

# HVAC TECHNICAL SHEET

Packaged HVAC Units, Chillers, and VFD Equipment



An Exelon Company

## Prescriptive Program

The Pepco Energy Savings for Business Program offers incentives to install energy efficient HVAC, chiller, and variable frequency drive (VFD) equipment.

Click or scroll to view the following sections below:

- [Packaged HVAC Equipment](#)
- [Geothermal Equipment](#)
- [Hotel Room HVAC and Receptacle Controls](#)
- [Chillers](#)
  - [Constant Speed Chillers](#)
  - [VFD Chillers](#)
- [Variable Frequency Drives](#)

To take advantage of these incentives, you must meet the following eligibility requirements:

1. Be a Pepco customer and business in the Maryland territory
2. Have an electrical demand greater than 60kW or not applying through the Small Business Program.
3. Incentives apply only where existing equipment is being replaced, with the exception of new construction and/or major renovation projects.

Existing buildings, new construction, and major renovation projects are all eligible for Prescriptive incentives. New construction refers to site preparation for and construction of entirely new structures and/or extensions to existing buildings. Major renovation refers to extensive alteration of an existing building encompassing projects where lighting and HVAC systems are being completely replaced.

Multifamily properties are eligible for packaged HVAC unit, chiller, and VFD incentives through the Prescriptive program.

### All projects require pre-approval.

You can also contact your installation contractor or equipment vendor to discuss energy efficiency equipment options. If you do not have a contractor or vendor in mind, please visit our website for a list of Service Providers. **New construction and/or major renovation projects are not subject to program Service Provider requirements.**

All projects MUST receive pre-approval before purchasing equipment or beginning work. Please review the program process and eligibility requirements on the [program website](#) as well as the customer-signed [Terms and Conditions](#). Please [contact](#) the program office with any questions.

How to Apply:

1. **The customer completes and submits the application via the online [Application Center](#). The Application Center Equipment Guide below illustrates how to enter equipment into the online application. Pre-approval is required before proceeding. The following supporting information must be included with the application:**
  - Completed and customer-signed [Terms and Conditions \(T&Cs\)](#)
  - Manufacturer specification sheets providing EER, IPLV, and HSPF/COP (as applicable) at AHRI conditions
  - Current AHRI website product qualification screenshots (note: not all equipment is listed on AHRI website)
2. **The Program reviews submitted documentation, revises and/or requests additional documentation as necessary. A site inspection may be required as part of the pre-approval process.**
3. **The Program emails the project pre-approval to the customer and Service Provider.**
4. **If the scope of work has changed, then the Program must be notified as soon as possible. If your project increases the incentive amount by more than \$2,500 or 10% of the reserved amount – whichever is greater – a separate application must be submitted for the variance prior to installation and will need to go through the application pre-approval process.**
5. **Once the installation of all proposed equipment is complete and the Pepco customer is satisfied with the equipment and installation, the Pepco customer must sign the program pre-approval letter. The customer-signed pre-approval letter must be uploaded to the online Application Center along with a copy of the invoice, indicating total project cost, incentive amount, and balance of cost to be paid by customer. The invoice should match the application information.**
6. **The Program may require a post-installation inspection to verify compliance with program rules, accuracy of project documentation, and equipment operation.**
7. **The Program distributes the incentive check to the payee following final approval processing.**

## PACKAGED HVAC EQUIPMENT – APPLICATION CENTER EQUIPMENT GUIDE

Product Type	Category
Air Conditioners	Air Conditioning Only
	Residential Air Conditioners Installed in Commercial Setting (Window Unit)
	Water Cooled Air Conditioning
	Ductless Mini Split Air Conditioner

EmPOWER Maryland programs are funded by a charge on your energy bill. EmPOWER programs can help you reduce your energy consumption and save you money. To learn more about EmPOWER and how you can participate, go to [pepco.com/business](http://pepco.com/business).

**PACKAGED HVAC EQUIPMENT – APPLICATION CENTER EQUIPMENT GUIDE (CONTINUED)**

Product Type	Category
Geothermal Heat Pumps	Ground Source Heat Pump
	Ground Water Source Heat Pump
Heat Pumps	Air Source Heat Pumps
	Ductless Mini Split Heat Pumps
	Water Source Heat Pump
Packaged Terminal Equipment	Packaged Terminal Air Conditioner
	Packaged Terminal Heat Pump

