PASADENA WATER AND POWER

EEP SAVINGS & REBATE CALCULATION METHODOLOGY

1. After the pre-inspection has been completed, PWP and/or its third-party consultant will calculate the EEP rebate based on the qualifying efficiency project energy savings and demand reduction.

2. Project analysis may require (at PWP's expense):
   a. The gathering of pre and post retrofit real-time data.
   b. The installation of data logging equipment to measure the energy consumption and demand load of existing and/or retrofit/replacement equipment.
   c. Access to the project site for PWP and/or PWP's third-party consultant to conduct the installation, monitoring and removal of data-logging equipment.

3. To determine whether your project is subject to Title 24/CalGreen, please refer to "Table 1" below.

4. EEP rebates are calculated by multiplying the "EEP Incentive Rate" (see "Incentive Rates tab") with the corresponding efficiency project's **energy savings** (measured in kilowatt-hours, or **kWh**, expected to occur over a 12 month period) and the electric **demand reduction** during peak hours "Reductions in the time rate of energy use (demand) (kW) occurring during the period of the POU's system peak demand". The energy (kWh) and demand (kW) savings for projects subject to Title 24/CalGreen standards are calculated using the baseline energy use as shown in "Example 1" below.

5. For projects not subject to Title 24/CalGreen standards, calculations are shown in "Example 2" below.

6. The first PWP energy savings and demand reduction analysis is at no cost to the customer. If the customer or the customer's installer modifies the scope of the project(s) after PWP receives the initial project engineering report, the additional expense for a project reanalysis may be deducted from the final EEP rebate amount.

7. Any change in the project scope of work which results in lower energy savings and/or demand load reduction will reduce the final EEP rebate based on the new engineering analysis.

8. Energy savings and demand load reduction for **lighting efficiency projects** are calculated by PWP using an engineer-approved lighting calculator.

9. Incentive rates
   a. Rates vary depending on the type of replacement equipment that will be installed (see “EEP Incentive Rates”.)
   b. Incentive rates are subject to change at any time.
   c. Rebates will be calculated based on the incentive rates in effect as of the date which PWP receives a complete EEP Application (which includes a customer-signed project proposal from the equipment vendor and/or installer.)
   d. An additional rebate is provided if the project achieves an electric power demand reduction. Qualifying demand reduction, measured in kilowatts (kW), is the difference between the power demand of existing equipment and the proposed power demand of new equipment during "Reductions in the time rate of energy use (demand) (kW) occurring during the period of the POU's system peak demand".
   e. “Buy Local Bonus” provides a 5% bonus rebate for projects which use a Pasadena vendor. See “Program Rules” for details and limitations.

Project Classification Criteria: Title 24/CalGreen or Existing Equipment baseline

Table 1:

	Energy Savings Baseline	Retrofit Project Characteristics
Installation Conditions	***Natural Replacement :***	• Existing Equipment is non-functional
	Title 24/CALGreen standard consumption vs. Proposed	• Existing equipment is still functional but has less than three years remaining useful life
		• Proposed equipment increases facility electrical load
		• Proposed equipment includes new equipment added to an existing space in order to meet the need for an expanded process or new production
		• Lighting retrofits that replace over 50% of the fixtures, or that increase lighting load
	Early Replacement:	• Existing equipment is still functional and has at least three years of remaining useful life
	Existing equipment energy consumption vs. Proposed	• Proposed measures not applicable to Title 24 include cooling towers, variable frequency drives, building energy management systems, lighting controls and air compressors.
		• Measure is not governed by a federal, state or local mandated code
		• Lighting retrofits that replace less than 50% of fixtures, or only involve lamp and ballast replacement

<u>Title 24/CALGreen Projects (when applicable):</u> Energy savings (kWh) are the difference between the energy use allowed under current Title 24/CALGreen codes and the energy use of the proposed new equipment.

Example 1

kWh savings:				
Titile 24 Maximum Annual Energy Usage for Equipment Type	-	Proposed Project Annual Energy Usage	=	Qualifying Annual Energy Savings
12,000 kWh	-	**9,000 kWh**	=	**3,000 kWh**

kW reductions:				
Titile 24 Maximum kW Usage	-	Proposed Project kW Usage	=	Qualifying Demand Savings
100 kW	-	**50 kW**	=	**50 kW**

<u>Not subject to Title 24/CALGreen (when applicable):</u>

For existing buildings, energy savings (kWh) calculations are the difference in estimated annual energy usage between existing equipment and the proposed new equipment.

Example 2:

kWh savings:				
Existing Equipment Annual Energy Usage	-	Proposed Project Annual Energy Usage	=	Qualifying Annual Energy Savings
20,000 kWh	-	**12,000 kWh**	=	**8,000 kWh**

kW reductions:				
Existing Equipment kW Usage	-	Proposed Project kW Usage	=	Qualifying Demand Savings
100 kW	-	**50 kW**	=	**50 kW**

Typical measures not subject to Title 24/CALGreen standards include: cooling towers, variable frequency drives (VFD), building energy management systems (EMS), lighting controls and air compressors.