

## Heating, Ventilation & Air Conditioning Equipment

Pacific Power provides incentives for many types of energy-efficient technologies. Please read the following sections carefully to ensure that you follow the appropriate steps for securing your incentive. Equipment may be subject to inspection prior to incentive approval.

Incentives for additional measures may be available. For more information about the FinAnswer Express program, eligibility requirements, incentive levels or other general inquiries, contact your local equipment dealer or Pacific Power. You can visit the program website at [pacificpower.net/wattsmart](http://pacificpower.net/wattsmart) and submit your inquiry online, or you can call our energy services hotline at 1-800-222-4335.

### HEATING VENTILATION AND AIR CONDITIONING (HVAC)

**Measure description:** High-efficiency cooling equipment can significantly reduce annual energy costs compared to standard-efficiency units. Incentives are available for high-efficiency air conditioning, heat pump and evaporative cooling equipment.

**Applicability:** New construction and retrofit installations are eligible.

**Equipment eligibility:** Equipment must be purchased and installed, and meet all other program terms and conditions.

- Incentives of \$25/ton, \$50/ton and \$75/ton for unitary air conditioning/heat pump equipment and incentives of \$0.06/CFM for evaporative cooling are only available for equipment purchased and installed on or after January 19, 2012.
- Incentives may be available for equipment purchased prior to January 19, 2012. For incentive information regarding equipment purchased prior to January 19, 2012 please contact us.
- Incentives for room air-conditioners will be approved based on requirements and amounts listed in the Home Energy Savings program. Please visit [www.homeenergysavings.net](http://www.homeenergysavings.net).

Incentives are available for equipment meeting or exceeding the efficiency requirements listed in Tables 1, 2, and 3. As noted in the tables below, efficiency ratings will be determined by the applicable AHRI Standard and reported in the AHRI Directory of Certified Equipment (except evaporative equipment).

This directory is available at [www.ahridirectory.org](http://www.ahridirectory.org)

Heat Pumps must meet both the cooling mode and heating mode efficiency requirements to qualify for per ton cooling efficiency incentives. Packaged Terminal Heat Pumps (PTHPs) can replace electric resistive heating; however, in such cases, electric resistive heating must be removed.

#### Items to submit with application:

1. Dated sales receipt/invoice for the installed equipment.
2. AHRI certificate or other manufacturer information documenting the efficiency and capacity of the equipment.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

