

## 15. Demand Response Service

### A. Program Availability and Operation

**1. Air Conditioning Control – As of April 1, 2020, the Company will no longer accept new entrants in the Air Conditioning Control program and existing customers can only decrease to 50% or 0% cycling.**

A Customer receiving service under a Residential Service Schedule may contract with the Company to permit the installation, operation and maintenance, at the Company's expense, of a smart thermostat or a smart control switch on or near the Customer's electric central air conditioning unit(s) or heat pump(s). Customers selecting the smart thermostat option are responsible for battery replacement, when required.

The control device must give the Company complete control by direct means or by simulated remote control, of the supply of electricity to the central air conditioning unit(s) or heat pump(s).

Service hereunder to air conditioners or heat pumps is subject to interruption at any time, at the option of the Company. The Customer agrees to accept all responsibility for any loss, cost or damage resulting from any and all interruptions of service occasioned by taking service under this Rider. Customers participating in this program may override an interruption event up to, but no more than, twice during a calendar year, except no override will be permitted during a PJM Interconnection Emergency Event or during the Company's transition into and/or out of cycling events.

The effect of the Customer's interruptions hereunder shall be a net reduction of load on the Company's system. During periods of interruption, the work performed by the interrupted appliance shall not be transferred to any other electric service provided by the Company or to any other appliance.

Under this Rider, Customers may choose from three equipment cycling options: 50%, 75% or 100%. In exchange for control of the cooling equipment, the Company will provide a monthly credit on the Customer's June, July, August and September bills. The amount of the credit is determined based on the cycling option chosen. The monthly credit (plus the one-time Enrollment Incentive, where applicable) shall not exceed the current monthly bill otherwise applicable.

		Annual Customer Incentive per DRI Device		
		\$50 Bill Credit	\$75 Bill Credit	\$100 Bill Credit
<b>Operating Condition</b>	<b>PJM-Declared Emergency Event</b>	50% Cycling or Less	75% Cycling or Less	100% Cycling or Less
	<b>BGE Economic or Local Area Emergency Event</b>	50% Cycling or Less	50% Cycling or Less	50% Cycling or Less
	<b>One-Time Enrollment Incentive</b>	\$50.00	\$75.00	\$100.00

Customers in Demand Response Service will remain subject to interruption unless they make a request with the Company to be removed from the program. Upon such request, BGE will no longer control the smart thermostat or the smart control switch. The Company will remove its equipment at no charge at the Customer's request. The Customer is responsible for providing a replacement thermostat once the smart thermostat has been removed at the Customer's request.

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**Rider 15 – Demand Response Service –continued****2. Water Heater Control – As of April 1, 2020, the Company will no longer accept new entrants in the Water Heater Control program. The Water Heater Control program will end April 1, 2021 for all customers.**

A Customer receiving service under a Residential Service Schedule may contract with the Company to permit the installation, operation and maintenance, at the Company's expense, of a direct control switch on or near the Customer's qualifying electric water heater unit(s).

The control device must give the Company complete control by direct means or by simulated remote control, of the supply of electricity to the electric water heater.

Service hereunder to electric water heaters is subject to interruption at any time, at the option of the Company. The Customer agrees to accept all responsibility for any loss, cost or damage resulting from any and all interruptions of service occasioned by taking service under this Rider. Customers participating in this program may override an interruption event up to, but no more than, twice during the months of June through September and up to, but no more than, twice during the remaining months of the calendar year. No override will be permitted during a PJM Interconnection Emergency Event or during the Company's transition into and/or out of cycling events.

The effect of the Customer's interruptions hereunder shall be a net reduction of load on the Company's system. During periods of interruption, the work performed by the interrupted appliance shall not be transferred to any other electric service provided by the Company or to any other appliance.

In exchange for control of the water heating equipment, the Company will provide a monthly credit on the Customer's November, December, January and February bills.

