Section DSM Direct Load Control Program – Residential

Purpose

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The Direct Load Control Program will encourage the reduction in growth of peak demand, enabling East Kentucky Power Cooperative ("EKPC") to utilize its system more efficiently, manage market purchases, and defer the construction of new generation.

Availability

The Direct Load Control Program is available to residential members in the service territories of Blue Grass Energy and will include the control of <u>existing</u> water heaters, <u>existing and new</u> air conditioners and heat pumps, <u>and pool pumps</u>.

Availability may be denied where, in the judgment of the Blue Grass Energy, installation of the load control equipment is impractical.

Eligibility

To qualify for this Program, the new participant must be located in the service territory of Blue Grass Energy and have:

- 40-gallon (minimum) electric water heating units, and/or
- Central air conditioning or heat pump units with single-stage compressors., and/or
- Pool pumps.

The above appliances may be electrically cycled or interrupted in accordance with the rules of this Tariff.

The participant may either own or rent the residence where the qualifying appliances are located. The residence may be either a single-family structure or a multi-family apartment facility.

The participant is responsible for obtaining the permission of the owner of the rented residence to participate in the load control program. Blue Grass Energy may require that a rental property agreement be executed between Blue Grass Energy and the owner of the rented residence.

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	(Signature of Officer)	
TITLE	Vice President and CFO	

<u>Section DSM – (con't.)</u> Direct Load Control Program – Residential

Program Incentives

Blue Grass Energy will provide an incentive to the participants in this program for the following appliances:

<u>Water Heaters:</u> Blue Grass Energy will credit the residential power bill of the participant \$10.00 per water heater_per yearannually or provide the incentive via other payment means including, but not limited to, a check. The participant will receive this credit regardless of whether the water heater is actually controlled <u>during any program month</u>.

<u>Air Conditioners and Heat Pumps.</u> Blue Grass Energy will provide an incentive to the participants in this program. The participant may select one of two-three alternatives. The participant will receive one of these incentives regardless of whether the air conditioner or heat pump is actually controlled during any program month.

<u>Alternative One.</u> For each direct load control switch, Blue Grass Energy will credit the residential power bill of the participant \$20.00 annually or provide the incentive via other payment means including, but not limited to, a check per air conditioner or heat pump (\$5 per summer months, June, July, August, and September).

<u>Alternative Two</u>. When technically feasible, Blue Grass Energy <u>will-may</u> provide and install at no cost one or more <u>digital</u> <u>Wi-Fi enabled</u> thermostats as needed for control purposes or <u>Blue Grass Energy may provide a Wi-Fi enabled</u> thermostat and a rebate up to \$100 to offset the member's cost to have the thermostat installed by the member's own heating and <u>air-conditioning contractor</u>. The member must sign-up each Blue Grass Energy provided thermostat within 60 days or return it to Blue Grass Energy or be invoiced by Blue Grass Energy for the cost of the thermostat. Wi-Fi enabled means any thermostat utilizing the Wi-Fi communication protocol or similar local networking communication protocols. The member must have a fixed location and reliable internet for communication. Blue Grass Energy will reimburse the participating member \$20 per qualifying Wi-Fi enabled thermostat annually. After the initial selection of one of the alternatives, the participant may change to the other alternative subject to the following conditions:

From bill credits to digital thermostats – The change in alternative will be permitted in any month except for the summer months of June through September. In addition, the participant will pay 50 percent of the installed cost of each digital thermostat.
 From digital thermostats to bill credits – The change in alternative will be permitted in any month except for the summer months of June through September. In addition, the participant will either reimburse EKPC through Blue Grass Energy, an amount equal to 50 percent of the original installed cost of each digital thermostat that was initially installed if the participant keeps the thermostat or pay 50 percent of the cost to remove each digital thermostat that was initially installed.

Only one change in incentive alternatives will be permitted during a 12 month period.

<u>Alternative ThreePool Pumps</u>.: Blue Grass Energy will credit the residential power bill of the participant \$20.00 per pool pump-gualifying Wi-Fi enabled thermostat provided by the retail member that controls an air conditioner or heat pump annually or provide the incentive via other payment means including, but not limited to, a check. Blue Grass Energy will provide a rebate up to \$100 to offset the member's cost to have the thermostat installed by the member's own heating and air-conditioning contractor. The member must have a fixed location and reliable internet for communication. (\$5.00 per summer month, June, July, August and September). The participant will receive this credit regardless of whether the pool pump is actually controlled.

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Section DSM -(con't.)

