

# MEMORANDUM

Date: December 15, 2020  
To: Cal TF and LADWP  
From: Ayad Al-Shaikh, Tomas Torres-Garcia, Annette Beitel, and Jennifer Holmes, Cal TF Staff  
Subject: Opportunities and Benefits from Including LADWP Custom Measures in the eTRM

---

## I. Objective

The POU custom process varies across the 48 POUs that are located throughout California. Some of the POUs use the custom and semi-deemed measure approach documented in the POU TRM that was developed for the POUs and last updated in 2017,<sup>1</sup> The largest POUs (like LADWP) have built their own custom measure project development and review process to optimize the costs and benefits associated with custom projects.

This paper explores how the POU custom project development and review process can be further standardized and streamlined by integrating custom measures into the eTRM. Because LADWP's Custom Performance Program (CPP) project development and review process is already well-developed, standardized, and well-documented, it will serve as an excellent foundation for this initiative.

This paper discusses the LADWP current CPP process and savings calculation tool, and how migrating LADWP's custom measures into the eTRM could further improve workflow efficiency and increase custom project realization rates. Specifically, migrating LADWP's custom measures and process into the eTRM will result in greater transparency, more streamlined and accurate measure review and update processes, and greater consistency between related custom and deemed measures.

Cal TF Staff and LADWP propose starting with measures identified as CPP Custom Express measures for which "semi-deemed" savings values are based upon existing deemed measure values or deemed measure savings calculations. The Custom Express measures typically require limited data collection so that site-specific values can be interpolated from another existing deemed measure. (See Attachment A for additional details.)

The benefits of including LADWP custom measures in the eTRM will extend to other POUs by 1) facilitating statewide consistency in POU custom measure development and review, 2)

---

<sup>1</sup> Energy & Resource Solutions, Inc. (ERS). 2017. *Savings Estimation Technical Reference Manual*. 2017. Prepared for the California Municipal Utilities Association. Third Edition.

---

improving transparency, 3) increasing POU access to industry accepted calculation methods and inputs, and 4) increasing POU access to standardized tools and resources.

## II. Data Sources and Approach

To assess the value and limitations of integrating custom measures in the eTRM, Cal TF Staff reviewed LADWPs current custom application process and calculation tool, and LADWP's analysis of the FY14-15 Custom Performance Program evaluation results. Cal TF Staff had extensive engagement with LADWP staff to fully understand the CPP data standards, data requirements, and application processes.

See Attachment A for a more detailed description of the LADWP custom measure project development and review process.

## III. Opportunities

LADWP has standardized substantial portions of its CPP project development and review process, as follows:

1. Common nomenclature for all 180 custom measures
2. Complex, but easy to use Excel tool for data collection and savings calculations for each measure
3. Common documentation requirements for each measure
4. Documented eligibility and qualification requirements for each measure

Due to this standardization, the LADWP CPP is an ideal source of custom measures to migrate into the eTRM. The process of doing so will help Cal TF Staff identify existing and current eTRM features and functionality that will optimize custom program processes for both program administrators and custom project applicants.

Cal TF Staff has identified significant opportunities for increased efficiency and accuracy for LADWP's custom project development and review process that could result from adding custom measures in the eTRM.

*Opportunity #1: Enforce standard measure identification nomenclature:* The eTRM database ensures that measure numbering is consistent and follows the established convention; the *Statewide Measure Development and QA/QC Guidelines* provides the nomenclature for statewide measure IDs and measure names.

*Opportunity #2: Leverage statewide values:* The eTRM includes the current statewide deemed measures approved for both IOU and POU-only portfolios in California. Notably, the eTRM provides access to the latest per-unit savings, demand reduction, and cost values for 140+ measures, as well as currently accepted inputs and assumptions and the references that substantiate such values. *About 59 LADWP custom measures are already included in the eTRM.* These measure values can serve as the basis for POU semi-deemed measures, which are largely based upon deemed values but require some site-specific data collection. Housing semi-deemed measures in the eTRM will lead to more streamlined (lower cost) measure

---

updates; if a deemed measure is updated any measures linked to it will also be updated, and linked measures will remain aligned.

