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July 1, 2019

Ms. Barbara Kunkel
Acting Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Hwy.
Lansing, MI 48917

Re: Northern States Power Company
Renewable Energy Reconciliation
Case No. U-20486

Dear Ms. Kunkel:

Enclosed for electronic filing please find the 2018 Renewable Energy reconciliation application of Northern States Power Company – Wisconsin with supporting testimony of Deborah E. Erwin and Exhibit A-1 (DEE-1), which is the 2018 Renewable Energy Annual Report. Also enclosed is the appearance of Sherri A. Wellman in this matter.

Additionally, a draft notice of hearing will be e-mailed to Angela Sanderson at the Michigan Public Service Commission.

If you should have any questions, please kindly advise.

Very truly yours,

Miller, Canfield, Paddock and Stone, P.L.C.

By: _____
Sherri A. Wellman

SAW/kf
Enclosures

cc w/enc: Deborah E. Erwin
Julie McRea
Mara K. Ascherman

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)
NORTHERN STATES POWER COMPANY-)
WISCONSIN to commence a renewable energy) Case No. U-20486
cost reconciliation proceeding for the 12-month)
period ended December 31, 2018.)

APPLICATION

Northern States Power Company, a Wisconsin corporation (“NSP-W” or the “Company”) requests the Michigan Public Service Commission (“Commission”) to approve the Company’s 2018 Renewable Energy Annual Report (“Report”) and reconciliation. In support thereof, the Company respectfully represents as follows:

1. The Company is a public service corporation organized under the laws of Wisconsin with its principal offices located in Eau Claire, Wisconsin, and is engaged primarily in public utility operations. The Company is also authorized to do business in Michigan and provides retail electric service to the public in service areas located in Michigan.

2. By Order, dated July 24, 2018, in Case No. U-18234, the Commission approved the Company’s biennial renewable energy plan as relating to the 2018 reconciled period. As approved, the renewable energy plan provides for meeting renewable energy standards through existing power supply resources, with the costs thereof to be addressed and accounted for through base rates and Power Supply Cost Recovery (“PSCR”) proceedings, without a separate renewable energy surcharge.

3. By order dated March 7, 2019, in Case No. U-20486, the Commission established a filing deadline of July 1, 2019, for NSP-W's renewable energy reconciliation for the 2018 period.

4. NSP-W's actions with regards to renewable energy: (i) comply with the renewable energy standards applicable to 2018; (ii) are consistent with NSP-W's then existing renewable energy plan, as approved in Case No. U-18234; and (iii) are reasonable and prudent.

5. NSP-W's approved renewable energy plan does not include any renewable energy surcharge. Thus, there are no renewable energy surcharge revenues to be reconciled. NSP-W is not seeking at this time a modification of its renewable energy cost recovery mechanism.

6. NSP-W's 2018 Renewable Energy Annual Report is filed herewith as Exhibit A-1 (DEE-1) to the prefiled direct testimony of Deborah E. Erwin, which is filed contemporaneously herewith and in support of hereof.

WHEREFORE, Northern States Power Company – Wisconsin requests that this Commission:

A. Find and determine that NSP-W's 2018 Renewable Energy Annual Report satisfies all applicable requirements;

B. Find and determine that NSP-W's actions in 2018 complied with renewable standard requirements, and were reasonable and prudent;

C. Approve NSP-W's reconciliation of renewable energy revenues and incremental costs of compliance for 2018 as not resulting in any under-recovery or over-recovery of costs;

- D. Re-affirm NSP-W's existing cost recovery mechanism; and
- E. Grant such other relief as is just and reasonable.

Respectfully submitted,

NORTHERN STATES POWER COMPANY,
A WISCONSIN CORPORATION

Dated: July 1, 2019

By: _____
Its Attorney
Sherri A. Wellman (P38989)
MILLER, CANFIELD, PADDOCK, AND STONE, P.L.C.
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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)
NORTHERN STATES POWER COMPANY-)
WISCONSIN to commence a renewable energy) Case No. U-20486
cost reconciliation proceeding for the 12-month)
period ended December 31, 2018.)

DIRECT TESTIMONY AND EXHIBIT OF DEBORAH E. ERWIN

1 **Q. Would you please state your name and your business address?**

2 A. My name is Deborah E. Erwin. My business address is 10 East Doty Street, Suite 511,
3 Madison, WI 53703.

4

5 **Q. By whom are you employed and in what capacity?**

6 A. I'm employed as a Manager of Regulatory Policy by Northern States Power Company, a
7 Wisconsin corporation ("NSP-W" or the "Company") and wholly owned subsidiary of
8 Xcel Energy Inc. ("Xcel Energy")

9

10 **Q. Please describe your current job responsibilities.**

11 A. My current responsibilities include identifying appropriate policy alternatives and
12 developing recommendations for the Company's regulatory and legislative strategy on
13 issues related to industry structure, economic and environmental regulation, renewable
14 energy development and management, and operational requirements in Wisconsin and
15 Michigan. I work directly with senior management to develop regulatory and legislative
16 policies and strategies that benefit customers while supporting the Company's strategic
17 goals and objectives. I consult with legislative, regulatory and subject matter experts
18 throughout the Company and external stakeholders to establish progressive and consistent
19 policies/strategies. As part of these responsibilities, I prepare and deliver supporting
20 testimony in regulatory proceedings, administrative rulemakings and legislative hearings
21 as needed.

