

# **Technical Sheet**

Prescriptive Program - HVAC

Effective Date: September 19, 2024

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:

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- Geothermal Equipment
- Hotel Room HVAC and Receptacle Controls and Smart Thermostats
- Chillers
  - o Constant Speed Chillers
  - o VFD Chillers
- Variable Frequency Drives and ECMs

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 active commercial account.
- 3. Be replacing existing equipment (HVAC or chiller) OR applying for new construction / major renovation incentives

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 to apply for these incentives as follows. If tenant units are individually metered, incentives apply only to common areas. Mastermetered buildings are offered incentives for tenant units as well as common areas.

All projects require pre-approval. Unitary HVAC projects with an incentive of \$15,000 or less can receive instant pre-approval. New construction projects are not eligible for instant pre-approval. All applications for pre-approval must be submitted via the <u>Application Center</u>.

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 <u>program website</u> as well as the customer-signed <u>Terms and Conditions</u>. Please <u>contact</u> the program office with any questions.

#### How to Apply:

- Submit the application via the online <u>Application Center</u>. The Application Center Equipment Guide below illustrates how to enter equipment into the online application. <u>Pre-approval is required before purchasing or installing equipment.</u> The following supporting information must be included with the application:
  - ✓ Completed <u>Terms and Conditions (T&Cs)</u> form, signed by the customer
    - Manufacturer specification sheets providing SEER/SEER2, EER/EER2, IEER, IPLV, and HSPF2/COP (as applicable) at AHRI conditions
  - ✓ AHRI certificate or screenshot of current listing on AHRI website (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 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. The invoice should include equipment model numbers and quantities. 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.



Unitary HVAC Equipment – Application Center Equipment Guide						
Product Type	Category					
	Air Conditioning Only					
Air Conditioners	Residential AC Installed in Commercial Setting (Window Unit)					
	Water-Cooled Air Conditioning					
	Ductless Mini Split Air Conditioner					
Caathamaal Haat Durana	Ground Source Heat Pump					
Geothermal Heat Pumps	Ground Water Source Heat Pump					
	Air Source Heat Pumps					
Heat Dumps	Air-Cooled Variable Refrigerant Flow Heat Pumps					
Heat Pumps	Ductless Mini Split Heat Pumps					
	Water Source Heat Pump					
Dackaged Terminal Equipment	Packaged Terminal Air Conditioner					
Packaged Terminal Equipment	Packaged Terminal Heat Pump					

## Please Note:

- 1. The incentive will be based upon actual tons calculated by dividing the rated Btu/hour shown on the specifications by 12,000.
- 2. 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.

		Unitary HV	AC Measures and	Incentives			
	Cooling	Capacity	Minimum Requirements				Dual Enthalpy
Unit	Btu/h	Tons	SEER2/IEER	EER2	HSPF2/COP <sub>H</sub>	Incentive	Economizer (Pe Unit)
	Resident	ial Air Conditioners I	nstalled in Comm	ercial Setting (W	indow Unit)		
Single Package	N/A	N/A		ENERGY STAR		\$25/unit	N/A
	A	ir Conditioning Only*	'* (Units with Elec	tric Heat or No H	leat)		
Split System or Single Package	<65,000, 3 phase	<5.4	15.2	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥65,000 and <135,000	≥5.4 and <11.25	15.5	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥135,000 and <240,000	≥11.25 and <20	15.0	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥240,000 and <760,000	≥20 and <63.3	13.8	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥760,000	≥63.3	12.8	N/A	N/A	\$300/ton	\$200
		Air Conditioning U	Jnits Only** (Unit	s with Gas Heat)			
Split System or Single Package	<65,000, 3 phase	<5.4	15.2	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥65,000 and <135,000	≥5.4 and <11.25	15.3	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥135,000 and <240,000	≥11.25 and <20	14.8	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥240,000 and <760,000	≥20 and <63.3	13.6	N/A	N/A	\$300/ton	\$200
Split System or Single Package	≥760,000	≥63.3	12.6	N/A	N/A	\$300/ton	\$200