**Annual Customer Incentive per Controlled Electric Water Heating Unit: \$25  
One-Time Enrollment Incentive: \$25**

Customers in Demand Response Service will remain subject to interruption unless they make a request with the Company to be removed from the program. Upon such request, BGE will no longer control the direct control switch. The Company will remove its equipment at no charge at the Customer's request.

**3. Bring Your Own Device (BYOD) Program**

Beginning April 1, 2020, a Customer receiving service under a Residential Service Schedule may participate in the BYOD Program described herein. To participate, the Customer must have an eligible, Wi-Fi enabled, smart thermostat(s). A list of qualifying devices is maintained and available on BGE.com. The Customer is responsible for the purchase, installation, operation and maintenance of the smart thermostat(s), at their own expense.

By enrolling in the program, the Customer authorizes the Company to access the Customer's smart thermostat(s) for the demand response capabilities and related program services. By participating, Customer authorizes the Company to use temperature offset (i.e. increase or decrease the temperature a few degrees) in response to a PJM Interconnection Emergency Event and non-emergency events. The Customer agrees to accept all responsibility for any loss, cost or damage resulting from any and all temperature offsetting by taking service under this Rider.

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In exchange for control of the smart thermostat(s), the Company will provide a one-time sign-on bonus for joining the program and an annual incentive at the end of each Summer season. A Customer must participate in the BYOD Program for the entirety of the event season to qualify for the end of season annual incentive.

**One-Time Enrollment Incentive: \$50**  
**Annual Incentive for Participation: \$50 per Summer Season**

A Customer may not enroll the same HVAC system in both the Air Conditioning Control program and the BYOD Program under this Rider concurrently. BGE reserves the right to remove a Customer from the program if it is found that their thermostat(s) does not meet the requirements described herein. Participating customers may request to be removed from the program at any time. Upon removal from the BYOD program, the Company will no longer control the Customer's smart thermostat(s).

**4. Access to Company's Equipment**

Permission is given the Company to enter the Customer's premises at all reasonable times, for the purpose of installing, inspecting, modifying and keeping in repair or removing any or all apparatus used in connection with the Air Conditioning Control and Water Heater Control demand response services referenced above, and for said purposes the Customer authorizes and requests their landlord, if any, to permit the Company to enter said premises. Failure to allow access can result in termination from the program.

BGE reserves the right to remove customers from the program if it is found that the equipment is missing, bypassed or removed.

Customers choosing to participate in an alternative electricity supplier's, or Curtailment Service Provider's (CSP), demand response program, which is monetized in the PJM markets, will not be eligible to participate in any of the Company's demand response or PTR programs.

**B. Cost Recovery**

Rates for service under the Company's residential rate schedules are subject to a Charge to recover eligible costs for the Demand Response Service program. The Charge is calculated for a 12-month period beginning January 1 of each year using the procedures described below.

*Calculation of Charge*

The Charge for the 12-month period beginning January 1 of each year is determined for each rate schedule by dividing Eligible Costs (defined below) expected to be allocated to the schedule for the 12-month period by the kilowatt sales expected for that rate schedule over the 12-month period including a true-up (defined below). Subject to prior Commission approval, the Charge may be revised at any time to adjust for significant changes in Eligible Costs. Details concerning the calculation of the Charge are filed with and approved by the Commission prior to their use in billing. The Charge is combined with Rider 2 – Electric Efficiency Charge to comprise the EmPOWER Maryland Charge line item on the Customer's monthly electric bill.

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**The current Charge is as follows:**

<b>Rate Schedule</b>	<b>Rate (\$ per kilowatt-hour)</b>
<b>Residential (Schedules R, RD, EV, and RL)</b>	<b>0.00241</b>

**Eligible Costs**

Total costs eligible for recovery in a 12-month Charge period are the costs approved by the Commission and incurred from the following cost categories:

**Program Costs.** Eligible Costs include all costs associated with administering the program. They include but are not limited to capital costs (procurement and installation of switches and thermostats and other capital expenditures such as hardware and software); and operating costs including labor, advertising, other operation and maintenance, contractor costs, monitoring and evaluation, customer incentives (enrollment incentives and bill credits), return and taxes.