Opportunity #3: Leverage statewide tools and processes: The maintenance of data can be leveraged across statewide resources making it more cost effective for POUs to access the most current measure data and information. This opportunity includes the eTRM reference library, which stores all references cited to document statewide measure calculation inputs, assumptions, codes and standards, and other supporting research. The eTRM reference library overcomes the issues associated with using webpage URLs to link to references online, which frequently break or become unavailable. Moreover, references are already linked to shared data values providing highly valued transparency to the origins of key parameters of statewide measures.

Opportunity #4: Embed/live data collection and data storage: Since eTRM measures are version controlled, making the *latest* tools accessible can be handled through publishing only the latest version. Note that only published versions are visible to the typical user.

In the short-term, an Excel workbook can be posted for download in the eTRM measure form for custom measures. This file should be clearly labeled for use only until a clearly stated expiration date.

In the long-term, online custom application data input forms can be created that are mobile-device compatible; this solution ensures that only the right version is accessible and allows for the simplest use of tools to be used for data collection. For example, software applications exist today that can transfer nameplate data directly from an image to a data input form using image and text recognition decoding. This solution would require the ability to save progress so that an application can be completed in stages. With this solution, the eTRM becomes an interactive system for custom measures. The back-end capability of the eTRM is necessary to support this interaction to avoid performance issues that are experienced with other tools like the CET, for which there is only a single SQL-server available to process requests.

Inputs should be collected through this structured intake process so that the understanding of the measure can be informed for future updates. For example, cost data could be improved to be weighted based upon implementation quantities rather than a simple average approach if enough data exists.

Opportunity #5: Embed/live savings calculation tools: Similar to embedded data collection, the eTRM affords the opportunity for embedded calculations. Short and long-term solutions are possible and vary based upon eTRM system capabilities.

In the short-term an Excel file could be downloaded from the measure page in the eTRM. This file should be linked to the savings values associated with the corresponding deemed measure that is referenced, and it should be clearly labeled for use only until an expiration date.

In the long-term, online application/data input forms can be created that provide data validation and allow inputs to be controlled through assumptions and ranges. Inputs that are outside of normal ranges can be flagged to require additional documentation or be disallowed. The eTRM could afford users a customizable user dashboard to become a workspace for open applications and could provide the capability for multiple measures to be processed together.

---

Opportunity #6: Data validation and expanded review capabilities: Through its relational database structure and calculation features, the eTRM offers opportunities for automated data validation not only to ensure data accuracy but to drive toward data consistency across measures. Data inputs for each influential parameter (i.e., variables that are determined to be key drivers of savings, such as hours of operation that vary between building types) can be validated and controlled by predetermined limits that are more transparent than what is possible in an Excel workbook. The transparency afforded by the eTRM enables more efficient measure/project application review.

Opportunity #7: Default values: Influential parameters can offer default values within the calculation tool that are acceptable for a particular measure and building type if the site-specific data is not available.

Opportunity #8: Link to published deemed measure savings methodology: The methodologies for calculating impacts and costs for the 140+ deemed measures published in the eTRM are well documented and transparent. References are readily accessible and stored permanently as part of the eTRM reference library. Any semi-deemed measures that are linked to a deemed measure will exhibit the same transparency of methods to determine savings (and costs).

Opportunity #9: Link to published deemed measure cost values: The eTRM has documented cost data for base and measure case values for all published deemed measures. Base case cost documentation can be accessed directly for incremental cost analysis when required. Measure case cost documentation can be used as a proxy to ensure that submitted values are reasonable. Similar to deemed measures, custom measures will include both base and measure case costs so that new custom measures can be checked against existing base and measure case values for reasonableness.