Unitary HVAC Measures and Incentives (Continued)							
	Cooling	Capacity	Min	imum Requirem		Dual Enthalpy	
Unit	Btu/h	Tons	SEER2/IEER	EER/EER2	HSPF2/COP <sub>H</sub>	Incentive	Economizer (Per Unit)
		Air Source Heat Pumps	s** (Units with Ele	ectric Heat or No	Heat)		
Split System	<65,000, 3 phase	<5.4	15.2	N/A	7.7	\$350/ton	\$200
Single Package	<65,000, 3 phase	<5.4	15.2	N/A	7.0	\$350/ton	\$200
Split System or Single Package	≥65,000 and <135,000	≥5.4 and <11.25	14.8	N/A	3.5	\$350/ton	\$200
Split System or Single Package	≥135,000 and <240,000	≥11.25 and <20	14.1	N/A	3.4	\$350/ton	\$200
Split System or Single Package	≥240,000	≥20	13.0	N/A	3.3	\$350/ton	\$200
		Air Source Hea	t Pumps** (Units	with Gas Heat)			
Split System	<65,000	<5.4	15.2	N/A	7.7	\$350/ton	\$200
Single Package	<65,000	<5.4	15.2	N/A	7.0	\$350/ton	\$200
Split System or Single Package	≥65,000 and <135,000	≥5.4 and <11.25	14.6	N/A	3.5	\$350/ton	\$200
Split System or Single Package	≥135,000 and <240,000	≥11.25 and <20	13.9	N/A	3.4	\$350/ton	\$200
Split System or Single Package	≥240,000	≥20	12.8	N/A	3.3	\$350/ton	\$200
	Wat	er-Cooled Air Conditio	ners** (Units witl	h Electric Heat o	No Heat)		
Split System or Single Package	<65,000	<5.4	13.3	12.1	N/A	\$350/ton	\$200
Split System or Single Package	≥65,000 and <135,000	≥5.4 and <11.25	14.8	12.1	N/A	\$350/ton	\$200
Split System or Single Package	≥135,000 and <240,000	≥11.25 and <20	14.8	12.5	N/A	\$350/ton	\$200
Split System or Single Package	≥240,000 and <760,000	≥20 and <63.3	14.0	12.4	N/A	\$350/ton	\$200
Split System or Single Package	≥760,000	≥63.3	14.0	12.2	N/A	\$350/ton	\$200
		Water-Cooled Air C	Conditioners** (U	nits with Gas He	at)		
Split System or Single Package	<65,000	<5.4	13.1	11.9	N/A	\$350/ton	\$200
Split System or Single Package	≥65,000 and <135,000	≥5.4 and <11.25	14.6	11.9	N/A	\$350/ton	\$200
Split System or Single Package	≥135,000 and <240,000	≥11.25 and <20	14.6	12.3	N/A	\$350/ton	\$200
Split System or Single Package	≥240,000 and <760,000	≥20 and <63.3	13.8	12.2	N/A	\$350/ton	\$200
Split System or Single Package	≥760,000	≥63.3	13.8	12.0	N/A	\$350/ton	\$200
		Packaged T	erminal Air Condi	tioners***			
Single Package	<7,000	<0.58	N/A	12.9	N/A	\$75/unit	N/A
Single Package	≥7,000 and ≤15,000	≥0.58 and ≤1.25	N/A	12.4	N/A	\$100/unit	N/A
Single Package	>15,000	>1.25	N/A	10.5	N/A	\$125/unit	N/A

<sup>\*</sup>Note that the incentive will be based upon actual tons calculated by dividing the rated Btu/hour shown on the specifications by 12,000.



<sup>\*\*</sup>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.

<sup>\*\*\*</sup>For replacement of standard size systems

		Unitary HVAC Me	easures and Incen	tives (Continued)					
	Cooling	Capacity	Min	imum Requirem		<b>Dual Enthalpy</b>			
Unit	Btu/h	Tons	SEER/IEER	EER	HSPF2/COP <sub>H</sub>	Incentive	Economizer (Per Unit)		
		Packag	ed Terminal Heat	Pumps					
Single Package	<7,000	<0.58	N/A	12.9	3.6	\$75/unit	N/A		
Single Package	≥7,000 and ≤15,000	≥0.58 and ≤1.25	N/A	12.4	3.5	\$100/unit	N/A		
Single Package	>15,000	>1.25	N/A	10.5	3.1	\$125/unit	N/A		
	Ductless, Mini-Split Air Conditioners and Heat Pumps								
AC Split System	<65,000	<5.4	15.2	N/A	N/A	\$225/ton	N/A		
HP Split System	<65,000	<5.4	15.2	N/A	7.4	\$225/ton	N/A		

