Pacific Gas and Electric Company Energy-Efficiency Rebates for Your Business

# Agriculture and Food Processing Rebate Catalog Saving energy for a brighter future





#### Why saving energy is good business.

Energy is a key resource for farms and food processing facilities. Smart energy management can be a powerful tool in addressing stricter regulatory standards and rising energy costs. The benefits of managing your energy go far beyond direct cost savings. Facilities are more efficient and property value increases. Production can increase with fewer work stoppages and less health and safety risks. Equipment life is extended. You may even be able to improve product quality, thanks to better, more efficient irrigation, cooling and refrigeration.

This catalog is filled with Pacific Gas and Electric Company (PG&E) rebates to help you use energy more efficiently, save money in the process, realize a quicker return on your investments and stay on top of trends in sustainability.

#### Want help? Call PG&E's Agricultural Customer Service Center.

Maybe you are looking at this catalog because you have worked with us to conduct an energy audit and you are now selecting the equipment you want to upgrade. Or, maybe this is your first look at the money-saving solutions we offer your business. Either way, we are here to help you make smart decisions about all things energy-related. Contact your local PG&E account representative, or call our **Agricultural Customer Service Center** at **1-877-311-FARM (3276)**.

#### Learn about general rebate requirements.

Carefully read the specifications in this catalog to determine if you are installing qualifying products, and note the following requirements:

- To qualify for energy-savings rebates, you must have an electric and/or natural gas account with PG&E at the installation address.
- All installations must be new or retrofitted and replace a previously-installed product, unless otherwise noted.
- For lighting installations, customer or trade professional must submit a product specification sheet, a screen shot from the LED qualified product list (pge.com/ledqpl), showing product details and a date stamp, and an itemized invoice with the application. All other PG&E Business Rebate Application conditions apply.
- Funding for this program is limited and available on a first-come, first-served basis until allocated funds are exhausted or the program ends, whichever comes first. These rebates may be modified or terminated without prior notice. Additional terms and conditions may apply.

Additional rebates on qualifying products are available for agriculture and food processing customers through PG&E's energy-efficiency rebate programs for your business. For more information, visit **pge.com/ag**, or call the **Agricultural Customer Service Center** at **1-877-311-FARM (3276)**.

NOTE: If building type eligibility is not listed, all building types are eligible. Additional requirements may apply.

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## Irrigation

## **Advanced Pumping Efficiency Program**

A worn pump could be costing you hundreds or thousands of dollars in excess electric charges and reducing access to water. A pump is the heart of an irrigation system. When it does not meet growing requirements, crops can suffer in size and quality.

#### Pump testing

Schedule subsidized tests for pumps of 25 horsepower (hp) or greater every 23 months so that you can maintain a reliable pump that will deliver the right flow and pressure for optimum irrigation efficiency.

#### **Pumping efficiency**

To encourage increased efficiency, PG&E provides incentives to retrofit eligible pumps of any size. There are also cash incentives, based on your annual energy use, with maximum payout 50 percent of the project cost.

#### Learn more at pumpefficiency.org.

## Sprinkler-to-Drip Irrigation

Replacing a high-pressure sprinkler system with drip irrigation reduces water, energy and maintenance costs, and increases yields and revenue. Switching to drip irrigation also enables crop production in those areas where water supplies are depleted or restricted.

#### **Requirements:**

- System must be converted from a high-pressure, impact-type sprinkler irrigation system (50 PSI operating pressure or more at the sprinkler head) to a low pressure (less than 40 PSI) micro-irrigation system.
- Drip tape system is eligible, but the drip tape must be at least 10 mil thick or have a warranty of at least five years.
- Low-pressure micro-sprinklers are eligible for this program.
- Installation address must have an agricultural electric account with PG&E.

#### **Exclusions:**

- Rebates are not applicable to new plantings of crops, unless a field crop was the previous crop planted on the field.
- Drip tape, drip tubes or other drip irrigation systems with expected service life of less than five years are not eligible, including disposable drip tape.
- Rebates are not eligible in conjunction with Agricultural Irrigation Pump Variable Frequency Drive rebate applied for within the last five years.
- Rebates are not eligible for replacement of previously rebated equipment.

