

## **Heating, Ventilation, Air Conditioning & Refrigeration (HVAC&R) Technologies**

Rocky Mountain Power provides incentives for many types of energy efficient technologies. Please read the following sections carefully to ensure that you purchase and install qualifying equipment.

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 HVAC dealer or Rocky Mountain Power. You can also visit the program's Web site at [www.rockymountainpower.net/utsave](http://www.rockymountainpower.net/utsave) 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 and evaporative cooling equipment.

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

**Equipment Eligibility:** Incentives are available for equipment meeting or exceeding the efficiency requirements listed in Table H-1. Efficiency ratings will be determined by the applicable ARI Standard and reported in the ARI Directory of Certified Equipment (except evaporative equipment). This directory is available at [www.ariprimer.net.org](http://www.ariprimer.net.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

**Prequalification Required?** No

**HEATING VENTILATION AND AIR CONDITIONING (HVAC) CONTINUED...**

**Table H-1. HVAC Efficiency Requirements, Incentive Levels, & Equipment Codes**

Equipment Type	Equipment Code	Size Category	Sub-Category	Minimum Efficiency Requirement(s)	ARI Standard	Customer Incentive (\$/ ton)	
Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode)	HVCSA1	< 65,000 Btu/hr	Split System and Single Package (single phase)	15.0 SEER 12.5 EER	210/240	\$50	
	HVCSA3	< 65,000 Btu/hr	Split System and Single Package (three phase)	13.0 SEER 11.6 EER	210/240	\$50	
	HVCSA3	≥ 65,000 Btu/hr and < 135,000 Btu/hr	Split System and Single Package	11.0 EER 11.4 IPLV	210/240	\$50	
		≥ 135,000 Btu/hr and < 240,000 Btu/hr	Split System and Single Package	10.8 EER 11.2 IPLV	340/360	\$50	
		≥ 240,000 Btu/hr	Split System and Single Package	10.0 EER 10.4 IPLV	340/360	\$50	
Unitary Commercial Air Conditioners, Water and Evaporative Cooled	HVCUWC	<135,000 Btu/hr	Split System and Single Package	14.0 EER	210/240	\$50	
		≥ 135,000 Btu/hr	Split System and Single Package	14.0 EER	340/360	\$50	
Package Terminal Air Conditioners (PTAC) (Heating & Cooling Mode)	HVCPTA	≤ 8,000 Btu/hr	Single Package	11.8 EER 3.3 COP Heating	310/380	\$50	
		> 8,000 and < 10,500 Btu/hr	Single Package	11.4 EER 3.2 COP Heating		\$50	
		≥ 10,500 and ≤ 13,500 Btu/hr	Single Package	10.7 EER 3.1 COP Heating		\$50	
		> 13,500 Btu/hr	Single Package	10.0 EER 3.0 COP Heating		\$50	
Heat Pumps, Air Cooled  See note 1 below	Cooling Mode	HVCSH1	< 65,000 Btu/hr	Split System and Single Package (single phase)	15.0 SEER 12.5 EER	210/240	\$50
			HVCSH3	< 65,000 Btu/hr	Split System and Single Package (three phase)	13.0 SEER 11.6 EER	210/240
		≥ 65,000 Btu/hr and < 135,000 Btu/hr		Split System and Single Package	11.0 EER 11.4 IPLV	210/240	\$50
		≥ 135,000 Btu/hr and < 240,000 Btu/hr		Split System and Single Package	10.8 EER 11.2 IPLV	340/360	\$50
		≥ 240,000 Btu/hr	Split System and Single Package	10.0 EER 10.4 IPLV	340/360	\$50	
	Heating Mode	Same codes as above	< 65,000 Btu/hr	Split System (single phase)	8.5 HSPF	210/240	See note 1 below
				Single Package (single phase)	8.0 HSPF	210/240	
			< 65,000 Btu/hr	Split System (three phase)	8.0 HSPF	210/240	
				Single Package (three phase)	7.5 HSPF	210/240	
			≥ 65,000 Btu/hr and < 135,000 Btu/hr	47°F. db /43°F. wb Outdoor Air	3.4 COP	340/360	
				17°F. db /15°F. wb Outdoor Air	2.4 COP		
			≥ 135,000 Btu/hr	47°F. db /43°F. wb Outdoor Air	3.3 COP		
				17°F. db /15°F. wb Outdoor Air	2.2 COP		
			Heat Pumps, Water Source (Cooling Mode)	HVCWSH	< 135,000 Btu/hr	85°F. Entering water	
Heat Pumps, Water Source (Heating Mode)	See note 1 below	< 135,000 Btu/hr	70°F. Entering water	4.6 COP	320	See note 1 below	
Evaporative Cooling	HVCEVP	All	Direct or Indirect	Industry Standard Rating (ISR) CFM		\$0.02 / ISR CFM	

Note-1: Incentives for heat pumps are \$50 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.

