

North Central's News

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Thoughts and Comments from General Manager Keith E. Harvey



A couple of interesting issues that may ultimately affect all of us

I would like to present to you some

interesting facts: the price of solar panels per watt has declined by 75 percent between 2009 and 2017 and the price of wind turbines per watt have declined by 50 percent over the same time period (Shellenberger, P1). It is an intriguing observation that – over the same time period – the price of electricity in locations with a significant deployment of renewables increased dramatically (Ibid). I find that most interesting – cheaper costs per watt is not translated to lower electricity costs to consumers. What gives? First of all, let's look at some key examples: "Electricity prices have increased by 51 % in Germany during its expansion of solar and wind energy from 2006 to 2016; 24 percent in California during its solar build-out from 2011 to 2017; and over 100 percent in Denmark since 1995 when it began deploying renewables (mostly wind) in earnest" (Ibid). How can electricity prices in locations served by an increasing amount of renewable energy be so expensive when the costs per watt of the generators has dropped so much?

One possible answer is that with

renewables dropping in cost while the other fuels are increasing more in cost has driven up the overall price of electricity. The price of natural gas has declined by 72 percent in the U.S. from 2009 and 2016 due to fracking, and its price has declined by about half as much in Europe over that same time period. The price of coal and nuclear fuel over this time period have remained mostly flat. So it probably isn't fuel costs themselves as a driver of higher electric rates. Then maybe the closure of so many nuclear plants has driven up the price. This idea is based on the fact that locations with a lot of nuclear power like France, Sweden,

South Korea and Illinois enjoy some of the lowest electricity prices in the world. "Electricity in Illinois is 42 percent cheaper than electricity in California while electricity in France is 45 percent cheaper than electricity in Germany" (Ibid, P 4). However, the fly in this ointment is that with the closing of nuclear plants comes the need for the main replacement fuels which are natural gas and coal – both of which have remained low in cost. That leaves only the wind and solar as the culprits for the rise in electricity prices.

It seems that a young German

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Summer Rates Start June 1st

North Central PPD's summer electric rate schedule goes into effect June 1st. These rates were implemented Jan. 1, 2013, and are effective for the four summer demand months: June, July, August and September. The wholesale as well as retail electric rates are higher because Nebraska Public Power District charges North Central higher wholesale rates due to their higher costs during this time. It is North Central's goal to keep our summer electric peak demand down to prevent or lessen rate increases in the future.

North Central encourages customers to reduce their electric usage during these months between the hours of 9 a.m. to 11 p.m. If everyone does their part to reduce usage, hopefully we can keep our electric rates at an affordable level.

Electrical energy....

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economist, Leon Hirth, predicted this situation with renewables in 2013 in a paper for *Energy Policy*. He estimated in that paper that the value of wind and solar would decrease dramatically as they become a larger part of the electricity supply. "Hirth predicted that the economic value of wind on the European grid would decline 40 percent once it becomes 30 percent of electricity while the value of solar would drop by 50 percent when it got to just 15 percent" (Ibid). The reason for this is well-known, but so often ignored by those pushing for more renewables – wind and solar are fundamentally unreliable. They both produce too much energy when societies don't need it and not nearly enough when they do. Their production patterns are out of sync with how people live and use electricity. There must always be some source of reliable power to start or ramp-up on short notice when the wind stops blowing or the sun stops shining on the solar panels. And when these renewable generators produce too much at times, when people just are not using a high level of electricity, then the utility must pay someone

else to take the output. Remember, generation and load must always match. Too much generation and too little load, especially occurring over a short time-frame, and some new users of electricity must be found fast, even if you have to pay them to take it. I don't know about you, but to me something seems very wrong with this picture.

Mr. Shellenberger, in his article of April 23, 2018 titled *If Solar And Wind Are So Cheap, Why Are They Making Electricity So Expensive?* states that one of the problems that reporters have is that they think of electricity as a commodity when, in fact, it is a service – "like eating at a restaurant."

The price we pay for the luxury of eating out isn't just the cost of the ingredients most of which, like solar panels and wind turbines, have declined for decades. Rather, the price of services like eating out and electricity reflect the cost not only of a few ingredients but also their preparation and delivery" (Ibid, P 5). Another problem most reporters have is that they seem to lose their normal skepticism and give renewables a pass. And this writer believes that it is not because they don't know how to critically write about energy, but rather that they don't want to.