Opportunity #10: Access to and ability to create additional measures/measure offerings: The eTRM provides the platform to more efficiently update measures. The eTRM website provides any user with the ability to view all statewide measures and more readily determine if a desired measure/measure offering already exists. Through the Cal TF's new measure development and review process (<http://www.caltf.org/submit-a-measure>), a POU (or IOU or non-utility entity) can propose a new measure – custom, semi-deemed, and deemed – for consideration for the California portfolios. In other words, a POU can propose a new measure, can create a semi-deemed measure based upon an existing deemed measure, and/or can propose additional measure offerings to an existing deemed measure. The eTRM and the Cal TF new measure process both provide POUs with the opportunity to expand the set of energy efficiency measures available for their programs. As stated previously, workflow efficiencies with the eTRM will help new measures/measure offerings become available faster. (For example, eight (8) new electrification measures have been added to the IOU portfolios and in the eTRM within the last year.)

Opportunity #11: Structured measure approval: The Cal TF new measure development and review process allows for a structured intake, review, development, and affirmation by the Cal TF for approval for POUs such that every new measure matches the quality of the existing eTRM measures. The eTRM has been designed to allow for both CPUC approved and POU-only permutations when this distinction is needed.

---

Opportunity #12: Streamlined application processing: Automated workflows that are possible with the eTRM can streamline application intake, review, and approval processes by ensuring that standard rules are followed, which could also extend to pre/post inspection requirements. Any such application workflow requirements should be tied to the size and type of project.

#### **IV. Cal TF Staff Recommendations for Next Steps**

Cal TF Staff recommends the following next steps to add LADWP custom measures to the eTRM:

Recommendation #1: Cal TF Staff to create a POU subcommittee to review POU custom energy efficiency measures to be considered for the eTRM. As with other subcommittees, the “POU subcommittee” would include, in addition to POU, other interested members of the Cal TF, as well as outside experts if authorized by Cal TF Staff.

Recommendation #2: Cal TF Staff to review the POU and LADWP tools to understand and document the calculation tools and functionality that will need to be available within the eTRM.

Recommendation #3: Cal TF to document the eTRM software enhancements required to add the capabilities needed for integrating custom measures within the eTRM so that POU custom measure savings and cost calculations can be dynamic completed from within the eTRM, rather than by downloading a static Excel workbook.

Recommendation #4: Cal TF Staff to prepare and upload the LADWP Custom Express measures into the eTRM and identify which Custom Calculated measures can be transitioned to Custom Express eligibility.

## Attachment A: LADWP Custom Performance Program

The FY14-15 CPP funded about 130 projects representing over 46M kWh/yr of electric savings. The projects included a range of end uses, including HVAC, lighting, commercial refrigeration, and process applications. Key results of the evaluation of the FY14-15 CPP are noted below:

- “Small” projects for which savings are less than 250,000 kWh/yr accounted for 63% of the total number of CPP projects but only 10% of the total program savings.
- “Large” projects for which savings are greater than 1.5M kWh/yr accounted for only 5% of the number of CPP projects and 31% of the total program savings.
- The differential between the estimated ex ante project savings and the verified savings, shown in the “Verified Realized Rate” in the table below, is highest for Large projects. *The error associated with the realization rate for the Large project category represents 10% of the total program savings – greater than the total savings from all of the projects in the “Small” project category.*

The errors or differential between the ex ante and ex post savings were determined to be mostly due to inaccurate input values and assumptions for the savings calculation and savings persistence issues.

**Table A-1. Summary of FY14-15 CPP Evaluation Results**

Project Size	Savings per Project (kWh)	% of Project Volume	% of Total Savings	Verified Realized Rate	Program Savings Impact for Error
Large	> 1.5M	5%	31%	67%	-10.2%
Medium	250 K – 1.5M	24%	32%	76%	-7.6%
Small	< 250K	63%	10%	108%	0.8%
Street Lighting	Varies	8%	27%	99%	-0.3%
Total		100%	100%	83%	-17%.0

Source: LADWP

### ***The CPP Application Process***

A high-level overview of the LADWP CPP process, shown below, includes application intake, pre-inspection, application approval, post installation inspection and incentive payment. Cal TF Staff concludes that opportunities through the eTRM during the early stages of the CPP process will cascade to later subsequent stages.



