

C&I Prescriptive HVAC, Refrigeration and Plug Load Requirements

Program Details & Instructions

Central Hudson Gas & Electric's (CHGE) Commercial / Industrial Electric and Gas Programs are designed to help non-residential customers replace aging, inefficient equipment and systems with energy-efficient technologies by providing rebates and technical assistance that will facilitate the installation of premium efficiency equipment.

Details of the program, including rebate levels and technical requirements, are subject to change without prior notice.

Visit SavingsCentral.com to review the most current program information, or call 800-515-5353.

Eligible Participants

Rebates are available to non-residential, commercial, industrial, government, institutional and non-profit electric and gas service customers within the CHGE service territory. All applications must be submitted through a participating Trade Ally.

Eligible Equipment

Eligible equipment and rebate amounts are listed on the following pages of this measure list. These measures are subject to the associated technical eligibility criteria.

All equipment must be new; used or refurbished equipment is not eligible. This form is applicable to retrofit projects that are completed and invoiced after January 1, 2019. To guarantee the incentive levels represented in this document, projects must be installed by March 25, 2019 with applications received by April 1, 2019.

Customers cannot have received incentives from any other programs for the same equipment where a rebate is being requested in this application.

New construction projects and additions to existing facilities are not eligible through the Prescriptive programs.

Pre-Approval Requirements

Projects with total rebates less than or equal to \$10,000 do not require pre-approval from CHGE. The applicant must purchase the qualifying equipment and submit a completed application form and supporting documentation within 90 days of the invoice date.

Projects with total rebates greater than \$10,000 require preapproval from CHGE prior to purchasing and installing any equipment to guarantee rebate availability. After the application has been pre-approved by CHGE, the applicant will be notified in writing, assigned a project identification number, and given any specific instructions. The applicant may then purchase and install the pre-approved equipment.

Terms & Conditions

Please review and sign the program Terms and Conditions on the last page of this application.

Participation Instructions

Step 1

Review program materials to confirm your proposed equipment meets program requirements.

For questions, visit the program website at SavingsCentral.com or contact us at 800-515-5353.

Step 2

Trade Allies are directed to visit the Application Center to submit an online application on behalf of their customer. Refer to the Application Checklist on page 7 to verify that all required information and documentation are included for submission to CHGE. Applications not requiring preapproval should also include proof of purchase in the form of detailed invoices, manufacturer specification sheets or other documentation required to demonstrate compliance with eligibility requirements, and a Federal W9 form completed by the applicant.

All elements of a completed application must be uploaded to the Application Center by a valid Trade Ally. Trade Allies in need of credentials for the online application site should contact CHGEPrograms@icfi.com.

All applications will be reviewed for eligibility and completeness. Completed applications will be reviewed in the order they are received. Applicants who submit incomplete applications will be notified of deficiencies by a flaw letter describing the documentation or information needed to complete the application. CHGE may require a pre-installation inspection. CHGE will notify customers if an inspection of the facility is necessary.

Please indicate if the rebate payment should be made payable to the customer of record or a third party, such as the installation contractor. All rebate payments require authorization from the customer of record.

Step 3

Applications not requiring pre-approval (rebate ≤ \$10,000) will be processed for payment, subject to post-installation inspection.

Applications requiring pre-approval (rebate > \$10,000) will be processed and CHGE will notify the applicant in writing when the review is complete and funds have been reserved.

Upon receipt of program pre-approval, participants may purchase and install their energy-efficient equipment.

CHGE will notify applicant if an inspection of the facility is necessary prior to pre-approval.

Any changes in the proposed equipment, quantities, or operating conditions must be approved by CHGE prior to implementation.

Step 4

Upon project completion, review the pre-approved application and note any changes to the project that occurred during installation.

Submit the pre-approval letter, with the authorized customer signature, proof of purchase for rebate payment, specification sheets and a completed Federal W9 form.