22

23 **Q. Please describe your education experience and degrees.**

1 A. I am a 2003 graduate of the University of Minnesota-Twin Cities, with a Bachelor
2 of Arts degree in Political Science. I am also a 2006 graduate of the University of
3 Minnesota Law School, and was admitted to the Minnesota State Bar in October 2006.

4

5 **Q Have you previously presented testimony on behalf of the Company in other cases?**

6 A. Yes. I have testified several times before the Michigan Public Service Commission
7 (“MPSC” or “Commission”), including regarding NSP-W’s Renewable Energy (“RE”)
8 reconciliations for previous years, and NSP-W’s biennial RE plans in Case No. U-17795
9 and Case No. U-18234.

10

PURPOSE OF TESTIMONY

11 **Q. What is the purpose of your testimony?**

12 A. The Commission Order in Case No. U-20486, dated March 7, 2019, requires NSP-W to
13 file its RE annual report (“Report”) and reconciliation for 2018 by July 1, 2019. My
14 testimony describes the Company’s Report, the existing cost recovery mechanism; and
15 supports the relief requested in the Company’s 2018 RE reconciliation filing.

16

17 **Q. Are you sponsoring any exhibits with this testimony?**

18 A. Yes. I am sponsoring one exhibit, Exhibit A-1 (DEE - 1), which is NSP-W’s 2018
19 Renewable Energy Annual Report.

20

21 **Q. Did you prepare this exhibit or cause to have the exhibit prepared under your
22 direction and supervision?**

23 A. Yes.

1 **Q. Is NSP-W proposing any changes to its existing RE plan?**

2 A. Not in this case. The Company believes the final order in Case No. U-18234 dated July
3 24, 2018, remains appropriate for this Report and reconciliation. The Company's
4 renewable energy plan filed January 30, 2018 in Case No. U-18234 accurately reflects its
5 renewable energy plan going forward. The Company is not proposing any changes to the
6 cost recovery mechanism or the Company's existing tariff in this docket, nor is it
7 proposing changes to the cost recovery mechanism or tariff in Case No. U-18234.

8

9 **Q. Were NSP-W's actions and decisions in 2018 implementing its existing RE plan**
10 **reasonable and prudent?**

11 A. Yes.

12

13 **Q. Were any new qualifying RE facilities constructed in 2018?**

14 A. Yes. For details, see Exhibit A-1, NSP-W's response to Section 51(2)(d) in the
15 Company's Renewable Energy Annual Report.

16

17 **Q. Did NSP-W recover any RE cost through a RE surcharge in 2018?**

18 A. No. All of NSP-W's costs for its RE are included in its base rates or in rates that are
19 adjusted as part of the Power Supply Cost Recovery proceedings.

20

21 **Q. Does NSP-W plan to change its method for recovering its RE costs?**

22 A. No.

23

1 **Q. What method does NSP-W use to determine its annual retail sales for the Michigan**
2 **jurisdiction?**

3 A. NSP-W uses the three-year rolling average mechanism to determine its annual retail
4 sales.

5
6 **Q. Is NSP-W banking RE credits for future use in Michigan?**

7 A. Yes.

8

9 **Q. Did NSP-W create or use any energy waste reduction credits or any other incentive**
10 **credits in 2018?**

11 A. Consistent with MCL 460.1028(5), the Company retired 1,411 excess Energy Waste
12 Reduction (EWR) credits from 2017 for purposes of 2018 renewable energy standard
13 compliance.

14

15 **Q. What was NSP-W's available renewable energy for its Michigan retail customers in**
16 **2018?**

17 A. This value totals 34,461 RE Credits, almost two and a half times the Company's
18 compliance requirement. This is the amount of renewable energy available to Michigan
19 retail customers, with a small portion of that being used for our green pricing program,
20 Windsource®.

21

22 **Q. Is NSP-W in compliance with the renewable energy standards applicable to 2018?**

23 A. Yes.

1 Q. Does this conclude your direct testimony at this time?

2 A. Yes.

Renewable Energy Annual Report

Revised -February 2019

Electric Provider:

Reporting Period: Calendar Year 2018

- Section 51(1) of 2008 PA 295, as amended by 2016 PA 342, requires the filing of this document with the Michigan Public Service Commission.
- Many of the requested figures are available from MIRECS reports; names of which are noted within this template. If your figures agree with those within MIRECS, you may submit the MIRECS report as an attachment to this annual report. If your figures differ from those within MIRECS, please explain any discrepancies. Staff from the MPSC and MIRECS Administrator, APX, Inc., are available to help reconcile.
- The purpose of this annual report is to provide information regarding activities that occurred within calendar year 2018, not simply activity regarding energy credits with the vintage of 2018.

Section 51(1).

Within this section, list and describe actions taken by the electric provider to comply with the renewable energy standards.

a. Filings to the Commission (case numbers)

U-18234

b. Summary of actions taken during reporting period

Biennial Renewable Energy Plan

Section 51(2)(a).

Within this section, list the number of energy credits obtained and, if bundled credits, the MWh of electricity generated or otherwise acquired during the reporting period, including those credits transferred from ones wholesale electric supplier. This data may be found in the MIRECS report titled: My Credit Transfers using the transfer tabs indicated below and filtering the report by date (only activity occurring in 2018).

