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## Energy Efficiency Tip of the Month

Look for LED products and fixtures for outdoor use, such as pathway, step and porch lights. Many include features like automatic daylight shut-off and motion sensors. You can also find solar-powered lighting for outdoor spaces.

## COMPARING UTILITY BILLS— WHAT YOU NEED TO KNOW

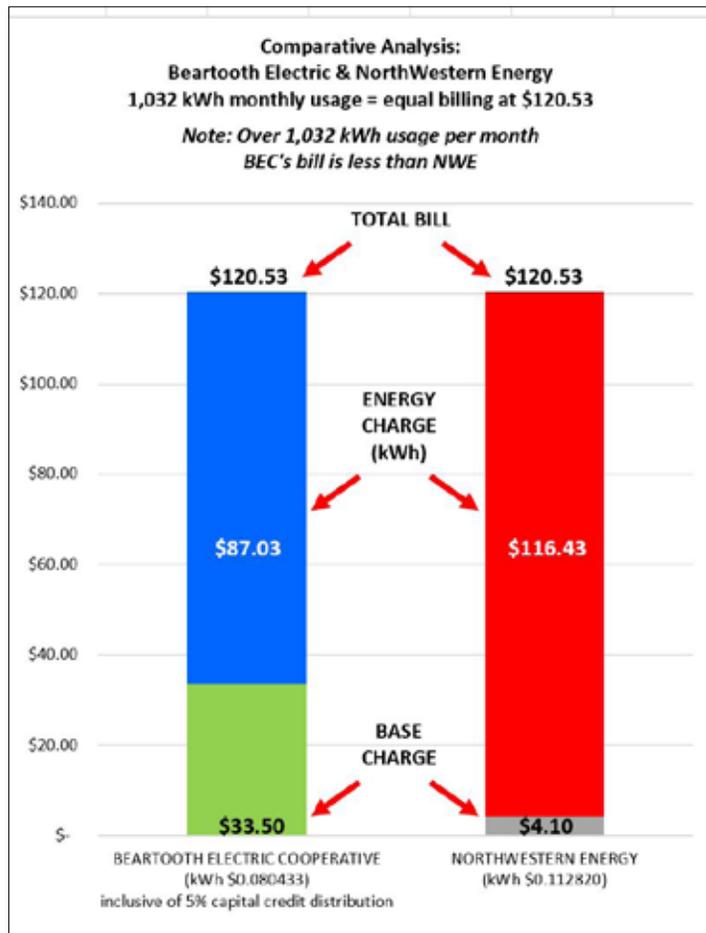
Today, BEC's electricity charge (kWh) is 27% less than Northwestern Energy's (NWE). Deduct the five percent (5%) annual margins (capital credits) and Beartooth Electric's electricity charge (kWh) averages 34% less than NWE. The electricity you use is much less. However, each utility also charges a different monthly base charge. We reviewed the monthly base charge in last month's *Rural Montana*. In this case, BEC's monthly base charge is more than 8 times higher than NWE. Why? It's because of our low consumer density. Beartooth Electric serves an average of 2.5 members per mile of line. Compare this to a city where the average density is easily more than

100 customers per mile of line. It is always more economical to serve areas of higher density. In addition, each utility performs their own Cost of Service Study (COSA) and adopts their own rate design philosophy.

In light of the differences between energy and base charges, it's the bottom line that matters most to our members. For comparative purposes, at a monthly usage amount of 1,032 kWh a bill from either Beartooth or Northwestern would be the same, inclusive of the

annual 5% capital credit distribution. Energy usage greater than 1,032 kWhs per month would yield a smaller bill from Beartooth Electric.

Beartooth has firm power contracts through 2027 and continues to invest in technology to operate more efficiently and increase member value, it is conceivable that rates will remain stable through 2027. That's a lofty goal, but very achievable. Over time, the comparative usage amount of 1,032 kWhs will likely decrease, as it just did with NWE's recent rate increase, lowering the apples to apples comparison from 1,064 to 1,032 kWh per month.