He feels that they are shirking their obligation to report accurately and fairly on all issues – and energy is an important one. And he concludes with what reporters could do at the very least. "A good start would be for them to investigate why, if solar and wind are so cheap, they are making electricity so expensive" (Ibid, P 6). I think that is a reasonable request.

The next issue that I would like to discuss, while not directly related to North Central, could morph into a form that could easily involve this power district. The issue is one that is near and dear to many of us – broadband (or the lack thereof) in rural areas. As an example, and to show that it is not just in Nebraska, DISH network decided that the Company's office in Falling Branch Corporate Park (in Virginia) was going to downsize to 150 people and allow the other 450 to work from home. However, to qualify for home work the employee had to have a dedicated work space in their home and "sufficient" internet access. The problem is that in rural Virginia, where many of these displaced workers live, they have internet speeds that are, quite literally, slower than some Third

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April 13-15 Storm

The April 13-15 Storm brought many outages and not many May flowers. North Central Public Power District's (NCPD) outages started Friday night April 13th. All of the crews were dispatched and worked until low visibility made working hazardous. Saturday weather was more of the same. High winds and ice caused many downed power lines and poles. NCPD's crews worked through this weather and returned power to many customers despite the working conditions. On Sunday the winds calmed down and NCPD's crews were able to get power back on to the remaining residential services around 7:00 P.M. Sunday night. NCPD's crews continued working on damages caused by this storm for two weeks afterwards.

If customers see downed power lines, please call in to the Operations Department. NCPD's Operations Department would like to say "thank you" to all of our customers that helped clear roads and gave our crews help in many different ways.



Electrical energy

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World countries (roanoke.com). DISH requires home workers to have an internet speed of 7 mbps (megabits per second), but look at the following speeds in the localities from which they are most likely to get their workers: Pembroke 7.6 mbps; Wytheville 6.1 mbps; Pearisburg 4.3 mbps; and Floyd 3.7 mbps. Compare that to some speeds in developing nations: Paraguay 7.5 mbps; Sri Lanka 6.9 mbps; Uruguay 4.6 mbps; Bolivia 4.0 mbps; and Nigeria 3.9 mbps (Ibid, P 2). Based on this, Pembroke is not much faster than Paraguay and Floyd is slower than Nigeria. Also, in viewing the above numbers, only Pembroke is fast enough for DISH that wants 7 mbps.

The sad truth is that if only internet speed were considered, DISH would be better off out-sourcing these jobs to Asia or South America. And if internet speed was the absolute determinant, then DISH should head to South Korea with an average internet speed – fastest in the world – of 28.6 mbps or up to seven times faster

than internet speeds in some parts of rural Virginia. This is the “digital divide” between rural and urban internet that exists in America and is crippling rural areas by shutting them out of internet-based economic development. One of the problems in this country is that it is a private function, not a government service. However, fixing this is a massive problem with incredible expenses attached to it. No company can finance it, so it will require state and federal participation – and a country with a population dedicated to supplying the legislation and funds to make it happen. North Central, along with other power districts, are not able to be involved in the build-out or upgrading of internet service. However, there is a Rural Broadband Task Force that was recently approved by the state legislature to study the rural broadband issues. Perhaps something will come out of this task force that can be translated into high speed internet for rural areas of Nebraska.