Credits From	Renewable Energy Credits	Incentive Credits	MWh Electricity Generated/Acquired
Generated (Intra-Account Transfer, only "Issued" in the Action column)	2018 Vintage: 9,027	2018 Vintage: 2017 Vintage: 2016 Vintage: 2015 Vintage: Older Vintages:	
Purchased (Inter-Account Transfer, only "Confirm" or "Forward Transfer" in the Action column)	2018 Vintage: 25,434	2018 Vintage: 2017 Vintage: 2016 Vintage: 2015 Vintage: Older Vintages:	
Total Credits	34,461		

"Issued" within the Action column refers to an account holder accepting the generation data after which energy credits are created. "Confirm" within the Action column refers to both the transferee and transferor agreeing to the non-recurring transfer. "Forward Transfer" within the Action column indicates a recurring transfer of which subsequent transfers of credits do not need to be accepted by both parties.

Explain any differences between the data provided and MIRECS reports.

All RECs are created in M-RETS.

Within this section, list the type of and number of energy credits sold, traded or otherwise transferred during the reporting period.

	Renewable Energy Credits	Incentive Credits
Sold, traded or otherwise transferred	0	0
Expired (not in compliance sub-account)		

This data may be found in MIRECS reports titled: My Sub-Accounts (filtered by Michigan eligibility and its end date) and My Credit Transfers.

Section 51(2)(b).

Within this section, list the number of advanced cleaner energy credits obtained and, if bundled, the MWh of advanced cleaner energy generated or otherwise acquired during this reporting period. This data may be found in the MIRECS report titled: My Credit Transfer using the transfer tabs indicated below and filtering the report by date (only activity occurring in 2018).

	Advanced Cleaner Energy Credits	MWh Electricity Generated/Acquired
Generated (Intra-Account Transfer, only "Issued" in the Action column)	0	0
Purchased (Inter-Account Transfer, only "Confirm" or "Forward Transfer" in the Action column)	0	0
Total Credits acquired	0	0

Section 51(2)(c).

Within this section, list each renewable energy system (RES) and advanced cleaner energy system (ACES) owned, operated or controlled by the electric provider. List the capacity of each system, the amount of electricity generated by each system and the percentage of electricity which was generated from renewable energy (RE) or advanced cleaner energy (ACE).

System Name ¹	System Type (RES or ACES)	Nameplate Capacity (MW)	Electricity Generated (MWh)	% of Electricity generated by RE/ACE
See Attachments III and IV				

¹System name should agree with the project name listed within MIRECS. This data may be found in the Project Management module within MIRECS.

Within this section, list the renewable energy system (RES) and advanced cleaner energy systems (ACES) the electric provider is purchasing energy credits from. These include purchase power agreements. However, unbundled (credit only) purchases do not need to be listed here. Projects (generators) serving multijurisdictional electric providers should be listed here.

The Michigan allocation factor of 2.0115% is based on the percentage of Michigan retail sales to NSP Wisconsin company retail sales. See Attachment II for more details on this calculation.

System Name	System Type (RES or ACES)	Electricity Purchased (MWh)	Energy Credits Purchased ¹	Allocation Factor and Method
See Attachments III and IV				

¹Distinguish between different types of credits (REC or ACEC).

Allocation Factor and Method: For use if 100% of system output is not purchased. For instance, a system selling to multiple parties: list how the energy and credits are allocated – if by percentage, list the percentage as well.

Allocation Factor and Method: If used by multijurisdictional electric providers please include which percentage of energy and credits are to be distributed to Michigan (list allocation method as well, for example: system load).

Section 51(2)(d).

Within this section, list whether, during the reporting period, the electric provider entered into a contract for, began construction on, continued construction of, acquired, or placed into operation a renewable energy (RE) system or advanced cleaner energy (ACE) system.

System Name ¹	Resource (technology, RE/ACE)		Nameplate Capacity (MW)	Construction start date or acquisition date	Commercial operation date	Owned by electric provider?
Dragon Fly Solar	Solar	RE	0.8	Jun-17	Sep-18	No
Woodstock Hills - Repower	Wind	RE	9.2	Jul-18	Dec-18	No
Dakota Range III	Wind	RE	151.2	Dec-18	Dec-20	No

¹System name should agree with the project name listed within MIRECS.

Dates may be forecast.

Section 51(2)(e).

Within this section, list the expenditures incurred during the reporting period to comply with the renewable energy standards or the forecasted expenditures for the remaining plan period. Also, electric providers with an approved or planned renewable energy surcharge (as per Section 45), list the incremental cost of compliance (ICC) incurred during the reporting period.

Total Costs to Comply with Renewable Energy Standard in 2018
\$0

Forecast of total expenditures for the remaining plan period of 2019-2029
\$0

Total Expenditures: ICC + Transfer Cost

Total Transfer Cost for 2018 (if any)
\$0

Transfer Cost: The component of renewable energy and capacity revenue recovered from PSCR clause.

Total ICC for 2018
\$0

Forecast of the ICC for the remaining plan period (2019-2029)	Monthly residential surcharge (\$3 or less)
\$0	\$0

Capital Expenditures for 2018 (if any)
\$0

Capital Expenditure: An investment in a renewable energy capital asset.

Section 51(2)(f).

Compliance: List the energy credits used for compliance for the 2018 compliance year. This number should agree with the compliance requirement listed in the 2018 compliance subaccount in MIRECS. Take into account any energy optimization or advanced cleaner energy credit substitutions and limits on their use.

14,118

Does the “energy credits used for compliance for the 2018 compliance year” figure above include any credits representing energy generated within 120 days after the start of the next calendar year? Yes/No.

No

If yes, how many credits from 2019 generation are included?

N/A

Attachment I.

