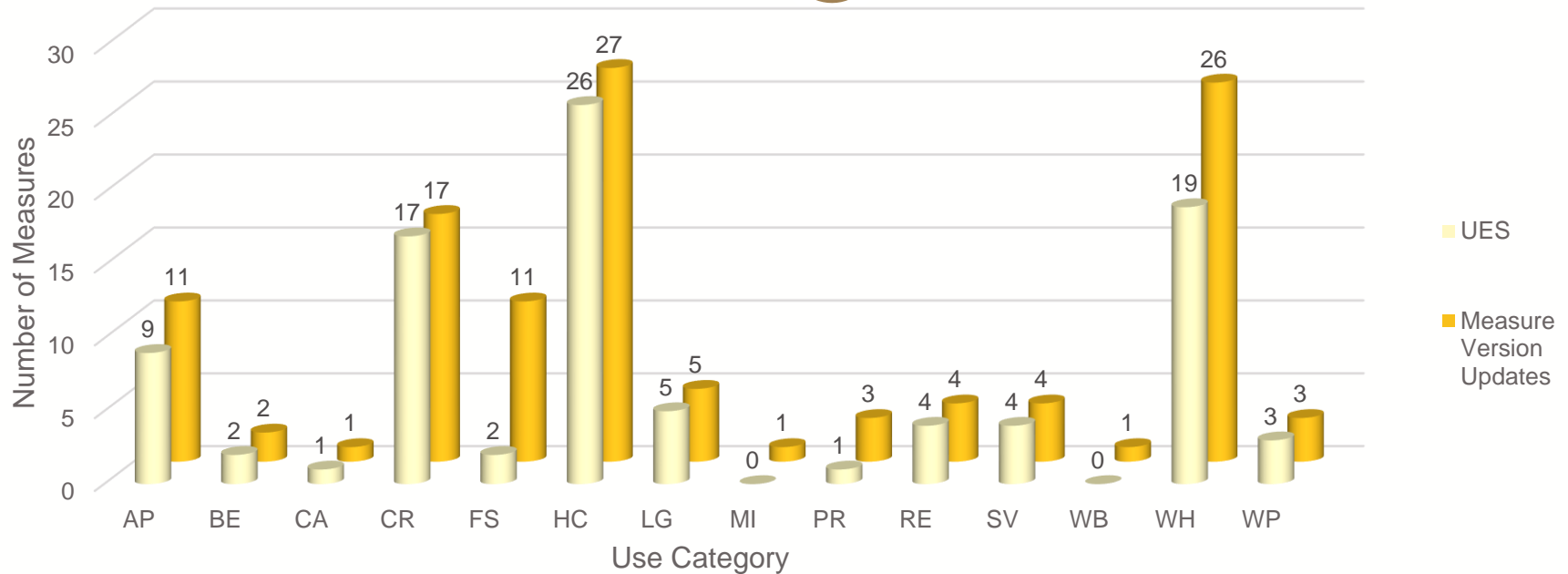
# New Measures

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| <b>Statewide ID</b> | <b>Measure Name</b>   | <b>Status</b>          |
|---------------------|---|------------------------|
| SWBE010-01          | Deeply Buried Ducts, Residential  | Peer Review            |
| SWHC054-01          | Heat Recovery Ventilation, Residential                                      | CPUC<br>Review         |
| SWLG020-01          | UL Type B LED Screw-in Lamp HID Retrofits                                   | Submitted to<br>CPUC   |
| SWMI002-01          | No Savings  | Cal TF Staff<br>Review |
| SWWB007-01          | Business Energy Reports   | CPUC<br>Review         |
| SWWH028-01          | Large Heat Pump Water Heater, Commercial and Multifamily, Fuel Substitution | Approved               |
| SWWH033-01          | Gas Heat Pump Water Heater, Multifamily                                     | Approved               |
| SWWH034-01          | Solar Thermal Water Heating System, Multifamily                             | Approved               |