#### Application process:

- Customer must include dated invoice that lists drip system equipment, manufacturer's make/model, a copy of the manufacturer's equipment specification cut sheet and, if applicable, the warranty details of the drip system installed.
- Customer must include an assessor's parcel map, or other documentation, to verify acreage.
- For questions on application process or eligibility, contact your PG&E representative, or call the Agricultural Customer Service Center at 1-877 311-FARM (3276).

Rebate Code	Description	Rebate/Unit Measure
A266	Sprinkler-to-Drip Irrigation Field Vegetables	\$44/acre

# **Agricultural Irrigation Pump Overhaul** (Less than or equal to 25 horsepower)

Overhauling irrigation pumps enables you to increase your irrigation system's efficiency. Without changing your irrigation system design, you can reduce the energy it takes to run the pumps while still distributing the volume of water your crops need.

#### **Requirements:**

- Existing pump must be operational prior to the overhaul. Proof of the pump's operating status may be required in order to receive the incentive.
- Pump rating must be less than or equal to 25 horsepower (hp).
- Pump type must be one of the following: submersible well, submersible booster, centrifugal booster, turbine booster or turbine well.
- Pump overhaul must include at least one of the following: replacing the pump bowl assembly/impeller, trimming the existing impeller on a booster pump or adjusting the bowl and impeller on a deep well pump.
- If adjusting the bowl and impeller on a deep well pump with semi-open impellers, all impellers in the bowl assembly must run in close proximity (0.003 to 0.007 inches) to the next lower bowl after adjustment. (For enclosed impellers with a principal seal that is parallel to the centerline of the shaft, a close axial adjustment is not necessary.)
- Installation address must have an agricultural electric account with PG&E.

#### **Exclusions:**

- Rebates do not apply to industrial pumps; only agricultural, irrigation district or other irrigation pumps are eligible.
- Specialty pumps with predetermined low load factors, such as fire pumps and storm water pumps, do not qualify for incentives.

#### Application process:

- Applicant must provide an invoice that includes the detailed scope of work of the overhaul. To qualify, at least one of the following must be performed: replacing the pump bowl assembly/impeller, trimming the existing impeller on a booster pump or adjusting the bowl and impeller on a deep well pump.
- If hp is not indicated on the invoice, applicant must provide photograph of pump motor nameplate showing pump hp is less than or equal to 25 hp.

Rebate Code	Description	Rebate/Unit Measure
IR001	Centrifugal Booster Pump System Overhaul (≤ 25hp)	\$75/hp
IR002	Submersible Well Pump System Overhaul (≤ 25hp)	\$75/hp
IR003	Submersible Booster Pump System Overhaul (≤ 25hp)	\$75/hp
IR004	Turbine Booster Pump System Overhaul (≤ 25hp)	\$75/hp
IR005	Turbine Well Pump System Overhaul (≤ 25hp)	\$75/hp

## Agricultural Irrigation Pump Variable Frequency Drive

Adding a variable frequency drive (VFD) to irrigation pumps may enable you to reduce your irrigation system's operating pressure, thus reducing energy consumed by pumps. Adding a VFD also enables you to vary the flow of water as needed for your irrigation schedules, while providing additional benefits such as soft start capability and enhanced performance of equipment.

**Note:** A VFD can save energy in cases where pumps and irrigation equipment are oversized, or in situations with variable water supply or irrigation flow conditions, but are not recommended in all situations. Consult a PG&E expert or an irrigation system engineer for more information.

#### **Requirements:**

- VFD must be installed on a single-speed pump motor for booster and/or well pump.
- VFD must be used to control flow in pumping applications which require throttling below full flow to meet irrigation requirements.
- Rebate is applicable to pressurized irrigation system types, including sprinklers, microsprinklers and drip, but excluding flood irrigation.
- VFD is recommended, but not required, to meet power quality requirements as specified by Institute of Electrical and Electronics Engineers (IEEE) Standard 519-2014, Recommended Practices and Requirements for Harmonic Control in Electric Power Systems.
- To qualify for the higher incentive measures (IR012, IR013, IR014 and IR015), the VFD system must comply with the specifications for PG&E Agricultural Pumping VFD Incentive Program, as prepared by California Polytechnic University, San Luis Obispo. The VFD specification should be dated 8/15/2017 or after. The current version of VFD specifications, can be found here: itrc.org/VFD at the Irrigation Training and Research Center website.
- Operation must be a minimum of 1,000 hours per year.
- Installation address must have an agricultural electric account with PG&E.