	Geothe	ermal Measures	and Incentive	es			
Qualifying equipment must m	neet or exceed the minimum EER/COP	outlined in the ta	able below.				
				Program Minim	num and Ince	ntives	
Unit	Capacity (Btu/h)		Tier I			Tier II	
		EER	СОР	Incentive	EER	COP	Incentive
	V	Vater Source Hea	at Pumps				
Water to Air	<17,000	13.2	4.7	\$300/ton	N/A	N/A	N/A
Water to Air	≥17,000 and <135,000	14	4.7	\$300/ton	N/A	N/A	N/A
Water to Water	≥17,000 and <135,000	11.6	4	\$300/ton	N/A	N/A	N/A
	Gi	round Source He	at Pumps				
Brine to Air	<135,000	15.5	3.4	\$350/ton	16.2	3.5	\$300/ton
Brine to Water	<135,000	13.3	2.6	\$350/ton	13.9	2.8	\$300/ton
	Grou	nd Water Source	Heat Pumps				
Water to Air	<135,000	19.8	3.9	\$350/ton	20.7	4.1	\$300/ton
Water to Water	<135,000	17.9	3.3	\$350/ton	18.7	3.4	\$300/ton

# Variable Refrigerant Flow Measures and Incentives

Eligible variable refrigerant flow (VRF) heat pumps are systems that do not incorporate heat recovery capability. VRF heat pump systems with heat recovery are eligible for Custom path incentives.

Co	Cooling Capacity Btu/h	Sina Catagon, (tons)		Incentive			
Co		Size Category (tons)	SEER2/IEER	EER2	COP at 47° F	COP at 17° F	incentive
	< 65,000	<5.4	15.2	12.0	8.5 (HSPF)	8.5 (HSPF)	\$350/ton
≥ 6	55,000 and < 135,000	≥ 5.4 and < 11.25	14.2	11.3	3.4	2.4	\$350/ton
≥ 13	35,000 and < 240,000	≥ 11.25	13.7	10.9	3.2	2.1	\$350/ton
	≥ 240,000	≥ 20	12.5	10.3	3.2	2.1	\$350/ton



#### **VFD and EC Motor Instructions**

- If submitting an application for a Standard measure, enter data requested on the online VFD or EC motor application. Annual savings will be automatically calculated.
- 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.

VFI	and EC Motor Application Center Equipment G	uide
Product Type	Category	Equipment Attribute
		HVAC Supply Fans
W - 11 - 5 - 5 -	V50.5	HVAC Return Fans
Variable Frequency Drives	VFD Fan	Cooling Tower Fans
		HVAC Make Up Air Fans
		HVAC Exhaust Fans
		Chilled Water Supply/Return Pumps
		Condenser Water Supply/Return Pumps
Variable Frequency Drives	VFD Pump	Hot Water Supply/Return Pumps
		Hot Water Circulation Pumps
		Heat Water Pumps
Electronically Commutated Motors	EC Motor Fan	HVAC Circulation Fans
Floatranically Communitated Motors	FC Motor Duma	Heating Circulation Pumps
Electronically Commutated Motors	EC Motor Pump	DHW Recirculation Pumps

#### VFD and EC Motor Measures and Incentives\*

Incentives are awarded based upon the VFD or EC motor 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 must be applied for through the Custom program. The custom incentive is calculated at a rate of \$0.28/kWh for one year of projected kWh savings, up to 50% of installed cost. Custom projects must pass the Societal Cost test.

\*To qualify for an incentive, the motor(s) being controlled must operate a minimum of 2,000 hours per year. VFD measures are only eligible in retrofit applications. Replacement of failed VFDs and EC motors, or installation in new construction or major renovation projects are not eligible.

	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 <u>Terms and Conditions</u> for details.						

EC Motor Incentives for both Standard and Custom Measures					
EC Motor Horsepower Rating	Per Unit Incentive <sup>1</sup>				
<1	\$100				
≥1 to <2	\$125				
≥2 to <3	\$150				
≥3 to ≤5	\$200				
>5 to ≤10	\$400				
>10	<sup>1</sup> Custom measures may be adjusted. See <u>Terms and Conditions</u> for details.				



## Prescriptive 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).

\*Note: the Performance Incentive is applied for each 0.1 EER point above or for each 0.01 kW/ton below minimum efficiency Full Load or Integrated Part Load Value (IPLV). Total incentive is capped at \$200/ton for all air-cooled chillers and water-cooled centrifugal chillers and \$175/ton for water-cooled positive displacement chillers.