# Measure Updates – Energy Savings

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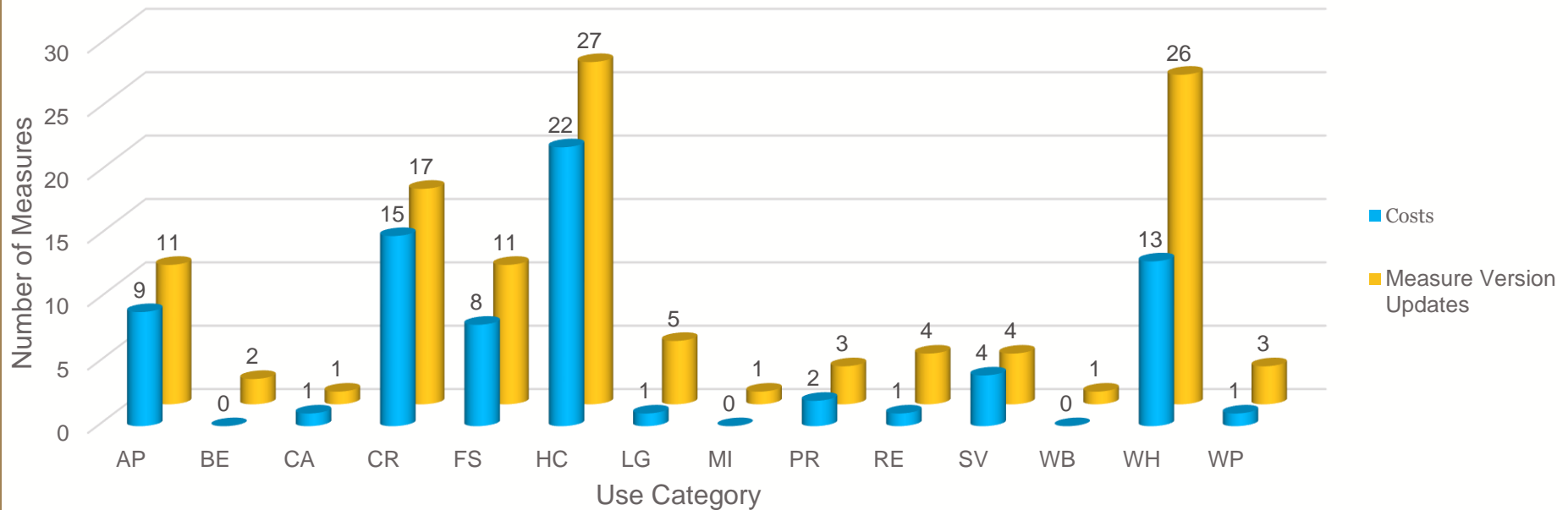


**Data Available in the PG&E Deemed Measure Package Draft Changes Spreadsheet**

|                            | AP | BE | CA | CR | FS | HC | LG | PR | RE | SV | WH | WP |
|----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Peak Demand Reduction (kW) | 4  | 0  | 0  | 11 | 2  | 11 | 3  | 0  | 0  | 1  | 10 | 0  |
| Electric (kWh/yr)          | 4  | 0  | 0  | 11 | 2  | 11 | 3  | 1  | 0  | 1  | 14 | 0  |
| Gas (therm/yr)             | 3  | 0  | 0  | 6  | 3  | 11 | 2  | 0  | 1  | 1  | 16 | 0  |

# Measure Updates – Costs

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**Data Available in the PG&E Deemed Measure Package Draft Changes Spreadsheet**

| AP | CA | CR | FS | HC | LG | PR | RE | SV | WH | WP |
|----|----|----|----|----|----|----|----|----|----|----|
| 4  | 0  | 9  | 2  | 10 | 1  | 1  | 1  | 1  | 11 | 0  |



# Examples

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- Savings

- Some percent changes are caused by the removal or a small shift in very small values
  - ✦ Old value = 0.0012
  - ✦ New value = 0
- Multiple updates at a time affect how savings change
  - ✦ Weather, Baseline Updates, etc.

- Costs

- One offering can greatly affect the average one way
  - ✦ Offering 1: \$22 -> \$17
  - ✦ Offering 2: \$22 -> \$23 (Almost no change)
  - ✦ Offering 3: \$22 -> \$75