

August 1, 2019 Email from Alex Timperley, Legislative Research Council to Steve Willard, Executive Director South Dakota Electric Utility Companies.

“There are four research requests that the IOUs could help with. Here are the requests:

- 1) For each of the Munis, IOUs and RECs have them provide the Interruption Index Standards (IEEE): System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) ratings – these tell you how frequently they have outages and how long the durations are. Its an annual figure – so get the last three years.
- 2) What does each type of utility pay in taxes (looking at all types of taxes paid including property tax and gross receipts tax)? Looking for the total amount paid by each type of utility, and does not need to specify the tax paid by each individual entity.
- 3) How much do employees contribute to volunteer efforts? What is each type of utility doing to encourage such volunteer efforts? Looking at each type of utility as a whole and not necessarily by each individual entity.
- 4) What is each type of utility doing to provide a safe work environment? Looking at each type of utility as a whole and not necessarily by each individual entity.

I sent emails to the Municipals and Co-ops earlier today giving them the research requests that involve them, so they should have those parts of the request covered.

Number 2 in particular seems like it could be one of the more difficult requests to put together. The Dep’t of Revenue might be the easiest route for me to get this information.

In addition to the four above, there are a few other requests where I think I would only need to get information from Northwestern Energy. Those requests are attached to this email. One request requires getting more information on instances of annexations that changed electric service territory over the past ten years and the other deals with the utilities providing service in the Watertown, Madison, Brookings, Vermillion, and Pierre areas. From what I have gotten so far from the PUC Northwestern Energy is the only IOU this would involve. But if you are aware of other IOUs that would fall under this, let me know. If there is someone at Northwestern Energy who would be the best person to contact let me know.”

I appreciate the assistance.

**Alex**

- 1) For each of the Munis, IOUs and RECs have them provide the Interruption Index Standards (IEEE): System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) ratings – these tell you how frequently they have outages and how long the durations are. It's an annual figure – so get the last three years.

## Background

The Institute of Electrical and Electronics Engineers (IEEE) has provided ratings since 1998 to measure electric system reliability (IEEE Standard 1366). The standards were updated in 2001, 2003 and 2012. In 2003, the IEEE began to account for Major Event Days (MED) to try to normalize the numbers created by catastrophic events. The usual cause is extremely severe weather. IEEE expects 2.3 MED annually.

IEEE has 12 indices, but for reliability rely on two. SAIFI, the System Average Interruption **Frequency** Index measures the average number of sustained power outages (lasting longer than 5 minutes) that a customer experienced in a year. SAIDI, the System Average Interruption **Duration** Index measures the cumulative duration of sustained outages experienced by the average customer in a year.

## Context

According to IEEE Standard 1366-1998, the median SAIFI value for North American utilities is approximately 1.10 interruptions per customer.

According to IEEE Standard 1366-1998, the median SAIDI value for North American utilities is approximately 1.50 hours.

During the last three years 2017 was a bit of an outlier. More major events including hurricanes and winter storms occurred in 2017, and the total duration of interruptions caused by major events was longer. Electric power for U.S. customers was interrupted for an average of 7.8 hours (470 minutes) in 2017, a significant increase from the average duration of interruptions experienced in 2016.

Excluding major events, the average duration of interruptions customers experienced was almost identical in 2016 and 2017, at about 2 hours both years.

In 2017, the District of Columbia, New Jersey, North Dakota, Arizona and South Dakota had the shortest total time interrupted, with average interruptions ranging from 58 minutes (D.C.) to 95 minutes (SD).

That 2017 report (EIA-861) accounts for 94% of U.S. customers. 1100 utilities reported. Reporting coverage ranges from 72% of customers in South Dakota and North Dakota, to 99% of customers in California, Connecticut, the District of Columbia, Florida, Hawaii, Maryland, Rhode Island, and West Virginia.

According to the EIA, in 2016 municipal utility customers experienced the lowest instances of power outages in both frequency and duration, averaging one outage and less than two hours of interrupted electric service. Investor-owned utilities' customers averaged about four hours without electric service, while co-op customers averaged about six hours without electric service.

