

High Efficiency Equipment Technical Sheet

Energy Solutions for Business

Baltimore Gas and Electric Company (BGE) offers incentives through its Smart Energy Savers Program® to help commercial, industrial, government, institutional and nonprofit electric service customers offset the upfront costs for energy-efficient improvements. The High Efficiency Equipment Technical Sheet covers commercial electric kitchen equipment, refrigeration equipment, common plug load equipment and appliances in projects such as retrofits of existing inefficient equipment, new construction, major renovation and remodeling, new equipment purchases and end-of-life equipment replacements. Measures can include refrigeration controls, cooking equipment, refrigerators, freezers, ice machines and smart energy strips.

Instructions

Eligible Participants

Incentives are available to non-residential, commercial, industrial, government, institutional, and nonprofit electric service customers within the BGE service territory that fall under rate schedules G, GS, GL, P or T.

Eligible Equipment

All equipment must be new and meet all designated requirements. Used equipment or equipment not meeting program and/or technical requirements is not eligible for incentives. Existing equipment must be removed and may not be reinstalled within the BGE service territory.

Submitting an Application

All High Efficiency Equipment applications, regardless of the total requested incentive amount, require a [program pre-approval letter](#). No amount of existing equipment being replaced may be removed or altered, and no amount of proposed equipment applied for may be purchased and/or installed prior to the issuance of a program pre-approval letter. To receive a program pre-approval letter, an application must first be submitted for review through BGE's Application Center and include the manufacturer data (cut) sheets for all proposed equipment, and customer-signed [Terms and Conditions](#).

Approval Requirements

Once an application has been submitted, the project will be assigned a project ID. A [program pre-approval letter](#) will be issued once the application has been pre-approved. Only at this time may any existing equipment being replaced be removed or altered and may the proposed equipment being applied for be purchased and/or installed. Once the installation of all proposed equipment is complete and the BGE customer is satisfied with the equipment and installation, the BGE customer must sign the program pre-approval letter. The BGE customer-signed pre-approval letter must be uploaded to the [BGE Application Center](#) along with the final detailed invoice(s). Pre-approval commitments are valid for up to six months for prescriptive retrofit projects and up to 12 months for new construction and custom projects from the date of the pre-approval letter that is issued to the customer of record.

Program Details

Details of the program, including incentive levels and technical requirements, are subject to change without prior notice. You may go to [BGESmartEnergy.com](#) to get the most current program information, or you may call 410.290.1202.

Total incentives are limited to \$1,000,000 per federal tax ID per calendar year. Incentives above this level may be granted on a case-by-case basis subject to program budget limitations. BGE reserves the right to deny any application that may result in BGE exceeding its program budget.

Participation Instructions

Step 1

Verify that your project meets the eligibility requirements specified on the this technical sheet. Visit the program website at [BGESmartEnergy.com/business/energy-solutions-business](#) or contact us at 410.290.1202 with any questions about eligibility.

Step 2

Whether the application is submitted by the BGE end-use customer or the Service Provider, the Service Provider and/or Installation Contractor must submit an [Energy Solutions for Business Service Provider application](#) prior to the submission of incentive applications. The party listed as completing and submitting the application must be the party who completes and submits the application. Service Providers and Installation Contractors must be properly licensed and insured and could face participation restrictions based on their cumulative score through the Application Evaluation System. For a list of Service Providers who have participated in the program and currently have no participation restrictions, please visit the Energy Solutions for Business [Service Provider Directory](#). Installation Contractor requirements do not apply to plug load or refrigeration applications.

Step 3

Visit [the Application Center](#) to submit an online application. Refer to the Application Checklist to verify that all required information and documentation is included for submission to BGE.

All elements of a completed application must be uploaded to [the Application Center](#). All applications will be reviewed for eligibility and completeness. Completed applications will be reviewed in the order received. Applicants who submit incomplete applications will be notified of deficiencies. BGE may require a pre-installation inspection and will notify customers if an inspection of the facility is necessary.