Direct Load Control Program - Residential

When the qualifying appliances are located in rental residences, program incentives will be paid to the participant, regardless of whether the participant owns or rents the residence where the qualifying appliances are located. Nothing contained in this Tariff will prohibit a further disposition of the program incentive between the participant and the owner of a rented residence.

Program Special Incentives

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Blue Grass Energy will provide a special incentive up to \$25.00 for new participants that install a load control switch on qualifying electric water heaters, air conditioners and heat pumps, and or pool pumps. Utility supplied Wi-Fi enabled thermostat or retail member supplied Wi-Fi enabled thermostat. The This one time per residence incentive will be in the form of a bill credit on the electric bill or check following the switch installation or provided via other payment means including, but not limited to, a check.

Time Periods for Direct Load Control Program

<u>Water Heaters.</u> A load control switch will be placed on the water heater and <u>Existing load control switches</u> may be electrically interrupted for a maximum time period of six (6) hours <u>per event</u> during the May through September months indicated below and for a maximum time period of four (4) hours during the October through April months indicated below.

EKPC will cycle the water heaters only during the hours listed below.

<u>Months</u>	Hours Applicable for Demand Billing – EPT
October through April	6:00 a.m. to 12:00 noon
	4:00 p.m. to 10:00 p.m.
May through September	10:00 a.m. to 10:00 p.m.

<u>Air Conditioners and Heat Pumps.</u> A load control device (switch or <u>Wi-Fi enabled</u> thermostat) will be placed on each central air conditioning unit or heat pump that will allow the operating characteristics of the unit to be modified to reduce demand on the system. Communication to the load control device will be accomplished via AMR-or AMI equipment, Wi-Fi, or similar <u>communication technologies</u>.

EKPC will control the air conditioning units and heat pumps only during its summer on-peak billing hours listed below<u>and up to</u> four (4) hours per event.

Months May through September Hours Applicable for Demand Billing – EPT 10:00 a.m. to 10:00 p.m.

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	(Signature of Officer)
TITLE	Vice President and CFO

<u>Section DSM – (con't.)</u> Direct Load Control Program – Residential

<u>Pool Pumps.</u> A load control switch will be placed on the pool pump and may be controlled for a six hour curtailment during on peak days May through September. In addition, there may be a 50 percent cycling for the ensuing 2 hour recovery period to prevent creating a new peak.

Terms and Conditions

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1. Prior to the installation of load control devices, Blue Grass Energy may inspect the participant's electrical equipment to insure good repair and working condition, but Blue Grass Energy shall not be responsible for the repair or maintenance of the electrical equipment.

2. EKPC, on behalf of Blue Grass Energy, will install, <u>in some cases</u>, own, and maintain the load management devices controlling the participant's air conditioner, <u>or</u> heat pump, or water heater for alternatives One and Two as noted in this tariff. The participant must allow Blue Grass Energy, or their representative, reasonable access to install, maintain, inspect, test and remove load control devices. Inability of the Blue Grass Energy to gain access to the load management device to perform any of the above activities for a period exceeding 30 days may, at Blue Grass Energy's option, result in discontinuance of credits under this tariff until such time as Blue Grass Energy is able to gain the required access.

3. Participants may join the program at any time during the year. Participants with water heaters and/or pool pumps will receive the first annual incentive within 12 months after the installation of the load control device. Participants with air conditioning or heat pump units who join during the months of June through September can select an incentive alternative as described in this Tariff. If the bill credit incentive is selected, incentives will be provided annually, bill credits will not begin until after the installation of the load control device and control device and control device and continue for the months remaining in the June to September time period for that year.

4. If a participant decides to withdraw from the program or change incentive alternatives, Blue Grass Energy will endeavor to implement the change as soon as possible.

5. If a participant decides to withdraw from the program, the participant may not apply to rejoin the program for a period of <u>six</u> (6) months. Returning participants for air conditioning and heat pump units will be required to initially select the bill credit alternative, but may change alternatives later as described in this Tariff.

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TITLE	Vice President and CFO	

<u>Section DSM</u> Direct Load Control Program – Commercial

Purpose

The Direct Load Control Program will encourage the reduction in growth of peak demand, enabling EKPC to utilize its system more efficiently, manage market purchases, and defer the construction of new generation.

Availability

The Direct Load Control Program is available to commercial customers in the service territories of Blue Grass Energy Cooperative Corporation and will include the control of air conditioners and water heaters.

Availability may be denied where, in the judgment of Blue Grass Energy Cooperative Corporation, installation of the load control equipment is impractical.

Eligibility

To qualify for this Program, the <u>new</u> participant must be located in the service territory of Blue Grass Energy Cooperative Corporation and have a central air conditioning unit and/or a 40-gallon (minimum) electric water heating unit<u>heat pump units</u>. The appliance may be electrically cycled or interrupted in accordance with the rules of this Tariff.