#### **Exclusions:**

- VFDs must be used to adjust operation of pumps to meet flow/pressure requirements and not simply as soft starters or for cavitation controls.
- VFDs must NOT be solely for the following pumping applications:
  - A well pump used to fill a reservoir
  - A well pump discharging directly into a canal
  - A mixed flow pump (high volume, low head)
- Rebates do not apply to industrial or commercial pumps. Only agricultural irrigation pumps are eligible.
- Rebates are not eligible in combination with A266 Sprinkler-to-Drip Irrigation Field Vegetables incentive.
- Rebates are not eligible if rebates were previously received for Sprinkler-to-Drip (A266/A268/A269) or Low-Pressure Irrigation Nozzles (A272/A273) incentives in the last five years.

#### Application process:

- Customer must supply an invoice or other supporting documentation that includes the quantity of VFD(s), type (well and/or booster), horsepower rating of motor(s) and VFD(s), area map showing physical location of pumps and the manufacturer's make/models of the VFD(s) installed.
- To qualify for the higher incentive measures (IR012, IR013, IR014 and IR015), customer must supply additional required documentation as stated in the VFD specification, which can be found at itrc.org/VFD.

Rebate Code	Description	Rebate/Unit Measure
IR006	Well Pumps—Variable Frequency Drive, Retrofit and New Construction only ( $\leq$ 300hp)	\$20/hp/motor (max \$6,000)
IR007	Booster Pumps—Variable Frequency Drive, Retrofit and New Construction only ( $\leq$ 150hp)	\$20/hp/motor (max \$3,000)
IR012	Well Pumps (LTE 75hp) VFD—Enhanced Specifications, Retrofit, and New Construction	\$60/hp/motor (max \$6,500)*
IR013	Booster Pumps (LTE 75hp) VFD—Enhanced Specifications, Retrofit, and New Construction	\$60/hp/motor (max \$6,500)*
IR014	Well Pumps (GT 75hp to LTE 600hp) VFD—Enhanced Specifications, Retrofit and New Construction	\$60/hp/motor (max \$36,000)
IR015	Booster Pumps (GT 75hp to LTE 150hp) VFD—Enhanced Specifications, Retrofit and New Construction	\$60/hp/motor (max \$9,000)

\*In addition to the \$60 per horsepower (hp) incentive, this measure includes a \$2,000 bonus incentive.



## Livestock and Dairy

## Agricultural Process Fan Variable Speed Drive

Improve the energy efficiency and effectiveness of an agricultural process fan by adding a variable speed drive (VSD). A VSD ensures that air flows to barns, greenhouses, storage facilities, and other farm buildings when it's needed. By circulating air only when necessary, or at the right level of intensity, it's possible to lower the cost of energy bills. Adding a VSD to an agricultural process fan is a smart and energy-efficient measure.

#### **Requirements:**

- Agricultural process fan must not be used for HVAC, exhaust, pressurization or other process applications.
- Individual fan motors must not exceed 3 horsepower (hp).
- Fan must operate continuously or be manually operated with an ON/OFF control switch.
- Fan motors must not be two-speed or have an existing VSD.
- VSD must control multiple fans up to 3 hp each in arrays with one VSD or with one VSD for each fan.
- VSD must vary the speed of the fan automatically based on ambient conditions.
- Rebate applicable only to agricultural buildings in climate zones CZ11, CZ12 and CZ13.

#### Additional details:

- Place the VSD as close to the motor as possible when applying VSD to a standard duty National Electrical Manufacturers Association (NEMA) motor. Failure to do so may result in premature motor failure.
- Maintain sufficient airflow through the motor to prevent overheating.
- Must comply with the practices and requirements of American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) 519-2014 found here: standards.ieee.org/standard/519-2014.html.