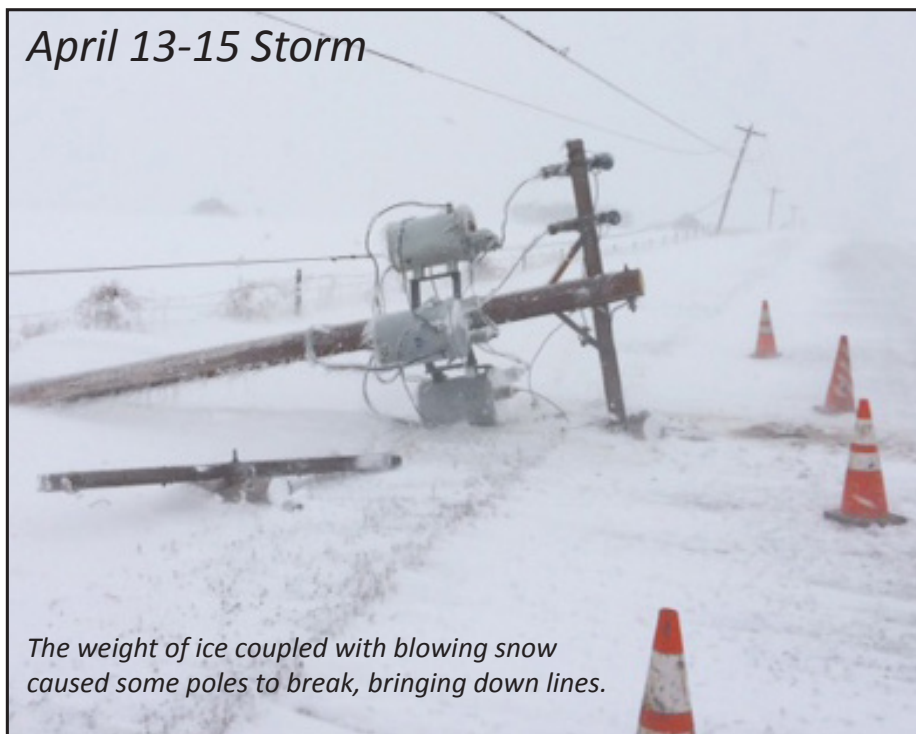
Well it looks as if Spring may have finally arrived. North Central PPD is busy cleaning up some of the dam-

age from the ice and wind that accompanied the storm that occurred a couple of weeks ago. Also, a few irrigation services are being built to be ready for this irrigation season. Please work safely and always remember to look up when moving large equipment near the District's lines. We look forward to a safe and productive summer for our customers and will do all that we can to keep your electricity reliable. Thank you for allowing us to serve you.

"Editorial: Lack of broadband may cost some of these workers their jobs". *The Roanoke Times*. 20 March 2018. Retrieved from <http://www.roanoke.com/opinion/editorials/editorial-lack-of-broadband-may-cost-some-of-these-workers/article-b9f46253-220a-5e1c-8a70-8f64dba65f173html>

Shellenberger, Michael. (2018, April 23) *If solar and wind are so cheap, why are they making electricity so expensive?* Retrieved from <https://www.forbes.com/sites/michaelshellenberger/2018/04/23/if-solar-and-wind-are-so-cheap-why-are-they-making-electricity-so-expensive/>

April 13-15 Storm



The weight of ice coupled with blowing snow caused some poles to break, bringing down lines.



Upcoming Events

Klown Festival -Plainview	June 1-3
Kolach Days -Verdigre	June 7-10
BerryPepper Days -Creighton	June 15-17
Desperado Days -Niobrara	July 20-22

Todd Zimmerer Completes Management Intern Program



NCPD Operations Manager Todd Zimmerer receives the MIP certification from Gary Pfann, Director, Executive & Staff Education

Madison, WI, March 2018: North Central Public Power District Operations Manager Todd Zimmerer has completed an intensive program in electric utility management with the University of Wisconsin, Madison.

The Robert I. Kabat Management Internship Program (MIP) is a series of workshops offered by the National Rural Electric Cooperative Association in conjunction with the University of Wisconsin. The program guides participants through all facets of the electric utility industry, including the many changes occurring around the nation.

Todd Zimmerer is one of only a few electric utility CEO's [management staff] that will graduate from the Management Internship Program this year.

MIP participants go through three 10-day sessions designed to challenge and educate participants in new, innovative management techniques. Participants leave with a better understanding of what consumers want and how to ensure they get it.

By also covering the unique principles that govern the operations of rural electric utilities, the program helps the district analyze business related issues such as break-even points and cost-benefit analysis.

Only rural electric systems send top level management to participate in the program. This allows greater emphasis of study of management challenges and the aspects of serving rural customers in low density environments. Participants learn to focus on customer value as part of day-to-day decision-making.

Todd Zimmerer has completed one of the most exclusive educational programs in the nation for electric rural utility management.

