



414 Nicollet Mall  
Minneapolis, MN 55401

February 15, 2019

—Via U.S. Mail—

Minnesota Senate  
75 & 100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155

Minnesota House of Representatives  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155

RE: ANNUAL REPORT TO MINNESOTA STATE LEGISLATURE RENEWABLE  
DEVELOPMENT FUND

Dear Senators and Representatives:

Pursuant to the Minn. Stat. § 116C.779, enclosed is our Renewable Development Fund Annual Report. This report itemizes actual and projected financial benefit to Xcel Energy's electric ratepayers for each project that has received an RDF project grant administered by Xcel Energy.

If you have any questions regarding this filing please contact me at (612) 330-6064 or [bria.e.shea@xcelenergy.com](mailto:bria.e.shea@xcelenergy.com).

Sincerely,

/s/

BRIA SHEA  
DIRECTOR, REGULATORY AND STRATEGIC ANALYSIS

Enclosures

*Xcel Energy*  
*Renewable Development Fund (RDF)*

**Annual Report to the Minnesota State Legislature**

**February 15, 2019**

## Background

The Renewable Development Fund (RDF) program was first authorized by the Minnesota Legislature in 1994 in conjunction with legislation regarding the Prairie Island nuclear generating plant in Red Wing, Minnesota. As a condition of storing spent nuclear fuel in dry casks at Prairie Island, the RDF statute required Xcel Energy to transfer \$500,000 per year for each dry cask containing spent fuel to a renewable energy fund, which amounted to \$9 million annually. In 2003, this statute was amended to extend the life of the nuclear-waste storage at the Prairie Island plant; at that time the amount to be transferred into the RDF was increased to a fixed sum of \$16 million annually. In 2007, the statute was further amended to add an additional assessment for dry casks stored at our Monticello nuclear generating plant in Monticello, Minnesota. The annual amount set aside for RDF funding has increased throughout the years as the Company has placed in service more dry cask storage at its Prairie Island and Monticello nuclear generating plants. A cumulative total of \$307,548,394 million has been set-aside in the RDF since inception.

2017 Minnesota Session Laws Chapter 94, Article 10, Section 3 (the 2017 Legislation) made various changes to the the RDF program including, among other things

- the creation of a new Renewable Development Account (RDA) in the special revenue fund in the state treasury, which is administered by the Commissioner of Management and Budget (whereas the monies collected under previous versions of the statute were known as the RDF, and administered by Xcel Energy);
- changes to the purposes for which RDA funds can be expended in future funding cycles;
- the creation of a new RDA advisory group (though the existing RDF advisory group remains for the purposes of oversight over the RDF's prior funding cycles);
- changes to the process for soliciting, selecting and awarding RDA funds in future funding cycles; and
- changes in reporting requirements
  - a RDA advisory group must submit this annual report on the projects funded by the RDA for the prior year and all previous years (whereas previous versions of the annual report were submitted by Xcel Energy).
  - the commissioner of management and budget will report to the legislature on the availability of funds in and obligations of the RDA.

Essentially, the 2017 Legislation created two types of programs under the statute—the legacy RDF legislative mandates and grants (which continue to be referred to as the

RDF) and the new RDA, which is funded by the annual transfer to the Minnesota Management Budget (MMB).

Due to Xcel Energy's familiarity with the projects funded previously under the legacy RDF, its continuing obligation for annual reporting with the Minnesota Public Utilities Commission, and that RDA advisory group process has not yet been established, Xcel Energy is submitting this report on behalf of the RDA advisory group.

### **RDA Grant Program Summary**

As required by Minn. Stat. § 116C.779 (1)(p), since the 2017 Legislation was enacted in May 2017, no projects have been funded by the newly-created RDA fund in the prior year or any previous year.

### **RDF Grant Program Summary**

For informational purposes, Attachment A includes a complete list of projects for all years that have been awarded RDF grant awards, prior to the enactment of the 2017 Legislation.

The costs of RDF program expenses allocated to Minnesota are recovered through a surcharge on our customer bill statements as part of their monthly charges for electricity. In 2018 the RDF charge was \$0.001318 per kWh.

Since its inception, the RDF program has provided over \$300 million for renewable energy initiatives including \$92.6 million for Renewable Energy Production Incentive (REPI) payments, \$126.5 million for legislatively-mandated projects and programs, \$86.3 million which has been awarded over four grant cycles (see Attachment B - Financial Statement), and \$2.3 million for general program support. Mandated programs have included the appropriation of \$25 million to the University of Minnesota for the Initiative for Renewable Energy and Environment (IREE), and \$57.1 million for the Minnesota Bonus Solar Rebate and Solar Energy Incentive Programs.