The participant is responsible for obtaining the permission of the commercial property owner to participate in the load control program. Blue Grass Energy Cooperative Corporation may require that a rental property agreement be executed between Blue Grass Energy Cooperative Corporation and the owner of the rented commercial property.

Program Incentives

Blue Grass Energy Cooperative Corporation will provide an incentive to the participants in this program for the following appliances.

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TITLE	Vice President and CFO	

<u>Section DSM)- (con't.)</u> Direct Load Control Program – Commercial

<u>Air Conditioners and Heat Pumps:</u> The incentive will be based on the tonnage of the air conditioning unit. Units up to and including five (5) tons will receive a monthly credit of \$5.00-\$20.00 per unit. Units over five (5) tons will receive an additional monthly annual credit of \$1.004.00 per ton per unit. Blue Grass Energy Cooperative Corporation will credit the commercial power bill of the participant the applicable incentive credit <u>or provide the incentive via other payment</u> means including, but not limited to, a checkduring the months of June through September. The participant will receive the incentive regardless of whether the air conditioner is actually controlled during any program month.

<u>Water Heaters.</u> Blue Grass Energy Cooperative Corporation will credit the <u>existing participating</u> commercial power bill of the participant \$10.00 per water heater per yearannually or provide the incentive via other payment means including, but not limited to, a check. The participant will receive this credit regardless of whether the water heater is actually controlled.

Time Period for Direct Load Control Program

<u>Air Conditioners and Heat Pumps:</u> A load control device will be placed on each central air conditioning unit <u>or heat</u> <u>pump</u> that will allow the operating characteristics of the unit to be modified to reduce demand on the system. <u>The</u> <u>member must have internet for communication</u>. <u>Utility of member supplied Wi-Fi enabled thermostat programs may</u> <u>also be available</u>. Communication to the load control device <u>or thermostat</u> will be accomplished via AMR, -AMI, <u>Wi-Fi</u> <u>or similar communication technologies or paging equipment</u>.

EKPC will control the air conditioning units only during its summer on-peak billing hours listed below and up to four (4) hours per event:

<u>Months</u> May through September Hours Applicable for Demand Billing - EPT 10:00 a.m. to 10:00 p.m.

<u>Water Heaters.</u> A load control switch will be placed on the water heater and <u>Existing load control switches</u> may be electrically interrupted for a maximum time period of six hours <u>per event</u> during the May through September months indicated below and for a maximum time period of four (4) hours <u>per event</u> during the October through April months indicated below.

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TITLE	Vice President and CFO	

<u>Section DSM- (con't.)</u> Direct Load Control Program – Commercial

EKPC will cycle the water heaters only during the hours listed below.

Months October through April <u>Hours Applicable for Demand Billing - EPT</u> 6:00 a.m. to 12:00 noon 4:00 p.m. to 10:00 p.m. 10:00 a.m. to 10:00 p.m.

May through September

Terms and Conditions

1. Prior to the installation of load control devices, Blue Grass Energy may inspect the participant's electrical equipment to iensure good repair and working condition, but the Blue Grass Energy shall not be responsible for the repair or maintenance of the electrical equipment.

2. EKPC on behalf of Blue Grass Energy, will install, in some cases own, and maintain the load management devices controlling the participant's air conditioner <u>unit</u>-or <u>heat pump</u>-water heater. The participant must allow Blue Grass Energy, or their representative, reasonable access to install, maintain, inspect, test and remove load control devices. Inability of Blue Grass Energy to gain access to the load management device to perform any of the above activities for a period exceeding 30 days may, at Blue Grass Energy's option, result in discontinuance of credits under this tariff until such time as Blue Grass Energy is able to gain the required access.

3. Participants may join the program at any time during the year. Participants with air conditioning <u>or heat pumps</u> who join during the months of June through September will receive <u>the</u> bill credits <u>beginning annually</u>after the installation of the load control device and continuing for the months remaining in the June to September time period for that year. Participants with water heaters will receive the first annual incentive within 12 months after the installation of the load control device.

4. If a participant decides to withdraw from the program, Blue Grass Energy will endeavor to implement the withdrawal as soon as possible. If a participant decides to withdraw from the program, the participant may not apply to rejoin the program for a period of six (6) months.