NSP Renewable Energy Compliance Calculation

As approved in U-16585

Number of RECs, one year prior to Act (October 2007-September 2008) that would have been transferred under 35(1) PURPA Provision, if Act in effect at time	0
Number of RECs generated one year prior to Act (January 2008 - December 2008) (if recoverable in rates)	2,600
Number of RECs purchased one year prior to Act (January 2008 - December 2008) (if recoverable in rates)	<u>10,079</u>
(Baseline) RECs prior to Act	12,679
	<u>2018</u>
*Projected Retail Sales (MWh)	136,765
Previous 3-year average method	
10% REC Requirement	13,676
Less: (Baseline) RECs prior to Act	<u>12,679</u>
Additional RECs needed for compliance	997
Add: 2018 (100% of RECs needed for 10% compliance)	997
	<hr/>
2018 Compliance Requirement (RECs)	13,676
Compliance Renewable Energy % for Reporting Period	10.00%
2015 Compliance Requirement (RECs)	14,118

Notes:

- (1) Incentive RECs were not included in the calculation of the RECs baseline
- (2) New MI Law states " In 2016 and each year thereafter, maintain a renewable energy credit portfolio that consists of at least the same number of renewable energy credits as were required in 2015 under subdivision".

Attachment II.
NSP- Wisconsin Energy Requirements and Retail Sales

	2018
Wisconsin Co. Net Energy Requirements	7,071,791
NSP System NetEnergy Requirements	42,867,827
Wisconsin Co. Percent of NSP System	16.4967%
Wisconsin Co. Gross Energy Requirements	7,555,333
Wisconsin Co. Wholesale Sales	0
Wisconsin Co. Wholesale Allocation Percent	0
Wisconsin Co. Percent of NSP RECs Available for Compliance	16.4967%
Michigan Percentage of Wisconsin Co.	#REF!
2015 Michigan Forecast Retail Sales	136,210
2016 Michigan Forecast Retail Sales	136,875
2017 Michigan Forecast Retail Sales	137,208
2015 - 2017 Average Retail Sales	136,765
2018 RECs Available (see Attachment IV, includes Green Pricing RECs)	34,461
Estimated Available Renewable Energy % for Reporting Period	25.20%

Attachment III
Generator Nameplate Capacity and Percentage Generated from Renewable Energy

Purchased Wind	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Adams Wind	Wind	MN	19.80	100%
Agassiz	Wind	MN	1.98	100%
Big Blue Wind Farm	Wind	MN	36.00	100%
Boeve	Wind	MN	1.90	100%
Carlton College	Wind	MN	1.65	100%
Chanarambie PP	Wind	MN	85.50	100%
Cisco	Wind	MN	8.00	100%
Danielson Wind	Wind	MN	19.80	100%
East Ridge	Wind	MN	10.00	100%
Ewington	Wind	MN	19.95	100%
Fenton Power Partners I	Wind	MN	102.75	100%
Fenton Power Partners II	Wind	MN	102.75	100%
Fey Windfarm	Wind	MN	1.90	100%
FPL Mower County	Wind	MN	98.90	100%
Garwin McNeilus Windfarm	Wind	MN	36.75	100%
Grant County	Wind	MN	20.00	100%
Hilltop	Wind	MN	2.00	100%
Jeffers	Wind	MN	50.00	100%
JJN Windfarm	Wind	MN	1.50	100%
K-Brink Windfarm	Wind	MN	1.90	100%
KAS Brothers	Wind	MN	1.50	100%
Lake Benton PP	Wind	MN	209.25	100%
Metro	Wind	MN	0.66	100%
MinnDakota	Wind	MN/SD	150.00	100%
Rock County Energy	Wind	MN	11.55	100%
Moraine Wind	Wind	MN	51.00	100%
Moraine II	Wind	MN	49.50	100%
Norgaard North	Wind	MN	5.00	100%
Norgaard South	Wind	MN	3.75	100%
North Community Turbines	Wind	MN	15.00	100%
North Wind Turbines	Wind	MN	15.00	100%
North Shaokotan	Wind	MN	11.88	100%
Odell Wind Farm	Wind	MN	200.00	100%
Olsen	Wind	MN	1.50	100%
Pipestone	Wind	MN	8.25	100%
Prairie Rose	Wind	MN	200.00	100%
Ridgewind	Wind	MN	26.00	100%
Rock Ridge	Wind	MN	1.80	100%
Ruthton Ridge	Wind	MN	15.84	100%
Shane	Wind	MN	2.00	100%
Southridge	Wind	MN	1.80	100%
St Olaf	Wind	MN	1.65	100%
Tholen	Wind	MN	13.20	100%
Uilk	Wind	MN	4.50	100%
Valley View	Wind	MN	10.00	100%
Velva	Wind	MN	11.88	100%
Westridge Windfarm	Wind	MN	9.50	100%
Windcurrent Farms	Wind	MN	1.90	100%
Windvest	Wind	MN	1.80	100%
Winona	Wind	MN	1.50	100%
Woodstock Municipal	Wind	MN	0.75	100%
Zephyr Wind	Wind	MN	30.75	100%
Total Purchased Wind			1,691.74	

Attachment III
Generator Nameplate Capacity and Percentage Generated from Renewable Energy