**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 Rocky Mountain Power’s Energy FinAnswer® program. For more information about Energy FinAnswer contact Rocky Mountain Power or your vendor before purchasing your equipment.

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

- Chillers must exceed the minimum efficiency requirements per Table H-2 below.
- Chiller must not be a backup service unit.
- IPLV ratings must account for Variable Frequency Drives (VFD) installed on the chiller compressor, if applicable
- Chiller loads must not be more than 20% process related.
- 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.)

**Items to submit with application:** 1. Dated sales receipt/invoice  
2. Manufacturer’s equipment specification sheet showing the unit’s COP and IPLV ratings at ARI rated conditions

**Prequalification Required?** Pre-qualification is recommended, but not required to receive incentives.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
HVCCHL	Chillers	0.12/kWh annual + \$50/kW <i>To calculate the project savings and incentives, complete Table H-3 and submit a copy with your application to your vendor or via email to: HVAC@rockymtnpower.net.</i>

**WATER-CHILLING EQUIPMENT CONTINUED...**

**Table H-2. Chiller Efficiency Requirements**

Heat Rejection	Type	Size Category (tons)	IECC 2006	
			Minimum COP	Minimum IPLV
Air cooled	Screw	< 150	2.80	2.80
		≥ 150	2.50	2.50
	Reciprocating	< 150	2.80	2.80
		≥ 150	2.50	2.50
Water cooled	Reciprocating	All capacities	4.20	4.65
	Rotary/Screw/Scroll	< 150	4.45	4.50
		≥ 150 & < 300	4.90	4.95
		≥ 300	5.50	5.60
	Centrifugal	< 150	5.00	5.00
		≥ 150 & < 300	5.55	5.55
≥ 300		6.10	6.10	

**Table H-3. Chiller Information Table**

*(Submit completed table with application or email to HVAC@rockymtnpower.net)*

<b>Customer Name</b>	
<b>Facility Address</b>	
<b>Facility City, State, Zip</b>	
<b>Rocky Mountain Power Account Number</b>	
<b>Facility Type</b>	
<b>Existing Chiller (Baseline) Heat Rejection</b>	
<b>Existing (Baseline) Chiller Type</b>	
<b>**Proposed Chiller Heat Rejection</b>	
<b>**Proposed Chiller Type</b>	
<b>**Proposed Chiller ARI Nameplate Capacity</b>	
<b>Does Proposed Chiller Include VFD?</b>	
<b>**Proposed Chiller COP</b>	
<b>**Proposed Chiller IPLV</b>	
<b>Proposed Chiller Cost</b>	

Incentive calculated by Rocky Mountain Power

\*\*Refer to Chiller Cut Sheets for information on these parameters

**PROGRAMMABLE THERMOSTATS**

**Measure Description:** Programmable thermostats provide improved control for HVAC zones where occupancy levels vary according to a predictable schedule.

**Applicability:** Incentives are available for customers who replace non-programmable thermostats with qualifying programmable thermostats. Incentives are not available for new construction installations or where the installation is required by code.

**Equipment Eligibility:** The programmable thermostat must comply with 2006 ENERGY STAR® requirements. A listing of eligible thermostats is available at [www.rockymountainpower.net/utsave](http://www.rockymountainpower.net/utsave). Additional thermostats may qualify, contact your vendor for more information.

**Items to submit with application:** 1. Dated sales receipt/invoice

**Prequalification Required?** No

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
HVCTSA	Air Conditioner Application	\$ 25/ thermostat
HVCTSH	Heat Pumps & All Electric Heating	\$ 70/ 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 setback the zone temperature during extended unoccupied periods.

**Items to submit with application:** 1. Dated sales receipt/invoice

**Prequalification Required?** No

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

**VARIABLE FREQUENCY DRIVES FOR HVAC FANS & PUMPS (VFD)**

**Measure Description:** Variable Frequency Drives (VFDs) are electronic controls that regulate motor speed and torque, resulting in reduced energy consumption under part load conditions.

**Applicability:** *For retrofit projects:* For HVAC installations where a variable load is present and the system is throttled with a device such as inlet vanes, bypass dampers and throttling valves. Throttling devices must be removed or permanently disabled prior to applying for the incentive. Incentives are not available for retrofits of existing VFDs.