**Prequalification required? No.** Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

**Table 1. A/C Efficiency Requirements, Incentive Levels, & Equipment Codes**

Equipment Type	Size Category	Equipment Code	Sub-Category	Minimum Efficiency Requirement(s) & Customer Incentive	
				CEE Tier 1 \$50/ton*	CEE Tier 2 \$75/ton*
Unitary Commercial Air Conditioners, Air-Cooled	< 65,000 Btu/hr (three phase only) For single phase see table 3	Split Systems- HVCSA3  Package Systems- HVCPA3	Split System	14.0 SEER 12.0 EER	15.0 SEER 12.5EER
			Single Package	14.0 SEER 11.6 EER	15.0 SEER 12.0 EER
	Split System and Single Package		11.5 EER 12.8 IEER	12.0 EER 13.8 IEER	
	Split System and Single Package		11.5 EER 12.3 IEER	12.0 EER 13.0 IEER	
	Split System and Single Package		10.3 EER 11.1 IEER	10.6 EER 12.1 IEER	
	Split System and Single Package		9.7 EER 10.9 IEER	10.2 EER 11.4 IEER	
Unitary Commercial Air Conditioners, Water Cooled	< 65,000 Btu/hr	HVCUWC	Split system and Single Package	14.0 EER	--
	≥ 65,000 Btu/hr and < 135,000 Btu/hr			13.8 EER 15.1 IEER	--
	≥ 135,000 Btu/hr			13.8 EER 14.6 IEER	--
Unitary Commercial Air Conditioners, Evaporatively Cooled	< 65,000 Btu/hr	HVCUWC	Split System and Single Package	14.0 EER	--
	≥ 65,000 Btu/hr and < 135,000 Btu/hr			13.8 EER 15.1 IEER	--
	≥ 135,000 Btu/hr			13.3 EER 14.1 IEER	--
<p>1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive. Equipment must meet <u>both</u> listed efficiency requirements to qualify for the listed incentives.</p> <p>2. Commercial Unitary AC and HP Specifications for CEE Tier 1 and CEE Tier 2 are available at <a href="http://www.cee1.org">www.cee1.org</a>.</p> <p>3. Equipment size categories and capacities are specified in terms of net cooling capacity at AHRI standard conditions as determined by AHRI Standard 210/240 for units &lt;65,000 Btu/hr, AHRI Standard 340/360 for units ≥65,000 Btu/hr, and AHRI Standard 310/380 for PTAC and PTHP units.</p> <p>4. Units rated only with an IPLV may qualify for the listed incentives if the value meets or exceeds the minimum IPLV established as part of the Consortium for Energy Efficiency Commercial Unitary Air Conditioning and Heat Pump Specification effective January 16, 2009.</p> <p>* Equipment must be purchased and installed on or after January 19, 2012 to qualify for this incentive.</p> <p><b>EER</b> = Energy Efficiency Ratio  <b>SEER</b> = Seasonal Energy Efficiency Ratio  <b>IEER</b> = Integrated Energy Efficiency Ratio  <b>IPLV</b> = Integrated Part Load Value  <b>CEE</b> = Consortium for Energy Efficiency  <b>AHRI</b> = Air Conditioning, Heating, and Refrigeration Institute</p>					

**Table 2. Air or Water Cooled Heat Pump Efficiency Requirements, Incentive Levels, & Equipment Codes**

				Minimum Efficiency Requirement(s) & Customer Incentive	
Equipment Type	Size Category	Equipment Code	Sub-Category	CEE Tier 1 \$50/ton*	CEE Tier 2 \$75/ton*
<b>Heat Pumps, Air-Cooled (Cooling Mode)</b>	< 65,000 Btu/hr (three phase) For single phase see table 3	Split systems- <b>HVCSH3</b>	Split System	14.0 SEER 12.0 EER	15.0 SEER 12.5 EER
			Single Package	14.0 SEER 11.6 EER	15.0 SEER 12.0 EER
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	Package Systems- <b>HVCPH3</b>	Split system and single package	11.1 EER 12.1 IEER	--
			Split system and single package	10.7 EER 11.7 IEER	--
			Split system and single package	10.1 EER 10.7 IEER	--
≥ 135,000 Btu/hr and < 240,000 Btu/hr	Split systems- <b>HVCSH3</b>	Split system	8.5 HSPF	9.0 HSPF	
Single package			8.0 HSPF	8.5 HSPF	
≥ 65,000 Btu/hr and < 135,000 Btu/hr		47°F db/43°F wb outdoor air	3.4 COP	--	
			17°F db/15°F wb outdoor air	2.4 COP	--
		≥ 135,000 Btu/hr	47°F db/43°F wb outdoor air	3.2 COP	--
17°F db/15°F wb outdoor air	2.1 COP		--		
<b>Heat Pumps, Water-Source (See note 2)</b>	< 135,000 Btu/hr	<b>HVCWSH</b>	86°F Entering Water (Cooling Mode)	14.0 EER	--
			68°F Entering Water (Heating Mode)	4.6 COP	--

1. Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for the listed incentive. Equipment must meet both listed efficiency requirements to qualify for the listed incentives.

2. Commercial Unitary AC and HP Specifications for CEE Tier 1 and CEE Tier 2 are available at [www.cee1.org](http://www.cee1.org).

3. Incentives for heat pumps are available per ton of **cooling** capacity ONLY. No incentives are paid per ton of heating capacity. Heat pumps must meet both the cooling mode and heating mode efficiency requirements to qualify for per ton cooling efficiency incentives.