**PACKAGED HVAC MEASURES AND INCENTIVES**

Unit	Cooling Capacity		Minimum Requirements			Incentive*	Dual Enthalpy Economizer (Per Unit)
	Btu/h	Tons	SEER/IEER	EER	HSPF/COP		
<b>RESIDENTIAL AIR CONDITIONERS INSTALLED IN COMMERCIAL SETTING (WINDOW UNIT)</b>							
Single Package	N/A	N/A	ENERGY STAR			\$25/unit	N/A
<b>AIR CONDITIONING ONLY**</b>							
Split System	<65,000	<5.4	16.0	N/A	N/A	\$200/ton	\$200
Single Package	<65,000	<5.4	16.0	N/A	N/A	\$200/ton	\$200
Either	≥65,000 and <135,000	≥5.4 and <11.25	14.0	12	N/A	\$200/ton	\$200
Either	≥135,000 and <240,000	≥11.25 and <20	13.2	11.8	N/A	\$200/ton	\$200
Either	≥240,000 and <760,000	≥20 and <63.3	12.3	10.6	N/A	\$200/ton	\$200
Either	≥760,000	≥63.3	11.6	10.3	N/A	\$200/ton	\$200
<b>AIR SOURCE HEAT PUMPS**</b>							
Split System	<65,000	<5.4	16.0	N/A	9.0	\$200/ton	\$200
Single Package	<65,000	<5.4	16.0	N/A	8.2	\$200/ton	\$200
Either	≥65,000 and <135,000	≥5.4 and <11.25	13.0	12.0	3.4	\$200/ton	\$200
Either	≥135,000	≥11.25	12.0	10.8	3.3	\$200/ton	\$200
<b>WATER COOLED AIR CONDITIONERS**</b>							
Single Package	<65,000	<5.4	16.0	13	N/A	\$200/ton	\$200
Single Package	≥65,000 and <135,000	≥5.4 and <11.25	15.3	13	N/A	\$200/ton	\$200
Single Package	≥135,000 and <240,000	≥11.25 and <20	14.8	13.5	N/A	\$150/ton	\$200
Single Package	≥240,000 and <760,000	≥20 and <63.3	14.0	13.4	N/A	\$150/ton	\$200
Single Package	≥760,000	≥63.3	14.0	13.2	N/A	\$150/ton	\$200

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**PACKAGED HVAC MEASURES AND INCENTIVES (CONTINUED)**

Unit	Cooling Capacity		Minimum Requirements			Incentive*	Dual Enthalpy Economizer (Per Unit)
	Btu/h	Tons	SEER/IEER	EER	HSPF/COP		
<b>PACKAGED TERMINAL AIR CONDITIONERS</b>							
Single Package	<9,000	<3/4	N/A	12.0	N/A	\$60/ton	N/A
Single Package	≥9,000 and <12,000	≥3/4 and <1	N/A	11.4	N/A	\$80/ton	N/A
Single Package	≥12,000	≥1	N/A	10.5	N/A	\$100/ton	N/A
<b>PACKAGED TERMINAL HEAT PUMPS</b>							
Single Package	<9,000	<3/4	N/A	11.7	3.4	\$60/ton	N/A
Single Package	≥9,000 and <12,000	≥3/4 and <1	N/A	11.0	3.3	\$80/ton	N/A
Single Package	≥12,000	≥1	N/A	10.1	3.1	\$100/ton	N/A
<b>DUCTLESS, MINI-SPLIT AIR CONDITIONERS AND HEAT PUMPS</b>							
AC Split System	All	All	16.0	N/A	N/A	\$100/ton	N/A
HP Split System	All	All	16.0	N/A	8.2	\$100/ton	N/A

\*Note that the incentive will be based upon actual tons calculated by dividing the rated Btu/hour shown on the specifications by 12,000.  
 \*\*Measures in the following categories are eligible for an additional \$200/unit incentive when a Dual Enthalpy (DE) Economizer is installed on a new HVAC unit meeting the minimum requirements: Air Conditioning, Air Source Heat Pumps, and Water Cooled Air Conditioners.

**GEOHERMAL INCENTIVES**

Qualifying equipment must meet or exceed the minimum EER/COP outlined in the table below.

Unit	Capacity (Btu/h)	Program Minimum and Incentives					
		Tier I			Tier II		
		EER	COP	Incentive	EER	COP	Incentive
<b>WATER SOURCE HEAT PUMPS</b>							
Water to Air	<17,000	13.2	4.7	\$200/ton	N/A	N/A	N/A
Water to Air	≥17,000 and <135,000	14	4.7	\$200/ton	N/A	N/A	N/A
Water to Water	≥17,000 and <135,000	11.6	4	\$200/ton	N/A	N/A	N/A
<b>GROUND SOURCE HEAT PUMPS</b>							
Brine to Air	<135,000	15.5	3.4	\$250/ton	16.2	3.5	\$300/ton
Brine to Water	<135,000	13.3	2.6	\$250/ton	13.9	2.8	\$300/ton
<b>GROUND WATER SOURCE HEAT PUMPS</b>							
Water to Air	<135,000	19.8	3.9	\$250/ton	20.7	4.1	\$300/ton
Water to Water	<135,000	17.9	3.3	\$250/ton	18.7	3.4	\$300/ton

## HOTEL ROOM HVAC AND RECEPTACLE CONTROLS INCENTIVE

Facility must be a lodging business. Incentives 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.