The CPP evaluation results revealed that large projects (> 1.5M kWh/yr) accounted for the largest share of the differential between estimated and realized savings. In response, LADWP made specific changes to the CPP intake process to reduce the savings estimation error for custom projects (i.e., increase the realization rate) and optimize program resources such that application review and pre/post inspections are devoted to the largest and higher risk projects.

The CPP program now accepts custom project applications through two pathways to address the needs of small (low risk) and large (high risk) projects. Table A-2 and Table A-3 below define the CPP pathways and summarize the categorization of measures eligible for the CPP program accordingly.

**Table A-2. Current CPP Application Pathways**

	Description	Per-Project Savings Range	Default Review Level
<b>Custom Express</b>	Custom Express project savings may include some deemed measure savings values/calculations	< 250,000 kWh/yr	Low
	Some site-specific information is required to prove qualification, and in many cases, this information is also used to refine and validate deemed savings results. → 53 of the 180 measures	≥ 250,000 kWh/yr	High
<b>Custom Calculated</b>	Custom Calculated project savings are developed through custom calculations	< 250,000 kWh/yr	Low
	This path requires calculations using M&V data or through a calibrated model. → 127 of the 180 measures	≥ 250,000 kWh/yr	High

**Table A-3. CPP Custom Measure Summary**

Category	Custom Express	Custom Calculated	Total
Controls / RCx	25	98	123
Envelope	6	3	9
HVAC / Refrigeration	13	6	19
Lighting	3	0	3
Lighting (Lamp Only)	3	0	3
Plug Process / Other	3	19	22
Thermal Energy Storage		1	1
<b>Total</b>	<b>53</b>	<b>127</b>	<b>180</b>

---

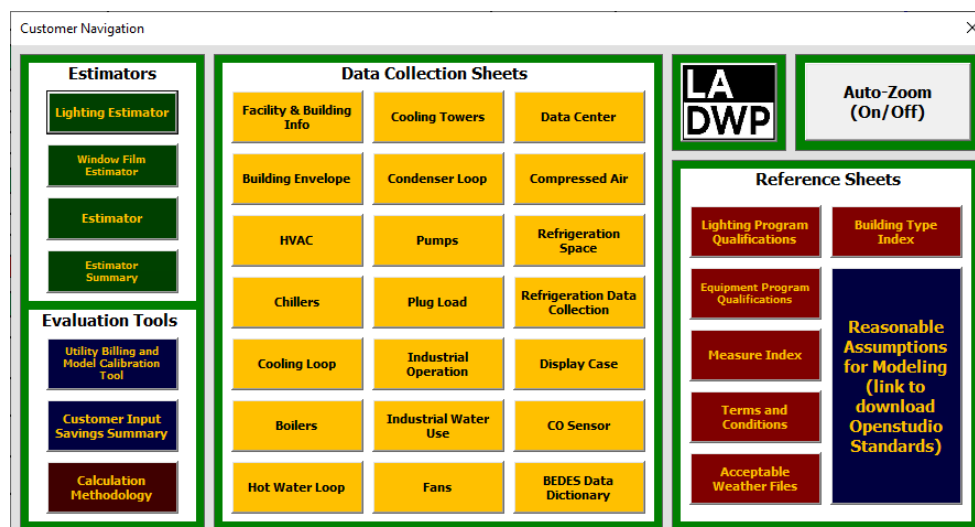
## The CPP Project Savings Calculation Workbook

The LADWP CPP Workbook specifies the 180 measures that are eligible for the CPP program. (See Table A-3 above.)