In 2012, \$120 million had been appropriated for the Made In Minnesota Solar Energy Production Incentive Account. The 2017 Legislation rescinded this appropriation on a going forward basis. A total of \$48 million was paid into the Made In Minnesota Solar Energy Production Incentive Account. Additional appropriations in 2018 also include \$20 million to the City of Benson and \$34 million to the Laurentian Power Authority.

These additional appropriations will be paid out over the next several years in a manner consistent with newly enacted Minnesota law.

As Table 1 below shows, 65 legacy RDF projects have been completed and 16 are active. All Cycle 4 projects that have been awarded RDF grants; have executed grant contracts and project activity has begun.

**Table 1: Summary of Project Status**

Type	Completed	Active as of 12/31/2018	Total
Energy Production	22	4	26
Research	43	9	52
Higher Education Block Grant	0	3	3
Total	65	16	81

Xcel Energy has responsibility for the day-to-day administration of the legacy RDF. A seven-member advisory group, representing the interests of various stakeholder groups, assisted Xcel Energy in evaluating and making recommendations on grant project proposals to Xcel Energy and the Commission. Further details on the members of the RDF advisory group can be found in Attachment C.

The 2017 Legislation struck a provision that referenced the Company’s management of the RDF. Under the 2017 Legislation, there is no entity that “manages” the RDA, but the MMB does “administer” the RDA. The 2017 Legislation also seems to contemplate a new RDA advisory group, potentially with different composition than the legacy RDF advisory group, with more responsibility for preparing the requests for proposals and making funding recommendations to the Company. Because of the lack of clarity, no one has been appointed to the RDA advisory group thus far.

***Legislatively Directed RDF Projects***

Legislation in 2003 created the Renewable Energy Production Incentive (REPI) program to provide production incentives for electricity generated by wind, biogas, and hydro. The Minnesota Department of Commerce administers this program. REPI payments since program inception have totaled approximately \$92.6 million.

### **a. RDF Solar Rebates (Minnesota Bonus)**

In 2010, the Minnesota Legislature approved a measure to utilize \$21 million from the RDF program for solar rebates called Minnesota Bonus. This program was available to customers for incentives awarded from 2011 to 2013. The legislation specifies that Xcel Energy would administer the RDF rebates for solar photovoltaic (PV) systems less than 40 kW installed by customers in the Company's Minnesota service territory. The RDF solar rebates were only available for systems that use solar modules manufactured or assembled in Minnesota. Minnesota Bonus rebates were first disbursed in 2011. No additional capacity was awarded since the program closed in 2014. Most of the projects were installed during 2014 and 2015, however a very small number of additional projects continued to be completed. Payments have continued for a total reimbursement of over \$19 million for the program thus far. The Minnesota Bonus provided roughly 3.8 MW of installed capacity from 138 projects.

Minnesota legislation, Minn. Stat. §216C.417, established a "Made in Minnesota" solar energy production incentive account as a separate account in the special revenue fund in the state treasury in 2013. Beginning January 1, 2014 and each January 1 thereafter, through 2023, for a total of ten years, each electric public utility subject to Conservation Improvement Program (CIP) requirements must annually pay to the Commissioner of Commerce five percent of the minimum amount it is required to spend on CIP. Affected utilities are Xcel Energy, Minnesota Power and Ottertail Power. Funds from the RDF, when added to the total amount paid by the three affected utilities, totals a combined annual payment of \$15.0 million. In 2017, the annual payment obligation under Minn. Stat. §216C.417 was terminated on a going forward basis. The Made in Minnesota program led to an installation of roughly 17.4 MW of solar capacity from more than 1,300 projects.

### **b. Made in Minnesota (MiM) Solar Incentive Account**

In 2013, Minn. Stat. §116C.7792 approved a measure to establish a solar energy incentive program to be operated for five consecutive calendar years beginning in 2014 with no specifications around where panels are manufactured. Minn. Stat. §116C.7792, as revised by S.F. 1456 in 2017, extended the program through 2021. In 2018, H.F. 3232 further revised this statute and increased allowable name plate capacity from 20 kWdc to 40 kWdc. This revision also allows for more than one solar system per premise to be eligible for this incentive program, subject to an aggregate cap of no more than 40 kWdc. Further, the solar system eligible for incentive must be sized to less than 120 percent of the customer's on-site annual energy consumption when combined with other distributed generation resources. Since this program's inception in 2014, 14.4 MW of solar have been installed (roughly 1,500 systems) using RDF/RDA funding.

Approximately, \$600,000 has been disbursed in the form of customer production incentives.