Equipment Type	Per Unit Incentive	Application Center Equipment Guide	
		Product Type	Category
Hotel Room HVAC Controls	\$70/room	Hotel Room Controls	Hotel Room HVAC Controls
Receptacle Controls	\$10/control	Plug Load Control	Receptacle Controls

## CHILLER ELIGIBILITY AND INCENTIVE CALCULATIONS

Eligible systems are air- and water-cooled water chilling packages, 1,000 tons and less, used in single-chiller HVAC applications. Water-chilling equipment must meet the current Air Conditioning and Refrigeration Institute (ARI) standards 550/590, be UL-listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC).

Chillers installed in multiple chiller systems and chillers serving a non-HVAC load greater than 25% of chiller capacity are not eligible under this application form, but customers using these systems may apply using the Custom application form.

\*Note: Performance Incentive: For each 0.1 EER point above or for each 0.01 kW below minimum efficiency Full Load or Integrated Part Load Value (IPLV). Performance Incentive is capped at \$175/ton for air-cooled chillers and \$125/ton for water-cooled chillers.

## CONSTANT SPEED CHILLER MEASURES AND INCENTIVES

Equipment Type	Unit Size (ARI Net Tons)	Minimum Efficiency		Incentive		Application Center Equipment Guide	
		Full Load	IPLV	Base	Performance	Product Type	Category
Air Cooled Chiller with Condenser	<150	10.4 EER	14 EER	\$24/ton	\$8/ton	Air Cooled	Air Cooled Chiller
	≥150	10.4 EER	14.2 EER	\$24/ton	\$8/ton		
Water Cooled Screw and Reciprocating Chillers	<75	0.73 kW/ton	0.54 kW/ton	\$24/ton	\$8/ton	Electric, Water Cooled	Water Cooled Screw and Reciprocating Chillers
	≥75 and <150	0.70 kW/ton	0.54 kW/ton	\$24/ton	\$8/ton		
	≥150 and <300	0.64 kW/ton	0.52 kW/ton	\$15/ton	\$2/ton		
	≥300 and <600	0.59 kW/ton	0.50 kW/ton	\$10/ton	\$4/ton		
	≥600 and ≤1000	0.54 kW/ton	0.48 kW/ton	\$10/ton	\$4/ton		
Water Cooled, Centrifugal Chillers	<150	0.59 kW/ton	0.53 kW/ton	\$20/ton	\$4/ton	Electric, Water Cooled	Water Cooled Centrifugal Chillers
	≥150 and <300	0.59 kW/ton	0.53 kW/ton	\$20/ton	\$3/ton		
	≥300 and <400	0.54 kW/ton	0.50 kW/ton	\$10/ton	\$4/ton		
	≥400 and <600	0.54 kW/ton	0.48 kW/ton	\$10/ton	\$4/ton		
	≥600 and ≤1000	0.54 kW/ton	0.48 kW/ton	\$10/ton	\$4/ton		

## VFD CHILLER MEASURES AND INCENTIVES

Equipment Type	Unit Size (ARI Net Tons)	Minimum Efficiency		Incentive		Application Center Equipment Guide	
		Full Load	IPLV	Base	Performance	Product Type	Category
Air Cooled Chiller with Condensers	<150	10 EER	16 EER	\$24/ton	\$8/ton	Air Cooled	Air Cooled Chiller
	≥150	10 EER	16.3 EER	\$24/ton	\$8/ton		

