

Variable Frequency Drives

a BGE Smart Energy Savers ProgramSM



We're on it.SM

Application

Date of Application	Expected Completion Date
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I. CUSTOMER INFORMATION

Company Name		Contact Person		Email	
Street Address (facility)			Electric Account Number (required, if applicable)		
City	State	Zip	Customer Telephone ()		Customer Fax ()
Company Mailing Address (if different than above)			City	State	Zip

II. BUSINESS TYPE WHERE EQUIPMENT IS INSTALLED

Office Retail School University Religious Facility Grocery Restaurant
 Lodging Industrial Processing Warehouse Health Facility Multifamily Other _____

III. CONTRACTOR/VENDOR INFORMATION

Company Name		Contact Person		Email	
Company Address			City	State	Zip
<input type="checkbox"/> Corporation <input type="checkbox"/> LLC <input type="checkbox"/> Partnership <input type="checkbox"/> Individual Proprietorship <input type="checkbox"/> Not-for-Profit					Federal Tax ID Number

IV. VFD INFORMATION AND INCENTIVES

TABLE 1: VFD INSTALLATION TYPE

BEF = Building Exhaust Fan	MAF = Make-up Air Fan	RAF = HVAC Return Air Fan	HWP = Heat Water Pump
CTF = Cooling Tower Fan	SAF = HVAC Supply Air Fan	CWP = Chilled/Condenser Water Pump	WHP = WS Heat Pump Circ Loop

TABLE 2: VFD SIZE AND INCENTIVE LEVELS

Horsepower	Incentive	Horsepower	Incentive	Horsepower	Incentive	Horsepower	Incentive
5	\$1,700	15	\$2,300	30	\$3,500	60	\$5,500
7.5	\$1,900	20	\$2,600	40	\$3,800	75	\$6,000
10	\$2,100	25	\$3,100	50	\$4,500	100	\$7,000

TABLE 3: CONTROLLING PARAMETERS

DP = Differential Pressure	DT = Differential Temperature	Other: (Specify) _____
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TABLE 4: INCENTIVE TABLE FROM TABLES 1,2 AND 3 ABOVE FILL IN USING ONE ROW PER VFD

Installation Type (Table 1)	VFD & Motor Horsepower (Table 2)	Controlling Parameter (Table 3)	Location/Designation	Requested Incentive per VFD (Table 2)
Total Requested Incentive				

V. CUSTOMER ACKNOWLEDGEMENT

Payment to: Customer Contractor
 I have read the Terms and Conditions and I certify that the equipment listed in this form has been installed to my satisfaction.

Customer Name/Title	Customer Signature (Post Installation)	Date
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Corporation LLC Partnership Individual Proprietorship Not-for-Profit

ADMINISTRATIVE USE ONLY

Date Received	Project #	Program Rep.
Pre-approved Date	Program Manager	Pre-approved Incentive \$
Final Approval Date	Program Manager	Final Incentive \$

For more information about the program, go to BGESmartEnergy.com
 Please submit for review via one of the following: Fax 410-290-0861, email to Business@BGESmartEnergy.com or
 mail to BGE Smart Energy Savers ProgramSM, c/o ICF International, 7125 Thomas Edison Drive, Suite 100, Columbia, MD 21046

VI. IMPORTANT VFD INFORMATION

It is good engineering practice to ensure that the application of variable frequency drives within a facility do not cause excessive facility harmonic distortion. See IEEE 519 and BGE Retail Electric Service Tariff Sections 3.2 and 9.15 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 winding 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.

VII. ELIGIBILITY REQUIREMENTS

Prescriptive incentives will be provided for the installation of variable frequency drives (VFDs) from 5–100 hp for ONLY the HVAC applications listed in Table 1. For chilled water and heating pump installations, at least 75% of pump capacity must be controlled by 2-way valves. Note: 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; 2-speed control of a fan or pump; mitigation of oversized motor installation. All VFD applications not eligible to use this application may apply using BGE's Custom Program application.

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: 15 Millisecond Minimum Riddethrough 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 • 95% Minimum Drive Efficiency at Full Load and Full Speed • 0.95 Minimum Displacement Power Factor • Warranty of at least one year for parts.