According to Minn. Stat. § 116C.779 subdiv (1)(c), (d) and (e), Xcel Energy must annually transfer funds to the RDA, but the Company can withhold from that transfer RDF payments for ongoing legislative programs previously enacted and the three additional expenditures approved by the legislature in the 2017 Legislation. First, an appropriation of \$34,000,000 over a five year period (fiscal years 2018-2022) to the Laurentian Energy Authority, LLC to assist the transition required by the termination of a PPA. Second, an appropriation of \$20,000,000 over a four year period (fiscal years 2018-2021) to the City of Benson for purposes of economic development. Finally, an appropriation of \$1,000,000 during fiscal year 2018 to the DEED 21<sup>st</sup> Century Minerals Fund.

***Grant-Funded RDF Projects***

Energy Production: As shown in Table 2, the 31 electric production projects that received RDF grants have resulted in the installation of more than 29.7 MW of renewable energy nameplate capacity and have generated a total of 631,330 MWh of energy over the life of the facilities.

**Table 2: Electric Production Projects**

Type	Investment	Facilities	Installed Capacity (MW)	Energy Production (MWh)
Biomass	\$27,887,976	3	0.30	2,868
Hydro	\$44,145,119	2	9.176	277,846
Solar	\$44,104,631	22	10.27	61,372
Wind	\$10,990,338	4	9.95	289,243
Total	\$127,128,064	31	29.7	631,330

The environmental benefits from these investments are recognized in marketable Renewable Energy Credits (RECs) from qualifying facilities, emission reductions, avoided costs to build conventional facilities, and avoided costs to replace the electricity generated. RDF projects have generated RECs which can be used to meet Xcel Energy’s renewable energy goals and requirements to the benefit of its electric customers.

Research and Development: As shown in Table 3, research and development projects contributed to the development of articles, workshops, and patent applications.

**Table 3: Research and Development Projects**

Technology	Total Investment	Published Articles	Presentations/ Workshops	Patent Applications
Biomass	\$35,662,853	23	62	3
Solar	\$8,345,591	10	29	1
Wind	\$10,306,447	12	49	1
Multiple Tech	\$7,557,215	14	58	3
Total	\$61,872,106	59	198	8

It should be noted that two out-of-state research projects are using a Minnesota project host located in the NSP-Minnesota service area. These projects' association to an in-state host keeps the research relevant to Minnesota and directs additional RDF funds to businesses and organizations in the state.

Grantee	MN Host	Host Location	Host Activity
Coaltec Energy USA	P & K Farms	Northfield, Minnesota	Pilot demonstration of biomass gasifier
University of Florida	Pending Research	West Central Minnesota	Pilot demonstration of anaerobic digester
Oak Leaf Energy	Met Council	Shakopee, Minnesota	Install 970 kW photovoltaic array

## Conclusion

Xcel Energy appreciates this opportunity to provide this report summarizing the projects funded by the RDA, and also providing information about the projects funded by the RDF for informational purposes, through 2018.







**RENEWABLE DEVELOPMENT FUND FINANCIAL STATEMENT**  
**As of December 31, 2018**

	2001 - 2017	2018	Since RDF Inception (2001-2018)
<b>Total RDF Credits *</b>	<b>\$326,950,000</b>	<b>\$32,500,000</b>	<b>\$359,450,000</b>
Excelsior	\$10,000,000	\$0	\$10,000,000
Energy Production Grants	\$29,718,293	\$2,619,741	\$32,338,034
Research Grants	\$38,841,944	\$5,174,230	\$44,016,174
<b>Total RDF Grant Payments</b>	<b>\$78,560,237</b>	<b>\$7,793,971</b>	<b>\$86,354,208</b>
<b>Administrative Costs</b>	<b>\$2,299,756</b>	<b>\$0</b>	<b>\$2,299,756</b>
<b>University of Minnesota</b>	<b>\$25,000,000</b>	<b>\$0</b>	<b>\$25,000,000</b>
<b>REPI</b>	<b>\$91,799,763</b>	<b>\$840,405</b>	<b>\$92,640,168</b>
<b>Solar Rebates</b>	<b>\$54,749,130</b>	<b>\$2,376,200</b>	<b>\$57,125,330</b>
<b>Other Legislative Mandates</b>	<b>\$25,451,809</b>	<b>\$18,677,123</b>	<b>\$44,128,932</b>
<b>Total RDF Costs</b>	<b>\$277,860,695</b>	<b>\$29,687,699</b>	<b>\$307,548,394</b>

**SUMMARY OF RDF PROGRAM FUNDS**

Total Amount Credited to RDF	\$359,450,000
Total RDF Payments	\$307,548,394
Total Amount of Grant Awards	\$104,381,687
Amount of Grant Awards Paid	\$86,354,208
Cumulative Cask Credits Uncollected and Unexpended	\$33,874,127 <sup>(1)</sup>
Balance of RDF	- 0 -