## VFD CHILLER MEASURES AND INCENTIVES (CONTINUED)

Equipment Type	Unit Size (ARI Net Tons)	Minimum Efficiency		Incentive		Application Center Equipment Guide	
		Full Load	IPLV	Base	Performance	Product Type	Category
Water Cooled Screw and Reciprocating Chillers	<75	0.76 kW/ton	0.48 kW/ton	\$24/ton	\$2/ton	Electric, Water Cooled	Water Cooled Screw and Reciprocating Chillers
	≥75 and <150	0.73 kW/ton	0.47 kW/ton	\$24/ton	\$2/ton		
	≥150 and <300	0.66 kW/ton	0.42 kW/ton	\$15/ton	\$4/ton		
	≥300 and <600	0.60 kW/ton	0.38 kW/ton	\$15/ton	\$4/ton		
	≥600 and ≤1000	0.56 kW/ton	0.36 kW/ton	\$15/ton	\$4/ton		
Water Cooled, Centrifugal Chillers	<150	0.67 kW/ton	0.42 kW/ton	\$20/ton	\$3/ton	Electric, Water Cooled	Water Cooled Centrifugal Chillers
	≥150 and <300	0.61 kW/ton	0.38 kW/ton	\$20/ton	\$3/ton		
	≥300 and <400	0.57 kW/ton	0.37 kW/ton	\$20/ton	\$4/ton		
	≥400 and <600	0.56 kW/ton	0.36 kW/ton	\$20/ton	\$4/ton		
	≥600 and ≤1000	0.56 kW/ton	0.36 kW/ton	\$10/ton	\$4/ton		

## CUSTOM CHILLER MEASURE DEFINITIONS

Measures are designated as Custom if:

1. The project has more than one chiller in the same building, or
2. The chiller has greater than 1,000 tons cooling capacity.

## CUSTOM CHILLER MEASURE ADDITIONAL INFORMATION

1. If submitting an application for any Custom measure, enter data requested on the online Custom application.
2. The user is also required to supply the average electricity price. This is the price that the facility paid over the last 12 months, inclusive of the distribution costs, fuel cost, demand charge, and all taxes and applicable rider charges. This is calculated as the sum of all electricity charges over the past 12 months divided by the kWh used over the same period.
3. The online application will automatically calculate incentives and energy savings. Please note that these calculations may need to be adjusted by the Program office. Submit a completed application and contact the Program for further guidance.
4. Refer to the [Terms and Conditions](#) for additional information.

## VFD INSTRUCTIONS

1. If submitting an application for a Standard measure, enter data requested on the online VFD application. Annual savings will be automatically calculated.
2. If submitting an application for any Custom measure, enter data requested on the online Custom application. For these measures, the user is required to calculate annual savings and enter those data into the online application. All calculations and methodology supporting the annual kWh and kW savings must be provided. In addition, for Custom measures, the user is required to supply the average electricity price. This is the price that the facility paid over the last 12 months, inclusive of the utility's transmission and distribution costs, fuel cost, demand charge, and all taxes and applicable rider charges. This is calculated as the sum of all electricity charges over the past 12 months divided by the kWh used over the same period. For New Construction/Major Renovation, this will be set at \$0.14 per kWh.

## VFD APPLICATION CENTER EQUIPMENT GUIDE

Product Type	Category	Equipment Attribute
Variable Frequency Drives	VFD Fan	HVAC Supply Fans
		HVAC Return Fans
		Cooling Tower Fans
		HVAC Make Up Air Fans
		HVAC Exhaust Fans

## VFD APPLICATION CENTER EQUIPMENT GUIDE (CONTINUED)

Product Type	Category	Equipment Attribute
Variable Frequency Drives	VFD Pump	Chilled Water Supply/Return Pumps
		Condenser Water Supply/Return Pumps
		Hot Water Supply/Return Pumps
		Hot Water Circulation Pumps
		Heat Water Pumps

## VFD MEASURES AND INCENTIVES\*

Incentives are awarded based upon the VFD horsepower (HP) rating and type of equipment controlled. If the equipment controlled is identified as Standard, then the incentive is calculated based upon HP (see incentive table immediately following). If the equipment controlled is identified as Custom, then the incentive is calculated as the lesser of Standard incentive, \$0.28/kWh for one year of projected kWh savings, 50% of installed cost, or buydown to 1.5 year payback and must pass the Total Resource Cost test.

\*To qualify for an incentive, the motor(s) being controlled must operate a minimum of 2,000 hours per year.

### VFD INCENTIVES FOR BOTH STANDARD AND CUSTOM MEASURES

VFD Horsepower Rating	Per Unit Incentive <sup>1</sup>	VFD Horsepower Rating	Per Unit Incentive <sup>1</sup>
2	\$500	30	\$1,800
3	\$600	40	\$2,000
4	\$700	50	\$2,500
5	\$800	60	\$3,000
7.5	\$900	75	\$3,750
10	\$1,100	100	\$5,000
15	\$1,350	101 to ≤200	\$50 per HP
20	\$1,500	>200	\$50 per HP
25	\$1,600	<sup>1</sup> Custom measures may be adjusted. See <a href="#">Terms and Conditions</a> for details.	

### Pepco Energy Savings for Business Program

Contact: 1-866-353-5798 | [pepcobusiness@icf.com](mailto:pepcobusiness@icf.com)

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