



500 West Russell Street  
Sioux Falls, SD 57101-0988

June 30, 2015

—Via Electronic Filing—

Patricia Van Gerpen  
Executive Director  
South Dakota Public Utilities Commission  
Capitol Building, 1<sup>st</sup> Floor  
500 East Capitol Avenue  
Pierre, SD 57501

Re: 2014 REPORT OF NORTHERN STATES POWER COMPANY ON MEETING THE  
RENEWABLE, RECYCLED AND CONSERVED ENERGY OBJECTIVE

Dear Ms. Van Gerpen:

In accordance with SDCL 49-34A-105, Northern States Power Company, doing business as Xcel Energy, provides the attached report on meeting South Dakota's renewable, recycled and conserved energy objective for 2014.

Based on the jurisdictional energy allocator applicable to South Dakota, we have determined that the share of system-wide energy from renewable resources allocable to South Dakota was 343,866 MWh. This represents the energy we provided to our customers in 2014 that was generated by renewable generation facilities as defined by SDCL 49-34A-94.

As provided in Chapter 49-34A-103, we have deducted electricity obtained from hydro facilities with an in-service date before July 1, 2008 from retail sales. As a result, we calculate that approximately 17.2 percent of the energy provided to South Dakota customers in 2014 was from renewable energy resources. This percent reflects an increase from the 2013 level of 13.8 percent due to the continued addition of renewable resources, increased generation from all renewable resources except hydroelectric resources. In addition, no renewable energy credits have been retired to date to comply with the South Dakota renewable energy objective (REO).

The attached reporting form includes the following information as requested by the Commission:

- Retail Sales (MWh) - Total & SD-based

- Total Renewable Generation Capacity Owned (MW) - All States & SD<sup>1</sup>
- Renewable Generation Capacity Owned (MW) - Total & SD-based by technology<sup>1</sup>
- Renewable Generation with RECs Retired for SD (MWh) - Total & SD-based by technology<sup>1</sup>
- Renewable Generation with RECs Retired for other states/purposes (MWh) - Total & SD-based by technology<sup>1</sup>
- Conserved Energy (MWh) and Capacity (MW)
- Renewable Energy Calculations

The Company files and achieves energy efficiency and load management savings. Planned savings for 2014 were approved on December 3, 2013 in Docket No. EL13-017.<sup>2</sup> However, the Company does not include conserved energy toward our compliance with the REO at this time.

Additionally, the Commission's Order in Docket No. EL09-029, dated February 12, 2010, directs the Company to report any sales of RECs in this report. Vintage 2014 RECs sold from transactions executed to date are shown in row 17 of Attachment A. For the reporting period, we have sold 9,204 SD RECs which accounts for approximately \$222,691 (gross revenue) allocated to the SD ratepayers. South Dakota customers have been credited \$200,422 as net revenue (which excludes 10 percent of expenses) through the monthly Fuel Clause Charge consistent with the Commission's February 12, 2010 Order in Docket No. EL09-029.<sup>3</sup>

Finally, the Company continues to seek to incorporate renewables and energy efficiency measures when and where those measures are cost effective. The Company expects to continue to be able to meet the renewable energy objective in South Dakota.

If there are questions regarding information contained in the report, please feel free to contact me at (605) 339-8350 or Jeff Haskins at 303-571-6454.

SINCERELY,

ERIC PAULI  
COMMUNITY RELATIONS MANAGER

Enclosures

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<sup>1</sup> As defined in SDCL 49-34-94.

<sup>2</sup> These figures were calculated using both the deemed and measured energy savings approaches outlined in the Commission's rules, SD Admin. R. 20:10:38:04 and 20:10:38:05.

<sup>3</sup> See our February FCC report, Attachment 3, page 4.

## Renewable, Recycled, and Conserved Energy Objective Annual Report for 2014

Directions: Fill in each orange box, save your responses, and email the completed spreadsheet back to [brian.rounds\(at\)state.sd.us](mailto:brian.rounds(at)state.sd.us) by **July 1, 2015**. Your completed spreadsheet will fulfill the reporting requirements in SDCL 49-34A-105. If you wish to supplement the spreadsheet with an additional narrative report, please include that report in your submission. If you have any questions, please contact Brian Rounds at 605.773.3201 or [brian.rounds\(at\)state.sd.us](mailto:brian.rounds(at)state.sd.us).