This Excel-based workbook provides the guidance for applicants regarding the necessary inputs for the following:

- Customer and contractor information
- Building information
- Measure Name and Measure Category (which are chosen from the list of 180 measures)
- Each Measure Name includes detail on:
  - Measure Application (i.e., Offering) that is described by size or efficiency level
  - Measure Eligibility and Other Qualifiers
  - Original IOU workpaper source for savings methodology
  - Modifications to the base reference assumptions
- Custom Calculation supporting materials that include:
  - *Data Collection Sheets* that are primarily organized by equipment type
  - *Reference Sheets* that provide important supporting information
  - *Estimator* worksheets to streamline specific calculations for lighting and window film. The Estimator feature of the workbook covers all other Custom Express measures by taking minimal inputs and providing savings estimates that are based upon deemed values but scaled to the customer specific information (i.e., size or efficiency).
  - *Evaluation Tools* that describe M&V protocols

The CPP workbook also includes validation macros to ensure that all necessary fields have been completed.





---

The benefits and limitations of the CPP workbook approach for custom project development and review are summarized below.

#### *Benefits of the CPP Workbook*

Minimizes error: Creating review pathways based upon the energy efficiency measure and the project savings size, the submittal requirements remain clear to the customer, while the measure review can vary depending upon the impact to the portfolio.

Clear measure definitions: Measures are clearly defined from among the list of 180 choices. Each measure definition includes: a brief Measure Description, Category Designation, Measure Name, and Measure Application.

Review pathway / data collection requirements: The energy efficiency measure dictates the pathway (express or calculated) and measure eligibility and qualifications. Tools for data collection make it clear what supporting documentation is required.

Lower data requirements for Custom Express measures: Semi-deemed values are typically used within the Estimator tool for Custom Express measures. This pathway allows for limited data collection so that site-specific values can be interpolated between results that are linked to another deemed measure. Calculated values are required for the remaining measures that require more on-site data collection to document site-specific savings calculation inputs.

Multiple measures in one application: The current CPP program allows multiple measures to be included as part of the same application.

#### *Limitations of the CPP Workbook*

Revision control issues: The Excel workbook is version controlled to clearly document whether the tool is current. However, rolling out updates with all changes (program rules, new measures, updated measure eligibility, etc.) to the 180 measures within the workbook remains a challenge. Implementers who have locally-stored a version of the workbook might submit a project application using an outdated version of the workbook.

Reference control: While the CPP workbook references sources for assumptions that are considered industry best practice, issues arise in the control of these references:

- The workbook includes links to references online that can become outdated or broken (i.e., OpenStudio Standards)
- References themselves become outdated (i.e., IOU workpapers mostly from 2013)
- The workbook does not provide direct link to references and the references, therefore cannot be examined (i.e., IOU workpapers)

Methodology standards: Because of the scope of this tool, it remains an onerous task to keep methodologies consistent with best practices. It is typical for baselines and assumptions to change and improve over time.

---

Baseline cost documentation: For measures requiring an incremental cost analysis, baseline cost is required for submittal, which is typically a difficult value for a contractor to provide since this information is outside of the scope of the normal project.

Transparency in extrapolating savings: Explanations for how savings are extrapolated from deemed values are lacking; additional explanations should be provided to show when and how savings are extrapolated.

---

## Attachment B: Custom Measure Name List from the LADWP CPP Workbook

### Controls / RCx

Measure Name	Measure Application	Express Eligible
<b>Add Heat Recovery</b>	Air Handling Unit	N
	Domestic Water Distribution System	N
	HVAC Water Distribution System	N
	Process Water Distribution System	N
	Unitary HVAC	N
<b>Advanced System Optimization</b>	HVAC Air Distribution System	N
	HVAC Water Distribution System	N
<b>Air Side Economizer New or Repair</b>	Air Handling Unit	N
	Unitary HVAC	N
<b>Air Side ReZoning</b>	Hot & Cold Aisle Isolation	N
	HVAC Air Distribution System	N
<b>Boiler System Optimization</b>	Boiler	N
<b>CO Sensor Control</b>	Parking Garage	N
<b>Condenser Water Setpoint Reset Strategy</b>	Cooling Tower	N
<b>DDC Control Conversion</b>	Air Handling Unit	N
	Central Plant	N
	HVAC Air Distribution System	N
	Unitary HVAC	N
<b>Demand Control Ventilation</b>	Fume Extraction System	N
	HVAC Air Distribution System	N
	Process Exhaust	N
<b>Duct Static Pressure Setpoint Reset</b>	Air Handling Unit	N
	Unitary HVAC	N
<b>Elevator Modernization</b>	Elevators	N
<b>Equipment Optimum Start Stop Schedule Adjustment</b>	Air Compressor	N
	Air Handling Unit	N
	Boiler	N
	Chiller	N
	Cooling Tower	N
	HVAC Supply/Return Fan	N
	Other	N
	Process Fan	N
	Process Motor	N
	Pump	N