4. Equipment size categories and capacities are specified in terms of net cooling capacity at AHRI standard conditions as determined by AHRI Standard 210/240 for units < 65,000 btu/hr, AHRI Standard 340/360 for units ≥ 65,000 btu/hr, and AHRI Standard 310/380 for PTAC/PTHP units.

5. Units rated only with an IPLV may qualify for the listed incentives if the value meets or exceeds the minimum IPLV established as part of the Consortium for Energy Efficiency Commercial Unitary Air Conditioning and Heat Pump Specification effective January 16, 2009.

\* Equipment must be purchased and installed on or after January 19, 2012 to qualify for this incentive.

**EER** = Energy Efficiency Ratio  
**SEER** = Seasonal Energy Efficiency Ratio  
**IEER** = Integrated Energy Efficiency Ratio  
**CEE** = Consortium for Energy Efficiency

**IPLV** = Integrated Part Load Value  
**HSPF** = Heating Seasonal Performance Factor  
**COP** = Coefficient of Performance  
**AHRI** = Air Conditioning, Heating, and Refrigeration Institute

**Table 3. Other HVAC Equipment Efficiency Requirements, Incentive Levels, & Equipment Codes**

Equipment Type	Equipment Code	Size Category	Sub-Category	Minimum Efficiency Requirement(s)	Customer Incentive
Unitary Commercial Air Conditioners, Air-Cooled	HVACSA1	< 65,000 Btu/hr (single phase)	Split System	15.0 SEER 12.5EER	\$25 / ton
	HVACPA1		Single Package		
Heat Pumps, Air-Cooled (Cooling Mode)	HVCSH1	< 65,000 Btu/hr (single phase)	Split System	15.0 SEER 12.5 EER	\$25 / ton
	HVCPH1		Single Package		
Heat Pumps, Air-Cooled (Heating Mode) (See Note 2)	HVCSH1	< 65,000 Btu/hr (single phase)	Split system	8.5 HSPF	
	HVCPH1		Single package	8.0 HSPF	
Packaged Terminal Air Conditioners (PTAC)	HVCPTA	≤ 8,000 Btu/hr	Single package	12.2 EER	\$25 / ton
		> 8,000 Btu/hr and < 10,500 Btu/hr	Single package	11.9 EER	
		≥ 10,500 Btu/hr and ≤ 13,500 Btu/hr	Single package	10.7 EER	
		> 13,500 Btu/hr	Single package	9.9 EER	
Packaged Terminal Heat Pumps (PTHP) (Heating & Cooling Mode)	HVCPTH	≤ 8,000 Btu/hr	Single package	12.2 EER 3.4 COP	\$50 / ton
		> 8,000 Btu/hr and < 10,500 Btu/hr	Single package	11.5 EER 3.3 COP	
		≥ 10,500 Btu/hr and ≤ 13,500 Btu/hr	Single package	10.7 EER 3.1 COP	
		> 13,500 Btu/hr	Single package	9.8 EER 3.0 COP	
*Evaporative Cooling	HVCEVP	All sizes	Direct or Indirect	Industry Standard Rating (ISR)	\$0.06/ CFM
Room Air Conditioner	RACRES	All sizes	Residential used in a business	See Note 5	\$25 each (See Note 5)
Heat Pumps, Ground-source or Groundwater-source (Heating & Cooling Mode) – See Note 2	HVCGSH	All sizes	77° Entering Water	ENERGY STAR Qualified	\$50 / ton
Ground-source or Groundwater-source Heat Pump Loop	HVCHPL	All Sizes	Open Loop	--	\$25/ton
			Closed Loop		
<p>1. Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for the listed incentive. Equipment must meet <u>both</u> listed efficiency requirements to qualify for the listed incentives.</p> <p>2. Incentives for heat pumps are available per ton of <b>cooling</b> capacity ONLY. No incentives are paid per ton of heating capacity. Heat pumps must meet <u>both</u> the cooling mode and heating mode efficiency requirements to qualify for per ton cooling efficiency incentives.</p> <p>3. Equipment size categories and capacities are specified in terms of net cooling capacity at AHRI standard conditions as determined by AHRI Standard 210/240 for units &lt; 65,000 btu/hr, AHRI Standard 340/360 for units ≥ 65,000 btu/hr, and AHRI Standard 310/380 for PTAC/PTHP units.</p> <p>4. Ground and Water Source Heat Pumps must meet or exceed listed efficiency requirements when rated in accordance with ISO-13256-1 to qualify for an incentive.</p> <p>5. Incentive will be paid at \$/unit as listed in the Home Energy Savings program. Refer to Pacific Power’s Home Energy Savings Program for efficiency requirements and incentives for listed residential appliances used in a business: <a href="http://www.homeenergysavings.net">www.homeenergysavings.net</a></p> <p>* Equipment must be purchased and installed on or after January 19, 2012 to qualify for this incentive.</p>					
EER = Energy Efficiency Ratio		PTAC = Packaged Terminal Air Conditioner			
COP = Coefficient of Performance		PTHP = Packaged Terminal Heat Pump		ISR = Industry Standard Rating	

