PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED

STATE OF NORTH DAKOTA
BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION

Randy Christmann	Chair
Julie Fedorchak	Commissioner
Brian Kroshus	Commissioner

NORTHERN STATES POWER COMPANY ADVANCE PRUDENCE – ACQUISITION OF 302.4 MW WIND GENERATION APPLICATION

CASE NO. PU-17-372

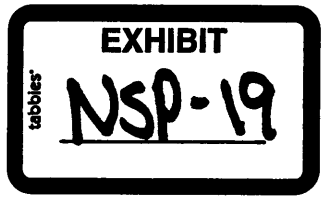
SUPPLEMENT

OVERVIEW

Northern States Power Company, doing business as Xcel Energy (NSP, Xcel Energy, or the Company), submits to the North Dakota Public Service Commission (Commission) this supplement to our October 10, 2017 Application for an Advance Determination of Prudence (Application) for the Company to build, own, and operate the 302.4 MW Dakota Range I and II wind projects ("Dakota Range" or "Project").

The purpose of this Supplement is to update the Commission regarding the impacts of the 2017 Tax Cuts and Jobs Act (TCJA) and other significant changes on the Dakota Range project and to provide updated economic data and modeling for the project that take those impacts into account. Pursuant to the letter filed with the Commission on February 5, 2018 in this Case – and the Commission's February 14, 2018 Order postponing this proceeding – the Company and Advocacy Staff will update the record in this proceeding consistent with the information contained in this Supplement.

The TCJA reduces our overall electric costs of service and thus results in net customer benefits. It also, however, has minor offsets as it modestly increases the project-specific revenue requirement for wind projects that receive federal tax credits. In addition, and since filing our initial Application, we have obtained greater cost certainty with respect to transmission upgrades and have continued to seek opportunities to improve the project economics on behalf of our customers:



- We received a favorable reduction in expected transmission upgrade costs to the project;
- We negotiated a higher-than-expected sales tax rebate grant from the State of South Dakota; and
- We have contracted for lower periodic O&M costs than previously forecasted.

The net impact of the these changes is a project that delivers a Levelized Cost of Energy (LCOE) over a 25 year period of **[TRADE SECRET BEGINS TRADE SECRET ENDS]**. This LCOE is lower than our expected 2021 delivered cost of coal or natural gas, represents a fuel cost savings for our customers, and results in a base Present Value of Revenue Requirement (PVRR) savings of $167 million system-wide and $9 million for our North Dakota customers. While the updated LCOE is **[TRADE SECRET BEGINS TRADE SECRET ENDS]** higher than our pre-TCJA filing, the project remains highly competitive and will result in substantial and lasting benefits for our customers and the state.

Additionally, project certainty with respect to transmission remains unchanged and, as noted above, the costs associated with transmission improved due to the MISO restudy. Unlike other projects under development in MISO (including some projects in our own 1,550 MW portfolio), Dakota Range has an executed Generator Interconnection Agreement and a known assignment of transmission upgrades. As such, we believe Dakota Range represents a prudent project to add to our generation portfolio.

For all of these reasons, we continue to believe that Dakota Range is prudent, and we respectfully request that the Commission grant an Advanced Determination of Prudence.

SUPPLEMENT

A. Tax Cuts and Jobs Act

On December 22, 2017, the President signed the TCJA, which enacted significant changes to the Internal Revenue Code. The implications of the TCJA are complex. We recently provided a detailed discussion of the law and its impacts on our business in response to the Commission's January 10, 2018 Order Initiating Investigation in Case No. PU-17-490. One category of impacted costs is production tax credits. Importantly, the TCJA does not actually change the value of PTCs. They will continue to be earned at $0.024/kWh, adjusted annually for inflation and year of in-service (that said, Dakota Range is an 80% PTC project so the PTC value is

$0.019/kWh). However, in ratemaking, the PTCs are grossed-up at the applicable tax rate and credited to customers. As a result, the TCJA's lower corporate tax rate reduces the tax gross-up factor and this lowers the customer credit associated with PTCs on wind assets. Offsetting the lower credit from the PTC gross-up is a lower gross-up on the equity component of the cost of capital. Because the PTC is such a large part of the value of the project and it is all experienced in the first 10 years, the impact of the TCJA on it outweighs the reduction in revenue requirements due to the lower tax rate on our asset investment and thus increases the levelized cost of the project.

Additionally, the deferred tax liability associated with the project is likely to decrease due to the lower tax rate, which tends to increase the project-specific revenue requirement because a deferred tax liability is an offset to rate base. These effects are then partially offset by a decrease in total income tax expense for the project. Finally, while the Company plans to return the PTCs to customers over the first ten years of the project, the lower tax rate extends the timeframe for recovery of deferred tax assets. While we assumed a deferred tax asset carrying cost in our initial analysis, we have extended the period over which it will be returned by three years.

Taken together, these impacts from the TCJA would increase the project-specific revenue requirements for Dakota Range, raising the LCOE for the project from **[TRADE SECRET BEGINS TRADE SECRET ENDS]**.[1] However, as discussed in the next section, we are also providing updates to our cost estimates for the project, all of which mitigate the impacts of the TCJA by bringing the project cost down significantly. And again, the increase in project-specific revenue requirements for Dakota Range is just one of many impacts the TCJA has on our business, which collectively result in significant net customer benefits.