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
	Refrigeration Compressor	N
	Unitary HVAC	N
<b>Equipment ReSequencing</b>	Air Compressor	N
	Air Handling Unit	N
	Boiler	N
	Chiller	N
	Cooling Tower	N
	HVAC Supply/Return Fan	N
	Other	N
	Process Fan	N
	Process Motor	N
	Pump	N
	Refrigeration Compressor	N
	Unitary HVAC	N
<b>Escalator Motor Controller</b>	Escalators	N
<b>Fan System Control Performance Upgrade</b>	HVAC Supply/Return Fan	N
	Process Fan	N
<b>HVAC and Refrigeration System Insulation</b>	Boiler	N
	Chiller	N
	Heat Exchanger	N
	HVAC Air Distribution System	N
	HVAC Water Distribution System	N
	Refrigerated Storage	N
<b>Lighting Controls</b>	Exterior Lighting	Y
	Interior Lighting	Y
	Parking Garage Lighting	Y
<b>Permanent Duct Static Pressure Setpoint Reduction</b>	Air Handling Unit	N
	Unitary HVAC	N
<b>Pump Impeller Trimming</b>	Pump	N
<b>Refrigerated Display Case Motor Performance Upgrade</b>	Cooler Evaporator Fan Shaded Pole Motor to ECM	Y
	Freezer Evaporator Fan Shaded Pole Motor to ECM	Y
<b>Refrigerated Display Case Performance Upgrade</b>	Cooler ASH Controls Installation	Y
	Freezer ASH Controls Installation	Y
	Horizontal Freezer Night Covers Installation	Y
	Vertical Cooler Night Cover Installation	Y
	Vertical Freezer Night Covers Installation	Y

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
<b>Refrigerated Walk In Motor Performance Upgrade</b>	Cooler Evaporator Fan PSC To ECM	Y
	Cooler Evaporator Fan Shaded Pole To ECM	Y
	Cooler No Control To Cycling Control	Y
	Cooler No Control To VFD	Y
	Freezer Evaporator Fan PSC To ECM	Y
	Freezer Evaporator Fan Shaded Pole To ECM	Y
<b>Refrigeration Floating Head Control</b>	Refrigeration System	N
<b>Repair Pipe Leaks</b>	Compressed Air Distribution System	N
	Domestic Water Distribution System	N
	HVAC Water Distribution System	N
<b>Right Size or Resize Oversized Equipment</b>	Air Compressor	N
	Air Handling Unit	N
	Boiler	N
	Chiller	N
	Cooling Tower	N
	HVAC Supply/Return Fan	N
	Other	N
	Process Fan	N
	Process Motor	N
	Pump	N
Unitary HVAC	N	
<b>Supply Air Temperature Reset Strategy</b>	Air Handling Unit	N
	Unitary HVAC	N
<b>System Schedule Adjustment</b>	Air Compressor	N
	Boiler	N
	Chiller	N
	Cooling Tower	N
	HVAC Supply/Return Fan	N
	Other	N
	Process Fan	N
	Process Motor	N
	Pump	N
	Refrigeration Compressor	N
Unitary HVAC	N	
<b>Variable Air Volume System Conversion</b>	HVAC Air Distribution System	N
<b>Variable Speed</b>	Air Compressor	Y
	Chiller Compressor	N