VIII. TERMS & CONDITIONS

- 1. INCENTIVE OFFER:** This application covers products contracted for, purchased or installed within 60 days of the date BGE receives the application and is not retroactive prior to this date.
- 2. ELIGIBILITY:** Incentives are available to industrial, commercial, government and institutional electric service customers for the purchase and installation of qualifying energy savings measures in the BGE service territory. BGE reserves the right to deny any application that may result in BGE exceeding its program budget. Incentives are offered on a first-come, first-served basis and are subject to project and Customer eligibility, availability of funds and distribution of incentives across BGE customer base.
- 3. APPROVAL AND VERIFICATION:** Pre-approval is required for all custom projects as well as all prescriptive projects qualifying for a total incentive over \$5,000. BGE reserves the right to pre-inspect any project prior to pre-approval. No project related energy savings measures may be contracted for, purchased or installed prior to the date of BGE's pre-approval. Projects must be completed by the date listed on the pre approval notification letter (within 180 calendar days of project pre approval for retrofit projects and one (1) year of pre approval for new construction projects). All projects that require pre-approval may also require pre-inspection. BGE reserves the right to verify sales transaction and to have reasonable access to your facility, to inspect the energy savings measures installed under this Initiative, prior to issuing incentives, or at a later time. BGE reserves the right, for any reasons, to stop pre-approving energy savings measures at any time without notice. In particular, BGE is not obligated to pre-approve any application for an incentive that may result in BGE exceeding its program budget.
- 4. PROOF OF PURCHASE:** This application must have complete information and be submitted with an invoice itemizing the new equipment purchased. The invoice must indicate the date of purchase, the size, type, make, model, serial number, part number and/or equipment manufacturer specification sheets. The signed application must be returned to ICF International, 7125 Thomas Edison Dr., Suite #100, Columbia, MD 21406.
- 5. COMPLIANCE:** All projects must comply with all federal, state and local codes. All equipment must be new. Used or rebuilt equipment is not eligible for incentives. Existing equipment must be removed and disposed in a proper and legal manner. BGE encourages that equipment is disposed of and/or recycled in an environmentally friendly manner. Equipment must meet specification requirements and be purchased and operating prior to submitting the application form. Only one incentive will be granted for each project. Incentives granted to contractors, distributors or other market providers cannot also be claimed by end-use customers.
- 6. PAYMENT:** Once completed paperwork is submitted, incentive payments will be made within an estimated 4-6 weeks. Incomplete applications will be returned. The customer may assign the incentive payment to a qualified contractor (if allowed). The benefits/payments conferred upon the Customer or their designated contractor through participation in this program may be taxable by the federal, state, and local government. The Customer or their designated contractor is responsible for declaring and paying all such taxes.
- 7. INSPECTION:** BGE staff or their representatives may conduct an inspection of the facility to survey the installed projects.
- 8. PUBLICITY:** BGE reserves the right to publicize your participation in this program.
- 9. BGE/PROGRAM LOGO:** Customers or market providers may not use the BGE or Program name or logo in any marketing, advertising, or promotional materials without BGE's prior written permission.
- 10. DISCLAIMERS:** BGE does not endorse any particular market provider, manufacturer, product, labor or system design by offering this program; will not be responsible for any tax liability imposed on a Customer as a result of the payment of incentives; does not expressly or implicitly warrant the performance of installed equipment or contractor's quality of work (contact your contractor for detailed warranties); is not responsible for proper and legal disposal/recycling of any waste generated as a result of this project; and is not liable for any damage caused by the installation of the equipment or for any damage caused by the malfunction of the installed equipment.
- 11. VERIFICATION:** Any customer receiving an incentive check may be contacted by an evaluator to verify service/equipment installation or be asked to complete a written, oral or electronic customer survey.
- 12. APPLICATION DOES NOT ENTITLE CUSTOMER TO PARTICIPATE:** The program described in this application may be altered, suspended, or canceled by BGE at any time without prior notice. Under such circumstances, the Customer is not entitled to any program benefits in excess of those approved prior to such action by BGE. Submission of a completed application does not entitle the Customer to program participation. Entitlement to program participation can only occur after BGE has signed a copy of the application and granted pre-approval if required by BGE.
- 13. REMOVAL OF EQUIPMENT:** The Customer agrees, as a condition of participation in the program, to remove and dispose of the equipment being replaced by the energy savings measures in accordance with all legal requirements. The Customer agrees to not install any of this equipment in the BGE service territory.
- 14. CHANGES TO THE PROGRAM:** BGE may change the program and the Terms & Conditions at any time without notice. Pre-approved applications, however, will be processed to completion under the Terms & Conditions in effect at the time of the pre-approval by BGE.
- 15. NO WARRANTIES:** BGE does not endorse, guarantee, or warrant any particular manufacturer or product and BGE provides no warranties, expressed or implied, for any products or services. The Customer's reliance on warranties is limited to any warranties that may arise from, or be provided by contractors, vendors, etc. The Customer acknowledges that neither BGE nor any of its consultants are responsible for assuring the design, engineering and construction of the Facility or installation of the energy savings measures is proper or complies with any particular laws (including patent laws), codes, or industry standards. BGE DOES NOT MAKE ANY REPRESENTATIONS OF ANY KIND REGARDING THE RESULTS TO BE ACHIEVED BY THE ENERGY SAVINGS MEASURES OR THE ADEQUACY OR SAFETY OF SUCH MEASURES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 16. LIMITATION OF LIABILITY:** BGE's sole liability is limited to paying the properly qualified rebates specified herein. Neither BGE nor any of its affiliates shall be liable to the Customer or any other party for any indirect, consequential or incidental damages, regardless of the theory of recovery, caused by or arising from any activities associated with this program.
- 17. VENDOR SELECTION:** BGE acknowledges that the Customer may select any vendor or contractor to perform the work contemplated by this Application, even after the Application is submitted for pre-approval by BGE. Notwithstanding the foregoing, the Customer acknowledges that BGE has the right to prohibit specific vendors or contractors from program participation for any reason or no reason.
- 18. OBLIGATIONS BETWEEN THE PARTIES:** Customer acknowledges that any contractor selected by the Customer is not an agent, contractor or subcontractor of BGE. BGE shall have no obligation to maintain, remove or perform any work whatsoever on the energy savings measures installed. BGE shall have no liability for contractor's failure to perform, for failure of the energy savings measures to function, for any damage to the Customer's premises caused by the contractor or for any and all damages to property or injuries to persons caused by the energy savings measures.
- 19. ENERGY BENEFITS:** BGE is entitled to 100% of the energy benefits associated with the energy savings measures, excluding the value of energy cost savings realized by the Customer, but including all rights to all associated PJM Energy, Capacity and Reserves Products, and the Customers agrees to provide BGE with such further documentation as the BGE may request to confirm BGE's ownership of such benefits and products.
- 20. CUSTOMER'S CERTIFICATION:** Customer certifies that he/she has purchased and installed the equipment listed above at the defined location. Customer agrees that all information is true and that he/she has conformed to all Initiative and equipment requirements listed. Customer has verified that the units listed above have been installed correctly. Customer or Customer's representative has been instructed on how to operate and maintain this equipment and has received all necessary operation and maintenance manuals.