Rebate Code	Description	Rebate/Unit Measure
HV385	VSD on Agricultural Ventilation Fans (1hp to 2hp)*	\$75/hp
HV386	VSD on Agricultural Ventilation Fans ( $\geq$ 2hp to 3hp) <sup>*</sup>	\$75/hp

\*Multiple fans may be linked onto the same VSD circuit box, i.e. allowing multiple units to be controlled together.

## **Agricultural Ventilation Fans**

Installing agricultural ventilation fans helps dairy and livestock operations managers avoid compromising animal health while still improving energy efficiency, increasing animal comfort and reducing contaminant exposure in livestock holding facilities. These fans are box, panel or basket fans and are sometimes designated as low-volume, high-speed fans that are used primarily to cool poultry and livestock.

#### **Requirements:**

- Customer must convert from an agricultural ventilation fan to a high-efficiency, agricultural ventilation fan specifically designed for dairy ventilation.
- New fans must replace ventilation fans one-for-one, and must be designed to provide same airflow and radius as preexisting fans.
- Eligible agricultural ventilation fans are listed on the University of Illinois Bioenvironmental and Structural Systems Lab (BESS) website (**bess.uiuc.edu**) using the minimum cubic feet per minute per watt (cfm/W) listed below, by rebate code.
- Installation address must have an agricultural electric account with PG&E.

#### Exclusions:

- Rebates are for retrofit measures only (like-for-like replacement); no new construction (added load) applications are allowed.
- Applications are for added load, or for fans larger than 48 inches in diameter and must be handled under PG&E's Calculated Incentives program.
- Portable fans are not eligible for this incentive measure.

#### Application process:

- To qualify for this rebate, customer must include a dated invoice that lists the number of fans, fan diameter and the manufacturer make/model.
- For questions on eligibility, contact your PG&E account representative, or call the Agricultural Customer Service Center at 1-877 311-FARM (3276).

Rebate Code	Description	Rebate/Unit Measure
H207	Ventilation Fans or Box Fans 24"–26" Retrofit	\$150 each (min. cfm/W 14.0)
H208	Ventilation Fans or Box Fans 36" Retrofit	\$200 each (min. cfm/W 20.4)
H209	Ventilation Fans or Box Fans 48" Retrofit	\$130 each (min. cfm/W 21.9)

## Refrigeration

## **Efficient Evaporator Fan Motors**

#### **Requirements:**

- Electronically commutated motors (ECM) must be installed in refrigerated display cases.
- Fan motor must replace standard efficiency shaded-pole or permanent split capacitor evaporator fan motor.
- Installation address must have a commercial electric account with PG&E.

#### **Exclusions:**

- Motors in display cases built after 2011 are not eligible.
- May not be used in conjunction with PG&E rebates for new display cases.

Rebate Code	Description	Rebate/Unit Measure
R145	Efficient ECM Evaporator Fan Motor Medium-Temperature Display Case	\$35/motor
R176	Efficient ECM Evaporator Fan Motor Low-Temperature Display Case	\$50/motor

## **Vending Machine Controllers**

#### **Requirements:**

- Controller must turn off lights and compressor when surrounding area is unoccupied for a time period adjustable between 15 and 60 minutes.
- Coolers must have glass sliding or pull-open doors with self-contained condensing unit.
- Coolers must maintain temperatures for nonperishable products.
- Installation address must have a commercial electric account with PG&E.

Rebate Code	Description	Rebate/Unit Measure
R86	Vending Machine Controller (Cooled)	\$100/controller

## Insulation

## **Pipe Insulation**

#### **Requirements:**

- Minimum-qualifying pipe diameter is 0.5 inch.
- Pipe must transfer fluid directly from gas-fired equipment, and insulation materials/accessories must be installed according to manufacturer's instructions.
- Application must include the manufacturer's name, insulation material type and material K-value rating.
  - Acceptable types of insulation for hot water pipes include: elastomeric foam rubber, polyethylene foam, UV-resistant polyethylene foam and rigid polyurethane foam.
  - Acceptable types of insulation for steam pipes include silicone foam rubber, melamine foam, rigid urethane-based foam, cellular glass, rigid fiberglass and rigid mineral wool.