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TITLE	Vice President and CFO	

Section DSM-2

Touchstone Energy Home

Purpose

In an effort to improve new residential home energy performance, Blue Grass Energy has designed the Touchstone Energy Home Program. This program provides guidance during the building process to guarantee a home that is $\geq 25-30$ 15-20% more efficient than the Kentucky standard built home. The standard built new home in rural Kentucky typically receives a 100 105 on the Home Energy Rating System ("HERS") Index. A HERS Index Score of 100 means the home is built to only moderate levels of efficiency generally the 2004 International Energy Conservation Code ("IECC").

Availability

This program is available to home owners served by Blue Grass Energy.

Eligibility

To qualify as a Touchstone Energy Home under Blue Grass Energy's program, the participating single-family home must be located in the service territory of Blue Grass Energy and must meet the program guidelines <u>following one of the two available paths of approval</u>. Multi-family dwellings pre-approved by East Kentucky Power Cooperative, Inc. may be eligible.

Program Guidelines

- Home must receive a HERS Index score of between < 75 85 (At least 15-20 30% more efficient than the KY standard built home)
- Home must receive pre-drywall inspection and complete Blue Grass Energy's pre-drywall checklist (contact the Energy Advisor at Blue Grass Energy for a copy of the checklist)
- Home must receive a final inspection, pass a whole house air leakage test (<7 air changes per hour @50 pascals), and duct leakage test (<10% of the fan's rated capacity).
- Primary source of heat must be an Air Source Heat Pump ≥13SEER/7.5HSPF_current Energy and Water conservation standard established by the Federal DOE or Geothermal
- Home must pass 2009 IECC performance path current energy code requirements established in the KY <u>Residential Code</u>.
- Water Heater must be an electric storage tank water heater-_that is- <u>>-.90 (EF) current Energy and Water</u> conservation standard established by the Federal DOE.

Incentive

Blue Grass Energy will provide a free energy rating using the Home Energy Rating System (HERS) to each qualifying participant that builds their new home to meet the requirements listed above. <u>Any homes not able to meet the requirements listed above will be charged market value for the service provided.</u> A HERS rating is valued

at \$450 to \$1,200<u>750</u>.

<u>Term</u>

The program is an ongoing program.

DATE OF ISSUE: <u>December 13, 2012</u> January 30, 2019 DATE EFFECTIVE: <u>Service rendered on and after January 15, 2013</u> March 1, 2019.

ISSUED BY

Issued by authority of an Order of the Public Service Commission of Kentucky in Case No. _____ Dated _____

<u>Schedule_DSM – 8</u> <u>Appliance Recycling Program</u> [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

PURPOSE

The Appliance Recycling Program ("ARP") offers an incentive for the removal and recycling of old energy-inefficient refrigerators and freezers resulting in lower energy consumption at the participating residences.

Availability

This program is available in all territories served by Blue Grass Energy.

Eligibility

This program is targeted to existing single-family, multi-family, and manufactured homes that currently have old energy-inefficient refrigerators or freezers. The residential end-use cooperative member ("end-use member") may be eligible for this incentive by offering an existing refrigerator or freezer, subject to detailed eligibility requirements, to be picked-up and recycled. Detailed eligibility requirements are available at Blue Grass Energy and on Blue Grass Energy's website. General eligibility requirements are:

- Must be a residential end-use member of Blue Grass Energy.
- End-use member must own the appliance(s) being turned in for recycling.
- End-use member must be eligible for the incentive maximum 2 per metered account per calendar year.
- Appliance must be between 7.75 and 30 cubic feet
- Appliance must be plugged in, operational, working and colling when collection team arrives
- Appliance must be empty and have a clear path for removal
- Appliance must be picked up from the service address on the end-use member's billing account

DATE OF ISSUE: December 31, 2014January 30, 2019

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TITLE <u>Vice President & CFO</u> BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. _____ DATED:

<u>Schedule DSM – 8</u> <u>Appliance Recycling Program</u> <u>Continued</u> [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

LANDLORD/TENANT RELATIONSHIPS

Notwithstanding the forgoing, a landlord who owns a qualifying appliance that is used by a tenant who is an end-use member of Blue Grass Energy shall also be eligible to participate in the ARP program regardless of whether said landlord is also an end-use member of Blue Grass Energy. A landlord may be eligible for a maximum of 2 incentives per metered tenant end-user's account per calendar year.

PAYMENT

The end-use member will receive a \$50 incentive (rebate) per qualifying appliance from either Blue Grass Energy or its designated ARP contractor.

TERM

The program is an ongoing program.

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DATE EFFECTIVE: February 6, 2015 March 1, 2019

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TITLE <u>Vice President & CFO</u> BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. _____ DATED:

<u>Schedule_DSM – 9</u> ENERGY STAR[®] Appliances Program [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

PURPOSE

The Blue Grass Energy's ENERGY STAR® Appliances Program offers an incentive for reducing the energy consumed by household appliances. The end-use cooperative member ("end-use member") may qualify for this incentive (rebated) by purchasing an ENERGY STAR® qualifying appliance type listed in this tariff.

