

December 30, 2015

Mr. Jeff Derouen
Kentucky Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602

Re: East Kentucky Power Cooperative, Inc. Section DSM-11 –
Outdoor Lighting Program (New)

Dear Mr. Derouen:

Please find enclosed for filing with the Commission, via the electronic tariff filing system, the above-referenced tariff.

East Kentucky Power Cooperative, Inc. (“EKPC”) is seeking to expand its Demand-Side Management (“DSM”) program. Upon the recommendation of the East Kentucky Power Cooperative, Inc. (“EKPC”) Demand-Side Management (“DSM”) Steering Committee (“Steering Committee”), a committee of EKPC and owner-member cooperative (“owner-member”) staff, EKPC continues to expand its DSM program by offering the Outdoor Lighting Program, a common DSM program for utilities across Kentucky and the United States that offers incentives to owner-members to install Outdoor LED lights for end-use members.

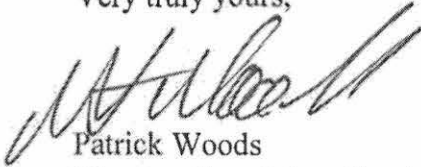
LED bulbs use one-third the energy of high pressure sodium bulbs and last up to 10-times longer. As a result, over the past few years, high-efficiency LED outdoor lighting options have increased, while the unit cost for such fixtures has steadily decreased. Lower fixture purchase costs, along with improvements in the quality of light produced by LED lighting, is making LEDs a much more viable option when replacing and installing outdoor lighting. However, EKPC recognizes that the initial cost of LED lighting still causes other less energy-efficient options to be more attractive, and that the owner-members have many lighting options available to them when installing new security lights or repairing failed security lights. This program is designed to incentivize EKPC’s owner-members to install the more energy-efficient security lighting option – LEDs – for their end-use members, and is similar to the Big Rivers Electric Corporation’s High Efficiency Outdoor Lighting Program.

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Pursuant to KRS 278.180 EKPC must give at least 30-days' notice to the Commission. Therefore, the proposed effective date of this program will be February 1, 2016. Pursuant to 807 KAR 5:011, EKPC has posted the requisite notice at its office located at 4775 Lexington Road, Winchester, Kentucky and will post the requisite notice on its website no later than five (5) business days from today's date, which will include a hyperlink to the Commission's website where the tariff can be found. EKPC has also given written notice to its 16 owner-members by mailing a copy of the notice and proposed tariff to each of them, on this date.

Please contact me if you have any questions.

Very truly yours,



Patrick Woods
Director, Regulatory Services

Enclosures

Section DSM – 11

Owner-Member Outdoor Lighting Program

Purpose

East Kentucky Power Cooperative's ("EKPC") Owner-Member Outdoor Lighting Program encourages EKPC's 16 Member System Cooperatives ("owner-members") to install high-efficiency outdoor lighting for their end-use cooperative members ("end-use members") instead of less expensive but less energy-efficient outdoor lighting options.

Availability

This DSM Program is available to the 16 owner-members served by EKPC.

Eligibility

An eligible owner-member that purchases wholesale power from EKPC shall be eligible for a one-time incentive payment from EKPC for each owner-member-owned, metered and non-metered, new or retrofitted, high-efficiency outdoor LED lighting fixture installed for an end-use member.

Payments

An owner-member cooperative will receive a one-time \$70 incentive payment for each metered and non-metered, new or retrofitted, high-efficiency outdoor LED lighting fixture installed for an end-use member.

Term

The program is an ongoing program.



DATE OF ISSUE December 30, 2015
Month / Date / Year

DATE EFFECTIVE Service Rendered on or after February 1, 2016
Month / Date / Year

ISSUED BY *Anthony J. Campbell*
(Signature of Officer)

TITLE President and Chief Executive Officer

LED Security Lights, combined program with scenarios 1, 2, and 3, tariff filing

Distribution System Benefits		Distribution System Costs	
Power Bill Declines	\$ 8,040,276	Revenue Declines	(\$9,458,245)
Rebates From EK	\$2,012,517	Incremental Capital Investment	(\$4,786,916)
Avoided fixture maintenance	\$ 4,924,917	Rebates Paid To Consumers	\$0
Total Benefits	\$14,977,711	Total Costs	(\$14,245,161)
Benefit / Cost Ratio: 1.05			

Participant Benefits		Participant Costs	
Electric Bill Declines	\$6,392,878	Up Front Investment	\$0
Rebates From Distribution System	\$ -		
Reductions in O&M costs	\$0		
Total Benefits	\$6,392,878	Total Costs	\$0
Benefit / Cost Ratio: #DIV/0!			

