

**SOUTH KENTUCKY RURAL ELECTRIC COOPERATIVE CORPORATION
DEVELOPMENT OF LED LIGHTING TARIFFS**

EXPLANATION OF THE DEVELOPMENT OF RATES

South Kentucky RECC is filing for LED lighting to be added to our existing Lighting tariffs as a step toward energy efficiency and demand reduction. LED lighting is the most energy efficient outdoor lighting available and offers South Kentucky's members a better quality and more environmentally friendly lighting. South Kentucky is proposing to add a LED Security Light to our Schedule OL, LED Flood Light to Schedule DSTL and a LED Street Light to the Schedule STL tariff. South Kentucky has used information from its Annual RUS Form 7, PSC Annual Report and Accounting Work Order System as the basis for the determination of the cost percentages and estimated installed capital costs associated with these lights to determine the rates contained in the tariffs.

There are four cost components that have been used in the formulation of the proposed rates. They are as follows:

1. Total Cost of Installation
2. Annual Carrying Cost
3. Annual Energy Usage
4. Energy Charge per kWh

Total Cost of Installation

The Installation Cost is the average installation cost for 2015 from our Continuing Property Records which had the largest number of lights installed in 2014 to get the most accurate average cost of installation. This cost was added to the estimated cost to purchase each of the LED lighting fixtures.

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Annual Carrying Cost

The Annual Carrying Cost is derived at by multiplying the installed cost by the Total Annual Carrying Charge for Distribution Plant. The Annual Carrying Charge for Distribution Plant is composed of the Overall Percentage of Distribution Cost to Distribution Plant Investment, the Percentage of Interest on Long-Term Debt and the Net Margin requirement to obtain a 2.1 TIER.

The Determination of the Overall Percentage of Average Distribution Plant Investment was calculated by dividing the total amount for each Distribution Cost by the Average Distribution Plant Investment for 2014. The following results:

Distribution Operations	1.99%
Distribution Maintenance	3.91%
Consumer Accounts	1.88%
Customer Service & Information	0.32%
Administrative & General	1.69%
Depreciation	<u>3.65%</u>
	13.44%

The Percentage of Interest on Long-Term Debt of 3.53% was based on the actual Interest Expense for 2014 dividend by the average Long-Term Debt (less any Rural Economic Development Loan Program Debt) and the average Distribution Equity for 2014.

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The Return on Investment of 3.88% is based on using a 2.1 TIER granted in Case No. 2011-00096.

The Annual Carrying Charge percentage (20.85%) is the sum of the Distribution Cost Percentages (13.44%) along with the Interest Expense (3.53%) and Return on Investment (3.88%). The Annual Carrying Cost is the result of multiplying the Annual Carrying Charge percentage by the total Cost of Installation.

Annual Energy Usage

The Annual kWh Usage for each LED light was based on the Input Watts multiplied by the Estimated Annual Hours used divided by 1,000:

LED Security Light	280
LED Cobra Head Light	473
LED Flood Light	876

Annual Energy Charge

The Energy Charge of \$0.07661 was calculated by dividing the total cost of Purchased Power (\$100,431,511) by the total kWh sold (1,310,882,736) for 2014. The kWh sold was utilized for the calculation to account for line loss.

The Annual Energy Charge is calculated by multiplying the Estimated Annual Usage by the annual Energy Charge.

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Resulting Monthly Rate per Light

The Monthly Rate per Light is the total Annual Carrying Cost plus the Annual Energy Charge divided by 12 months. We are proposing that the resultant monthly rates be put in place as identified for our Outdoor Lighting Service- Security Lights tariff- Schedule OL and the Decorative Street Lighting tariff- Schedule DSTL. However, we are proposing that the monthly rate for the LED Cobra Light on the Street Lighting Service tariff- Schedule STL, be phased in over a three year period in the manner identified on Schedule STL.