Measure Name	Measure Application	Express Eligible
	Cooling Tower Fan	Y
	Evaporator Fan	N
	HVAC Supply/Return Fan	Y
	Other	N
	Process Fan	Y
	Process Motor	N
	Pump Chilled Water	Y
	Pump Condenser Water	Y
	Pump Swimming Pool	Y
	Refrigeration Compressor	N
	Unitary HVAC	Y
<b>Water Side Economizer</b>	HVAC Water Distribution System	N
<b>Water System Balancing</b>	Domestic Water Distribution System	N
	HVAC Water Distribution System	N
	Process Water Distribution System	N
<b>Zone Thermostat Programming Performance Upgrade</b>	All Areas	Y

## Envelope

Measure Name	Measure Application	Express Eligible
<b>Building Envelope Performance Upgrade</b>	Architectural Shading Features or Devices	N
<b>Insulation</b>	Building Envelope	N
<b>Reduce Infiltration</b>	Building Envelope	N
<b>Refrigerated Display Case Performance Upgrade</b>	Add Door to Display Case	Y
	Add Door to Display Case w/ Night Cover	Y
	Door Replacement w/ Low Wattage ASH Controls	Y
<b>Roofing Material Performance Upgrade</b>	Low Pitch Cool Roof (<2:12)	Y
	Step Pitch Cool Roof (<2:12)	Y
<b>Window Film</b>	Building Envelope	Y

## HVAC / Refrigeration

Measure Name	Measure Application	Express Eligible
<b>Boiler Performance Upgrade</b>	Boiler	N
<b>Chiller Performance Upgrade</b>	Constant Speed Centrifugal Water Cooled Chiller	Y
	Other Chiller (specify)	N

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
	Screw/Scroll Air Cooled Chiller	Y
	Screw/Scroll Water Cooled Chiller	Y
	Variable Speed Centrifugal Water Cooled Chiller	Y
<b>Cooling Tower Performance Upgrade</b>	Cooling Tower	N
<b>Heat Exchanger Performance Upgrade</b>	Heat Exchanger	N
<b>Refrigeration Compressor Performance Upgrade</b>	Refrigeration Compressor	N
<b>Unitary HVAC Performance Upgrade</b>	Mini-Split HP	Y
	Multi-Split HP	Y
	Package Terminal A/C	Y
	Package Terminal HP	Y
	Packaged A/C	Y
	Packaged HP	Y
	Split System A/C	Y
	Split System HP	Y
	Water Source HP	Y
<b>Variable Refrigerant Flow</b>	Unitary HVAC	N

### Lighting

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
<b>Lighting Fixture Replacements</b>	Exterior Lighting	Y
	Interior Lighting	Y
	Parking Garage Lighting	Y

### Lighting (Lamp Only)

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
<b>Lighting Lamp Replacements</b>	Exterior Lighting	Y
	Interior Lighting	Y
	Parking Garage Lighting	Y

### Plug Process / Other

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
<b>Circulating Block Heater</b>	Properly Sized	Y
	Undersized	Y
<b>Compressed Air System Performance Upgrade</b>	Compressed Air Distribution System	N

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
<b>Food Service Equipment Performance Upgrade</b>	Food Service Equipment	N
<b>Fume Hood Exhaust System Performance Upgrade</b>	Process Fan	N
<b>High Efficiency Injection Molders</b>	Injection Molding Machine	N
<b>High Volume Low Speed Fans for Industrial Purposes</b>	Process Fan	N
<b>Industry Specific Process Improvements</b>	Process	N
<b>Plug Load Controls</b>	Advance Power Strip	Y
	Office Equipment	N
<b>Process Equipment Performance Upgrade</b>	Process	N
<b>Rapid Close Doors for Refrigerated Storage</b>	Refrigerated Storage	N
<b>Upgrade Motor Efficiency</b>	Air Compressor	N
	Chiller	N
	Cooling Tower	N
	HVAC Supply/Return Fan	N
	Other	N
	Process	N
	Process Fan	N
	Pump	N
	Refrigeration Compressor	N
<b>Vending Machine Controls</b>	Vending Machine	N

**TES**

<b>Measure Name</b>	<b>Measure Application</b>	<b>Express Eligible</b>
<b>Thermal Energy Storage</b>	HVAC Water Distribution System	N