

LIVEWIRE

Sheridan Electric Cooperative - Medicine Lake, Mont.
406-789-2231

EPA proposal rebuilds the heart of the system

BY RICK KNICK, GENERAL MANAGER

For the first 80 or more years that America had access to electricity, power companies used the concept of having one large generator to serve a defined area. We then built out the grid, starting at the generator with large wire and reducing the size of the wire and the voltage as we reached the customer at the end of the line.

It really isn't much different than the human body's blood flow. We have a heart as a generator and blood vessels acting as the wires, like an electrical grid. The vessels start out large and reduce in size as they reach the fingers and toes. In the power industry, these large power generators are called base load.

The Environmental Protection Agency (EPA) has issued final draft regulations in its Clean Power Plan 111(d) that detail performance standards for coal-based power plants. Under the plan, North Dakota power plants would have been required to reduce emissions by 45 percent

The goal of the EPA's 111(d) is to reduce carbon emissions by creating an atmosphere where renewable generating sources can compete with the traditional fossil fuel or base load generators. Wind and solar are the most common, but natural gas, which has a smaller carbon footprint than coal or fuel oil, is a popular alternative

as a short-term fix. These new sources are being built all over the nation and rarely are they being built next to the existing base load plant. In other words, we are building new hearts all over the human body.

It sounds like a good idea at first, because if one heart or power plant fails, then another can take over. Well, remember the size of the blood vessels or the size of the wires on the grid. You can't just implant a new heart on your knee and expect the blood vessels to be large enough to supply the rest of your body. You can't build a power plant at the end of the line and expect the wires to be big enough to supply the users on the other end of the grid.

We also have to remember that we need to use the electricity at the same time as it is generated, just like your blood system. If your heart pumps blood too fast or creates too much pressure, there is a breakdown. The electric grid acts the same – if we pump too much electricity into the grid, there is also a breakdown.

Now throw into the mix a bunch of doctors who want to sell hearts and a bunch of businesses that want to build power plants and sell the output. The government passes laws to allow these new generators and tells us that we have to allow these new facilities to use our electric grid, and offer it at the

cheapest possible cost.

Now we have to develop ways to schedule this new electricity, or blood supply, into the grid. Of course, each new power supplier, or each new heart, wants to run at 100 percent capacity because that is when they make the most money or operate the most efficiently. As you can imagine, it becomes a mess and creates new threats to the electric grid, or your blood system.

Don't stop reading!

I made this article a little complicated and a little crazy because that is where we are at with the electric grid.

The court granted a motion to stay EPA's plans to implement its 111(d) carbon reduction plan, but this only buys a little time.

It took more than 80 years to build the current electric grid and the EPA's 111(d) tells us we have to rebuild it by 2022. The electric industry cannot completely transform 80 years of infrastructure in six years.

I can only hope some common sense comes out of Washington, D.C., in the next couple of years that will allow the grid to be developed in a responsible manner, instead of a knee-jerk reaction that will cost the user at the end of the line a lot of money. ■



Electrical service department conducts makeover

BY SCOTT WESTLUND

In any business, labor and inventory constitute a majority of the expenses. In the case of your electric cooperative, power costs are also a major part of that equation.

March was slated to be the month when Sheridan Electric Cooperative did a full inventory of the electrical service department in both the warehouse and trucks. Although the goal was to have a good baseline inventory number to report, it was also a good time to clean house on 20 years of inventory that had been stockpiled or was no longer in use.

The electrical team embraced the idea, knowing they would uncover things they would never think to find.

Inventory is an expense. An excess inventory not only ties up cash flow by sitting on the shelf, it also uses valuable dollars in the taxes we pay for these assets.

In all circumstances, these dollars should be carefully monitored to ensure a positive cash flow and streamlined performance.

Streamlined performance is categorized as knowing what dollars you have invested in the process

as well as streamlining the team of people who use this stock to supply the service you require. In other words, they can find it when they need it.

There is a cost to doing what we have done with the inventory. First is the stoppage of all projects the team was slated to do so they could take care of the inventory process. Who is better qualified to sort through the items than the people who would be using them? Another cost is the restocking fee that vendors will charge to take back dead inventory from our site. This is a cost that will be a negative variable, but the credits back to the cooperative will far outweigh the loss.

This is a practice of lean manufacturing, by eliminating waste. Waste can be categorized in many ways, from taking time to find material, to the location of materials, to tying up dollars on the shelf. Waste is the enemy of any business, and the sooner a team recognizes the opportunities for improvement, the better the chances for positive results.

When I started with the cooperative, Rick Knick placed two tasks on my plate to solve. One was the outstanding invoices within the electrical service department; the other was the out-of-control inventory. The first project was solved by the employees of this cooperative last year. The second problem had a solution in place by the end of March, again solved by the employees.

Throughout my career, I have been involved in many such projects. These projects have one common denominator for solutions and that is "people." If you empower people with the power to solve, remove obstacles in their way, and inspire a vision for tomorrow, there is nothing they cannot do.

People are the most valuable resource for any business and especially this cooperative. ■



Impacts of the oil industry

BY SCOTT WESTLUND

These past few months have shown a downturn in the economy in this region. Oil had forced this cooperative into furious action to supply those needs and still not affect the residential membership.

In this cooperative business model, oil and related commercial businesses represent 70 percent of the total incoming cash within the service territory. With that came some infrastructure needs to support it.

In 2013, we started a project that would support this business by rebuilding a transmission line that was in need of repair. Folks in the Westby and Alkabo area saw multiple outages due to this aging asset, thus the time to rebuild was on the horizon.