- 1  MWH of electricity delivered to retail customers (retail sales) in 2014
- 2  MWH of electricity obtained from a hydroelectric facility in 2014 with an inservice date before July 1, 2008 (old hydro)
- 3  MWH of electricity obtained from qualifying renewable or recycled facilities
- 4  MWH of qualifying conserved energy

- 5 Please provide a brief narrative that describes steps taken to meet the state renewable, recycled, and conserved objective over time and identifies any challenges or barriers encountered in meeting the objective.

With our current portfolio and SD's current mandate, we believe that we own or have under contract sufficient renewable resources for REO compliance through at least 2020. In addition, we will be able to comply with the renewable requirements of other states in which we have service territory. However, we are paying close attention to a number of issues that may affect renewable energy development in our region. These issues include:

- **Cost-effectiveness of wind energy.** Natural gas prices and, correspondingly, market energy prices, have continued to stay low and are projected to continue at a lower level for a number of years to come. With those lower long-term price expectations, wind energy may not be as cost-effective as its likely alternative, natural gas generation, if the Production Tax Credit (PTC) or Investment Tax Credit (ITC) expire.
- **Wind integration and baseload cycling.** As the percentage of wind energy on our system and in the Midwest ISO (MISO) region continues to increase, we remain concerned about the cost and possible reliability impacts of integrating wind with other generation resources. The Company continues to monitor the MISO ancillary services market costs as wind penetration levels increase.
- **Transmission Construction Lead Time.** The best wind resource areas within and adjacent to our service territory do not currently have the necessary transmission infrastructure to support the level of wind generation needed to meet some REO compliance deadlines. CapX and other transmission initiatives will substantially improve transmission from those areas into our primary load center in the Twin Cities. Furthermore the transmission infrastructure between the Twin Cities and other parts of the MISO footprint appears inadequate to accommodate the ebb and flow of expected 2020 wind generation. It will be important to coordinate the planning of wind resources with the transmission necessary to integrate it into the electrical system. The Company is working with MISO and other stakeholders on these challenges.
- **MISO Interconnection Queue.** MISO has reformed its interconnection queue process of the the past several years, which has resulted in substantially reducing the lag time between making an interconnection request and executing a signed interconnection agreement. These changes appear to have resolved the problem of having thousands of MW of projects ready for development, but waiting years for interconnection studies. However, there has also been a lull in wind project development due to uncertainty about extension of the Federal PTC, which has dampened interconnection request activity. The Company will continue to monitor the interconnection queue process, and its effect on the aforementioned lag time, as more is known about PTC extension.
- **PTC/ITC Extension Uncertainty.** Currently the PTC requires wind projects to be producing energy by December 31, 2015 and the ITC requires projects to be producing energy by December 31, 2016 to receive the full 30% tax credit (though a 10% tax credit applies after January 1, 2017). Without the benefit of the PTC/ITC provisions, project economics are challenging for new renewable generation projects to be cost-competitive with natural gas generation alternatives.

**If the Company is claiming renewable MWH in (3) above or retiring RECs in other jurisdictions, please provide the following per ARSD 20:10:38:07:**

6  Total amount of RECs retired for CY2014 compliance across all jurisdictions

7  Amount of RECs retired to meet South Dakota's renewable energy objective for CY2014

8 For RECs listed above in (7), please provide the tracking system(s) RECs were retired under:

NA

9 For RECs listed above in (7), please provide the name and location of each facility that produced the retired RECs:

NA

10 Amount of RECs that the provider retired to meet a renewable energy objective or renewable energy standard in each of the other states it provides electricity services:

Please see attachment B.

11 For RECs listed above in (10), please provide the name and location of each facility that produced the retired RECs:

Please see attachment C.

**If the Company is claiming conserved MWH in (4) above, please provide the following per ARSD 20:10:38:03 through 06:**

12  MWH of conserved energy achieved through energy efficiency

13 A general explanation of each energy efficiency impact evaluation or estimate, the rationale for using each energy efficiency impact evaluation or estimate, and the amount of expenditures spent on energy efficiency measures for the calendar year (ARSD 20:10:38:03).

NA

14  MWH of conserved energy achieved through demand response ((12) and (14) should sum to (4))

15 A general explanation of each demand response impact evaluation or estimate, the rationale for using each demand response impact evaluation or estimate, and the amount of expenditures spent on demand response measures for the calendar year (ARSD 20:10:38:06).