Availability

This program is available in all territories served by Blue Grass Energy.

Eligibility

This program is targeted to new single or multi-family homes, existing single or multi-family homes or manufactured homes purchasing ENERGY STAR® appliances. Eligibility requirements are detailed below and are available at Blue Grass Energy and on the Blue Grass Energy's website.

- Product must certified by EPA as an ENERGY STAR[®] Appliance. Eligible models can be found on ENERGYSTAR.GOV.
- Product must be purchased after January 1, 2015.
- Product must be fully installed and operational.
- Rebate application must be completed and original receipt or copy must be provided for verification.

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<u>Schedule DSM – 9</u> <u>ENERGY STAR® Appliances Program</u> <u>Continued</u> [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

Receipt must include the following information:

- Retailer's Name
- Itemized listing of product(s), including description(s), manufacturer(s), model number(s) or other identifying information. The receipt information must match the product information from the rebate application.
- o Purchase price and proof that full payment was made
- o Purchase date and date of delivery or installment (if installed by a contractor)
- For new construction, a Blue Grass Energy energy advisor ("energy advisor") may enter the rebate application on behalf of the end-use member. For an application entered by the energy advisor, the application must be accompanied by a picture of the appliance model number and serial number. Rebate applications for new construction, without a receipt, will only be accepted through an energy advisor.

Refrigerators & Freezers

- Refrigerators must be greater than 7.75 cubic feet in capacity.
- End-use members may apply for one ENERGY STAR[®] certified refrigerator and one ENERGY STAR[®] certified freezer rebate per calendar year per member metered account. A maximum of two rebates within this appliance category (Refrigerators and Freezers) will be allowed per metered account.

Dishwashers

 End-use members may apply for one ENERGY STAR[®] certified dishwasher rebate per premise/location per calendar year. A maximum of two rebates within this appliance category (Dishwashers) will be allowed per premise/location.

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TITLE Vice President & CFO BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. _____ DATED: _____

<u>Schedule DSM – 9</u> <u>ENERGY STAR® Appliances Program</u> <u>Continued</u> [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

Clothes Washers

 End-use members may apply for one ENERGY STAR[®] certified clothes washer rebate per calendar year per member metered account. A maximum of two rebates within this appliance category (Clothes Washers) will be allowed per metered account.

Heat Pump Water Heaters

 End-use members may apply for two ENERGY STAR[®] certified heat pump water heater rebates per calendar year per premise/location. A maximum of four rebates within this appliance category (Heat Pump Water Heaters) will be allowed per premise/location.

Air Conditioners and Heat Pumps

- Rebate application must be completed, signed and returned with an original or copy of the receipt and the AHRI certificate obtained from the HVAC installer.
 - AHRI certificate must list model numbers for the condenser unit (outside unit) and evaporator coil (indoor unit).
- End-use members may apply for up to three ENERGY STAR[®] certified heat pump or air conditioner rebates per calendar year per premise/location. A maximum of six (6) rebates within this appliance category (Air Conditioners and Heat Pumps) will be allowed per premise/location.

LANDLORD/TENANT RELATIONSHIPS:

Notwithstanding the forgoing, a landlord who rents to a tenant who is an end-use member of Blue Grass Energy shall also be eligible to participate in the ESAP program regardless of whether said landlord is also an end-use member of Blue Grass Energy. A landlord may be eligible for the same number of incentives per calendar year as a metered tenant end-use member.

<u>Schedule DSM – 9</u> ENERGY STAR[®] Appliances Program

DATE OF ISSUE: December 31, 2014January 30, 2019

DATE EFFECTIVE: February 6, 2015March 1, 2019

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TITLE <u>Vice President & CFO</u> BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. ______ DATED: ______

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BLUE GRASS ENERGY COOPERATIVE CORPORATION ORIGINAL SHEET 159

Continued

[SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

PAYMENTS

Blue Grass Energy will provide an incentive (rebate) payment to the end-use member as noted in the following table:

Appliances	
Refrigerator	\$100
Freezer	\$50
Dishwasher	\$50
Clothes Washer	\$75
Heat Pump Water Heater	\$300
Air Source Heat Pump	\$300
Air Conditioner (Central)	\$300

TERM

The program is an ongoing program.