# Electric rates—See how we measure up

## Compare our rates with our neighboring utilities

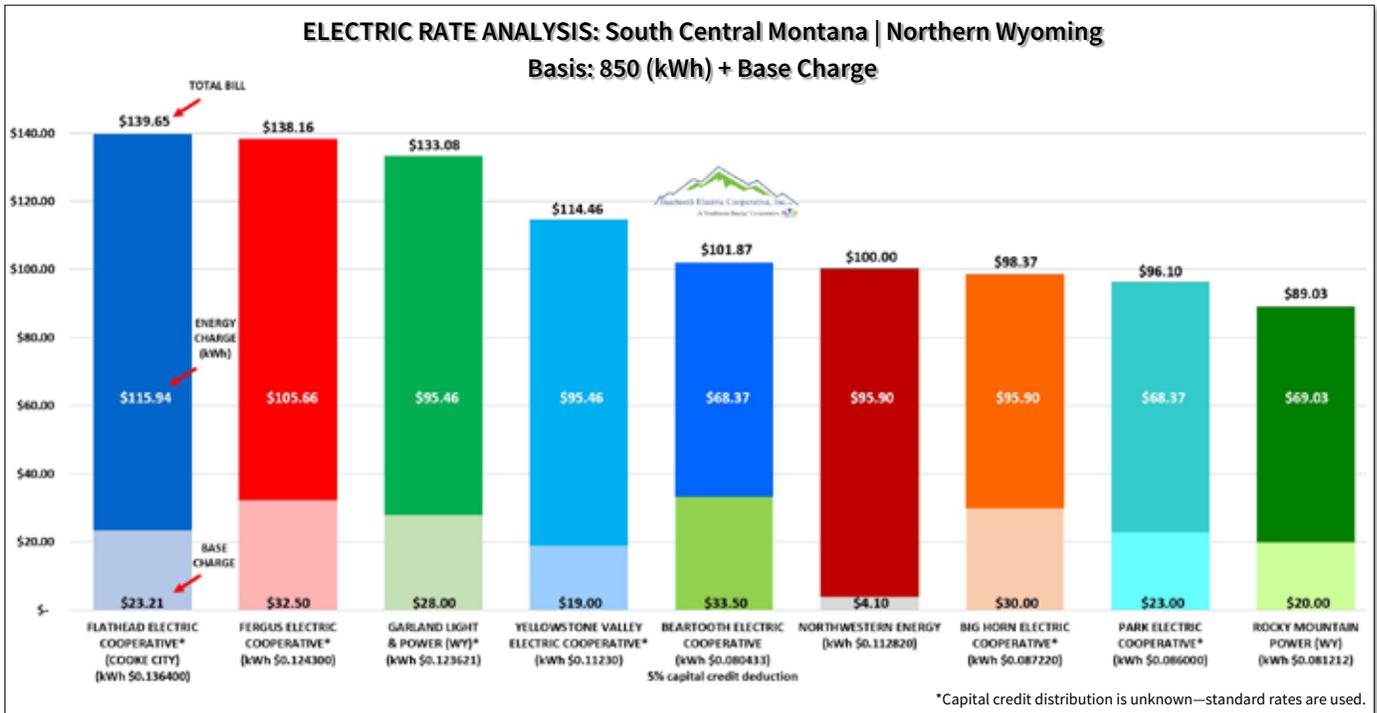
By Kaaren Robbins, BEC Communication & Member Services

Since 1938, Beartooth Electric has taken pride in delivering safe and reliable electric service. But our commitment doesn't stop there. We continually work to reduce operating costs and purchase power from diverse, competitive sources to ensure we offer you the best rates possible. In fact, we have wholesale electric contracted through 2027 and we're looking further into the future to keep your rates affordable.

Beartooth Electric members, you may be happy to know that BEC is the ONLY electric utility whose rates have decreased since 2015. In fact, BEC rates have decreased an average of 25%.

Rates went down: 5% in August 2015; 10% March 2016; 5% in August 2016 and in July 2017: 5% decrease for Residential, Large Commercial and Industrial classes, 6.5% decrease for Small Commercial class, and 2.5% decrease for Irrigation class.

Curious to see how we measure up? Take a look at the graphic below to compare Beartooth Electric rates with the rates of our neighboring utilities.



## Berkeley Lab: It Takes 70 Billion Kilowatt Hours A Year To Run The Internet

By Christopher Helman, Forbes Staff

America's myriad server farms and data centers operate 100 million drives that hold 350 million terabytes of data — everything from your decade-old emails to the collected offerings of Netflix.

A report from the Department of Energy's Lawrence Berkeley National Laboratory figures that those data centers use an enormous amount of energy — some 70 billion kilowatt hours per year. That amounts to 1.8% of total American electricity consumption. At an average cost of 10 cents per kWh, the annual cost of all that juice is on the order of \$7 billion.