#### **Exclusions:**

- These measures are applicable to any small, large commercial and industrial pipe insulation retrofit (i.e., non-new construction) application. They cannot be used for residential purposes.
- Replacement of damaged or existing insulation is not eligible for a rebate.
- California Building Standards Code (Title 24), Section 123, establishes requirements for pipe insulation in the design and installation of space-conditioning and service water heating systems and equipment. Any pipe requiring insulation according to these standards does not qualify for a rebate. Details are available at energy.ca.gov/title24.
- Pipe insulation for exposed steam and hot-water pipes within 7 feet of the floor that are not otherwise guarded in order to prevent contact does not qualify for rebate. Occupational Safety and Health Administration (OSHA) standards require that exposed, heated surfaces be covered to prevent injury.

#### Additional details:

Project cost can include installation and material cost.

continued

#### Pipe diameter is less than or equal to 1 inch

Rebate Code	Description	Rebate/Unit Measure
PR051	1 inch insulation layer, $\leq$ 1 inch pipe, $\leq$ 15 psig steam, outdoor	\$3/linear ft.
PR052	1 inch insulation layer, $\leq$ 1 inch pipe, > 15 psig steam, outdoor	\$3/linear ft.
PR053	1 inch insulation layer, $\leq$ 1 inch pipe, hot water, outdoor	\$3/linear ft.
PR060	1 inch insulation layer, $\leq$ 1 inch pipe, $\leq$ 15 psig steam, indoor	\$3/linear ft.
PR061	1 inch insulation layer, $\leq$ 1 inch pipe, > 15 psig steam, indoor	\$3/linear ft.
PR062	1 inch insulation layer, $\leq$ 1 inch pipe, hot water, indoor	\$3/linear ft.
PR069	Fitting insulation $\leq$ 1 inch pipe, $\leq$ 15 psig steam, indoor	\$3/fitting
PR070	Fitting insulation $\leq$ 1 inch pipe, > 15 psig steam, indoor	\$3/fitting
PR071	Fitting insulation $\leq$ 1 inch pipe, hot water, indoor	\$3/fitting
PR078	Fitting insulation, $\leq$ 1 inch pipe, $\leq$ 15 psig steam, outdoor	\$3/fitting
PR079	Fitting insulation, $\leq$ 1 inch pipe, > 15 psig steam, outdoor	\$3/fitting
PR080	Fitting insulation, $\leq$ 1 inch pipe, hot water, outdoor	\$3/fitting

Pipe diameter larger than 1 inch and less than or equal to 4 inches

Rebate Code	Description	Rebate/Unit Measure
PR057	1 inch insulation layer, 1 inch $<$ pipe $\le$ 4 inch, 15 psig steam, outdoor	\$3/linear ft.
PR058	1 inch insulation layer, 1 inch < pipe $\leq$ 4 inch, > 15 psig steam, outdoor	\$3/linear ft.
PR059	1 inch insulation layer, 1 inch $<$ pipe $\le$ 4 inch, hot water, outdoor	\$3/linear ft.
PR066	1 inch insulation layer, 1 inch < pipe $\leq$ 4 inch, $\leq$ 15 psig steam, indoor	\$3/linear ft.
PR067	1 inch insulation layer, 1 inch < pipe $\leq$ 4 inch, > 15 psig steam, indoor	\$3/linear ft.
PR068	1 inch insulation layer, 1 inch $<$ pipe $\le$ 4 inch, hot water, indoor	\$3/linear ft.
PR075	Fitting insulation 1 inch < pipe $\leq$ 4 inch, $\leq$ 15 psig steam, indoor	\$3/fitting
PR076	Fitting insulation 1 inch < pipe $\leq$ 4 inch, > 15 psig steam, indoor	\$3/fitting
PR077	Fitting insulation 1 inch $<$ pipe $\le$ 4 inch, hot water, indoor	\$3/fitting
PR084	Fitting insulation, 1 inch < pipe $\leq$ 4 inch, $\leq$ 15 psig steam, outdoor	\$3/fitting
PR085	Fitting insulation, 1 inch < pipe $\leq$ 4 inch, > 15 psig steam, outdoor	\$3/fitting
PR086	Fitting insulation, 1 inch < pipe $\leq$ 4 inch, hot water, outdoor	\$3/fitting