IEEE Median SAIDI – 95 minutes

IEEE Median SAIFI – 1.1

### Black Hills Energy

2016-2018 Reliability Indices for BHE-SD		
	SAIDI	SAIFI
2016	72 minutes	0.9
2017	65 minutes	0.9
2018	58 minutes	0.7

### Montana Dakota Utilities

#### 2016-2018 SOUTH DAKOTA RELIABILITY INDICES

Reliability Index-Without Identified Storm Event(s)	2018	2017	2016
System Average Interruption Frequency Index (SAIFI)	0.801	1.703	2.517
System Average Interruption Duration Index (SAIDI)	83.36	112.07	194.28

### Otter Tail Power

<u>Year</u>	<u>SAIFI</u>	<u>SAIDI</u>
2016	2.39	103.38
2017	3.36	224.87
2018	1.11	68.38

IEEE Median SAIDI – 95 minutes

IEEE Median SAIFI – 1.1

**NorthWestern Energy**

	<b>2016-2018 Reliability Indices for NorthWestern</b>	
	<b>SAIDI</b>	<b>SAIFI</b>
<b>2016</b>	<b>85.58 minutes</b>	<b>1.145</b>
<b>2017</b>	<b>83.55 minutes</b>	<b>1.240</b>
<b>2018</b>	<b>96.50 minutes</b>	<b>1.129</b>

**Xcel SD**

	<b>2016-2018 Reliability Indices for Xcel/NSP</b>	
	<b>SAIDI</b>	<b>SAIFI</b>
<b>2016</b>	<b>83.76 minutes</b>	<b>0.79</b>
<b>2017</b>	<b>55.74 minutes</b>	<b>0.52</b>
<b>2018</b>	<b>58.57 minutes</b>	<b>0.48</b>

- 2) What does each type of utility pay in taxes (looking at all types of taxes paid including property tax and gross receipts tax)? Looking for the total amount paid by each type of utility, and does not need to specify the tax paid by each individual entity.

#### Topical Statutes

10-35-1. Companies subject to tax. Any person, corporation, limited liability company, association, company, or partnership owning or holding under lease, or otherwise, any property in this state and operating the same for the purpose of furnishing electricity, heat, power, water, natural or artificial gas, or distributing the same for public use by means of transmission lines, gas or water pipelines, shall for the purposes of this chapter be held to be a light or power company, heating company, water company, or gas company.

**Source:** SL 1929, ch 247, § 1; SDC 1939, § 57.1901; SL 1994, ch 351, § 16.

10-35-1.2. Generating property of rural electric companies subject to tax. All property, real and personal, used or intended for use by a rural electric company as defined by § 10-36-1 for the generation of electricity excluding transmission or distribution facilities shall be taxed and administered in the manner provided for in this chapter.

**Source:** SL 1981, ch 94, § 5.

10-35-2. Operating property assessed by department. All property, real and personal, belonging to or held under lease or otherwise by any light or power company, heating company, water company, or gas company as the same is defined in § 10-35-1 and used by it exclusively in the operation of its line or lines in this state, except such as is held under lease and used in such manner as to make it taxable to the owner under the general property tax laws, shall be assessed annually for taxation by the Department of Revenue, and not otherwise.

**Source:** SDC 1939, § 57.1902; SL 2003, ch 272 (Ex. Ord. 03-1), § 82; SL 2011, ch 1 (Ex. Ord. 11-1), § 161, eff. Apr. 12, 2011.

10-35-3. Annual report required of companies--Date of filing. It shall be the duty of the president, secretary, general manager, or superintendent of every light and power company, heating company, water company, and natural or artificial gas company doing business in this state, to furnish to the Department of Revenue, on or before April fifteenth each year, a report under oath, on the forms furnished and according to the instructions issued by the Department of Revenue, with reference to the property owned, leased, or controlled on December thirty-first of the calendar year preceding the year for which the report is made.

**Source:** SDC 1939, § 57.1903; SL 2003, ch 272 (Ex. Ord. 03-1), § 82; SL 2011, ch 1 (Ex. Ord. 11-1), § 161, eff. Apr. 12, 2011.

10-35-10. Valuation of power and pipelines--Application of property tax levies. The Department of Revenue shall also fix the assessed valuation per mile of each class of the power or pipeline or lines of each company in each county in the state, which valuation shall be the average value of each class of lines of the company in such county, without corporate limits and such valuation or valuations together with that within the corporate limits of municipalities shall be subject to the levy imposed on all other

property in the same taxing district, which is subject to ad valorem levies.