Step 4

The application will be processed, and BGE will notify the applicant in writing when the review is complete and if funds have been reserved. Upon receipt of the program pre-approval letter, participants may begin removing/altering existing equipment and purchase and install the program-approved energy-efficient equipment.

Notify BGE immediately if there are any changes to the scope of work, as this may require additional pre-approval.

Step 5

Upon project completion, please review your approved application and note any changes to the project that occurred during installation. The BGE end-use customer must sign and return the [pre-approval letter](#) and provide invoices for all energy efficiency measures. BGE may require a post-installation inspection to verify compliance with program rules and verify the accuracy of project documentation and equipment operation.

BGE will authorize payment upon the application's review and approval. The incentive check should be received within six to eight weeks after the project's completion and final project approval.

Questions

If you have questions about the program, call 410.290.1202, email Business@BGESmartEnergy.com or visit [BGESmartEnergy.com](#).

I. APPLICATION CHECKLIST

Please include the following items when you apply through the [Application Center](#):

- BGE electric account number
- [Terms and Conditions](#) signed by the BGE end-use customer
- Supporting documentation to include manufacturer's specification (cut) sheets
- Completed [Window Film Location Details form](#), if applicable

BGE WILL PROCESS APPLICATIONS FOR PAYMENT IN THE ORDER RECEIVED AND ISSUE INCENTIVE PAYMENT WITHIN SIX TO EIGHT 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 AND RESULT IN A REDUCTION IN A SERVICE PROVIDER'S EVALUATION SCORE.**

II. COMMERCIAL REFRIGERATION EQUIPMENT ELIGIBILITY 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. Incentive not available for equipment in new walk-in freezers or coolers.

Reach-In Door Closers

The auto-closer device should be applied to the glass reach-in door of a walk-in cooler (40 F) or freezer (0 F). The reach-in door must have minimum perimeter of 16 feet. The auto-closer must be able to firmly close the door. Incentive not available for equipment in new walk-in 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 incentive is not available for display cases or replacing existing strip curtains. Incentive is based on square footage of doorway.

Refrigeration Door Gaskets

Gaskets must be installed on refrigerated doors for reach-in or walk-in coolers and freezers. Reach-in doors must have a minimum 6" of damaged or old gasket to be eligible. Walk-in doors must have a minimum of 2' of damaged or old gasket to be eligible.

ECM Evaporator Fan Motors

This measure is applicable to the replacement of an existing standard efficiency shaded-pole evaporator (S-P) or permanent split capacitor (PSC) fan motor in refrigerated walk-in or reach-in boxes (coolers or freezers). The replacement unit must be an Electronically Commutated Motor (ECM). An ECM is a brushless DC (direct current) motor with an electronically controlled commutator that allows the motor to operate much more efficiently than the shaded-pole motors with an electro-mechanical commutator typically used in refrigeration applications. This measure cannot be used in conjunction with the Networkable Evaporator Fan Controller measure. Incentive not available for equipment in new walk-in freezers or coolers.

Networkable Evaporator Fan Controls

Energy savings are achieved by reducing the speed of the evaporator fans on refrigerator cooler and freezer cases by at least 75% for an ECM, and 100% for non-ECM when compressor not running. Assumptions made in calculations.

1. 0.758 kW/hp for ECM
2. 2.088 kW/hp for shaded pole motor
3. Effective run time of uncontrolled motor 97.8%
4. Effective run time of controlled motor 63.6% for on/off Controls and 69.2% for multi-speed controls
5. Waste Heat Factor for savings due to reduced waste heat from motors 1.38 for cooler and 1.76 for freezer

II. COMMERCIAL REFRIGERATION EQUIPMENT ELIGIBILITY REQUIREMENTS *continued*

Refrigeration Display Case Doors on Open Display Cases

Open cases spill cold air requiring added refrigeration energy and ambient reheat energy. Adding doors reduces defrost cycles and raises evaporator temperature set point.