Upgrading the capacity from a 57,000-kilovolt line to a 115-kilovolt line was the correct avenue to pursue when paired with the ever-expanding oil wells being drilled. It was actually the oil companies who contacted us to build the line and pay for it as well. It was then that the introduction of the KVA charge was put into effect,

an idea that actually came from the oil companies.

With this ability, we had an additional charge based on the size (KVA) of the transformer hanging on the pole. In addition to this KVA charge was the aid-to-construction policy that was passed in late 2012. This policy supported the notion that cooperatives do not carry high dollars to build infrastructure, but do to maintain it. This policy states that any new builds had to be paid for up front from the requesting parties. This maintained stability in the cash flow needed to support your cooperative.

In 2016, we closed all work orders on the projects that I have described, and tripled the worth of the cooperative.

So, now the oil industry has tapered off, and yes we are seeing some impacts. The first of these impacts come in the form of aid to construction not used, to be paid back to the entities who wanted the construction to happen in the first place. The second is the disconnecting of marginal wells. With the wells comes the discontinuance

of the KVA income we are using to pay for the new transmission line. This could not happen as it was the oil industry who asked us to build in the first place. So for these accounts who want to disconnect, and yet leave the wires and poles intact for future use, we charge 60 percent of the KVA charge (monthly) and 60 percent of the base rate. As for the aid to construction, this was in a separate account anyway.

Thus, we preserve the debt service coverage for the transmission line, and ensure that this does not bleed over into the membership.

This is a new landscape in which we are maneuvering, one that does not have the hustle and bustle of an industry that drives what we build and when. This landscape does not support overstocked inventories within the cooperative, this does not support building any new infrastructure without aid to construction, and it means careful management of the bottom line and health of the cooperative.

Recently, we saw an increase in rates from 9 cents to 10 cents per kilowatt-hour. This by no means is tied to the transmission line costs, but rather is tied directly to rates charged to us by our power supplier, Basin Electric Power Cooperative. Basin has had to deal with the effects of the environmental impacts that have been passed down from the current administration. These impacts will be felt all over the nation. So I want to be clear that the two are very different topics when talking about rates.

All-in-all, your cooperative is in very good shape, has great employees and is ready to take on anything that may come its way. We have been proactive in streamlining the cooperative expenses, inventories and capital improvement (trucks), however we will not be surprised when something does come up and will address it with the same intensity we always do. ■

Lighting to be given away

In the spirit of efficiency, Sheridan Electric Cooperative is giving away compact fluorescent lights (CFLs) each month. Each month's winner will receive 24 new CFL bulbs. A CFL produces the same amount of light for less than half the cost. The bulbs also produce about 75 percent less heat, so they are safer to operate. They can also last up to 10 times longer than the standard incandescent bulb. You could save \$80 a year by switching to CFLs throughout your home!

So this month, take a moment to complete and mail the coupon. Maybe you'll be this month's lucky winner and save on your energy costs. Good luck! ■

Name: _____

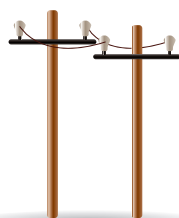
Address: _____

Phone number: _____

Account number: _____

Congratulations to **Hank's Wheat Ranch** (Lynn Severson) for winning this month's light giveaway.

Sheridan Electric Cooperative statistical report



	February 2015	February 2016
Total miles of line	2,833	2,849
Consumers billed	3,017	3,057
Kilowatt-hours purchased	13,164,755	11,795,266
Kilowatt-hours sold	11,969,691	11,089,279
Average KWH per residential consumer	1,658	1,387
Average bill per residential consumer	\$122.35	\$122.59
Cost of purchased power	\$616,959	\$522,343
Margins year to date	\$285,723	\$656,594

LINE DEPARTMENT STATS

	February 2015	February 2016
Weather	8	3
Age or deterioration	0	0
Animals and public	1	0
Power supplier	0	0
Equipment	2	0

SUMMARY OF WORK COMPLETED

	February 2015	February 2016	Year to date
Pole installations	4	14	31
New construction	2,907 ft.	435 ft.	1,687 ft.
Miles driven	19,790	18,185	44,867
New accounts	6	4	8
Accounts retired	0	4	6

SHERIDAN ELECTRIC CO-OP

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TRUSTEES

Wayne Deubner, President..... Brockton, Mont.
Rod Smith V. President..... Dagmar, Mont.
Rob Rust, Sec. Alkabo, N.D.
Kerrey Heppner, Treas..... Plentywood, Mont.
Alan Danelson, Trustee Scobey, Mont.
Andrew Dethman, Trustee Brockton, Mont.
Rick A. Hansen Trustee Froid, Mont.
Warren Overgaard Trustee..... Westby, Mont.
Harlan Skillingberg Plentywood, Mont.

EMPLOYEES

Rick Knick Manager
Riley Tommerup Office Mgr./Accountant
Scott Westlund Marketing/Member Service Manager
Pam Lund Billing Supervisor
Doris Wivholm Bookkeeper/Billing Specialist
Jamie Ator Accountant
Lisa Salveold Office Assistant
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Dan Roeder Journeyman Lineman
Shawn Sansaver..... Journeyman Lineman
Josh Marottek..... Apprentice Lineman
Bill Baillie..... Apprentice Lineman
Josh Ming..... Apprentice Lineman
Jim Bakken..... Material Specialist
Vicky Haddix..... Custodian

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406-789-2231

OFFICE HOURS: 7 a.m. to 5:30 p.m.
Monday through Friday

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