Purchased Solar	Type	State	Generator Nameplate Capacity (MW DC)	Percentage Generated from Renewable Energy
PSWIF1, LLC Eau Claire	Solar	WI	0.80	100%
Aurora Solar Projects	Solar	MN	100.00	100%
North Star Solar	Solar	MN	100.00	100%
Marshall Solar	Solar	MN	62.25	100%
Slayton Solar	Solar	MN	1.67	100%
St. John's Solar	Solar	MN	0.50	100%
School Sisters of Notre Dame Solar Park	Solar	MN	0.72	100%
1000 University Properties LP	Solar	MN	0.0324	100%
Blue Lake Wastewater Treatment	Solar	MN	1.25	100%
CHS Field Solar Arrays	Solar	MN	0.10	100%
Court International LLC	Solar	MN	0.34	100%
DNR Solar	Solar	MN	0.11	100%
DragonFly Solar	Solar	MN	0.79200	100%
East Phillips Park Cultural & Community C	Solar	MN	0.06500	100%
freEner-g 2009 Group	Solar	MN	0.01000	100%
freEner-g 2010 Group	Solar	MN	0.20200	100%
Hutchinson Wastewater Treatment	Solar	MN	0.39970	100%
MCC Solar	Solar	MN	0.46300	100%
Merrick Solar	Solar	MN	0.07300	100%
Minneapolis /St. Paul International Airport	Solar	MN	1.06560	100%
Nokomis Main Beach - Nokomis	Solar	MN	0.07400	100%
Parade Ice Garden	Solar	MN	0.15330	100%
Rev. Dr. Martin Luther King, Jr. Recreation	Solar	MN	0.06200	100%
Target Midway Store	Solar	MN	0.38000	100%
UEL Real Estate Holdings LLC	Solar	MN	0.30240	100%
University Centre @ 1919	Solar	MN	0.92400	100%
Webber Park - Webber	Solar	MN	0.04480	100%
Total Purchased Solar			272.78	

Purchased Hydro	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
LCO	Hydro	WI	3.00	100%
Neshonoc	Hydro	WI	0.42	100%
SAF Hydro	Hydro	MN	9.20	100%
Western Technical College	Hydro	MN	0.21	100%
Total Purchased Hydro			12.83	

Purchased RDF	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Total Purchased RDF			0.00	

Purchased Wood	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
St. Paul Cogen	Wood	MN	25.00	100%
Laurentian Energy	Wood	MN	35.00	100%
Total Purchased Wood			60.00	

Purchased Landfill Gas	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Minn Methane\Waste Mgmt	Landfill Gas	MN	4.70	100%
Pine Bend	Landfill Gas	MN	12.00	100%
Total Purchased Landfill Gas			16.70	

Attachment III
Generator Nameplate Capacity and Percentage Generated from Renewable Energy

Purchased Biogas	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Cow Poo	Biogas	WI	0.45	100%
Diamond K Dairy	Biogas	WI	0.35	100%
GL Bio Gas I	Biogas	WI	1.14	100%
Green Whey Energy	Biogas	WI	3.20	100%
Total Purchased Biogas			5.14	

Purchased Biomass	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
FibroMinnesota	Biomass	MN	64.00	100%
KODA	Biomass	MN	12.00	NA
Total Purchased Biomass			76.00	

Total Purchased Renewables			2,135.18	
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Attachment III
Generator Nameplate Capacity and Percentage Generated from Renewable Energy

Owned Wind	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Courtenay Wind Farm	Wind	ND	200.00	100%
Border Winds Wind Farm	Wind	ND	150.00	100%
Grand Meadow	Wind	MN	100.50	100%
Nobles Wind Farm	Wind	MN	201.00	100%
Pleasant Valley Wind Farm	Wind	MN	200.00	100%
Total Owned Wind			851.50	

Owned Hydropower	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Apple River	Hydro	WI	3.30	100%
Big Falls	Hydro	WI	7.78	100%
Cedar Falls	Hydro	WI	6.00	100%
Chippewa Falls	Hydro	WI	21.60	100%
Cornell	Hydro	WI	35.30	100%
Eau Claire Dells	Hydro	WI	9.50	100%
Hayward	Hydro	WI	0.20	100%
Hennepin Island/St. Anthony Falls	Hydro	MN	13.50	100%
Holcombe	Hydro	WI	33.90	100%
Jim Falls	Hydro	WI	59.80	100%
Ladysmith	Hydro	WI	3.40	100%
Menomonie	Hydro	WI	5.40	100%
Riverdale	Hydro	WI	0.60	100%
Saxon Falls	Hydro	WI/MI	1.60	100%
St Croix	Hydro	WI	23.20	100%
Superior Falls	Hydro	WI/MI	1.85	100%
Thornapple	Hydro	WI	1.40	100%
Trego	Hydro	WI	1.20	100%
White River	Hydro	WI	1.00	100%
Wissota	Hydro	WI	40.10	100%
Total Owned Hydropower			270.63	

Owned Biomass	Type	State	Generator Nameplate Capacity (MW)	Percentage Generated from Renewable Energy
Bay Front	Wood/MSW/Coal/Gas	WI	67.22	100.0%
French Island	RDF/Wood/Gas	WI	30.45	100.0%
Red Wing	RDF/Gas	MN	23.00	100.0%
Wilmarth	RDF/Gas	MN	25.00	100.0%
Total Owned Biomass			145.67	

	Generator Nameplate Capacity (MW)
Total Owned Renewables	1,267.80
Total Purchased Renewables	2,135.2
Total Xcel Energy - North Renewables	3,403.0