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ISSUED BY Mulle f. Allence 6 TITLE Vice President & CFO

BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. _____ DATED: _____

Section DSM-5

<u>Commercial & Industrial Advanced Lighting Program</u> [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

Purpose

The Commercial & Industrial Advanced Lighting Program is an energy efficiency program that encourages commercial and industrial customers to install high efficiency lamps and ballasts in their facilities.

Availability

This program is available to commercial and industrial facilities located in all service territory served by Blue Grass Energy

Eligibility

To qualify for the Commercial & Industrial Advanced Lighting Program the customer must be a Blue Grass Energy customer and be on a retail commercial or industrial rate. The business must have been in operations for at least two years prior to January 1, 2011, and be current on its power bill payment to Blue Grass Energy. No empty buildings, inactive warehouses, or inactive storage areas shall qualify. The business must be open or have its normal lighting load on for at least 50 hours per week. Retrofits of parking lot lighting, provided on photocell control, are eligible.

Rebate

EKPC and Blue Grass Energy will provide an incentive to the customer of \$213 for each kW of lighting load reduction for businesses open 50 hours a week or more. EKPC will reimburse Blue Grass Energy an additional \$320 for each kW of lighting load reduction, which is to compensate for lost revenue. For commercial customers, rebates are limited to \$15,000 per upgrade (total of both customer and distribution system rebates) for any facility. For industrial customers, rebates are limited to \$30,000 per upgrade (total of both customer and distribution system rebates) for any facility.

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Section DSM-5 (cont.)

[SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

<u>Term</u>

The Commercial & Industrial Advanced Lighting Program is an ongoing program.

Verification Procedure

Qualifying lighting must be identified or documented by EKPC or Blue Grass Energy staff prior to retrofitting. After the customer completes the retrofit, EKPC and/or Blue Grass Energy staff must verify the installed lighting retrofit. Demand and energy savings will be calculated based on lighting information gathered during the visits. EKPC will utilize the manufacturer's lighting fixture specifications and known measurements to calculate the savings; rebates under this tariff will be paid after these verification procedures are complete.

DATE OF ISSUE: October 28, 2011 January 30, 2019 DATE EFFECTIVE: Service rendered on or after January 1, 2012 March 1, 2019

ISSUED BY (i) TITLE Vice President & CFO

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Section DSM-6

Industrial Compressed Air Program [SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

Purpose

The Industrial Advanced Compressed Air Program is a program designed to reduce electricity consumption through a comprehensive approach to efficient production and delivery of compressed air in industrial facilities. The program includes (1) training of plant staff; (2) a detailed system assessment of the plant's compressed air system including written findings and recommendations; and (3) incentives for capital intensive improvements.

Availability

This program is available to commercial and industrial facilities using electric compressed air applications located in all service territory served by Blue Grass Energy.

Eligibility

To qualify for the Industrial Compressed Air Program, the customer must be on a retail industrial rate and must be a manufacturing operation with a compressed air system that is turned on during all the operating hours of the facility. The business must have been in operations for at least two years prior to January 1, 2011, and be current on its power bill payment to Blue Grass Energy.

Rebate

If the customer reduces at least 60% of the compressed air leaks (CFMs), EKPC will reimburse through the Blue Grass Energy to the customer the cost of the original compressed air leakage audit up to \$5,000. The combination of Blue Grass Energy's lost revenue and the reimbursement of the compressed air leakage audit costs are limited to \$15,000 for any facility.

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ISSUED BY Munker le. Dellecco

TITLE <u>Vice President & CFO</u> Issued by authority of an Order of the Public Service Commision of Kentucky in Case No. _____ Dated: _____

For All Counties Served

P.S.C. No. 1

Section DSM-6 (con't)

[SHEET CANCELLED]

[RESERVED FOR FUTURE USE]

<u>Term</u>

The Industrial Compressed Air Program is an ongoing program.

Verification Procedure

Determination of the amount of leakage reduction:

- 1. The leakage reduction will be determined by the measured reduction in compressed air leakage.
- 2. An ultrasonic compressed air leakage audit shall be performed and the results of this audit provided to the customer and EKPC. The report will contain an estimate of the amount of excess load in kW that the leaks are causing. The report will include a detail of leaks detected. The detail of leaks and the excess of kW load will be based on the criteria for leak reporting.
- 3. Upon completion of repairs to the system, a follow-up ultrasonic compressed air leakage audit will be conducted for the documented leaks to measure the difference in the kW leakage load. The follow-up audit reported will show the net kW leakage saved and results provided to the customer and EKPC. A lost revenue reimbursement will be paid to Blue Grass Energy based on the difference in the kW leakage load and the cost of the original air-leakage audit will be reimbursed to the customer if a 60% reduction in CFMs air leakage is achieved.