NA

Generation Mix Attributable to SD in 2014

Utility Name	Coal	Hydro	Nuclear	Wind	Natural Gas	Oil	Biomass	Solid Waste	Waste Heat	Purchases	Other - <i>Please Specify</i>	Total Check
Northern States Power Company	38.44%	7.72%	29.21%	13.79%	7.68%	0.05%	2.76%	0.22%	0.03%		0.11%	100.00%

Other:	Other comprises the generation produced from fossil fuel and other non-renewable fuel for multi fuel refuse derived generating facilities
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For the renewable generation listed above, please provide:	
RECs retired for SD RRCEO compliance in 2014	0
RECs held or "banked"	1,253,008
RECs sold or transferred to other parties	9,204

## South Dakota Renewable, Recyclable and Conserved Energy Objective 2014 Status Report

### System Total Generation (and Jurisdictional Allocator)

<u>State</u>	<u>State Allocators</u>
1 Minnesota	73.7784%
2 North Dakota	5.5828%
3 South Dakota	4.8404%
4 Wisconsin/Michigan	<u>15.7984%</u>
5 NSP System	100.0000%

### System Renewable Generation

<u>Source</u>	<u>M-RETS RECs</u>
6 Wind	5,902,987
7 Solar	12,951
8 Hydro (pre-7/1/2008)	1,127,251
9 Hydro (post 7/1/2008)	38,569
10 Biomass\Wood\Landfill Gas	1,098,029
11 Refuse-Derived Fuel (RDF)	<u>241,661</u>
12 NSP System	8,421,448

### SD RREO Renewable Energy

13 SD % of System Total Generation:	4.84042%
14 System RECs allocated to SD:	407,633
15 Remove Old Hydro (per SD RREO):	<u>(54,563)</u>
16 SD RREO qualifying renewable energy:	353,070
17 Vintage 2014 REC Sales <sup>1</sup> :	<u>(9,204)</u>
18 Net SD RREO qualifying renewable energy:	343,866
19 SD retail sales:	2,056,586
20 Remove SD Hydro allocation (per SD RREO):	<u>(54,563)</u>
21 SD REO adjusted retail sales:	2,002,023

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22 SD REO renewable energy %:	<u>17.2%</u>
23 RECs retired for 2014 REO compliance	0

<sup>1</sup> Vintage 2014 REC sales executed as of May 1, 2015

Attachment B is provided as part of the attached live Excel spreadsheet.