April 13-15 Storm



Area Schools Participate in the Electrical Safety Program



Linda Sokol,
Energy Advisor

Every year North Central Public Power District puts on an Electrical Safety Program for the 4th & 5th graders of the local schools. This year, Assistant Operations Manager Brent Eggerling and Energy Advisor Linda Sokol presented the program to the participating schools: St. Ludger's Elementary, Creighton Elementary, Plainview Elementary, Verdigre Elementary and Niobrara Elementary. **The Shocking Truth** video was shown and then there was discussion on the dangers of electricity. Students got to see the equipment that the lineman use for safety and also see how heavy a lineman's tool belt is. North Central has

an energized farm display that shows what could happen if you were to come into contact with an energized power line while flying a kite, climbing a tree or working with large farm equipment. Using the energized farm set, we can simulate with a hotdog what could happen if someone or something came in contact with an energized power line. It is a real eye opener for the kids when an electrical arc is created using the hotdog as part of the electrical circuit. We hope what the kids learn in this safety program stays with them so if they are ever in a situation where electrical wires are present, they will remember what to or not to do. The students are then given the opportunity to enter a poster into an electrical safety poster contest. Posters will be judged and the winners will receive a \$25 checks and be invited to a North Central Public Power Board of Directors meeting.



Asst. Operations Manager Brent Eggerling demonstrates electrical safety to local schools using a farm display

From our homes to yours . . .

Raisin Nut Bars

Ingredients

- 1 ½ cups sugar
- 4 eggs
- 1 ½ cups flour
- ½ tsp baking powder
- ½ cinnamon
- 1 tbsp vanilla extract
- ½ cup (1 stick) melted butter
- 1 ½ cup raisins, plumped
(cover raisins with water in a small pan & boil 5 min.
Drain & cool)
- 1 cup chopped walnuts

Directions

Pre-heat oven to 350°F. In a large bowl, beat together sugar & eggs. Add flour, baking powder, salt, cinnamon & vanilla & mix well. Add melted butter & mix to combine. Fold in raisins & walnuts. Pour batter into a greased 9x13" pan. (You can line with parchment paper & then spray it with cooking spray. Makes it easier to remove the bars). Bake at 350 F for 30-40 minutes. Bars are done when top is golden brown & crispy & inserted knife comes out clean. Cool & cut into bars.

Recipe provided by
NCPD customer
Linda Hayes
Orchard, NE

*Thanks for the bars
during the storm!*





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May 28, 2018



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FOR SALE: New GMC Trifold Tonneau Cover. New list \$478 plus tax, sell for \$400. Fits short box GMC, Chevy. Call 402-358-3740 or cell 402-360-1124.

FOR SALE: Chrome Chevy Hood Prop-
rector. Fits 2014-2018 Chevy. \$50. Call
402-358-3740 or cell 402-360-1124.

FOR SALE: 1985 Corvette Coupe, red on
grey, 350 engine with 4 speed, Michelin

Road grabber tires. Excellent condition.
\$8500. Call 402-336-8360.

FOR SALE: NH 688 big round baler.
Bought new, only 2300 bales on it. Always
shedded. Endless belts, auto tie, green
biodegradable twine, works good. Just like
new. Call 402-358-3217.

FOR SALE: Secretary desk, 5 drawers, curly
legs. Small desk, 4 drawers. Miscellaneous
furniture. Call for more information. 402-
668-2665.

FOR SALE: 1993 GMC 2 door extended
cab pickup, new 350 GM crate motor, 4
wheel drive, Rhino liner bed with steel
floor. Needs transmission & front end
work. 1958 Chevy Biscayne 4 door sedan.

FOR SALE: 1938 Chevy Master Town 2
door sedan. Call 402-893-4355 or 402-
961-0570.

FOR SALE: 8.7 litre generator set. Call 402-
360-3266.

FOR SALE: Aqua Cycle pontoon paddle
boat, 10 ft long. Call 402-394-1982.

FOR SALE: "Della" compact, portable,
automatic washing machine. For RVs &
apartment size. Never been used. \$60. Call

402-668-7252.

FOR SALE: 1984 Chevy 4x4 1/2 ton
pickup. New engine, transmission,
transfer case. All new frame up parts.
Would be excellent farm or work truck.
Have over \$12,000 invested. First
\$5000 cash gets it. Call 402-841-2242.
WANTED: Paying top dollar for scrap
metal. Any kind of metal. Will pick up.
Please call 402-841-2242.

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are you looking for something in
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