Night Covers for Refrigerated Cases

Energy savings are based upon reduced compressor load that results from the decreased mixing of the refrigerated display case air and the air outside the case. Demand savings are not recognized for this measure, as the reduced load only occurs during off-peak hours.

Anti-Fog Film

0.1 mm thick polyethylene terephthalate (PET) hydrophobic sheet with adhesive (R-value 0.00235). Saves energy through eliminating need for door heaters and frame heaters.

III. COMMERCIAL REFRIGERATION EQUIPMENT INCENTIVES

Measure/Product	Per Unit Incentive	Application Center Equipment Guide	
		Product Type	Category
Anti-Sweat Heat Controls	\$40 per door	Commercial Refrigeration Equipment	Commercial Refrigeration Equipment
Reach-In Door Closers	\$40 per cooler door closer	Refrigeration	Prescriptive Refrigeration
	\$50 per freezer door closer		
Strip Curtains for Walk-In Coolers and Freezers	\$3 per square foot	Refrigeration	Prescriptive Refrigeration
Refrigeration Door Gaskets	\$2 per linear foot for cooler doors	Refrigeration	Prescriptive Refrigeration
	\$3 per linear foot for freezer doors		
ECM Evaporator Fan Motors	\$50 per motor	Commercial Refrigeration Equipment	Commercial Refrigeration Equipment
Networkable Evaporator Fan Controls	\$75 per existing shaded-pole motor \$65 per existing ECM motor	Commercial Refrigeration Equipment	Commercial Refrigeration Equipment
Refrigeration Display Case Doors on Open Display Cases	\$25/linear foot for doors with anti-sweat heaters \$50/linear foot for doors without heaters (no sweat doors) \$600 cap per case	Refrigeration Equipment	Refrigeration Equipment
Night Covers for Refrigerated Cases	\$8 per linear foot of width \$500 cap per case	Commercial Refrigeration Equipment	Commercial Refrigeration Equipment
Anti-Fog Film	\$8 per square foot	Commercial Refrigeration Equipment	Commercial Refrigeration Equipment

Incentives are not eligible for new stand-alone cases

IV. COMMERCIAL KITCHEN EQUIPMENT ELIGIBILITY REQUIREMENTS

Spray Rinse Valves

Must meet or exceed the EPA specification set for the maximum flow rate for “WaterSense” labeled pre-rinse spray valves of 1.28 gpm.

Electric Fat Fryers

The commercial fryer must have a tested heavy load (french fry for large vats) cooking energy efficiency of greater than 80% utilizing American Society for Testing and Materials (ASTM) Standard F1361 for commercial fryers and ASTM Standard F2144 for large vat fryers. Multiple vat configurations are paid per qualifying vat. ENERGY STAR® maintains a list of qualifying products and specifications at <http://www.energystar.gov/>. To determine if non-ENERGY STAR models meet the ASTM standard, contact your manufacturer’s representative.

Electric Steam Cookers

The commercial steam cooker must meet ENERGY STAR specifications for energy efficiency.

Electric Insulated Holding Cabinets

Insulated holding cabinets must meet or exceed CEE Tier 2 specifications and not exceed 20 watts per cubic foot idle energy use. Cook and hold food cabinets are eligible through the Custom program.

Electric Griddles

The griddle must meet or exceed heavy load cooking energy efficiency of greater than 70% utilizing ASTM Standard F1275.

Electric Convection Ovens

The oven must meet or exceed heavy load potato cooking energy efficiency of greater than 70% utilizing ASTM Standard F1496.

Electric Combination Ovens

The oven must meet or exceed heavy load potato cooking energy efficiency of greater than 60% utilizing ASTM Standard F1639.

Commercial Refrigerators/Freezers

The refrigeration system shall be built-in (packaged). Cases with remote refrigeration systems do not qualify. Customers must provide proof that the appliance meets the CEE energy efficiency specifications using ANSI/ASHRAE Standard 72-2005 (commercial food grade refrigerator 38 F +/- 2 F, commercial food grade freezer 0 F +/- 2 F).