Criteria for leak reporting:

- 1. The criteria for reporting leaks shall be at the discretion of the auditor. At a minimum the report must detail the leak location, decibels measured, CFM of air leakage, and kW leakage load for each leak and summed for the facility.
- 2. The basic rule is that leaks that do not exceed 30 decibels in ultrasonic noise will not be reported or counted in the leakage kW load.
- 3. Exceptions to the 30 decibels rule are as follows:
 - a. In a quiet environment with a minimal amount of compressed air, the minimum will drop to between 15 to 20 decibels.
 - b. In a high noise environment, especially with robotic welding, the minimum will be raised to 40 to 50 decibels.
 - c.a. Distance is also a factor. A 25 decibel leak in a trunk pipe in a 20-foot ceiling, in a noisy environment, will be documented and added to the leakage kW according to the distance.

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Section DSM -

Button-Up Weatherization Program

Purpose

The Button-Up Weatherization Program offers an incentive for reducing the heat loss of a home. The retail member may qualify for this incentive by improving <u>attic</u> insulation, <u>installing higher efficiency</u> windows and doors, or by <u>and</u> reducing the air leakage of their home.

Availability

This program is available to home owners served by Blue Grass Energy.

Eligibility

This program is targeted at older single-family, multi-family or manufactured dwellings. Eligibility requirements are:

- Home must be 2 years old or older to qualify for the incentive.
- Primary source of heat must be electricity.
 Eligible dwellings may qualify for one of four levels:

Button Up Level I

The insulation portion of tThe Button Up incentive will promote the reduction of energy usage through air sealing on the part of the retail member. Typical air sealing could include caulking, improved weather stripping, sealing attic accesses, etc. To receive this incentive either an EKPC approved contractor or Blue Grass Energy representative must perform a "pre" and "post" blower door test to measure actual Btuh reduced.

The attic insulation portion of the Button Up incentive will promote the reduction of energy usage on the part of the retail member. by providing an incentive of \$40 per one thousand British thermal unit per hour (Btuh) reduced, up to \$520 resulting from improved insulation or installing higher efficiency windows or doors. Heat loss calculation of Btuh reduced will be made by Blue Grass Energy using either the Manual J 8th Edition or through other methods approved by East Kentucky Power Cooperative (EKPC). Heat loss calculations in Btuh are based on the winter design temperature. In order to receive an incentive for attic insulation, an air seal must be completed.

Button Up Level I w/ Air Sealing

The air sealing portion of the Button Up incentive will promote the reduction of energy usage through air sealing on the part of retail members. Typical air sealing could include caulking, improved weather stripping, sealing attic accesses, etc. To receive this incentive either an EKPC approved contractor or Blue Grass Energy representative must perform a "pre" and "post" blower door test to measure actual Btuh reduced. This portion of the Button Up incentive will also pay \$40 per thousand Btuh's reduced and increases the Button Up Level I maximum incentive to \$750.

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<u>Section DSM ____ (continued)</u>

Button Up Level II

The Button Up Level II portion of this incentive will promote energy conservation through a whole house approach. This level of incentive is targeted at retail members experiencing high energy bills as a result of excessive heat loss from multiple causes. The incentive promotes the member to address all of the problems in their home at one time. Retail members who reduce their home's energy needs by 26,500 Btuh are eligible for the full Button up Level I Air Seal incentive plus an additional \$310 for a total of \$1,060. To receive this incentive either an EKPC approved contractor or Blue Grass Energy representative must perform a "pre" and "post" inspection/blower door and duct leakage test of the home to measure actual Btuh reduced. Each home must meet minimum requirements as determined by Blue Grass Energy.

Button Up Level III

The Button Up Level III portion of this incentive will promote energy conservation through a whole house approach. This level of incentive is targeted at retail members experiencing extremely high energy bills as a result of excessive heat loss from multiple causes. The incentive promotes the member to address all of the problems in their home at one time. Retail members who reduce their home's energy needs by 34,250 Btuh are eligible for the full Button up Level I Air Seal incentive plus an additional \$620 for a total of \$1,370. To receive this incentive either an EKPC approved contractor or Blue Grass Energy representative must perform a "pre" and "post" inspection/blower door and duct leakage test of the home to measure actual Btuh reduced. Each home must meet minimum requirements as determined by Blue Grass Energy.

Button Up Level I Incentives

Blue Grass Energy will provide an incentive to home owners of \$40 per one thousand Btuh reduced, up to \$520_750. A blower door test is not required to receive this incentive up to the maximum incentive of \$520.