#### Pipe diameter is greater than 4 inches

Rebate Code	Description	Rebate/Unit Measure
PR054	1 inch insulation layer, $> 4$ inch pipe, $\le 15$ psig steam, outdoor	\$3/linear ft.
PR055	1 inch insulation layer, > 4 inch pipe, > 15 psig steam, outdoor	\$3/linear ft.
PR056	1 inch insulation layer, > 4 inch pipe, hot water, outdoor	\$3/linear ft.
PR063	1 inch insulation layer, $> 4$ inch pipe, $\le 15$ psig steam, indoor	\$3/linear ft.
PR064	1 inch insulation layer, > 4 inch pipe, > 15 psig steam, indoor	\$3/linear ft.
PR065	1 inch insulation layer, > 4 inch pipe, hot water, indoor	\$3/linear ft.
PR072	Fitting insulation > 4 inch pipe, $\leq$ 15 psig steam, indoor	\$3/fitting
PR073	Fitting insulation > 4 inch pipe, > 15 psig steam, indoor	\$3/fitting
PR074	Fitting insulation > 4 inch pipe, hot water, indoor	\$3/fitting
PR081	Fitting insulation, $> 4$ inch pipe, $\le 15$ psig steam, outdoor	\$3/fitting
PR082	Fitting insulation, > 4 inch pipe, > 15 psig steam, outdoor	\$3/fitting
PR083	Fitting insulation, > 4 inch pipe, hot water, outdoor	\$3/fitting

## Heating, Ventilation and Air Conditioning

## Notched V-Belts Replacing Solid V-Belts

#### **Requirements:**

- Customer must pick correct measure code for the type of packaged HVAC unit and enter the HVAC unit's tons of air-conditioning (AC) capacity on the rebate application as "Quantity."
- Customer must request separate rebate for each HVAC unit retrofitted with notched belts. See the HVAC unit's nameplate. (1 ton AC capacity = 12,000 Btuh)
- Customer must identify the building location, HVAC unit, motor, HVAC tonnage, v-belt make and model number and the quantity of the belts being replaced.
- Customer must replace solid v-belts with notched v-belts on HVAC supply or return fan motor.
- Only "A" or "B" type v-belts are considered.
- Rebate only applies to the following building types: assembly, education (community colleges, primary/secondary schools, relocatable classrooms, universities), hospitals, nursing homes, hotels, offices, restaurants (fast-food, sit-down), retail, conditioned storage, manufacturing (biotech, light industrial).
- Installation address must have a commercial electric account with PG&E.

#### **Exclusions:**

- Packaged HVAC units already fitted with notched v-belts do not qualify. Only units with solid v-belts qualify.
- Rebates for SA14 do not apply to relocatable classrooms.

Rebate Code	Description	Rebate/Unit Measure
SA13	HVAC Fans Cogged V-Belt Replacement for Gas Packs	\$0.35/ton (max \$30/motor)
SA14	HVAC Fans Cogged V-Belt Replacement for Heat Pumps	\$0.35/ton (max \$30/motor)
SA15	HVAC Fans Cogged V-Belt Replacement for Unitary AC Only	\$0.35/ton (max \$30/motor)



## Advanced Rooftop HVAC Controls

Retrofit your existing rooftop HVAC unit with one of several advanced control options.

#### **Requirements:**

- Customer must pick correct measure code for the type of packaged HVAC unit and enter the HVAC unit's tons of air-conditioning (AC) capacity on the rebate application as "Quantity." See the HVAC unit's nameplate for cooling capacity. (1 ton AC capacity = 12,000 Btuh)
- Installation must follow manufacturer's requirements. Customer must also ensure that controls are installed and operate according to current applicable building and energy codes.
- Installation address must have a commercial electric account with PG&E.

## Advanced Digital Economizer Control Systems for Packaged HVAC Units

Retrofit your existing analog or nonfunctional economizer controller for your packaged HVAC unit with an advanced digital economizer control (ADEC) system. ADECs detect and report problems with sensors, dampers and other components so that energy efficiency can be maintained.