CHGE will notify applicant if an inspection of the facility is necessary prior to final payment processing



Size Category (BTU/hr)	Sub-Category	Minimum Requirement	Rebates
apacity for Heat Pumps c	omes from Heating	·	
eat Pumps – Air Source	<u> </u>		
< 65,000 (5.42 tons)	Split System and Single Package	≥15.0 SEER, ≥12 EER, ≥8.5 HSPF	\$125/ton
≥ 65,000 (5.4 tons) and < 135,000 (11.25 tons)	Split System and Single Package	≥12.0 EER, ≥12.4 IEER, ≥3.4 COP	\$75/ton
135,000 (11.25 tons) and < 240,000 (20 tons)	Split System and Single Package	≥12.0 EER, ≥12.4 IEER, ≥3.4 COP	\$75/ton
≥ 240,000 (20 tons) and < 760,000 (63.3 tons)	Split System and Single Package	≥10.9 EER, ≥12.0 IEER, ≥3.4 COP	\$75/ton
≥ 760,000 (63.3 tons)	Split System and Single Package	≥10.5 EER, ≥11.0 IEER, ≥3.3 COP	\$60/ton
eat Pumps – Water Sourc	е		
< 240,000 (20 tons)	Split System and Single Package	≥14.0 EER, ≥4.7 COP	\$80/ton
eat Pumps – Packaged Te	erminal (PTHP)		
< 9,000 (.75 tons)	Single Package	≥ 11.5 EER, ≥ 3.3 COP	\$100/ton
≥ 9,000 (.75 tons) and < 12,000 (1 ton)	Single Package	≥ 10.8 EER, ≥ 3.2 COP	\$100/ton
≥ 12,000 (1 ton) Single Package		≥ 10.1 EER, ≥ 3.1 COP	\$100/ton
Capacity for Air Condition	ers comes from Coo	ling Capacity (Btuh)	
ir Conditioners – Water C	ooled		
< 65,000 (5.42 tons)	Split System and Single Package	≥ 13.1 EER, ≥ 15 IEER	\$40/ton
≥ 65,000 (5.42 tons) and < 135,000 (11.25 tons)	Split System and Single Package	≥ 12.6 EER, ≥ 13.3 IEER	\$40/ton
≥ 135,000 (11.25 tons) and < 240,000 (20 tons)	Split System and Single Package	≥ 13.5 EER, ≥ 14 IEER	\$40/ton
≥ 240,000 (20 tons) and < 760,000 (63.3 tons)	Split System and Single Package	≥ 13.4 EER, ≥ 13.6 IEER	\$40/ton
≥ 760,000 (63.3 tons)	Split System and Single Package	≥ 13.2 EER, ≥ 13.4 IEER	\$40/ton
ir Conditioners – Evapora	tive Cooled		
< 65,000 (5.42 tons)	Split System and Single Package	≥ 13.1 EER, ≥ 15 IEER	\$40/ton
≥ 65,000 (5.42 tons) and < 135,000 (11.25 tons)	Split System and Single Package	≥ 12.6 EER, ≥ 13.3 IEER	\$40/ton
2 135,000 (11.25 tons) and < 240,000 (20 tons)	Split System and Single Package	≥ 13.5 EER, ≥ 14 IEER	\$40/ton
≥ 240,000 (20 tons) and < 760,000 (63.3 tons)	Split System and Single Package	≥ 13.4 EER, ≥ 13.6 IEER	\$40/ton
≥ 760,000 (63.3 tons)	Split System and Single Package	≥ 13.2 EER, ≥ 13.4 IEER	\$40/ton
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Air Conditioners – Unita	ry			
< 65,000 (5.42 tons)	Single Package	≥ 12.5 EER, ≥ 15 SEER	\$40/ton	
≥ 65,000 (5.42 tons) and < 135,000 (11.25 tons)	Single Package	≥ 12.0 EER, ≥ 12.4 IEER	\$40/ton	
≥ 135,000 (11.25 tons) and < 240,000 (20 tons)	Single Package	≥ 12.0 EER, ≥ 12.4 IEER	\$40/ton	
≥ 240,000 (20 tons) and < 760,000 (63.3 tons)	Single Package	≥ 11.0 EER, ≥ 12.0 IEER	\$40/ton	
≥ 760,000 (63.3 tons)	Single Package	≥ 10.7 EER, ≥ 11.0 IEER	\$40/ton	
Air Conditioners – Packa	ged Terminal (PTAC)			
< 9,000 (.75 tons)	Single Package	≥ 11.8 EER	\$80/ton	
≥ 9,000 (.75 tons) and < 12,000 (1 ton)	Single Package	≥ 11.0 EER	\$80/ton	
≥ 12,000 (1 ton)	Single Package	≥ 10.3 EER	\$80/ton	
Capacity for chillers is li	sted in tons rather than E	BTU/hr.		
Chiller – Air Cooled				
	Path A – Constant Speed	Path B – Variable Speed		
< 150 tons	≤ 0.830 IPLV kW/ton	≤ 0.720 IPLV kW/ton	\$0.16/kWh saved	
< 150 tons	≤ 1.13 Full Load kW/ton	≤ 1.18 Full Load kW/ton	φυ. το/κνντι Saveu	
≥ 150 tons	≤ 0.815 IPLV kW/ton	≤ 0.707 IPLV kW/ton	\$0.16/kWh saved	
	≤ 1.13 Full Load kW/ton	≤ 1.18 Full Load kW/ton		
Chiller – Water Cooled P	·			
	Path A – Constant Speed	Path B – Variable Speed		
< 75 tons	≤ 0.535 IPLV kW/ton ≤ 0.675 Full Load kW/ton	≤ 0.450 kW/ton IPLV ≤ 0.700 Full Load kW/ton	\$0.16/kWh saved	
≥ 75 tons and <150 tons	≤ 0.500 IPLV kW/ton ≤ .645 Full Load kW/ton	≤ 0.440 kW/ton IPLV ≤ 0.675 Full Load kW/ton	\$0.16/kWh saved	
≥ 150 tons and < 300 tons	≤ 0.460 IPLV kW/ton ≤ .570 Full Load kW/ton	≤ 0.395 kW/ton IPLV ≤ 0.610 Full Load kW/ton	\$0.16/kWh saved	
≥ 300 tons and < 600 tons	≤ 0.425 IPLV kW/ton ≤ .530 Full Load kW/ton	≤ 0.369 kW/ton IPLV ≤ 0.530 Full Load kW/ton	\$0.16/kWh saved	
≥ 600 tons	≤ 0.410 IPLV kW/ton ≤ 0.500 Full Load kW/ton	≤ 0.342 kW/ton IPLV ≤ 0.525 Full Load kW/ton	\$0.16/kWh saved	
Chiller – Water Cooled C				
	Path A – Constant Speed	Path B – Variable Speed		
450:	≤ 0.495 IPLV kW/ton	≤ 0.395 kW/ton IPLV	Φο 40/11411	
< 150 tons	≤ 0.550 Full Load kW/ton	≤ 0.587 Full Load kW/ton	\$0.16/kWh saved	
≥ 150 tons and < 300 tons	≤ 0.495 IPLV kW/ton ≤ 0.550 Full Load kW/ton	≤ 0.360 kW/ton IPLV ≤ 0.565 Full Load kW/ton	\$0.16/kWh saved	
≥ 300 tons and < 400 tons	≤ 0.465 IPLV kW/ton ≤ 0.505 Full Load kW/ton	≤ 0.350 kW/ton IPLV ≤ 0.535 Full Load kW/ton	\$0.16/kWh saved	
≥ 400 tons and < 600 tons	≤ 0.450 IPLV kW/ton ≤ 0.505 Full Load kW/ton	≤ 0.341 kW/ton IPLV ≤ 0.526 Full Load kW/ton	\$0.16/kWh saved	
≥ 600 tons	≤ 0.450 IPLV kW/ton ≤ 0.505 Full Load kW/ton	≤ 0.341 kW/ton IPLV ≤ 0.526 Full Load kW/ton	\$0.16/kWh saved	