**Source:** SDC 1939, § 57.1905; SL 1992, ch 60, § 2; SL 2003, ch 272 (Ex. Ord. 03-1), § 82; SL 2011, ch 1 (Ex. Ord. 11-1), § 161, eff. Apr. 12, 2011.

10-35-10.1. Determining fair market value of public utility property. For the purpose of determining the fair market value of the property of any public utility company, the Department of Revenue shall take into consideration the cost approach, the market approach, and the income approach to appraisal. In the market approach, the department shall consider the actual or market value of the shares of stock outstanding, the actual or market value of all bonds outstanding, and all other indebtedness as may be applicable for operating the company. In the income approach, the department may consider the company's growth rate and the rate of inflation in determining the capitalization rate. The Department of Revenue may take into consideration any other information or data of any kind or nature which the department may deem material in arriving at the fair market value of the property.

**Source:** SL 1996, ch 77, § 9; SL 1997, ch 61, § 8; SL 2003, ch 272 (Ex. Ord. 03-1), § 82; SL 2011, ch 1 (Ex. Ord. 11-1), § 161, eff. Apr. 12, 2011.

**2019 Property Taxes** (2018 values payable in 2019, not including Charles Mix and Custer Counties)  
SD Department of Revenue - Todd Bailey 5/29

Black Hills Energy	\$4,531,340	
Xcel Energy	4,262,604*	
NorthWestern Energy	4,247,041	
Basin Electric Cooperative	3,139,128	
Otter Tail Power	2,396,394	
Montana Dakota Utilities	1,455,256	
MidAmerican Energy	384,320	
WWMPA (Western MN Municipal Power)	142,711	
Heartland Consumers Power District	69,214	
Nebraska Public Power	30,011	
Ormat (Renewables)	24,036	
Great River Energy	5,479	
White River Energy	263	
Total property tax (w/o Charles Mix and Custer)		\$20,687,801
Total property tax paid by the IOU's		17,276,957

**2018 Sales Tax Collected and remitted**

NorthWestern Energy	\$10,986,945
Black Hills Energy	9,453,804
Montana Dakota Utilities	3,941,723
Otter Tail Power	3,169,174

## **Wind Taxes**

SDCL 10-35-16 to 10-35-22 are applicable to wind farms of 5MW or greater.

Commercial wind farms having a capacity of 5MW or greater pay a nameplate capacity tax and a production tax. The nameplate capacity tax is \$3.00 per KW times the generating capacity. The production tax for commercial wind farms that were producing power prior to April 1, 2015 is \$.00065 per KWH. The production tax for commercial wind farms that began producing power on or after April 1, 2015 is \$.00045 per KWH. Beginning the calendar year following the commercial operation date, companies are required to submit their South Dakota Annual Report and their payment on or before February 1<sup>st</sup>.

100% of the nameplate tax goes to the local community: 50% to schools, 35% to counties, and 15% to townships. The production tax goes 80% to the state with 20% to the community that distributed similarly to the nameplate tax. In years 1 to 5 of the wind farm, 100% of the tax revenue from the farm is counted outside the state-aid formula and is not counted as local effort. In year six, 80% of the revenue is considered outside the formula and is not counted as local effort. In year seven, 60% is outside the formula and not counted. In year eight, 40% is considered outside the formula. In year nine, 20% is considered outside the formula. In years 10 and beyond, all tax revenue is considered inside the formula and counted as local effort.

Xcel Energy, with help from NextEra Energy is building South Dakota's largest wind farm. The 600 megawatt Crown Ridge Wind project, is in Codington, Deuel, and Grant counties. Property taxes over the life of the project are estimated at \$75 million. Landowner payments are expected to exceed \$150 million. Nameplate and production wind taxes are estimated at \$2.1 million a year.

In 2018 NorthWestern Energy paid \$369,425 in wind taxes. The wind gross receipts tax was \$130,775. Nameplate capacity tax \$238,650.