#### **Requirements:**

- Customer must pick correct measure code for the type of packaged HVAC unit and enter the HVAC unit's tons of air-conditioning (AC) capacity on the rebate application as "Quantity." See the HVAC unit's nameplate for cooling capacity. (1 ton AC capacity = 12,000 Btuh)
- Customer must replace existing analog or nonfunctional economizer control system with an ADEC system.
- Installation must follow manufacturer's requirements. Customer must also ensure that controls are installed and operate according to current applicable building and energy codes.
- Customer cannot combine this rebate with demand controlled ventilation (DCV) or enhanced ventilation control (EVC) rebate offers for the same HVAC unit.
- Rebate applicable for heat pumps, air conditioners, gas packs and variable air volume (VAV) systems.
- Installation address must have a commercial electric account with PG&E.

#### **Exclusions:**

Not all building types qualify. See table below for eligible building types.

Measure	Packaged HVAC Unit Type	Eligible Building Types
HV294	Gas Pack	Assembly, community colleges, primary schools, relocatable classrooms, secondary schools, universities, grocery, hospitals, hotels, motels, manufacturing (biotech and light industrial), nursing homes, large and small offices, restaurants (fast-food and sit-down), retail (single/multistory large, small), conditioned storage, refrigerated warehouses
HV295	Air Conditioning	Assembly, community colleges, primary schools, relocatable classrooms, secondary schools, universities, grocery, hospitals, hotels, motels, manufacturing (biotech and light industrial), nursing homes, large and small offices, restaurants (fast-food and sit-down), retail (single/multistory large, small), conditioned storage, refrigerated warehouses
HV296	Heat Pump Unit	Assembly, community colleges, primary schools, relocatable classrooms, secondary schools, universities, grocery, hospitals, hotels, manufacturing (biotech and light industrial), nursing homes, large and small offices, restaurants (fast-food and sit-down), retail (single/multistory large, small), conditioned storage, refrigerated warehouses
HV297	Variable Air Volume (VAV) Unit	Community colleges, secondary schools, universities, hospitals, hotels, manufacturing (biotech), nursing homes, large and small offices, multistory large retail

Eligible Building Type Table for Advanced Digital Economizer Controls (ADEC)



## **Demand Controlled Ventilation for Packaged HVAC Units**

Add demand controlled ventilation (DCV) to your packaged HVAC unit. DCV enables your economizer to reduce the amount of outside air when the conditioned space is occupied by fewer people than the design capacity. A  $CO_2$  sensor provides the occupancy signal to the advanced digital economizer control (ADEC) system. This is a good energy-efficiency measure for conditioned spaces with highly-variable or low occupancy. If your rooftop unit already has an ADEC, then you have the option of just adding a  $CO_2$  sensor.

#### **Requirements:**

- Customer must pick correct measure code for the type of packaged HVAC unit and enter the HVAC unit's tons of air-conditioning (AC) capacity on the rebate application as "Quantity." See the HVAC unit's nameplate for cooling capacity. (1 ton AC capacity = 12,000 Btuh)
- Rebate is based on the HVAC unit's cooling capacity and is maxed at \$1,500 per ADEC, plus  $CO_2$  sensor system, or \$600 for  $CO_2$  sensor.
- Installation must follow manufacturer's requirements. Customer must also ensure that controls are installed and operate according to current applicable building and energy codes.
- Customer must install DCV on existing operational packaged HVAC unit.
- Installer and manufacturer must warrant equipment for at least two years for parts and labor. All installed equipment must be new.
- Rebate cannot be combined with ADEC or enhanced ventilation control (EVC) rebate offers for the same HVAC unit.
- Rebate only applies to the following building types: assembly, education (primary/ secondary school, relocatable classrooms, universities), small office, restaurant (fast-food, sit-down), retail, manufacturing (biotech).
- Installation address must have a commercial electric account with PG&E.

## **Enhanced Ventilation Control for Packaged HVAC Units**

Add enhanced ventilation control (EVC) to your packaged HVAC unit. EVC kits add variable speed,  $CO_2$  sensors and advanced digital economizer control (ADEC) to existing packaged HVAC units. These retrofit add-on technologies can reduce the ventilation rate and outside air when the conditioned space is occupied by fewer people than the design capacity. This is a good energy-efficiency measure for conditioned spaces with highly-variable or low occupancy.