FacilityName	County	State
Adams - Adams Wind	Meeker	MN
Agassiz Beach - Agassiz Beach	Clay	MN
Apple River (Unit 1)(Units 3-4) - Apple River	St Croix	WI
Bayfront (Unit 4) - Bayfront (Unit 4)	Ashland	WI
Bayfront (Unit 5) - Bayfront (Unit 5)	Ashland	WI
Bayfront (Unit 6) - Bayfront (Unit 6)	Ashland	WI
Big Blue Wind Farm - Big Blue Wind Farm, LLC	Faribault	MN
Big Falls (Units 1-3) - Big Falls	Rusk	WI
Carleton College - Carleton College	Rice	MN
Cedar Falls (Units 1-3) - Cedar Falls	Dunn	WI
Chanarambie Power Partners (1) - Chanarambie Power Partners (1)	Murray	MN
Chanarambie Power Partners (2) - Chanarambie Power Partners (2)	Murray	MN
Chippewa Falls (Unit 1) - Chippewa Falls (Unit 1)	Chippewa	WI
Chippewa Falls (Unit 2) - Chippewa Falls (Unit 2)	Chippewa	WI
Chippewa Falls (Unit 3) - Chippewa Falls (Unit 3)	Chippewa	WI
Chippewa Falls (Unit 4) - Chippewa Falls (Unit 4)	Chippewa	WI
Chippewa Falls (Unit 5) - Chippewa Falls (Unit 5)	Chippewa	WI
Chippewa Falls (Unit 6) - Chippewa Falls (Unit 6)	Chippewa	WI
Community Wind North - North Community Turbines	Lincoln	MN
Community Wind North - North Wind Turbines	Lincoln	MN
Cornell (Unit 1-4) - Cornell (Unit 1-4)	Chippewa	WI
Cow Poo - Cow Poo	Jackson	WI
Danielson - Danielson Wind Farms	Meeker	MN
Dells (Units 1-7) - Dells	Eau Claire	WI
East Ridge - East Ridge	Murray	MN
Ewington Energy Systems - Ewington Energy Systems	Jackson	MN
Fenton Power Partners I (1) - Fenton Power Partners I (1)	Murray	MN
Fenton Power Partners I (2) - Fenton Power Partners I (2)	Murray	MN
Fey Windfarm - Fey Windfarm	Pipestone	MN
Fibrominn LLC - Fibrominn	Swift	MN
FPL Energy Mower County - FPL Energy Mower County	Mower	MN
FreEner-g-2010-01 - FreEner-g-2010-01	Multiple	MN
French Island (Unit 1) - French Island (Unit 1)	La Crosse	WI
French Island (Unit 2) - French Island (Unit 2)	La Crosse	WI
GL Bio Gas I, LLC - GL Bio Gas I	La Crosse	WI
GL Bio Gas II, LLC - GL Bio Gas II	La Crosse	WI
Grand Meadow Wind Farm - Grand Meadow	Mower	MN
Grant County Wind - Grant County Wind	Grant	MN
Hayward (Unit 1) - Hayward	Sawyer	WI
Hibbing Public Utility - Laurentian	St. Louis	MN
Hilltop Power - Hilltop	Pipestone	MN
Holcombe (Unit 1) - Holcombe (Unit 1)	Chippewa	WI
Holcombe (Unit 2) - Holcombe (Unit 2)	Chippewa	WI
Holcombe (Unit 3) - Holcombe (Unit 3)	Chippewa	WI
Jeffers Wind 20 - Jeffers Wind 20	Cottonwood	MN
Jim Falls (Unit 1) - Jim Falls (Unit 1)	Chippewa	WI
Jim Falls (Unit 3) - Jim Falls (Unit 3)	Chippewa	WI
Kas Brothers Windfarm - Kas Brothers Windfarm	Pipestone	MN
Ladysmith (Units 1-3) - Ladysmith	Rusk	WI
Lake Benton Power Partners II (LBII) - LB II	Pipestone	MN
Lake Benton Power Partners, LLC - Lake Benton Power Partners (LBI)	Lincoln	MN
LCO Band of Lake Superior Chippewa Indians - Lac Courte Oreilles (LCO)	Sawyer	WI
MCC - Solar	Hennepin	MN



FacilityName	County	State
McNeilus Group - McNeilus Group	Dodge	MN
Menomonie (Units 1-2) - Menomonie	Dunn	WI
Merrick Solar - Merrick Solar	Ramsey	MN
Metro Wind - Metro Wind	Sherburne	MN
MinnDakota Wind (1) - MinnDakota Wind (1)	Lincoln	MN
MinnDakota Wind (1b) - MinnDakota Wind (1b)	Lincoln	MN
MinnDakota Wind (2) - MinnDakota Wind (2)	Brookings	SD
MNRDF_DNR - MNRDF_DNR	Multiple	MN
Moraine II - Moraine II	Pipestone/Murray	MN
Moraine Wind - Moraine Wind	Murray	MN
Neshonoc - Neshonoc	LaCrosse	WI
Nobles Wind Farm - Nobles Wind Farm I	Nobles	MN
Nobles Wind Farm - Nobles Wind Farm II	Nobles	MN
Norgaard North - Norgaard North	Lincoln	MN
Norgaard South - Norgaard South	Lincoln	MN
North Shaokatan Wind - Group	Lincoln/Lake Benton	MN
Olsen Windfarm LLC - Olsen Windfarm	Pipestone	MN
Pine Bend - Pine Bend	Dakota	MN
Pipestone - Pipestone	Pipestone	MN
Prairie Rose Wind - Prairie Rose Wind, LLC	Rock & Pipestone	MN
Red Wing (Unit 1) - Red Wing (Unit 1)	Goodhue	MN
Red Wing (Unit 2) - Red Wing (Unit 2)	Goodhue	MN
Ridgewind - Ridgewind	Murray	MN
Riverdale (Units 1-2) - Riverdale	St. Croix	WI
Rock Ridge Power Partners - Rock Ridge Power Partners	Pipestone	MN
Ruthon Ridge Wind - Group	Lincoln/Murray/Pipestone	MN
SAF Hydro, LLC - SAF Hydro	Hennepin	MN
Saxon Falls (Units 1-2) - Saxon Falls	Iron	MI
Shane's Wind Machine - Shane's Wind Machine	Pipestone	MN
South Ridge Power Partners - South Ridge Power Partners	Pipestone	MN
SRMN2010-J-01 - SRMN2010-J-01	Multiple	MN
SRMN2011-01 - SRMN2011-01	Multiple	MN
SRMN2011-02 - SRMN2011-02	Multiple	MN
SRMN2012-01 - SRMN2012-01	Multiple	MN
SRMN2012-02 - SRMN2012-02	Multiple	MN
SRMN2012-03 - SRMN2012-03	Multiple	MN
SRMN2012-04 - SRMN2012-04	Multiple	MN
St. Anthony (Units 1-5) - St. Anthony	Hennepin	MN
St. Croix Falls (Unit 1-8) - St. Croix Falls (Unit 1-8)	Polk	WI
St. John's Solar Farm - St. John's Solar Farm	Stearns	MN
St. Olaf College - St. Olaf College	Rice	MN
St. Paul Cogeneration - St. Paul Cogeneration	Ramsey	MN
Superior Falls (Units 1-2) - Superior Falls	Iron	MI
Tholen Transmission Inc. (North) - Tholen Transmission Inc. (North)	Pipestone	MN
Tholen Transmission Inc. (South) - Tholen Transmission Inc. (South)	Pipestone	MN
Thornapple (Units 1-2) - Thornapple	Rusk	WI
Trego (Units 1-2) - Trego	Washburn	WI
Uilk Wind Farm - Uilk Wind Farm	Pipestone	MN
Valley View - Valley View Wind	Murray	MN
Velva Windfarm - Velva Windfarm	McHenry	ND
West Ridge - West Ridge	Pipestone	MN
White River (Units 1-2) - White River	Ashland	WI
Wilmarth (Unit 1) - Wilmarth (Unit 1)	Blue Earth	MN