II. GAS HVAC MEASURES AND F	REBATES	
Size Category (kBTU/hr)	Minimum Requirement	Rebates
AFUE = Annual Fuel Utilization E	Efficiency, E_t = Thermal Efficience	cy , E_c = Combustion Efficiency
Gas Furnace		
Any Consoity	AFUE ≥ 90%	\$300/installed unit
Any Capacity	AFUE ≥ 95%	\$600/installed unit
Hydronic Boiler		
< 300	AFUE ≥ 90%	\$850/installed unit
≥ 300 and < 500	$E_t \ge 90\% \text{ or } E_c \ge 93\%$	\$1400/installed unit
≥ 500	$E_t \ge 90\% \text{ or } E_c \ge 93\%$	\$1800/installed unit
Steam Boiler		
< 300	AFUE ≥ 82%	\$250/installed unit
≥ 300 and < 2500	E _t ≥ 82% or E _c ≥ 84%	\$600/installed unit
≥ 2500	$E_t \ge 82\% \text{ or } E_c \ge 84\%$	\$2000/installed unit
Boiler Reset Control		
< 300	Must be installed with qualifying	\$125/installed unit
> 300	gas boiler.	\$200/installed unit
Indirect Water Heater		
Any Capacity	Must be listed on invoice	\$250/installed unit
Wi-Fi Thermostat		
Electric or Gas	Must be installed with qualifying measure	\$20/installed unit