Attachment IV.
Renewable Generation and RECs

Purchased Wind	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsource Allocation	Retired Renewable Connect	Available for Compliance	Available for Compliance2	Michigan Allocation 2018
Adams Wind	Wind	MN	52,196	52,196				52,196	8,611	-
Agassiz	Wind	MN	4,365	4,365				4,365	720	-
Big Blue Wind Farm	Wind	MN	115,340	115,340				115,340	19,027	-
Boeoe	Wind	MN	5,373	5,373		4,851		522	86	-
Carlton College	Wind	MN	3,685	3,685				3,685	608	-
Chanarambie PP	Wind	MN	211,690	211,690				211,690	34,922	-
Cisno	Wind	MN	23,330	23,330		21,618		1,712	282	-
Danielson Wind	Wind	MN	46,291	46,291				46,291	7,637	-
East Ridge	Wind	MN	23,677	23,677				23,677	3,906	-
Evington	Wind	MN	59,108	59,108				59,108	9,751	-
Fenton Power Partners I	Wind	MN	319,708	319,708				319,708	52,741	-
Fenton Power Partners II	Wind	MN	325,694	325,694				325,694	53,729	24,049
Fey Windfarm	Wind	MN	5,232	5,232				5,232	863	-
FPL Mower County	Wind	MN	261,957	261,957				261,957	43,214	-
Garwin McNeilus Windfarm	Wind	MN	76,302	76,302		17,904		58,398	9,634	-
Grant County	Wind	MN	54,351	54,351				54,351	8,966	-
Hillop	Wind	MN	3,001	3,001				3,001	495	-
Jeffers	Wind	MN	160,429	160,429				160,429	26,466	-
JJN Windfarm	Wind	MN	4,090	4,090		3,811		279	46	-
K-Benk Windfarm	Wind	MN	5,699	5,699		5,412		287	47	-
KAS Brothers	Wind	MN	3,197	3,197				3,197	527	-
Lake Benton PP	Wind	MN	459,424	459,424				459,424	75,790	-
Metro	Wind	MN	761	761				761	126	-
MinnDakota	Wind	MN/SI	493,123	493,123				493,123	81,349	-
Rock County Energy	Wind	MN	21,685	21,685		17,857		3,828	631	-
Moraine Wind	Wind	MN	137,965	137,965				137,965	22,760	-
Moraine II	Wind	MN	160,075	160,075		4,385		155,690	25,684	-
Norgaard North	Wind	MN	15,178	15,178				15,178	2,504	-
Norgaard South	Wind	MN	10,392	10,392				10,392	1,714	-
North Community Turbines	Wind	MN	45,340	45,340				45,340	7,480	-
North Wind Turbines	Wind	MN	43,551	43,551				43,551	7,184	-
North Shaokotan	Wind	MN	25,190	25,190				25,190	4,156	-
Olson	Wind	MN	760,157	760,157				760,157	106,056	-
Osdel Wind Farm	Wind	MN	1,980	1,980			117,265	(115,285)	327	-
Pipestone	Wind	MN	22,157	22,157				22,157	3,655	-
Prairie Rose	Wind	MN	623,012	623,012				623,012	102,777	-
Ridgewind	Wind	MN	81,332	81,332				81,332	13,417	-
Rock Ridge	Wind	MN	5,168	5,168				5,168	853	-
Ruthon Ridge	Wind	MN	40,241	40,241				40,241	6,638	-
Shane	Wind	MN	6,236	6,236				6,236	1,029	-
Southridge	Wind	MN	3,895	3,895				3,895	643	-
St Olaf	Wind	MN	25	25				25	4	-
Thoken	Wind	MN	39,687	39,687				39,687	6,547	-
Urk	Wind	MN	12,076	12,076				12,076	1,992	-
Valley View	Wind	MN	27,500	27,500				27,500	4,537	-
Velva	Wind	MN	26,026	26,026				26,026	4,293	-
Westridge Windfarm	Wind	MN	17,784	17,784		5,895		11,889	1,961	-
Windcurrent Farms	Wind	MN	5,136	5,136		4,694		442	73	-
Windpower Partners	Wind	MN	-	-				-	-	-
Windvest	Wind	MN	1,879	1,879				1,879	310	-
Winona	Wind	MN	-	-				-	-	-
Woodstock Municipal	Wind	MN	923	923				923	152	-
Zephyr Wind	Wind	MN	112,498	112,498				112,498	18,558	-
Total Purchased Wind			4,965,111	4,965,111	-	86,427	117,265	4,761,419	785,479	24,049

Purchased Solar	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsource Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance2	Michigan Allocation 2018
PSWFI, LLC-Eau Claire	Solar	WI	1,027	1,027			1,027		1,027	-
Aurora Solar Projects	Solar	MN	188,781	188,781					188,781	31,143
North Star Solar	Solar	MN	196,803	196,803			33,074	163,729	27,010	1,166
Marshall Solar	Solar	MN	107,509	107,509				107,509	17,735	-
Slayton Solar	Solar	MN	2,627	2,627				2,627	433	-
St. John's Solar	Solar	MN	679	679				679	112	-
School Sisters of Notre Dame Solar Park	Solar	MN	1,080	1,080				1,080	178	-
1000 University Properties LP	Solar	MN	37	37				37	6	-
Blue Lake Wastewater Treatment	Solar	MN	1,589	1,589				1,589	262	-
CHS Field Solar Arrays	Solar	MN	96	96				96	16	-
Court International LLC	Solar	MN	442	442				442	73	-
DNR Solar	Solar	MN	125	125				125	21	-
DragonFly Solar	Solar	MN	195	195				195	32	-
East Phillips Park Cultural & Community Center	Solar	MN	130	130				130	21	-
freEmerg 2009 Group	Solar	MN	12	12				12	2	-
freEmerg 2010 Group	Solar	MN	193	193				193	32	-
Hutchinson Wastewater Treatment	Solar	MN	392	392				392	65	-
MCC Solar	Solar	MN	674	674				674	111	-
Merrick Solar	Solar	MN	109	109				109	18	-
Minneapolis/St. Paul International Airport	Solar	MN	11	11				11	2	-
Nokomis Main Beach - Nokomis	Solar	MN	77	77				77	13	-
Parade Ice Garden	Solar	MN	88	88				88	15	-
Rev. Dr. Martin Luther King, Jr. Recreation Center	Solar	MN	169	169				169	28	-
Target Midway Store	Solar	MN	494	494				494	81	-
UHL Real Estate Holdings LLC	Solar	MN	324	324				324	53	-
University Centre @ 1919	Solar	MN	943	943				943	156	-
Webber Park - Webber	Solar	MN	121	121				121	20	-
Total Purchased Solar			503,700	503,700	-	-	33,074	470,626	77,638	1,166