Refrigerated Beverated Vending Machine

The refrigerated beverage vending machine can be new or rebuilt and must meet ENERGY STAR specifications for energy efficiency. Class A vending machines are considered fully cooled bottled or canned beverage machines. Class B machines are any refrigerated bottled or canned beverage machine not considered to be Class A, including combination vending machines.

Ice Machines

This specification covers machines generating 60 grams (2 oz.) or lighter ice cubes, as well as flaked, nugget, crushed and fragmented ice makers. Performance data is based on ARI Standard 810. Only air-cooled machines (self-contained, ice-making heads or remote condensing) are eligible.

V. COMMERCIAL KITCHEN EQUIPMENT INCENTIVES *continued*

Measure/Product	Type/Size	Per Unit Incentive	Application Center Equipment Guide	
			Product Type	Category
Spray Rinse Valves	N/A	\$75 per valve	Commercial Appliances	Commercial Appliances
Fat Fryers	Open deep fat fryers	\$200 per fryer	Commercial Kitchen Equipment	Electric Food Preparation Equipment
	Large vat fryers			
Steam Cookers	N/A	\$125 per pan	Commercial Kitchen Equipment	Electric Food Preparation Equipment
Hot Food Holding Cabinets	Full-size cabinets	\$300 per cabinet	Commercial Kitchen Equipment	Electric Food Preparation Equipment
	Three-quarter size cabinets	\$250 per cabinet		
	Half-size cabinets	\$200 per cabinet		
Griddles	N/A	\$250 per griddle	Commercial Kitchen Equipment	Electric Food Preparation Equipment
Convection Ovens	N/A	\$350 per oven	Cooking Equipment	High Efficient Cooking Equipment
Combination Ovens	N/A	\$1,000 per oven	Commercial Kitchen Equipment	Electric Food Preparation Equipment
Solid Door Reach-In Refrigerators	<19 cubic ft	\$75 per refrigerator	Commercial Kitchen Equipment	Refrigerators and Freezers
	19–20 cubic ft	\$100 per refrigerator		
	>20–60 cubic ft	\$150 per refrigerator		
	>60–90 cubic ft	\$225 per refrigerator		
Solid Door Reach-In Freezers	<19 cubic ft	\$100 per freezer	Commercial Kitchen Equipment	Refrigerators and Freezers
	19–20 cubic ft	\$200 per freezer		
	>20–60 cubic ft	\$320 per freezer		
	>60–90 cubic ft	\$500 per freezer		
Glass Door Reach-In Refrigerators	<19 cubic ft	\$75 per refrigerator	Commercial Kitchen Equipment	Refrigerators and Freezers
	19–20 cubic ft	\$100 per refrigerator		
	>20–60 cubic ft	\$125 per refrigerator		
	>60–90 cubic ft	\$150 per refrigerator		
Glass Door Reach-In Freezers	<19 cubic ft	\$100 per freezer	Commercial Kitchen Equipment	Refrigerators and Freezers
	19–20 cubic ft	\$200 per freezer		
	>20–60 cubic ft	\$250 per freezer		
	>60–90 cubic ft	\$300 per freezer		
ENERGY STAR Refrigerated Beverage Vending Machine	Class A	\$50 per machine	Residential/Commercial Appliances	Commercial Appliances
	Class B	\$75 per machine		