III. DUAL ENTHALPY ECONOMIZER, CONTROLS, ECM MEASURE AND REBATES

Dual Enthalpy Economizer

Dual Enthalpy Economizer control incentives are for new or existing HVAC units meeting minimum requirements.

Hotel Room HVAC Controls

- Facility must be a lodging business.
- Rebates are for occupancy-based guest room energy management controls.
- Occupancy control may be room-key activated or sensed due to motion and/or sound and must control the HVAC system serving the room.
- Front desk control systems and new construction are not eligible.

ECM Furnace Fan

- Electrically Commutated Motor Furnace Fan must be installed on qualifying Furnace
- Must be listed on AHRI certificate.

Siza Catagory (PTII/br)	Sub Cotogony	Minimum Requirement	Rebates	
Size Category (BTO/III)	Size Category (BTU/hr) Sub-Category		Repates	
Dual Enthalpy Economiz	er			
Any Capacity (of equipment installed on)	Split System and Single Package	Must be installed on qualifying equipment.	\$100/installed unit.	
Hotel Room HVAC Contr	ols	·		
Any Capacity (of equipment installed on)	Split System and Single Package	Can be installed on existing HVAC equipment.	\$25/installed unit	
ECM Furnace Fan				
Any Capacity (of equipment installed on)	Packaged	Must be installed on qualifying equipment.	\$200/installed unit	



IV. VARIABLE FREQUENCY DRIVES MEASURE AND REBATES

Prescriptive Variable Frequency Drive

- It is good engineering practice to ensure that the application of variable frequency drives (VFDs) within a facility does not cause excessive facility harmonic distortion. See IEEE 519 for further information.
- If the cable length between a VFD and controlled motor is greater than 50 feet, additional motor winding
 insulation on the first few windings or the installation of an LC filter on the output of the inverter may be
 required.
- The VFD should be grounded in accordance with manufacturer's grounding requirements for noise as long as their requirement complies with applicable electric codes.
- The facility owner may want to consider: VFD startup by manufacturer representative, overcurrent trip
 protection, critical frequency lockout.
- Prescriptive rebates will be provided for the installation of variable frequency drives 2 hp and greater for ONLY the HVAC applications listed under VFD Installation Type below. Other VFD applications may be eligible under Central Hudson's Custom program.
- The following HVAC VFD applications are not eligible to use this application:
 - Forward curve fans with inlet guide vanes;
 - Variable pitch vane-axial fans;
 - Replacement of a failed VFD;
 - VFD used solely for balancing a constant flow;
 - Control of existing 2-speed cooling tower fan;
 - o 2-speed control of a fan or pump; mitigation of oversized motor installation.
- For chilled water and heating pump installations, at least 75% of pump capacity must be controlled by 2-way valves.
- VFDs must be controlled by an automatic signal in response to varying air or water flow. Controlled motors must operate a minimum of 2,000 hours per year.
- Published manufacturer's information must be submitted with this application to demonstrate compliance for each of the following criteria:
 - o 15 Millisecond Minimum Ride-through on the VFD Control at Full Load and No Inertia
 - Auto Restart
 - Flying Restart (Start into Rotating Motor, Speed Search)
 - Under Voltage Trip 85% or Less
 - Minimum 3% In Line Reactor or Equivalent (Choke, Isolation Transformer) Based on Drive Horsepower
 - o 95% Minimum Drive Efficiency at Full Load and Full Speed
 - 0.95 Minimum Displacement Power Factor
- Warranty of at least one year for parts

VFD Installation Type				
EXH fan = Exhaust Fan	MAF = Make-up Air Fan	RAF = HVAC Return Air Fan	HW pump = Hot Water Pump	
CT fan = Cooling Tower Fan	SAF = HVAC Supply Air Fan	CW pump = Condenser Water Pump	WLHP = Water Loop Heat Pump Circ Loop	
CHW pump = Chilled Water Pump	Boiler FW pump = Boiler Feed-Water Pump	TF = Tower fan		
Size Category	/ (Horsepower)	Reb	pates	
2	: 2	\$200/installed unit. Add	litional \$60/Horsepower.	