Button Up Level I with Air Sealing Incentive

Blue Grass Energy will provide an incentive to home owners of \$40 per one thousand Btuh reduced, up to \$750. To qualify for the increased maximum incentive of \$750 as noted herein, a blower door test is required.

Button Up Level II Incentive

Blue Grass Energy will provide an incentive of \$1060 to home owners who reduce their home's energy needs by 26,500 Btuh. To qualify for the increased maximum incentive as noted herein, the home must pass a blower door test, duct leakage test, and meet the minimum program requirements.

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Section DSM (continued)

Button Up Level III Incentive

Blue Grass Energy will provide an incentive of \$1370 to home owners who reduce their home's energy needs by 34,250 Btuh. To qualify for the increased maximum incentive as noted herein, the home must pass a blower door test, duct leakage test, and meet the minimum program requirements.

Term

The program is an ongoing program.

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<u>Section DSM –</u> <u>Heat Pump Retrofit Program</u>

Purpose

The Heat Pump Retrofit Program provides incentives for residential members to replace their existing resistance heat source with an high-efficiency heat pump.

Availability

This program is available to home owners served by Blue Grass Energy.

Eligibility

This program is targeted to home owners who currently heat their home with a resistance heat source; this program is targeted to site built homes, manufactured homes, and multi-family dwellings. Eligibility requirements are:

- Incentive only applies when homeowner's primary source of heat is an electric resistance heat furnace, ceiling cable heat, or baseboard heat, or electric thermal storage.
- Existing heat source must be at least 2 years old.
- New manufactured homes are eligible for the incentive.
- Two (2) maximum incentive payments per location, per lifetime for centrally ducted systems.
- <u>Air-Conditioning, Heating, and Refrigeration Institute ("AHRI") ratings may range as follows:</u> Seasonal Energy Efficiency Ratio ("SEER") minimum 13; Heating Seasonal Performance Factor ("HSPF") minimum 7.5 Ducted and Ductless mini-splits applying for the incentive will be incentivized at a rate of \$250 per indoor head unit up to a maximum of three head units per location, per lifetime.
- <u>Participants in the Heat Pump Retrofit Program are not eligible for participation in the ENERGY</u> <u>STAR® Manufactured Home Program.</u>

Incentives

Homeowners replacing their existing resistance heat source with a heat pump will qualify for the following incentive based on the <u>AHRI Rating equipment type</u>:

Equipment TypeAHRI RATING

INCENTIVE TO MEMBER

Centrally Ducted Systems:	
Current Energy Conservation Standard established	\$500
By the Federal Department of Energy "DOE"	
13 SEER	
7.5 HSPF\$500	
Current ENERGY STAR® level equipment or greater	\$750
14 SEER	
8.0 HSPF \$750	
Mini Split Systems:	
Ducted or Ductless Mini-Splits ENERGY STAR®	\$250
Level equipment or greater	
≥ 15 SEER	
<u>≥8.5 HSPF</u> \$1,000	
<u>>8.5 HSPF \$1,000</u>	

Term

The program is an ongoing program.

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Section DSM-4c

HVAC Duct Sealing Program

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[RESERVED FOR FUTURE USE]

Purpose

The HVAC Duct Sealing Program offers blower door tests to evaluate and identify costly duct leaks and an incentive to seal leaking ductwork either with traditional mastic sealers or with the *Aeroseal* duct sealing program. Duct losses are to be reduced to 10% or less, and duct loss measurement requires the use of a blower door test and the blower door subtraction method.

Availability

This program is available to residential members in all service territory served by Blue Grass Energy.

Eligibility

This program is targeted at any single family or multi-family dwelling using an electric furnace or electric heat pump. Eligibility requirements are:

- Limited to homes that have centrally ducted heating systems in unconditioned areas, using only electricity as a fuel source.
- Duct system must be 2 years old or older.
- Initial duct leakage must test greater than 10% of the fan's rated capacity.
- Contractor or Co-op Representative are required to conduct a "pre" and "post" blower door test to verify reductions. Only contractors trained or approved by EKPC may be used.
- Duct leakage per system must be reduced to below 10% of the fan's rated capacity (assuming 400cfm per ton, ex. 2 ton system= 800 cfm, thus duct leakage must be reduced to 80cfm or less). If duct system cannot be reduced to 10% of fan's rated capacity, contractor is expected to provide a detailed justification.
- All joints in the duct system must be sealed with foil tape and mastic. Foil tape alone does not qualify as
 properly sealing the duct system.
- For homes that have two separately ducted heat systems, each system will qualify independently for the incentive.

Incentive

Blue Grass Energy will provide a \$250 incentive to residential members (or contractor) that meet the Eligibility requirements listed above.

Term

The program is an ongoing program.

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