## WATER-CHILLING EQUIPMENT

**Measure description:** Water-chilling equipment (e.g., chillers) is commonly used to provide cooling for a variety of building types and process loads. Chillers come in many different types (centrifugal, rotary screw, scroll, and reciprocating) and typically reject heat either through air-cooled or water-cooled condensers. High efficiency chillers can yield significant energy cost savings compared to standard efficiency units.

**Applicability:** New construction and retrofit installations are eligible. Technical assistance and financial incentives for comprehensive chiller projects are also available through Pacific Power’s Energy FinAnswer program. For more information about Energy FinAnswer, contact Pacific Power or your vendor before purchasing your equipment.

**Equipment eligibility:** Eligible chiller projects must meet the following requirements:

1. Chillers must exceed the minimum efficiency requirements per Table 4 below;
2. Chiller must not be a backup service unit;
3. IPLV ratings must account for Variable Frequency Drives (VFD) installed on the chiller compressor, if applicable;
4. Chiller loads must not be more than 20 percent process related;
5. Projects must not incorporate significant deviations from the standard chiller operational practices; (e.g., non-standard chilled water or condenser water set points, ice production during off peak hours, changes in chiller sequencing, etc.);
6. Equipment must be purchased and installed, and meet all other program terms and conditions.

**Items to submit with application:**

1. Dated sales receipt/invoice for installed.
2. Manufacturer’s equipment specification sheet showing the unit’s Full Load and IPLV ratings and Net Cooling Capacity at AHRI rated conditions (AHRI Standard 550/590).
3. A completed copy of the Chiller Information Table, see Table 5 below.
4. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

**Prequalification required? No.** Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive*</u>
HVCCHL	Chiller	\$0.12/kWh + \$50/kW

\*To calculate the project savings and incentives, complete Table 5 and submit a copy with your application via email to: [ca.hvacr@pacificpower.net](mailto:ca.hvacr@pacificpower.net). Energy and demand savings are subject to Pacific Power approval.

**Table 4. Chiller Minimum Efficiency Requirements**

(CA Title 24-2008)

Heat Rejection	Type	Size Category (tons)	CA Title 24-2008	
			Minimum COP	Minimum IPLV
Air cooled	Reciprocating, Rotary, Screw, Scroll	< 150	2.80	3.05
		≥ 150	2.80	3.05
Water cooled	Reciprocating	All capacities	4.20	5.05
	Rotary, Screw, Scroll	< 150	4.45	5.20
		≥ 150 & < 300	4.90	5.60
		≥ 300	5.50	6.15
	Centrifugal	< 150	5.00	5.25
		≥ 150 & < 300	5.55	5.90
≥ 300		6.10	6.40	

**Table 5. Chiller Information Table**

(Submit copy of table with application)

Customer	Customer name		
	Facility address		
	Facility city, State, Zip		
	Pacific Power account number		
	Pacific Power rate schedule		
	Facility type		
Vendor	Company name		
	Company city		
	Company contact name		
Chiller data (see Notes)	Chiller is a backup service unit	YES	NO
	Chiller cost (\$)		
	Cost adder for chiller		
	Chiller heat rejection (circle one)	AIR	WATER
	Chiller type (from Table 4)		
	Does the chiller include a VFD (circle one)?	YES	NO
	*AHRI chiller capacity (tons)		
	*AHRI chiller full load (COP or kW/ton)	COP   kW/ton	
*AHRI chiller IPLV (kW/ton)			

\* Refer to cut sheets provided by chiller manufacturer for information on these parameters.