- a. Capital costs are amortized on a straight line basis over ten years (thermostats) and fifteen years (switches).
- b. The regulatory asset is amortized over five years for the air conditioning switch and thermostat pilot costs and for certain operating costs (specifically, certain customer acquisition costs, one-time Enrollment Incentive costs and a portion of the customers' monthly credits as required).
- c. Earnings on the net investment in the Demand Response Service are determined by applying the Company's most recent authorized rate of return, adjusted for taxes, to the average investment balance net of deferred taxes.
- d. The remaining operating costs (customer's monthly or annual credit, ongoing operating costs, property taxes, costs to administer the BYOD program, etc.) will also be recovered. Pilot costs will be recovered as approved by the Commission.

**Program Incentive.** BGE's incentive will be determined monthly beginning in January 2008. It will be equal to a tiered percentage sharing basis between residential ratepayers and the Company of the benefit components of wholesale capacity revenue, wholesale energy revenue and wholesale capacity price mitigation:

MW Capacity	Company Incentive
0-199	0.00%
200-299	0.00%
300-399	5.00%
400-499	5.75%
500-599	6.50%
600 and above	7.75%

The Company will not receive any program incentive until the Commission determines that Customers are receiving benefits sufficient to offset the cost recovery charge.

The wholesale capacity revenue will be the total amount of revenue that BGE receives from PJM by monetizing the peak load reduction capability of its Demand Response Service and residential legacy programs in the PJM RPM process and any other capacity revenue that may be derived from bilateral or other arrangements associated with these programs.

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The wholesale energy revenue will be the amount of revenue that BGE receives from PJM from monetizing the load reduction capability of its Demand Response Service and residential legacy programs in the day-ahead or real-time energy markets and any other energy revenue that may be derived from bilateral or other arrangements associated with these programs.

The wholesale capacity price mitigation incentive amount will be based on the amount of cumulative growth in BGE's Demand Response Service and residential legacy programs load control capability that is cleared in the PJM Base Residual Auctions and the point at which the auctions clear on the Variable Resource Requirement (VRR) curve applicable to BGE load and is calculated as described herein below:

The wholesale capacity price mitigation incentive amount will be determined as the product of: (a) the amount of growth in BGE's Demand Response Service and residential legacy programs premise-level load control capability that is cleared in Base Residual Auctions; (b) demand resource line loss factor; (c) PJM's Forecast Pool Requirement; (d) PJM's Demand Resource Factor; (e) the slope of the Variable Resource Requirement (VRR) curve applicable to BGE load between points "a" and "b" for all auctions that clear at reserve levels less than the reserve level represented by point "b", and the slope of the VRR curve applicable to BGE load between points "b" and "c" for all auctions that clear at reserve levels at or greater than the reserve level represented by point "b"; (f) capacity peak load contribution (PLC) of the residential class; (g) PJM's Forecast Pool Requirement; and (h) number of days in the incentive period.

Points "a", "b" and "c" on the VRR curve shall have the definitions ascribed to them by PJM as those definitions may change from time to time. As of December 2007, point "a" represents a reserve level equal to the Installed Reserve Margin (IRM) minus 3%; point "b" represents a reserve level equal to the IRM plus 1%; and point "c" represents a reserve level equal to the IRM plus 5%.

***True-up***

An annual true-up will be conducted by:

1. Calculating the difference between the actual revenue requirement for the program year based on actual information (includes nine months of actual and three months of estimated data) to the actual revenues recognized in the program year.
2. Interest is then computed on this difference using the Company's most recent authorized rate of return, adjusted for taxes.
3. This interest amount is then combined with the amount determined in 1.) above to derive the true-up. This amount is then used in the determination of the estimated revenue requirement for the upcoming program year.