#### **Requirements:**

- Customer must install EVC on existing operational packaged HVAC unit.
- Rebate cannot be combined with ADEC or demand control ventilation (DCV) rebate offers for the same HVAC unit.
- Rebate only applies to the following building types: assembly, education (primary/ secondary school, universities), small office, restaurant (fast-food, sit-down), retail, manufacturing (biotech).
- Installation address must have a commercial electric account with PG&E.

#### **Exclusions:**

Variable air volume (VAV) packaged HVAC units are excluded.

		Advanced Digital Economizer Controller	Demand Controlled Ventilation		Enhanced Ventilation Control		
	Packaged HVAC Unit Type	ADEC	+CO <sub>2</sub> sensor only to existing ADEC	ADEC + CO <sub>2</sub> sensor	ADEC + CO <sub>2</sub> sensor + VFD	ADEC + CO <sub>2</sub> sensor + VFD + NEMA Premium Motor	ADEC + CO <sub>2</sub> sensor + VFD + Permanent Magnet Motor
Rebate Code	Gas Pack	HV294	HV027	HV026	SA07	SA08	SA09
	Heat Pump Unit	HV296	HV031	HV030	SA10	SA11	SA12
	Air Conditioning	HV295	HV029	HV028			
	Variable Air Volume (VAV) Unit	HV297			No rebate av	ailable	
	Rebate/Unit Measure	\$10/ton (max \$150)	\$40/ton (max \$600)	\$100/ton (max \$1,500)	\$155/ton (max \$3,875)	\$190/ton (max \$4,750)	\$194/ton (max \$4,850)

Demand controlled ventilation and enhanced ventilation control do not have specific separate rebates for the VAV category, but VAV is an option on the other three HVAC types: gas pack, heat pump and air conditioning only. (For example, an HVAC unit can be a VAV heat pump.)

## More ways for your business to save money

To find the latest rebate information and catalogs or to apply for rebates online, visit pge.com/businessrebates. For a full glossary of terms, please visit pge.com/glossary.

PG&E offers a wide range of tools and resources that can help your business save energy and money while helping the environment.

- Check out PG&E's Calculated Incentives for businesses if you did not find a rebate matching the high-efficiency equipment you would like to install. To learn more, visit **pge.com/cr**.
- Sign up for automated benchmarking service at **pge.com/benchmarking**, which allows you to use the ENERGY STAR<sup>®</sup> Portfolio Manager to track and compare your facility's energy performance over time.
- Use PG&E's audit tools to identify options for saving energy and money at your facility, and get started on developing a comprehensive energy management plan. Visit the Business Energy Checkup at pge.com/waystosave.
- Find out how you can earn incentives for large custom projects, including equipment upgrades and retrocommissioning, by using PG&E's Calculated Incentives Program. Visit **pge.com/customized** and **pge.com/rcx**.
- Explore PG&E's demand response programs, which offer incentives for managing your energy use during times of peak demand. Visit **pge.com/demandresponse**.
- Check out PG&E's third-party programs at **pge.com/thirdparty**. These programs are managed by energy-efficiency specialists and offer a range of services to provide you with industry-specific, energy-saving solutions—from heavy industry to hospitality to dairies to wineries to food processors.
- Use PG&E's Savings By Design or Customized New Construction programs to build in energy efficiency from the ground up and earn incentives at the same time. To get started, visit **pge.com/savingsbydesign**.
- Go to the Agriculture and Food Processing section of PG&E's website at **pge.com/ag** to learn about loans and grants that focus on food, agribusiness, alternative energy and environmental programs, or call our **Agricultural Customer Service Center** at 1-877-311-FARM (3276).
- If you are considering generating your own electricity, talk to your PG&E account representative about incentives for solar, wind and fuel cell self-generation equipment.

You also may learn more about these programs, tools and offers by contacting your local PG&E account representative or by calling our **Business Customer Service Center** at 1-800-468-4743.

Ready to get started with your next project and need the help of a contractor? Find local vendors who participate in PG&E's energy-efficiency rebate programs for your business at pge.com/tradeprodirectory.