AHRI = Air-conditioning, Heating, and Refrigeration Institute

COP = Coefficient of Performance

IPLV = Integrated Part Load Value

## INDIRECT-DIRECT EVAPORATIVE COOLING (IDEC)

**Measure description:** Indirect-Direct Evaporative Cooling systems are integrated into air-handling units and use evaporative technologies instead of a chiller to provide cooling for buildings. Evaporative cooling systems work best in dry, arid climates and require much less energy than a chiller. Depending on the climate, IDEC systems can save considerable amounts of energy.

**Applicability:** New construction and retrofit installations are eligible.

**Equipment eligibility:** Equipment must be purchased and installed and meet all other program terms and conditions. IDEC systems must be designed as an integral component of the central air-handling unit and air-distribution system. All components must exceed minimum efficiencies required by 2008 Building Efficiency Standards (Title 24 2008).

Customer will be required to submit the design parameters of the air-handling system (i.e. supply air flow/temperature, operating set points, fan/pump specifications) and the installed mechanical cooling system. Incentives for IDEC systems are calculated based on climate, building occupancy, and cooling system parameters.

**Items to submit with application:**

1. Dated sales receipt/invoice for the installed equipment.
2. Documentation of IDEC/air-handling unit system parameters, documented by specifying engineer in Table 6 below.
3. Manufacturer’s equipment specification for the mechanical cooling system showing the unit’s COP/EER and IPLV ratings at AHRI rated conditions.
4. IDEC calculator savings/incentive summary, supplied by Pacific Power.

**Prequalification required? No.** Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

*Note:* Pacific Power has a calculation software tool available for vendors participating in our Energy Efficiency Alliance (EEA) to calculate project-specific energy savings, project economics, and eligible incentives for IDEC projects. Visit our website at [pacificpower.net/wattsmart](http://pacificpower.net/wattsmart) for a current list of participating vendors.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive*</u>
HVCIDC	Indirect-Direct Evaporative Cooling	\$0.12/kWh + \$50/kW

\*To calculate the project savings and incentives, please contact us. Energy and demand savings are subject to Pacific Power approval.

**Table 6. Indirect-Direct Evaporative Cooling System Information Table**  
*(Submit copy of table with application)*

<b>Customer</b>	Customer name		
	Facility address		
	Facility city, State, Zip		
	Pacific Power account number		
	Pacific Power rate schedule		
	Facility type		
<b>IDECE Information (see Footnotes)</b>	IDECE system cost (\$)		
	Direct evaporative installed? (circle one)	YES	NO
	Mechanical cooling installed? (circle one)	YES	NO
	<u>Type of Indirect Evaporative Cooling<sup>1</sup> (check one)?</u>		
	<input type="checkbox"/> Air to Air Indirect (i.e. Crossflow Plate)		
	<input type="checkbox"/> Coil to Coil Indirect (i.e. Heat Pipe)		
	<input type="checkbox"/> Water Cooling Tower to Coil		
	<input type="checkbox"/> None		
Design air flow (CFM)			
Design supply air temperature (°F)			
Supply fan horsepower			
Design static pressure (inches H <sub>2</sub> O)			
<b>Mechanical Cooling Information</b>	<u>Proposed and/or Existing Type of Mechanical Cooling (check one)?</u>		
	<input type="checkbox"/> Chilled Water Coil, Water Cooled		
	<input type="checkbox"/> Chilled Water Coil, Air Cooled		
	<input type="checkbox"/> DX Refrigerant Coil, Air Cooled		
	<input type="checkbox"/> None		
	AHRI Mechanical Cooling Nameplate Capacity <sup>2</sup>		
AHRI Mechanical Cooling Efficiency <sup>2</sup>			EER   COP   kW/ton
AHRI Mechanical Cooling Part Load Rating <sup>2</sup>			IPLV   SEER   IEER   kW/ton

<sup>1</sup>For further information or descriptions of indirect evaporative stages, please consult the 2007 ASHRAE Handbook – HVAC Applications, Chapter 51.