## **Public Utilities Commission Gross Receipts Tax**

The PUC is funded by a gross receipts tax on utility and telecommunications companies. The tax levy for 2020 was set April 23, 2019. Its .0015 percent of gross revenues or \$250 whichever is greater. According to the PUC Annual Report, gross receipts taxes collected in FY 2018 were \$2,043,420. Total revenues were \$2,084,060. MDU shared their 2018 portion. It was \$98,624. Otter Tail's share was \$52,525.

## **Federal Tax Cuts and Jobs Act**

The Act passed in December 2017. In 2018, the PUC approved settlements with the investor owned utility companies that resulted in a net savings for the year 2018 of over \$23.7 million to South Dakota consumers as well as ongoing benefits.

- **Xcel Energy** customers were refunded approximately \$11.12 million collectively with the average residential customer receiving a one-time credit of approximately \$55.73. The company also agreed to a two-year rate moratorium, ensuring South Dakota customers will not see an increase in their base electric rates until at least Jan. 1, 2021.
- **Black Hills Energy** agreed to refund \$7.67 million to customers for the year 2018. The average residential customer received a credit of approximately \$50. Customers also saw a decrease in

their variable charges and a slight increase in their monthly fixed charges, resulting in an ongoing annual net decrease to base rates of about \$9 million beginning in January 2019.

- **NorthWestern Energy** agreed to refund a total of \$3 million to the company's electric and natural gas customers. The average residential electric customer saw a one-time refund of about \$18 while the average residential natural gas customer was refunded approximately \$9. The company also agreed to a two-year rate moratorium ensuring customers will not see a rate increase until at least Jan. 1, 2021.
  - **Montana-Dakota Utilities Co.** refunded approximately \$1.33 million to natural gas customers and approximately \$0.59 million to electric customers. The average residential natural gas customer received an estimated \$14.05 refund while the average residential electric customer received a credit of approximately \$41.84. The PUC approved an ongoing reduction of the company's base rates of approximately \$0.076 million for its South Dakota electric customers and approximately \$0.34 million for the company's South Dakota natural gas customers, effective January 2019.
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- 3) How much do employees contribute to volunteer efforts? What is each type of utility doing to encourage such volunteer efforts? Looking at each type of utility as a whole and not necessarily by each individual entity.

All of the companies value employee participation in their communities. They think it serves the individual, the community and the company. So they all encourage their employees to volunteer, but they also provide specific financial support to volunteer efforts. Local United Way Campaigns were frequent recipients from all the companies as they trusted their choice of recipients.

**NorthWestern Energy** specifically sponsors volunteerism by offering paid time off for volunteer activities (VPTO). Employees can also earn grant money for organizations to which they volunteer through the Employee Volunteer Program. The more time one contributes, the more money is donated, up to \$400 a year. In 2018, 36 South Dakota employees earned \$8,550 of company contributions for 27 local charities. The company also specifically encourages and contributes toward employee team support for local events, last year providing \$18,800 to teams and their events. And it matches companywide half of individual employee contributions toward United Way. In 2018, total South Dakota contributions to United Way were nearly \$40,000.

**Black Hills Energy** encourages their employees to volunteer with other organizations and provides financial assistance to those groups. Last year 170 employees provided volunteer assistance to 270 organizations. Organizations supported with time and money include, Hills Alive, the Girl Scouts, Central States Fair, Working against Violence, Lutheran Social Services, Meals on Wheels, etc. Black Hills created and fund an Ambassador program that provides volunteers to assist at community events. The Ambassadors commonly provide water, totes, and even popsicles. They sponsor free swim days. They support United Way providing \$220,000 in donations last year. They also encourage their employees to look for unique opportunities to contribute. Last month, the Sturgis Line Crew provided a bucket truck



arch to the entrance of the Black Hills National Cemetery to honor Vietnam Veteran Lyle Clapp. Lyle was a serviceman, line foreman, then line superintendent. He was also a Purple Heart and Bronze Star recipient.

**Montana Dakota Utilities** offers financial assistance to organizations for which an employee volunteers. The program provides a \$500 grant to a non-profit organization at which an employee volunteers 25 hours in one year. Six particular South Dakota employees have taken advantage of the program the last two years by volunteering 610 hours and thereby provided \$3000 to their local charities.