Purchased Hydro	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsource Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance2	Michigan Allocation
LCO	Hydro	WI	12,302	12,302				12,302	2,029	219
Neshonoc	Hydro	WI	1,767	1,767				1,767	291	-
SAF Hydro	Hydro	MN	51,374	51,374				51,374	8,475	-
Western Technical College	Hydro	MN	833	833				833	137	-
Total Purchased Hydro			66,276	66,276	0	0	0	66,276	10,933	219

Purchased RDF	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsource Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance2	Michigan Allocation
Total Purchased RDF			0	0	0	0	0	0	0	0

Purchased Wood	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsource Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance2	Michigan Allocation
St. Paul Cogen	Wood	MN	254,461	254,461				254,461	41,978	-
Laurentian Energy	Wood	MN	118,702	118,702				118,702	19,582	-
Total Purchased Wood			373,163	373,163	0	0	0	373,163	61,560	0

Attachment IV.
Renewable Generation and RECs

Purchased Landfill Gas	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
Minn Methane/Waste Mgmt	Landfill Gas	MN	35,536	35,536				35,536	5,862	-
Pine Bend	Landfill Gas	MN	8,850	8,850				8,850	1,460	-
Total Purchased Landfill Gas			44,386	44,386	0	0	0	44,386	7,322	0

Purchased Bio Gas	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
Cow Pos	Biogas	WI	1,762	1,762				1,762	291	-
Diamond K Dairy	Biogas	MN	-	-				-	-	-
GL Bio Gas I	Biogas	WI	4,247	4,247				4,247	701	-
Green Whey Energy	Biogas	WI	8,666	8,666				8,666	1,430	-
Total Purchased Bio Gas			14,675	14,675	0	0	0	14,675	2,422	0

Purchased Biomass	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
FibroMinnesota	Biomass	MN	149,635	149,635				149,635	24,685	-
KODA	Biomass	MN	99,938	99,938				99,938	16,487	-
Total Purchased Biomass			249,573	249,573	0	0	0	249,573	41,171	0
Total Purchased Renewables			6,202,209	6,202,209	0	86,427	0	5,494,817	986,525	25,434

Owned Wind	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
Courtenay Wind Farm	Wind	ND	714,811	714,811				714,811	117,920	-
Border Winds Wind Farm	Wind	MN	610,180	610,180				610,180	100,660	-
Grand Meadow	Wind	MN	271,952	271,952				271,952	44,863	-
Nobles Wind Farm	Wind	MN	651,998	651,998				651,998	107,558	-
Pleasant Valley Wind Farm	Wind	MN	757,462	757,462				757,462	124,956	-
Total Owned Wind			3,006,403	3,006,403	0	0	0	3,006,403	495,957	0

Owned Hydropower	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
Apple River	Hydro	WI	11,965	11,965				11,965	1,974	-
Big Falls	Hydro	WI	43,423	43,423				43,423	7,163	-
Cedar Falls	Hydro	WI	36,549	36,549				36,549	6,029	-
Chippewa Falls	Hydro	WI	76,383	76,383				76,383	12,601	-
Cornell	Hydro	WI	96,938	96,938				96,938	15,992	-
Eau Claire Dells	Hydro	WI	54,206	54,206				54,206	8,942	-
Hayward	Hydro	WI	0	0				0	0	-
Hennepin Island/St. Anthony Falls	Hydro	MN	59,689	59,689				59,689	9,847	-
Holcombe	Hydro	WI	110,827	110,827				110,827	18,283	-
Jim Falls	Hydro	WI	148,008	148,008				148,008	24,416	-
Ladysmith	Hydro	WI	13,008	13,008				13,008	2,146	-
Menomonie	Hydro	WI	26,725	26,725				26,725	4,409	-
Riversdale	Hydro	WI	2,488	2,488				2,488	410	-
Saxon Falls	Hydro	WI/MI	11,658	11,658				11,658	1,923	-
St Croix	Hydro	WI	111,339	111,339				111,339	18,367	3,305
Superior Falls	Hydro	WI/MI	12,450	12,450				12,450	2,054	-
Thornapple	Hydro	WI	9,607	9,607				9,607	1,585	-
Trego	Hydro	WI	9,353	9,353				9,353	1,543	-
White River	Hydro	WI	4,756	4,756				4,756	785	-
Wisnota	Hydro	WI	160,046	160,046				160,046	26,402	-
Total Owned Hydropower			999,418	999,418	0	0	0	999,418	164,871	3,305

Owned Biomass (RDF and Wood)	Type	State	2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
Bay Front	Wood	WI	164,121	164,121				164,121	27,075	-
French Island	Wood/RDF	WI	53,690	53,690				53,690	8,857	5,722
Red Wing	RDF	MN	119,906	119,906				119,906	19,781	-
Wilmarth	RDF	MN	98,214	98,214				98,214	16,202	-
Total Owned Biomass			435,931	435,931	0	0	0	435,931	71,914	5,722