Seventy billion kilowatt hours is such a giant number that it's helpful to put it into some other terms. For comparison purposes, 1 kWh is enough power to keep ten 100-watt light bulbs illuminated for one hour,

or to keep your smartphone charged for an entire year.

To generate 70 billion kWh you'd need power plants with a baseload capacity of 8,000 megawatts — equivalent to about 8 big nuclear reactors, or twice the output of all the nation's solar panels.

Sliced up per capita, the average American uses about 200 kWh a year for his or her internet use, costing about \$20. For those of you obsessed with carbon footprints, your internet use is responsible for the emission of about 300 pounds of carbon dioxide per year.

But our internet addiction is only growing. According to Nielsen, the average adult in the United States spends 10 hours and 39 minutes a day consuming digital media. That's up an hour a day in the past year. And we're

spending most of that additional time peering at our smart phones, which now occupy us for an hour and a half each day.

### Want to lower your electric bill?

Clean your data files regularly and logout and power off your computer and smartphone when not in use. Bonus—your system will run better with a new start each time of use.



## GENERAL MANAGER'S MESSAGE

# The "Orange Trucks" are Back!



Kevin P. Owens, PE  
BEC General Manager

Beartooth Electric Cooperative (BEC) recently signed a contract with Asplundh Tree Expert Company to clear vegetation and trim trees throughout BEC's service territory in 2018. Most importantly, it's the first year of a vegetation management program that will ensure



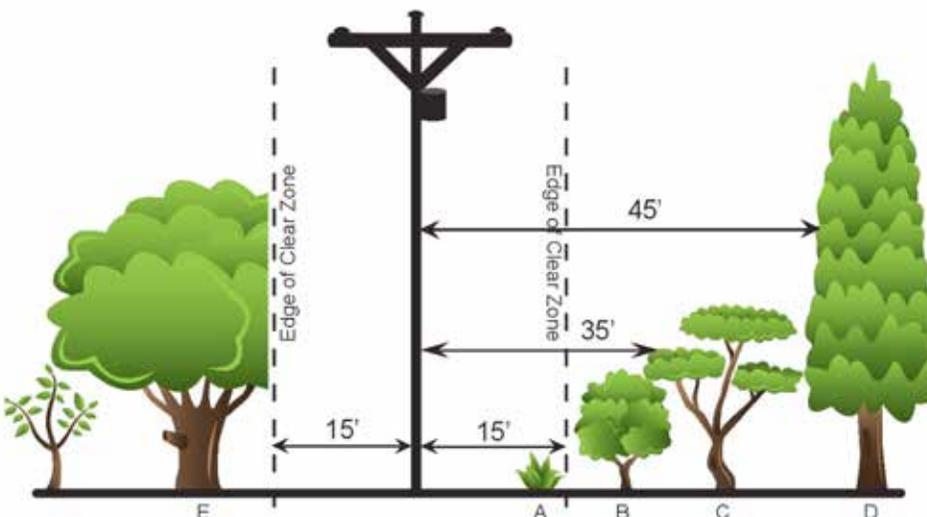
a consistent rotation every five years throughout our service territory. This approach will insure a more efficient operation and maintenance of our electric system to reduce outages, improve electrical safety and reduce the risk of wildfire.

I am sure most of you identify our tree trimming efforts as the first defence against power outages and help us keep the lights on for you. In many respects this is true. However, we really need to think beyond this and recognize the annual increase in wildfires throughout Montana, California and the Pacific Northwest. These events are no longer anomalies. Once again we have found ourselves with a very wet Spring and early Summer. The grass was incredibly tall and green and will inevitably turn to a crispy brown in August. Fire danger will be intense again in Montana.

Wildfire danger isn't anything new or unknown to electric utilities. As long as transmission and distribution systems run through areas of dry ignitable trees and vegetation, the potential loss of usable land, homes, equipment, etc. will continue to loom large. We all remember the tremendous loss of homes and property in California last summer. The cause was recently determined to be "electric power and distribution lines, conductors and the failure of power poles." Pacific Gas & Electric recently took a pretax write-down against second-quarter earnings of \$2.5 billion to cover liabilities of the 2017 wildfires. That figure does not include fines or penalties that may be assessed by governmental agencies.