<sup>(1)</sup> Cask credits that were not collected from customers and not obligated prior to law change

RDF Congressional Districts (1/1/2018 - 12/31/2018)									
RDF Contract	Grant	Type	Cycle	Renewable Category	Host Site		Project Sponsor		
					District	Location	District	Organization	
<b>District 1</b>									
EP4-24	\$1,106,600	EP	4	Solar	MN06	Lincoln, Lyon, Pipestone Co.	OK	Bergey Windpower, Norman	
EP4-29	\$1,650,000	EP	4	Solar	MN01	Dodge City	MN03	Dragonfly Solar, Lakeville	
HE4-1	\$5,500,000	HE	4	All	MN01	Minnesota State, Mankato	MN04	U of M, St. Paul	
RD4-14	\$161,081	RD	4	Wind	MN01	Grand Meadows, Nobles Co.	MN05	Barr Engineering, Minneapolis	
<b>District 2</b>									
RD3-77	\$1,000,000	RD	3	Biomass	MN02	P & J Farms, Northfield	IL	Coaltec Energy USA, Carterville	
EP4-15	\$2,661,320	EP	4	Solar	MN02	Northfield	MN05	MRES, Minneapolis	
EP4-29	\$1,650,000	EP	4	Solar	MN01	Dodge City	MN03	Dragonfly Solar, Lakeville	
RD4-2	\$982,408	RD	4	Solar/Wind	MN02	WCROTC, Morris	MN05	U of M, Minneapolis	
RD4-8	\$1,999,500	RD	4	Biomass	MN02	MSW Campus, Red Wing	MN02	City of Red Wing	
<b>District 4</b>									
EP4-11	\$1,850,000	EP	4	Solar	MN04	EIC, St. Paul	MN05	IPS, Minneapolis	
EP4-20	\$583,513	EP	4	Solar	MN04	Midway Superstore, St. Paul	MN05	Target, Minneapolis	
EP4-34	\$555,750	EP	4	Solar	MN04	CHS Field, St. Paul	MN04	U of M, St. Paul	
HE4-1	\$5,500,000	HE	4	All	MN05	Century College	MN04	MnSCU, St. Paul	
HE4-2	\$2,157,215	HE	4	All	MN05	UST, St. Paul	MN05	UST, St. Paul	
HE4-3	\$3,000,000	HE	4	All	MN05	U of M, Minneapolis	MN04	U of M, St. Paul	
<b>District 5</b>									
AH-01	\$5,100,000	EP	1	Hydro	MN05	Crown Hydro, Minneapolis	MN05	Crown Hydro, Minneapolis	
EP4-11	\$1,850,000	EP	4	Solar	MN04	EIC, St. Paul	MN05	IPS, Minneapolis	
EP4-15	\$2,661,320	EP	4	Solar	MN05	North Minneapolis	MN05	MRES, Minneapolis	
EP4-20	\$583,513	EP	4	Solar	MN04	Midway Superstore, St. Paul	MN05	Target, Minneapolis	
EP4-22	\$969,741	EP	4	Solar	MN05	MPRB, Minneapolis	MN05	MPRB, Minneapolis	
RD4-1	\$999,999	RD	4	Biomass	MN05	U of M, Minneapolis	MN05	U of M, Minneapolis	
RD4-2	\$982,408	RD	4	Solar/Wind	MN02	WCROTC, Morris	MN05	U of M, Minneapolis	
RD4-7	\$1,000,000	RD	4	Solar	CA/MN05	InterPhases/U of M	CA	InterPhases, Moorpark	
RD4-11	\$1,899,449	RD	4	Biomass	MN08	NRRI, Coleraine	MN05	U of M, Minneapolis	
RD4-12	\$625,102	RD	4	Wind	MN05	U of M, Minneapolis	MN05	U of M, Minneapolis	
RD4-13	\$1,391,684	RD	4	Wind	MN05	U of M, Minneapolis	MN05	U of M, Minneapolis	
RD4-14	\$161,081	RD	4	Wind	MN01	Grand Meadows, Nobles Co.	MN05	Barr Engineering, Minneapolis	
HE4-3	\$3,000,000	HE	4	All	MN05	U of M, Minneapolis	MN04	U of M, St. Paul	
<b>District 6</b>									
EP4-24	\$1,106,600	EP	4	Solar	MN06	Stearns, Sherburne, Meeker	OK	Bergey Windpower, Norman	
HE4-1	\$5,500,000	HE	4	All	MN05	St. Cloud State, St. Cloud	MN04	U of M, St. Paul	
<b>District 8</b>									
RD4-11	\$1,899,449	RD	4	Biomass	MN08	NRRI, Coleraine	MN05	U of M, Minneapolis	