Total Resource Benefits		Total Resource Costs	
Avoided Energy Costs	\$6,611,559	Up Front Customer Investment	\$0
Avoided Gen Capacity Costs	\$0	Coop Incr. Capital Investment	(\$4,786,916)
Avoided Transmission Expense	\$145,423	EK Administrative Costs	(\$57,500)
Avoided fixture maintenance	\$4,924,917		
Total Benefits	\$11,681,899	Total Costs	(\$4,844,417)
Benefit / Cost Ratio: 2.41			

EK Benefits		EK Costs	
Avoided Energy Costs	\$6,611,559	Decrease In Revenue	(\$8,040,276)
Avoided Gen Capacity Costs	\$0	Rebates Paid	(\$2,012,517)
Avoided Transmission Expense	\$145,423	Administrative Costs	(\$57,500)
Total Benefits	\$6,756,981	Total Costs	(\$10,110,294)
Benefit / Cost Ratio: 0.67			

Societal Benefits		Societal Costs	
Avoided Energy Costs	\$7,348,938	Up Front Customer Investment	\$0
Avoided Gen Capacity Costs	\$0	Utility Admin Costs	(\$4,911,947)
Avoided Transmission Expense	\$161,430		
Avoided Fixture maintenance	\$4,993,570		
Total Benefits	\$12,503,938	Total Costs	(\$4,911,947)
Benefit / Cost Ratio: 2.55			

Combined RIM:
 Benefits: \$11,681,899 Costs: (\$14,302,662)

Benefit / Cost Ratio: 0.82

for Tariff Filing

Nov-15

scenario 1 of 3
Assumption

Outdoor Lighting, Security, cooperative-owned
replaced at end of useful life of existing luminaire
Converting from High Pressure Sodium to Light Emitting Diode (LED) luminaires results in improved lighting quality, maintenance cost savings, and energy savings
Source

Class: *Commercial Change*
#: *Record*

		kWh	Win kW	Sum kW
Load Impacts				
Before Participant 562 kWh, 0.14 kW (winter coinc.), 0.0 kW (summer coinc)	One high pressure sodium luminaire, 137 watts measured input, 4100 operating hours per year. Dusk to dawn load profile.	562	0.14	0
After Participant 254 kWh, 0.08 kW (winter peak), 0.0 (summer peak)	One LED luminaire, 62 watts measured input, 4100 operating hours per year. Performance data from UUS. Dusk to dawn load profile.	254	0.08	0
		savings:	0.06	0
Lifetime of savings	15 Years (conservative - estimated life is 80,000 - 100,000 hours)			
Generation Capacity Cost - EE = combined cycle, 100% summer \$126.50 in 2015 Avoided Electricity Energy Costs - PJM Market	Combined Cycle Baseload unit. 100% allocation to summer based on ACES July 1 2014 energy forward curve for AEP_Dayton. DSMore Scenario 1, 0.724 esc in 2015			
Participant Costs \$ 0.00	no outlay for the participating customer; pays fixed monthly rate for lighting service			
Administrative Cost EK \$ 20,000 fixed annual (2015-2017), 2% escalation \$0 per new participant Co-op \$ -50 per new participant	Includes setup, rebate processing, program mgt, monitoring & eval. Scenario 1 bears 100% of fixed annual admin costs. installed cost of LED luminaire (\$200) less the installed cost of the HPS luminaire (\$80) and present value of maintenance costs (\$ 170) avoided - lamp replacements			
Rate Schedule - Retail Typical security lighting rate: \$7.30 plus \$0.06 per kWh	modeled with fixed charge (for equip and maint) and variable charge (for kWh) Current rates in effect as of June, 2011.			
Rate Schedule - Wholesale East Kentucky E-2 rate.	Current rates in effect as of June, 2011.			
Participation - Year by year, 2015 to 2017: 8,000 0% Free riders	8,000 for single year for simplicity. 80% of total across the 3 scenarios. Technically, there are no free riders because there are no rebates to participants. However, the same principle must be evaluated with respect to the need for EKPC to continue to provide an incentive to the member cooperatives.			
Rebates Co-op to Participant \$0 EK to Co-op \$70 per fixture	No rebate. Savings provided through the rate To offset higher upfront capital costs of the LED fixture	0.015	46.2	10

for Tariff filing

Nov-15

scenario 2 of 3
Assumption

Outdoor Lighting, Security, cooperative-owned: **comparison is 250 watt MH replaced at end of useful life of existing luminaire**
Converting from Metal Halide to Light Emitting Diode (LED) luminaires results in improved lighting quality, maintenance cost savings, and energy savings