*For New Construction projects:* Incentives are not available where VFDs are required by code. Utah energy code requires a VFD on HVAC fans ≥ 10 horsepower (where a variable flow system is required).

**Equipment Eligibility:** The incentives listed for this measure apply to fan and pump applications on HVAC distribution systems. The maximum fan or pump size is 100 hp.

VFDs larger than 100 hp or installed on non-HVAC equipment may be eligible for custom incentives. For more information about custom incentives through FinAnswer Express or Energy FinAnswer, contact Rocky Mountain Power or your vendor before purchasing your equipment.

**Items to submit with application:** 1. Dated sales receipt/invoice

**Prequalification Required?** Pre-qualification is not required for eligible installations. (Pre-approval is required for custom incentives for non-qualifying VFD applications.)

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
VDFAN	VFD on HVAC Fan	\$ 65/ hp
VDFPMP	VFD on HVAC Pump	\$ 65/ hp

**ELECTRONICALLY COMMUTATED MOTORS (ECM)**

**Measure Description:** An electronically commutated motor (ECM) is a fractional horsepower direct current (DC) motor used most often in commercial refrigeration applications such as display cases, walk-in coolers/freezers, refrigerated vending machines, and bottle coolers. ECMs can also be used in HVAC applications, primarily as small fan motors for packaged terminal units or in terminal air boxes. ECMs generally replace shaded pole (SP) motors and offer significant energy savings.

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

**Equipment Eligibility:** All ECMs up to 1 HP in size may qualify for an incentive.

**Items to submit with application:** 1. Dated sales receipt/invoice  
2. Manufacturer’s equipment specification sheet

**Prequalification Required?** No

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
ECMREF	Refrigeration Application	\$0.50/ nameplate watt
ECMHVC	HVAC Application	\$50/ nameplate hp

**SOLID DOOR REFRIGERATORS AND FREEZERS**

**Measure Description:** Reach in, solid door refrigerators and freezers are significantly more efficient than regular refrigerators and freezers due to better insulation and higher efficiency components.

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

**Equipment Eligibility:** Incentives are available for equipment meeting or exceeding the efficiency requirements listed in the Table H-4 below.

**Items to submit with application:** 1. Dated sales receipt/invoice

**Prequalification Required?** No

**Table H-4. Solid Door Efficiency Requirements, Incentive Levels, & Equipment Codes**

Equipment Code	Measure Description	Efficiency Tier	Minimum Efficiency Requirements (Maximum kWh/day)	Incentives
SDREF1	Solid Door Refrigerator ≤ 30 Cubic Ft. (V)	Tier 1	0.1*Volume+2.04	\$ 30/unit
	Solid Door Refrigerator 31-60 Cubic Ft. (V)			\$ 40/unit
	Solid Door Refrigerator ≥ 61 Cubic Ft. (V)			\$ 50/unit
SDREF2	Solid Door Refrigerator ≤ 30 Cubic Ft. (V)	Tier 2	0.06*Volume+1.22	\$ 125/unit
	Solid Door Refrigerator 31-60 Cubic Ft. (V)			\$ 150/unit
	Solid Door Refrigerator ≥ 61 Cubic Ft. (V)			\$ 175/unit
SDFRZ1	Solid Door Freezer ≤ 30 Cubic Ft. (V)	Tier 1	0.4*Volume+1.38	\$ 30/unit
	Solid Door Freezer 31-60 Cubic Ft. (V)			\$ 40/unit
	Solid Door Freezer ≥ 61 Cubic Ft. (V)			\$ 50/unit
SDFRZ2	Solid Door Freezer ≤ 30 Cubic Ft. (V)	Tier 2	0.28*Volume+0.97	\$ 150/unit
	Solid Door Freezer 31-60 Cubic Ft. (V)			\$ 175/unit
	Solid Door Freezer ≥ 61 Cubic Ft. (V)			\$ 200/unit

Qualifying units are categorized into two tiers. For a list of qualifying equipment for each tier see:

Tier 1	Refrigerators & Freezers	<a href="http://www.energystar.gov/ia/products/prod_lists/commer_refrig_prod_list.pdf">http://www.energystar.gov/ia/products/prod_lists/commer_refrig_prod_list.pdf</a>
Tier 2	Refrigerators	<a href="http://www.cee1.org/com/com-ref/frig-prod.pdf">http://www.cee1.org/com/com-ref/frig-prod.pdf</a>
	Freezers	<a href="http://www.cee1.org/com/com-ref/freezer-prod.pdf">http://www.cee1.org/com/com-ref/freezer-prod.pdf</a>