			2018 Generation (MWh)	2018 RECs	Adjustments	MN Windsourc Allocation	Retired Renewable Connect	2018 NSP RECs Available for Compliance	2018 NSPW RECs Available for Compliance ²	Michigan Allocation
Total Owned Renewables			4,441,752	4,441,752	0	0	0	4,441,752	732,743	9,027
Total Purchased Renewables			6,216,884	6,216,884	0	86,427	150,339	5,980,118	986,525	25,434
Total Xcel Energy - North Renewables			10,658,636	10,658,636	0	86,427	150,339	10,421,870	1,719,268	34,461

Footnotes:

² RECs are net wholesale transfers

³ NSP purchases a portion of the energy generated at Koda, so the entire generation is unknown. REC transfer to NSP began May 2011.

**Attachment V.
RECs Submitted for 2018 MI RPS Compliance**

satType	Sub-Account	Sub-Account ID	MIRECS ID	Project	Operation Begin Date	Fuel/Project Type	Credit Type	Credits Vintage	Credit Serial Numbers	Quantity	Ratio	Adjusted Export Quantity	MI Eligible	MI Eligibility End Date	PAG/ICS Designation	Green-e Energy Eligible	LIHI Certified
COM	2018 Compliance - Northern States Power Company - Wisconsin	1046	IMP279	Fenton Power Partners I (2) - Northern States Power Company - Wisconsin-Electric-	11/13/2007	Wind	RECS	Mar-18	IMP-MRETS-REC-279-MN-03-2018-53562-1412 to 14118	12707	1	12707	Yes	3/31/2023	No	No	No
COM	2018 Compliance - Northern States Power Company - Wisconsin	1046	EWR373	EWR		Electric Savings	EWR	Dec-17	MIRECS-EWR-373-MI-12-2017-50459-1397 to 2807	1411	1	1411	Yes	2/28/2019	No	No	No
Total										14,118							

**Attachment VI.
Remaining REC Inventory**

**MRETS
Inventory**

Account Name	Account ID	M-RETS ID	Project Name	Commenced Operation Date	Fuel Type	Vintage	Location	Quantity
NSP-MI Active	E639	M351	East Ridge - East Ridge	3/1/2006	Wind		Mar-18 MN	1,263
NSP-MI Active	E639	M351	East Ridge - East Ridge	3/1/2006	Wind		Apr-18 MN	2,249
NSP-MI Active	E639	M351	East Ridge - East Ridge	3/1/2006	Wind		May-18 MN	1,617
NSP-MI Active	E639	M351	East Ridge - East Ridge	3/1/2006	Wind		Feb-18 MN	1,097
NSP-MI Active	E639	M351	East Ridge - East Ridge	3/1/2006	Wind		Jul-18 MN	1,267
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Dec-18 MN	27,970
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Jul-18 MN	18,114
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Oct-18 MN	11,328
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Aug-18 MN	17,457
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Jan-18 MN	17,617
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Sep-18 MN	24,049
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Nov-18 MN	26,530
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Jun-18 MN	27,517
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		May-18 MN	23,408
NSP-MI Active	E639	M356	Fenton Power Partners I (2) -	11/13/07	Wind		Mar-18 MN	18,060
Total								219,543

**MIRECS
Inventory**

Sub-Account	Account ID	MIRECS ID	Project	Operation Begin Date	Fuel/Project Type	Credit Type	Credits Vintage	Credit Serial Numbers	Quantity
DefaultACT	152	IMP279	Fenton Power Partners I (2) - Fenton Power Partners I (2)	11/13/07	Wind	RECS	3/1/18	IMP- MRETS- REC-279- MN-03-2018- 53562-1 to 1411	1411
DefaultACT	152	EWR373	Northern States Power Company - Wisconsin-Electric-EWR		Electric Savings	EWR	12/1/17	MIRECS- EWR-373- MI-12-2017- 50459-2808 to 2846	39
DefaultACT	152	EWR374	Northern States Power Company - Wisconsin-Gas-EWR		Gas Savings	EWR	12/1/17	MIRECS- EWR-374- MI-12-2017- 50460-6976 to 9865	2890

Footnotes:

RECs actually transferred to MIRECS and submitted for compliance may differ from the generators shown above to improve the efficiency of the MRETS to MIRECS transfer and certification process.

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
PUBLIC SERVICE COMMISSION

ENTRY OF APPEARANCE IN AN ADMINISTRATIVE HEARING

This form is issued as provided for by 1939 PA 3, as amended, and by 1933 PA 254, as amended. The filing of this form, or an acceptable alternative, is necessary to ensure subsequent service of any hearing notices, Commission orders, and related hearing documents.

General Instructions:

Type or print legibly in ink. For assistance or clarification, please contact the Public Service Commission at (517) 284-8090.

*Please Note: The Commission will provide **electronic** service of documents to all parties in this proceeding.*

THIS APPEARANCE TO BE ENTERED IN ASSOCIATION WITH THE ADMINISTRATIVE HEARING:

Case / Company Name: _____ Docket No. _____

Please enter my appearance in the above-entitled matter on behalf of:

1. (Name)
2. (Name)
3. (Name)
4. (Name)
5. (Name)
6. (Name)
7. (Name)

Name _____

Address _____

City _____ State _____

Zip _____ Phone (____) _____

Email _____

Date _____

I am not an attorney

I am an attorney whose:

Michigan Bar # is P- _____

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