V. COMMERCIAL KITCHEN EQUIPMENT INCENTIVES <i>continued</i>				
Measure/Product	Type/Size	Per Unit Incentive	Application Center Equipment Guide	
			Product Type	Category
Ice Machine - CEE Tier I	<450 lbs/day	\$50 per ice machine	Commercial Kitchen Equipment	Ice Machines
	450–1,000 lbs/day	\$100 per ice machine		
	>1,000 lbs/day	\$150 per ice machine		
Ice Machine - CEE Tier II	Cube & Nugget (<450 lbs per 24 hrs)	\$75 per ice machine	Commercial Kitchen Equipment	Ice Machines
	Cube & Nugget (450–1,000 lbs per 24 hrs)	\$125 per ice machine		
	Cube & Nugget (>1,000 lbs per 24 hrs)	\$150 per ice machine		
	Flake (<450 lbs per 24 hrs)	\$100 per ice machine		
	Flake (450–1,000 lbs per 24 hrs)	\$175 per ice machine		
	Flake (>1,000 lbs per 24 hrs)	\$250 per ice machine		

VI. COMMERCIAL APPLIANCE ELIGIBILITY REQUIREMENTS
<p>Commercial Dishwashers</p> <p>Qualifying products must be listed on the ENERGY STAR qualifying product list, http://www.energystar.gov/, or meet ENERGY STAR idle energy rate and water consumption limits, as determined by both machine type and sanitation approach (chemical/low temp versus high temp).</p>
<p>Commercial Clothes Washers</p> <p>Qualifying product must be listed on the CEE qualifying product list for the appropriate Tier or meet the CEE criteria. For CEE Tier 2, a Modified Energy Factor (MEF) of 2.2 or greater and a Water Factor (WF) of 4.5 or lower.</p>
<p>Heat Pump Water Heaters</p> <p>Heat pump water heaters must meet ENERGY STAR® criteria of EF or COP > 2.0 and FHR > 50 gallons/hr.</p> <p>Note: FHR is first hour rating, which is found on the spec sheet, GPM x 60.</p>
<p>Water Coolers</p> <p>Qualifying products must be listed on the ENERGY STAR qualifying product list, http://www.energystar.gov/, or meet or exceed ENERGY STAR's standards relating to daily maximum energy consumption for each unit type.</p>
<p>Room Air Conditioners</p> <p>Qualifying products must be listed on the ENERGY STAR qualifying product list, http://www.energystar.gov/, or meet or exceed ENERGY STAR's minimum EER rating based on capacity and unit type.</p>
<p>Dehumidifiers</p> <p>Qualifying products must be listed on the ENERGY STAR qualifying product list, http://www.energystar.gov/.</p>

VII. COMMERCIAL APPLIANCES INCENTIVES				
Measure/Product	Type	Per Unit Incentive	Application Center Equipment Guide	
			Product Type	Category
Commercial Dishwashers – High Temperature	Under Counter	\$250 per dishwasher	Commercial Appliances	Commercial Appliances
	Door Type	\$450 per dishwasher		
	Single Tank Conveyor	\$600 per dishwasher		
	Multi Tank Conveyor	\$1,000 per dishwasher		
Commercial Dishwashers – Low Temperature	Under Counter	\$50 per dishwasher	Commercial Appliances	Commercial Appliances
	Door Type	\$300 per dishwasher		
	Single Tank Conveyor	\$300 per dishwasher		
	Multi Tank Conveyor	\$500 per dishwasher		
Commercial Clothes Washers	CEE Tier 1	\$100 per clothes washer	Residential/ Commercial Appliances	Commercial Appliances
	CEE Tier 2	\$200 per clothes washer		
Heat Pump Water Heaters	<40 gallons	\$500 per water heater	Residential/ Commercial Appliances	Commercial Appliances
	40-49 gallons	\$700 per water heater		
	50 gallons	\$800 per water heater		
	>50 gallons	\$1,000 per water heater		
Water Coolers	ENERGY STAR	\$50 per water cooler	Residential/ Commercial Appliances	Commercial Appliances
Room Air Conditioners	ENERGY STAR	\$25 per air conditioner	Residential/ Commercial Appliances	Commercial Appliances
Dehumidifiers	ENERGY STAR	\$25 per dehumidifier	Residential/ Commercial Appliances	Commercial Appliances