**Attachment C**

<b>FacilityName</b>	<b>County</b>	<b>State</b>
Wilmarth (Unit 2) - Wilmarth (Unit 2)	Blue Earth	MN
Wind Power Partners - Wind Power Partners	Lincoln	MN
Windvest Power Partners - Windvest Power Partners	Pipestone	MN
Winona County Wind - Winona County Wind	Winona	MN
Winona County Wind, LLC - Winona County Wind	Winona	MN
Wissota (Unit 1-3) - Wissota (Unit 1-3)	Chippewa	WI
Wissota (Unit 4-6) - Wissota (Unit 4-6)	Chippewa	WI
WM Renewable Energy - Burnsville - WM Renewable Energy - Burnsville	Burnsville/ Dakota	MN
Woodstock Municipal Wind - Woodstock Municipal Wind	Pipestone	MN
Zephyr Wind, LLC (CWS) - Zephyr Wind (2)	Nobles	MN
Zephyr Wind, LLC (CWS) - Zephyr Wind (1)	Nobles	MN

**Northern States Power Company - Minnesota**  
**Generation Mix Support**

Fuel Type

Row Labels	Sum of Quantity
Biogas	43,983
Biomass	1,017,143
Biomass – Agricultural Crop (open loop)	185
Biomass – Animal Waste – Other	1,252
Biomass – Herbaceous Vegetative Matter or Residue	149
Biomass – Wood – Wood/Wood Waste Solids	145,974
Hydroelectric Water	418,563
Municipal solid waste	29,719
Solar	900
Wind	4,471,267
<b>Grand Total</b>	<b>6,129,135</b>

**Retired RECs**

Biomass	1,208,686	2.62%
MSW	29,719	0.06%
Hydro	418,563	0.91%
Solar	900	0.002%
Wind	4,471,267	9.69%
	6,129,135	

Total System Energy:	46,145,077
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**Fleet Generation Mix (based on Gen above)**

		Reported Mix	SD Mix	Difference
Biomass	1,274,043	2.76%	2.76%	0.00% x
Coal	17,736,048	38.44%	38.44%	0.00% x
Gas	3,543,686	7.68%	7.68%	0.00% x
Hydro	3,562,208	7.72%	7.72%	0.00% x
Nuclear	13,479,077	29.21%	29.21%	0.00% x
Oil	23,194	0.05%	0.05%	0.00% x
Other	49,952	0.11%	0.11%	0.00%
Solar	12,525	0.03%	0.03%	0.00%
Waste	99,967	0.22%	0.22%	0.00% x
Wind	6,364,377	13.79%	13.79%	0.00% x
	46,145,077	100.00%	100.00%	0.00%