Class: *Commercial* Change
#: Record

Source

		kWh	Win kW	Sum kW
Load Impacts				
Before Participant 1210 kWh, 0.30 kW (winter coinc.), 0.0 kW (summer coinc)	One metal halide luminaire, 295 watts measured input, 4100 operating hours per year. Dusk to dawn load profile.	1210	0.3	0
After Participant 328 kWh, 0.08kW (winter peak), 0.0 (summer peak)	One LED luminaire, 80 watts measured input, 4100 operating hours per year. Performance data from UUS. Dusk to dawn load profile.			
	savings:	882	0.22	0
Lifetime of savings	15 Years (conservative - estimated life is 80,000 - 100,000 hours)			
Generation Capacity Cost - EE = combined cycle, 100% summer \$126.50 in 2015 Avoided Electricity Energy Costs - PJM Market	Combined Cycle Baseload unit. 100% allocation to summer based on ACES July 1 2014 energy forward curve for AEP_Dayton. DSMore Scenario 1, 0.724 esc in 2015			
Participant Costs \$ 0.00	no outlay for the participating customer; pays fixed monthly rate for lighting service			
Administrative Cost EK \$ 0 fixed annual (2015-2017), 2% escalation \$0 per new participant	Scenario 1 bears 100% of the fixed annual costs			
Co-op \$ 83 per new participant	installed cost of LED luminaire (\$625) less the installed cost of the MH luminaire (\$360) and present value of maintenance costs (\$ 182) avoided - lamp replacements		625	360
			83	182
Rate Schedule - Retail Typical security lighting rate: \$10.77 plus \$0.06 per kWh	modeled with fixed charge (for equip and maint) and variable charge (for kWh) Current rates in effect as of June, 2011.			
Rate Schedule - Wholesale East Kentucky E-2 rate.	Current rates in effect as of June, 2011.			
Participation - Year by year, 2015 to 2017: 1,000 0% Free riders	1,000 for single year for simplicity. 10% of total across the 3 scenarios. Technically, there are no free riders because there are no rebates to participants. However, the same principle must be evaluated with respect to the need for EKPC to continue to provide an incentive to the member cooperatives.			
Rebates Co-op to Participant \$0	No rebate. Savings provided through the rate			
EK to Co-op \$70 per fixture	To offset higher upfront capital costs of the LED fixture. First run to see if enough for RIM>1	0.015	132.3	10

for Tariff Filing

Nov-15

scenario 3 of 3

Assumption

Outdoor Lighting, Security, cooperative-owned: comparison is 400 watt HPS replaced at end of useful life of existing luminaire
 Converting from High Pressure Sodium to Light Emitting Diode (LED) luminaires results in improved lighting quality, maintenance cost savings, and energy savings

Class: *Commercial* Change Record
 #:

Source

Load Impacts

Before Participant

1825 kWh, 0.45 kW (winter coinc.), 0.0 kW (summer coinc)

One high pressure sodium luminaire, 445 watts measured input, 4100 operating hours per year. Dusk to dawn load profile.

kWh Win kW Sum kW

1825 0.45 0

After Participant

648 kWh, 0.16kW (winter peak), 0.0 (summer peak)

One LED luminaire, 158 watts measured input, 4100 operating hours per year. Performance data from UUS. Dusk to dawn load profile.

savings:

1177 0.29 0

648 0.16 0

Lifetime of savings

15 Years (conservative - estimated life is 80,000 - 100,000 hours)

Generation Capacity Cost - EE = combined cycle, 100% summer \$126.50 in 2015
Avoided Electricity Energy Costs - PJM Market

Combined Cycle Baseload unit. 100% allocation to summer based on ACES July 1 2014 energy forward curve for AEP_Dayton. DSMore Scenario 1, 0.724 esc in 2015

Participant Costs \$ 0.00

no outlay for the participating customer; pays fixed monthly rate for lighting service

Administrative Cost

EK \$ 0 fixed annual (2015-2017), 2% escalation \$0 per new participant

Scenario 1 bears 100% of fixed annual admin costs

747 307

Co-op \$ 269 per new participant

installed cost of LED luminaire (\$747) less the installed cost of the HPS luminaire (\$307) and present value of maintenance costs (\$ 171) avoided - lamp replacements

269 171

Rate Schedule - Retail

Typical security lighting rate: \$10.77 plus \$0.06 per kWh

modeled with fixed charge (for equip and maint) and variable charge (for kWh)
 Current rates in effect as of June, 2011.

Rate Schedule - Wholesale

East Kentucky E-2 rate.

Current rates in effect as of June, 2011.

Participation - Year by year, 2015 to 2017: 1,000 0% Free riders

1,000 for single year for simplicity. 10% of total across the 3 scenarios. Technically, there are no free riders because there are no rebates to participants. However, the same principle must be evaluated with respect to the need for EKPC to continue to provide an incentive to the member cooperatives.

Rebates

Co-op to Participant \$0

No rebate. Savings provided through the rate

EK to Co-op \$70 per fixture

To offset higher upfront capital costs of the LED fixture. First run to see if enough for RIM>1

0.015 176.55 10