**Xcel Energy** encourages employees to provide both time and financial assistance toward local non-profits. Full-time employees are eligible for 40 hours per year of Volunteer Paid Time Off. Their Dollar for Doing Program rewards volunteer activity by providing financial assistance. The money comes from the Xcel Energy Foundation which matches up to 100 hours per employee a year at a rate of \$10 per hour. To encourage personal financial giving by their employees, they support a Double the Donation Program which matches employee contributions toward non-profits. The minimum match \$50 / maximum \$750. Xcel matches up to \$2,000 for higher education contributions. They also promote and provide an Annual Day of Service for all employees to assist local nonprofits.

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- 4) What is each type of utility doing to provide a safe work environment? Looking at each type of utility as a whole and not necessarily by each individual entity.

Beyond customers, safety may be the primary focus of the companies. Northwestern Energy may have said it the best, "One of the guiding principles of the company is that any work-related incident or illness is an unacceptable part of doing business and that no job is so important and no service is so urgent that employees cannot take time to perform these activities safely."

There were a lot of activities that all of the IOU's engaged in, including:

- The creation and maintenance of a credible, high-performance safety program that covers all employees.
- The application of ANSI standards, NEC electric codes, NFPA codes and NIOSH recommendations.
- All incidents are reportable.
- Every meeting starts with a safety topic or message.
- Every employee has stop work authority.

All of the companies offered to share goals and numbers for OSHA rates, vehicle accidents, lost-time injuries. They are all very proud of their record. I told them to wait. They identified a number of noteworthy company specific activities:

At **Black Hills Energy** compliance with the OSHA Total Case Incident Rate is tied to the bonus structure. Their Safety Event Program allows employees to report near-miss and safety suggestions. Bonuses are provided for participation in the Employee Wellness program. Defensive driving programs are offered to employees and family members at no cost.

**Otter Tail Power** is instituting Minnesota's "hands free" law in both North and South Dakota for their employees. The just passed law requires motorists to use hands-free devices if they want to talk on the phone while driving. Employees will be allowed to operate a cellphone with voice commands or single touch applications, they just can't hold the phone.

**Xcel Energy** calls their safety program Journey to Zero. It began in 2009 and is a commitment that all employees return home from work injury free every day. It provides training, job-site safety reviews and safety job briefings. It provides posters, communication all the way to executive leadership, and additional safety leadership training for those employees who work directly with electricity and natural gas. The program has significantly reduced OSHA recordable injuries, increased near-miss sharing, and even increased the total safety incident rate for contractors. In 2018 the American Gas Association recognized Xcel with the 2018 AGA Safety Achievement Award for excellence in employee safety.

**NorthWestern Energy** compiles their safety program into a Safety Health and Environmental Handbook for the purpose of giving information and guidelines for safe work production and to prevent incidents. A progressive discipline policy is utilized to ensure all employees adopt safe practices and procedures. Working crew of two or more require a foreman – a lead position who is responsible for holding pre-work tailboards to review work tasks, identify hazards and discuss safety equipment and procedures to complete the assigned job safely. The company provides for a local safety committee, conducts monthly safety meetings, and reviews all incidents to educate and prevent similar situations. The company uses comprehensive computer safety training modules and provides the necessary time to complete them. NWE ensures time is allowed at the start of each shift to stretch and do warm up exercises. The program in place provides reminders to properly position the body during work activities to ensure the muscle and ligaments are protected to eliminate strains and sprains. They specifically identify corporate criteria for safety and safety objectives. They identify and promote specific company safety responsibilities. Those are:

#### **Company Responsibilities**

- To provide a safe and healthy work environment for its employees and to ensure employees comply with applicable safety and health standards.
- To provide training and education to employees so that they have the ability to perform their work in compliance with safety and health standards, are able to recognize hazards in their workplace, and have the skills and knowledge to mitigate those hazards and make their work safe and productive.
- To encourage and require all employees to always choose safe production and never cut corners in the completion of tasks.
- To ensure that supervisors observe and enforce safety and health standards pertaining to their area of responsibility and ensure that supervisors are trained about their obligations under this policy.
- Ensure that supervisors appropriately reinforce and motivate their employees to practice safe production.
- Hold supervisors accountable for infractions of safety standards by those employees under their immediate supervision, whether these infractions occur through active participation in an unsafe practice or indifference to safety rules or neglect of duty.
- Provide the time and resources for regular safety meetings and training.