V. PLUG LOAD TECHNICAL REQUIREMENTS

"Smart" Power Strips

- Rebate applies to any plug strip that eliminates idle or stand-by power consumption of connected plug-load appliance through the use of an electric load sensor or timer.
- New construction is not eligible.

Vending Machine Control - non-refrigerated

 Rebates are for controllers for non-refrigerated snack vending machine(s) with mechanisms that function to power down the machine if the surrounding area is vacant.

Vending Machine Control - refrigerated

 Rebates are for controllers for glass fronted coolers and refrigerated snack vending machines where the controller functions to power down the machine when the surrounding area is vacant (vending machine occupancy control), monitors the room temperature and re-powers the cooling system to maintain a cool product.

Computer Controls

- Computer power management software is installed on a network of computers. This software monitors and records computer and monitor usage, as well as allows centralized control of computer power management settings.
- Applicable on networks at least one year old that do not currently have a PC power management system installed.
- The installed software must:
 - Allow centralized control and override of computer power management settings of workstations that include both a computer monitor and CPU (i.e., a desktop or laptop computer on a distributed network)
 - Be able to control on/off/sleep states on both the CPU and monitor according to the Network Administrator-defined schedules and apply power management policies to network groups
 - Have capability to allow networked workstations to be remotely wakened from power-saving mode (e.g., for system maintenance or power/setting adjustments)
 - Have capability to detect and monitor power management performance and generate energy savings reports
 - Have capability to produce system reports to confirm the inventory and performance of equipment on which the software is installed.

Measure Description	Rebate
"Smart" Power Strips	\$20/installed unit
Vending Machine Control – non-refrigerated	\$75/installed unit
Vending Machine Control – refrigerated	\$150/installed unit
Computer Controls	\$15/installed unit



VI. REFRIGERATION ELIGIBILITY AND TECHNICAL REQUIREMENTS

Anti-Sweat Heat Controls

- Must install a device that senses the relative humidity in the air outside of the display case and reduces or turns off
 the glass door (if applicable) and frame anti-sweat heaters at low humidity conditions.
- Equivalent technologies that can reduce or turn off anti-sweat heater based on the amount of condensation formed
 on the inner glass pane may also qualify.
- Rebate not available for equipment in new walk-in freezers or coolers.

Walk-In Door Closers

- The auto-closer device should be applied to the glass reach-in door or a walk-in cooler (40°F) or freezer (0°F). The reach-in door must have a minimum perimeter of 16 feet.
- The auto-closer must be able to firmly close the door. Rebate not available for equipment in new freezers or coolers.

Strip Curtains for Walk-In Coolers and Freezers

- Must install new strip curtains or clear plastic swinging doors on doorways of walk-in boxes and refrigerated warehouses
- This rebate is not available for display cases or for replacing existing strip curtains.
- Rebate is based on square footage of doorway.

ECM Motor for Walk-In Coolers

- Must be replacement of refrigerated case motors with electronically commutated (EC) motor, or retrofits of walk-in cooler or freezer motors with EC motors.
- Can be installed with or

ECM Motor for Reach-In Refrigerated Cases

- Must be replacement of refrigerated case motors with electronically commutated (EC) motor, or retrofits of walk-in cooler or freezer motors with EC motors.
- Motor types must be either Permanent-Split Capacitor or Shaded-Pole.