Mother Nature doesn't discriminate among utilities and we know we are living with heightened risk this summer and fall. When you see the "Orange Trucks" working our system this summer, understand the nature of their business and what they are doing for all of us. If they leave you a door hanger announcing that they are working in your area, please take the time to give them a follow-up call to fully understand the nature of the work on rights of way and easements impacting your property.

The letters below each tree in the illustration relate to the types of vegetation listed below than can be safely planted near the cooperative's right-of-way.



A. If landscaping is needed near right-of-way areas, choose low growth shrubs.

B. Smaller trees can be planted on right-of-way edges, at least 15 feet from distribution power lines.

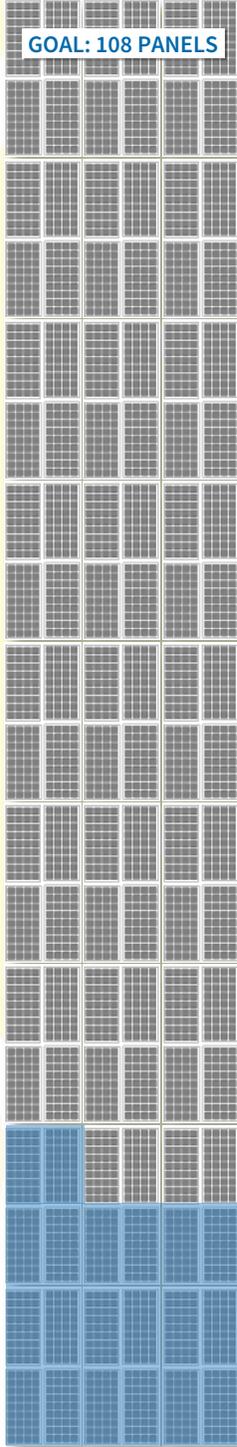
C. Medium trees need to be planted at least 35 feet away from distribution power lines.

D. Large trees need to be planted at least 45 feet away from overhead distribution power lines.

E. Trees planted too close to the lines will always be misshapen by unavoidable pruning of limbs to prevent interference with lines.



GOAL: 108 PANELS



**SALES GOAL:  
108 SHARES DU SOLEIL  
CERTIFICATES**

**AVAILABLE  
NOW**

## OWN YOUR SHARE OF THE SUN

### Purchase your Solar Panel Energy Output Certificate!

Shares du Soleil Phase II has launched! All members are invited to join the Shared Solar project—purchase your Shares du Soleil energy output certificates now.

Member purchases are limited to (2) two certificates initially, if certificates are available later, interested members will have the opportunity to purchase additional certificates.

#### How do I purchase Shares du Soleil Certificates?

- Stop by the BEC Red Lodge office or mail your down payment of \$375.00 between now and November 1, 2018.
- Your final payment is required in January 2019.

#### Phase III-Construction

- The project will be built to match member demand.
- A final contractor will be selected and construction will begin in March 2019.
- The project may be completed by April 1, 2019 and customers will begin receiving bill energy credits in the following months.
- The project duration is estimated at 25 years.

## Get your Shares du Soleil!

Here are just a few of our Shares du Soleil partners—



### RURAL MONTANA CONTENT MAIL-IN SURVEY WINNERS

**IN FACT WE HAVE 8 WINNERS!**

Yes eight! We had such a great survey response that we decided to award double the amount of \$25 electric bill credits as announced. Winners, your electric bill credit was applied to your account.

**VERONICA CARTER  
JOSEPH FOWLER  
WILLIAM GRIGGS  
JIM LOWE  
GARY MORSEMAN  
RONALD OHLIN  
FRANCIE FONTAINE  
RIEMANN  
JACOB TROYER**

Thank you members for your incredible response to our *Rural Montana* content survey! Your input will help us bring you the news you need and want.

#### TRUSTEE ELECTIONS

### Trustee Candidate Filing Period Districts 4 & 6 Closes August 10



#### How to run for a board seat

The election process begins with a nomination petition. Any active BEC member who resides in Districts 4 or 6, that wishes to be considered as a 2018 trustee candidate may pick up the required petition from the cooperative office or download the form from the Beartooth Electric website [www.beartoothelectric.com](http://www.beartoothelectric.com).

The deadline to submit completed petitions is Friday, August 10, 2018.

The elected trustees will be announced at the annual meeting to be held Saturday, September 29, ANIPRO Event Center, Absarokee, Montana. Mark your calendars.