<sup>2</sup>Refer to cut sheets provided by mechanical cooling system manufacturer for information on these parameters. Please circle the correct units associated with the values provided.

**AHRI** = Air-conditioning, Heating, and Refrigeration Institute

**SEER** = Seasonal Energy Efficiency Ratio

**EER** = Energy Efficiency Ratio

**IEER** = Integrated Energy Efficiency Ratio

**COP** = Coefficient of Performance

**IPLV** = Integrated Part Load Value

**CFM** = Cubic Feet per Minute

## PORTABLE CLASSROOM CONTROL

**Measure description:** 365/366-day programmable thermostats provide the capability to independently program occupied and unoccupied temperature set points for each day of the year. For portable classrooms unoccupied during summer months and occupied on fixed schedules the rest of the year, 365/366-day programmable thermostats reduce unnecessary heating and cooling during unoccupied periods and offer significant energy savings.

**Applicability:** New construction and retrofit installations that meet eligibility requirements may qualify for an incentive.

**Equipment eligibility:** Equipment must be installed and meet all other program terms and conditions. Thermostats must be installed in a portable classroom that is mechanically cooled, unoccupied during summer months and must have either local or remote 365/366 day programmable thermostatic setback capability.

**Items to submit with application:**

1. Dated sales receipt/invoice with install date and retailer/contractor name, address and phone number.
2. Manufacturer specification sheet.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

**Prequalification required? No.** Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
DPRGTH	365/366 day Programmable Thermostat	\$150 / thermostat

## OCCUPANCY BASED PACKAGED TERMINAL AC/HP CONTROLS

**Measure description:** Occupancy based Packaged Terminal Heat Pump (PTHP) and Packaged Terminal Air-Conditioning (PTAC) controllers are a combination of a control unit and occupancy based sensor that operate in conjunction to provide occupancy controlled heating and/or cooling. The control unit is operated by an occupancy sensor that is mounted in the room and turns the PTHP/PTAC on and off.

**Applicability:** This incentive is available for installation of new occupancy based control on all sizes of PTHP/PTAC units with no existing occupancy based control. New construction and retrofit applications are eligible for incentives.

**Equipment eligibility:** Eligible controller units must include an occupancy sensor and have the capability to set back the zone temperature during extended unoccupied periods and set up the temperature once the zone is occupied.

Equipment must be purchased and installed, and meet all other program terms and conditions.

**Items to submit with application:**

1. Dated sales receipt/invoice with install date and retailer/contractor name, address and phone number.
2. Manufacturer’s equipment specification sheet.
3. Itemized listing of quantity, description, manufacturer, model number and other identifying information as appropriate.
4. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

**Prequalification required? No.** Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
HVCPTC	PTAC/PTHP Control	\$50 / controller

## **PROGRAMMABLE THERMOSTATS**

**Measure description:** ENERGY STAR programmable thermostats provide improved control for HVAC zones where occupancy varies according to a predictable schedule.

**Applicability:** Prior to January 1, 2010, incentives were available for customers who replaced a nonprogrammable thermostat with a qualifying ENERGY STAR programmable thermostat in a retrofit application. Incentives were not offered for thermostats installed in new construction applications or where required by 2008 Building Efficiency Standards (Title 24 2008). The Environmental Protection Agency (EPA) suspended the ENERGY STAR programmable thermostats specification effective December 31, 2009.

**Equipment eligibility:** Incentives are not available for ENERGY STAR programmable thermostats purchased on or after January 1, 2010.