Evaporator Fan Controller on Existing Shaded-Pole Motor

- Must reduce airflow of evaporator fans in medium-temperature walk-in coolers when compressor(s) cycle off and there is no refrigerant flow through the evaporator.
- Must control a minimum fan load of 1/20 horsepower where the fan(s) operate continuously at full speed.
- Must reduce fan motor power by at least 75% during the compressor off-cycle.
- Do not use if any of the following conditions apply:
 - The compressor runs all the time with high-duty cycle;
 - o The evaporator fan does not run at full speed all the time;
 - o The evaporator fan motor runs on poly-phase power;
 - The evaporator fan motor is not shaded-pole; or
 - o The evaporator does not use off-cycle or time-off defrost.
- Rebate not available for equipment in new walk-in freezers or coolers.



Measure Description	Rebate
Anti-Sweat Heat Control	\$35/installed unit
Walk-In Door Closers	\$50/installed unit
Strip Curtains for Walk-In Coolers and Freezers	\$3/square foot installed
ECM for Walk-In Coolers	\$125/installed unit
ECM for Reach-In Refrigerated Cases	\$40/installed unit
Evaporator Fan Controller on Existing Shaded-Pole Motor	\$75/installed unit



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Trade Allies - Please include the following items when you apply through the Application Center: ☐ Supporting documentation to include manufacturer's specification (cut) sheets or AHRI certificate for all equipment. ☐ Complete application worksheet – for retrofit projects only. Meet measure code eligibility requirements. Upload the completed electronic copy of the worksheet under the files tab of your project in the Application Center. ☐ Appropriate invoices (if no pre-approval required). ☐ Signed Customer Acknowledgement (if payment is to the contractor). ☐ Signed Terms and Conditions ☐ A completed Federal W9 form CHGE will process applications for payment in the order received and issue incentive payment within 4-6 weeks after project completion and approval. Applicants will be notified if post-installation inspections are required prior to final payment. Please note that failure to provide any of the above items may delay the processing of your application.



VIII. TERMS & CONDITIONS

- Equipment and services must be purchased January 1, 2019, through March 25th 2019, or while funding for rebates for this program are still available. Projects completed in the above named period must have applications submitted by April 1, 2019.
- Work must be completed by a participating Central Hudson SavingsCentral Trade Allv.
- Incentives are available for commercial electric and gas customers of Central Hudson. Measures installed in newly constructed commercial buildings are not eligible for rebates.
- 4. It is the responsibility of the customer to ensure that all requirements for the rebate are met and that all required documentation is provided.
- 5. Rebate payments will be based on the equipment purchase date.
- Failure to provide any of the required information will prevent processing of your application.
- 7. Central Hudson reserves the right to review the installations in order to ensure compliance with all program requirements. Central Hudson may choose to review locations to verify completion of the projects and to measure and verify energy savings. Such reviews will be made at a time convenient to the applicant, with advanced notice given to the applicant. Misrepresentation of installation location or measure eligibility may result in forfeiture of the incentive award.
- 8. Program procedures, requirements and rebate levels are subject to change or cancellation without notice.
- One rebate check will be issued to the customer for each approved and completed application. Where applicable, a separate check will be issued to the contractor for each approved and completed application.

- 10. Installations must be completed in accordance with all laws, codes and other requirements applicable under federal, state and local authority.
- 11. You are urged to seek appropriate consultation concerning any tax liabilities that could be associated with the receipt of the rebate.
- 12. Customer verifies that they have not received any other incentives from any other programs for the same equipment where a rebate is being requested in this form.
- 13. Central Hudson is entitled to 100% of the energy benefits associated with the rebated measures, excluding the value of energy cost savings realized by the customer.
- 14. Central Hudson assumes no responsibility for the performance of the equipment and equipment warranty, the quality of the work, labor and/or materials supplied, and/or the acts or omissions of the Trade Ally.
- 15.The equipment must be purchased new and installed at the above listed customer location.
- 16.The customer hereby relieves and indemnifies Central Hudson of any and all liability associated with this project.
- 17.I understand that I may be contacted by Central Hudson via survey or questionnaire to provide feedback on my satisfaction with the program.

administrators and evaluation contractors. These administrators an information confidential. The release and usage of data will be only purposes and analysis and will be kept confidential.	d contractors are obligated to Central Hudson to keep customer for program evaluation, program eligibility determination, energy savings
Customer Name	
Trade Ally Name	
Customer Signature	Date

By signing this application, the customer agrees to the terms and conditions of this document. The customer hereby consents to the utilization and release of his or her energy consumption data and usage by Central Hudson and/or its designees including program