Constant Speed Chiller Measures and Incentives (Path A)								
Equipment Type	Unit Size (ARI Net	Minimum	Efficiency	Inc	centive	Application Center Equipment Guide		
	Tons)	Full Load	IPLV	Base	Performance	Product Type	Category	
Air-Cooled Chiller	<150	10.1 EER	14 EER	\$24/ton	\$8/ton	HVAC	Air-Cooled Chillers	
with Condenser	≥150	10.1 EER	14.2 EER	\$24/ton	\$8/ton	HVAC	All-Cooled Crillers	
	<75	0.75 kW/ton	0.56 kW/ton	\$15/ton	\$6/ton			
Water-Cooled	≥75 and <150	0.72 kW/ton	0.54 kW/ton	\$15/ton	\$6/ton		Electric, Water- Cooled Chillers	
Positive Displacement	≥150 and <300	0.66 kW/ton	0.52 kW/ton	\$15/ton	\$6/ton	HVAC		
Chillers	≥300 and <600	0.61 kW/ton	0.50 kW/ton	\$15/ton	\$6/ton			
	≥600 and ≤1000	0.56 kW/ton	0.48 kW/ton	\$15/ton	\$6/ton			
	<150	0.61 kW/ton	0.53 kW/ton	\$20/ton	\$8/ton			
Water-Cooled,	≥150 and <300	0.61 kW/ton	0.53 kW/ton	\$20/ton	\$8/ton		Electric, Water- Cooled Chillers	
Centrifugal Chillers ≥300	≥300 and <400	0.56 kW/ton	0.50 kW/ton	\$20/ton	\$8/ton	HVAC		
	≥400 and ≤1000	0.56 kW/ton	0.48 kW/ton	\$20/ton	\$8/ton			

VFD Chiller Measures and Incentives (Path B)								
Equipment Type	Unit Size (ARI Net	Minimum	Efficiency	ficiency Incentive			Application Center Equipment Guide	
	Tons)	Full Load	IPLV	Base	Performance	Product Type	Category	
Air-Cooled Chiller	<150	9.7 EER	16 EER	\$24/ton	\$8/ton	11)/46	Air Caalad Chillan	
with Condenser	≥150	9.7 EER	16.3 EER	\$24/ton	\$8/ton	HVAC	Air-Cooled Chillers	
	<75	0.78 kW/ton	0.48 kW/ton	\$20/ton	\$10/ton	HVAC		
Water-Cooled	≥75 and <150	0.75 kW/ton	0.47 kW/ton	\$20/ton	\$10/ton		Electric, Water- Cooled Chillers	
Positive Displacement	≥150 and <300	0.68 kW/ton	0.42 kW/ton	\$20/ton	\$10/ton			
Chillers	≥300 and <600	0.625 kW/ton	0.39 kW/ton	\$20/ton	\$10/ton			
	≥600 and ≤1000	0.585 kW/ton	0.36 kW/ton	\$20/ton	\$10/ton			
	<150	0.695 kW/ton	0.42 kW/ton	\$25/ton	\$10/ton			
Water-Cooled,	≥150 and <300	0.635 kW/ton	0.38 kW/ton	\$25/ton	\$10/ton		Electric, Water- Cooled Chillers	
Centrifugal Chillers	≥300 and <400	0.595 kW/ton	0.37 kW/ton	\$25/ton	\$10/ton	HVAC		
	≥400 and ≤1000	0.585 kW/ton	0.36 kW/ton	\$25/ton	\$10/ton			

#### **Custom Chiller Measure Definitions**

Measures are designated as Custom if:

- 1. The project has more than one chiller on the same chilled water line, or
- 2. The chiller has greater than 1,000 tons cooling capacity.

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

#### Custom Chiller Measure Additional Information

- 1. If submitting an application for any Custom measure, enter data requested on the online <u>Custom</u> application.
- If submitting an application for any Custom measure, please contact the program office to request a scoping call. This call will establish the baseline
  from which project savings will be claimed, and establish what, if any, trend data will need to be provided to verify savings. Please note an energy
  model or other savings calculation will be required for preapproval. Refer to the <u>Custom technical sheet</u> for more information.
- 3. 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.

Refer to the Terms and Conditions for additional information.

#### Hotel Room HVAC and Receptacle Controls Incentives

Smart Thermostats: Only for central AC, HP, furnace or RTUs with cooling capacities up to 300 kBtuh.

Must be installed in normally conditioned spaces - not partially conditioned or with frequently opened doors.

Eligible only for thermostats that certified ENERGY STAR® or have all the following capabilities:

- 1. Automatic scheduling
- 2. Occupancy sensing ("on" as default)
- 3. Must be capable of optimizing heat pump energy use, minimize supplemental heat
- 4. Must be able to control via smart phone or online
- 5. Must be able to view temp, adjust temp, and switch between "heating," "cooling" and "off," settings
- 6. Static temp accuracy of < +/- 2 deg F
- 7. Network standby average power consumption of < 3W, including all equipment needed to maintain connectivity

Hotel Room HVAC and Receptacle Controls: 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	<b>Application Center Equipment Guide</b>			
		Product Type	Category		
Smart Thermostats	\$50/thermostat	HVAC	Controls		
Hotel Room HVAC Controls	\$70/room	HVAC	Controls		
Receptacle Controls	\$10/control	HVAC	Controls		

Pepco Energy Savings for Business Program
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