VIII. PLUG LOAD EQUIPMENT ELIGIBILITY REQUIREMENTS
<p>Smart Power Strips</p> <p>Incentive 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.</p>
<p>Vending Machine Control – Non-refrigerated</p> <p>Incentives are for controllers for non-refrigerated snack vending machines with mechanisms that function to power down the machine if the surrounding area is vacant.</p>
<p>Vending Machine Control – Refrigerated</p> <p>Incentives 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.</p>

IX. PLUG LOAD EQUIPMENT INCENTIVES			
Measure/Product	Per Unit Incentive	Application Center Equipment Guide	
		Product Type	Category
Smart Power Strips	\$10 per strip	Plug Load Equipment	Plug Load Control
Vending Machine Control – Non-refrigerated	\$30 per control	Residential/Commercial Appliances	Commercial Appliances
Vending Machine Control – Refrigerated	\$75 per control	Residential/Commercial Appliances	Commercial Appliances

X. WINDOW FILM ELIGIBILITY REQUIREMENTS

New window film must be installed on east, west or south facing windows with no shading. Location information must be provided on the [Window Film Location Details form](#) at the time of application submission.

The existing windows must not have window film.

The entire window pane must be covered with new window film.

The proposed window film should have a solar heat gain coefficient (SHGC) of 0.40 or less or a shading coefficient (SC) of 0.45 or less.

Incentives are available for retrofit applications only. The window films must be NFRC certified.

XI. WINDOW FILM INCENTIVES			
Measure/Product	Per Unit Incentive	Application Center Equipment Guide	
		Product Type	Category
Window Film	\$1 per square foot	Building Envelope	Windows, Glazing and Treatments

XII. VARIABLE SPEED AIR COMPRESSOR ELIGIBILITY REQUIREMENTS

Eligible air compressors must be variable displacement screw compressors, 100 HP or less. Compressors larger than 100 HP may pursue a Custom incentive application. They can be installed as a new unit or to replace existing modulating or load/unload compressors.

XIII. VARIABLE SPEED AIR COMPRESSOR INCENTIVES				
Measure/Product	Type/Size	Per Unit Incentive	Application Center Equipment Guide	
			Product Type	Category
Variable Speed Air Compressors	≤25 HP	\$125 per HP	Industrial Equipment	Variable Speed Air Compressor
	>25-≤100 HP	\$100 per HP		

XIV. CONSUMER ELECTRONICS ELIGIBILITY REQUIREMENTS
<p>Monitors</p> <p>Monitors must meet ENERGY STAR specifications for energy efficiency and be listed on the ENERGY STAR certified products list.</p>
<p>Computers</p> <p>Computers must meet ENERGY STAR specifications for energy efficiency and be listed on the ENERGY STAR certified products list.</p>
<p>Imaging Equipment</p> <p>Imaging equipment consists of printers, copiers and multifunction devices. They must meet ENERGY STAR specifications for energy efficiency and be listed on the ENERGY STAR certified products list</p>
<p>Uninterruptible Power Supply</p> <p>Uninterruptible power supply must meet ENERGY STAR specifications for energy efficiency and be listed on the ENERGY STAR certified products list.</p>

XV. CONSUMER ELECTRONICS COMPRESSOR INCENTIVES			
Measure/Product	Per Unit Incentive	Application Center Equipment Guide	
		Product Type	Category
ENERGY STAR Monitor	\$5 per monitor	Consumer Electronics	Monitor
ENERGY STAR Computer	\$5 per computer	Consumer Electronics	Computer
ENERGY STAR Copier	\$10 per device	Consumer Electronics	Imaging Equipment
ENERGY STAR Printer	\$10 per device	Consumer Electronics	Imaging Equipment
ENERGY STAR Multifunction Device	\$10 per device	Consumer Electronics	Imaging Equipment
ENERGY STAR Uninterruptible Power Supply	\$40 per kVa	Consumer Electronics	Uninterruptible Power Supply

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 BGESmartEnergy.com.