B. Capital and O&M Reductions

As discussed above, we are also updating our cost estimates for Dakota Range to reflect a number of cost reductions, which together largely offset the impacts of the TCJA. We discuss each of these reductions in turn below.

First, after submitting our initial Application, MISO conducted a restudy of the DPP 2015 August West Area Study Group (which includes Dakota Range) due to the

[1] As an 80 % PTC-qualifying project, Dakota Range is impacted somewhat less by the TCJA than a comparable 100 percent project. We will be filing an update in connection with our 1,550 MW portfolio of 100 % PTC projects shortly after submitting this filing. That update will provide similar information regarding the impacts of the TCJA on our projects, as well as additional information regarding cost reductions we have been able to achieve and/or negotiate in order to mitigate those effects.

withdrawal of a 300 MW wind project in Iowa. MISO published the restudy on November 21, 2017. Our initial Application included a total of **[TRADE SECRET BEGINS TRADE SECRET ENDS]** in transmission upgrades and interconnection costs for Dakota Range. However, the updated study results assigned a smaller amount of transmission upgrades to Dakota Range, resulting in lower expected transmission costs to bring the project online. Based on those results, we now estimate only **[TRADE SECRET BEGINS TRADE SECRET ENDS]** in transmission upgrades and interconnection costs. This amounts to a **[TRADE SECRET BEGINS TRADE SECRET ENDS]** reduction in upfront capital for the project, which reduces the LCOE by **[TRADE SECRET BEGINS TRADE SECRET ENDS]**.

Second, on October 5, 2017, we applied to the South Dakota Board of Economic Development for a Reinvestment Payment Program grant in connection with the Dakota Range Project. In our initial Application, which we filed on September 26, 2017, we assumed a grant amount of approximately **[TRADE SECRET BEGINS TRADE SECRET ENDS]**. On November 15, 2017, we received a larger grant than we initially expected from the Board of Economic Development up to a maximum amount of **[TRADE SECRET BEGINS TRADE SECRET ENDS]**. This amounts to a **[TRADE SECRET BEGINS TRADE SECRET ENDS]** reduction to our estimate of initial capital for the project, which reduces the LCOE for the project by another **[TRADE SECRET BEGINS TRADE SECRET ENDS]**.

Finally, earlier this year we began testing the market for O&M services, and this update better reflects the improved pricing from our initial filing. **[TRADE SECRET BEGINS**

TRADE SECRET ENDS]

Taken together, these cost reductions serve to offset more than **[TRADE SECRET BEGINS TRADE SECRET ENDS]** of the increase in project revenue

requirement caused by the TCJA, with a resulting LCOE for the project of **[TRADE SECRET BEGINS TRADE SECRET ENDS]**.

C. Updated Economic Modeling

We updated the inputs to the Strategist resource planning model to reflect the TCJA impacts and cost reductions discussed above. In addition, we updated three other assumptions impacted by the TCJA, including the weighted average cost of capital, the tax impact on the revenue requirements of new generic resource investments, and the capacity credit.[2] All other assumptions are the same as those discussed in our initial Application.

As discussed in our initial Application, the Strategist planning model simulates the operation of the NSP System and estimates the cost to serve load through the life of the project. We use the model to test results under a range of input assumptions. To assess their impact on customer costs, we simulated the operation of the NSP System through 2053, with and without the addition of the 302.4 MW Dakota Range wind project proposed in this filing. All of our analysis assumes the addition of the 1,550 MWs of wind generation currently before the Commission in Case No. PU-17-120.[3] Therefore, the results of the Strategist analysis provide the incremental savings due solely to the addition of the Dakota Range project. The results of the updated Strategist analysis continue to show that this new wind resource will result in net savings for our customers under all sensitivity tests conducted.

Table 1, below, shows the updated present value of revenue requirement (PVRR) savings as well as the PVRR savings from our original analysis.

[2] The capacity credit corresponds to the cost of a generic CT.

[3] On March 19, 2018, the Company and Advocacy Staff requested that the Commission postpone further consideration of the 1,550 MW Wind Portfolio until such time as the Company can update its economic analysis to include the impacts of the TCJA.

Table 1: Incremental System PVRR Savings from Reference Case (millions)

	PVRR						
	Base	Markets Off	Low Gas Price	High Gas Price	+5% Cap Factor	-5% Cap Factor	Preferred Plan Renewables
Reference Case	0	0	0	0	0	0	0
Dakota Range - orig.	(182)	(132)	(106)	(274)	(245)	(119)	(133)
Dakota Range - suppl.	(167)	(118)	(91)	(259)	(229)	(105)	(122)

As shown above, the proposed wind project continues to provide significant benefits in all scenarios. The $167 million PVRR savings in the Base Case shown above compares to an initially projected PVRR savings of $ 182 million.

To illustrate how the costs (savings) change over time, Figure 1 below charts both the original and the supplemental filing annual costs (savings) impacts of the Dakota Range project as compared to the Reference Case for the PVRR Base assumptions.

Figure 1: Annual Costs (Savings) Compared to Reference Case

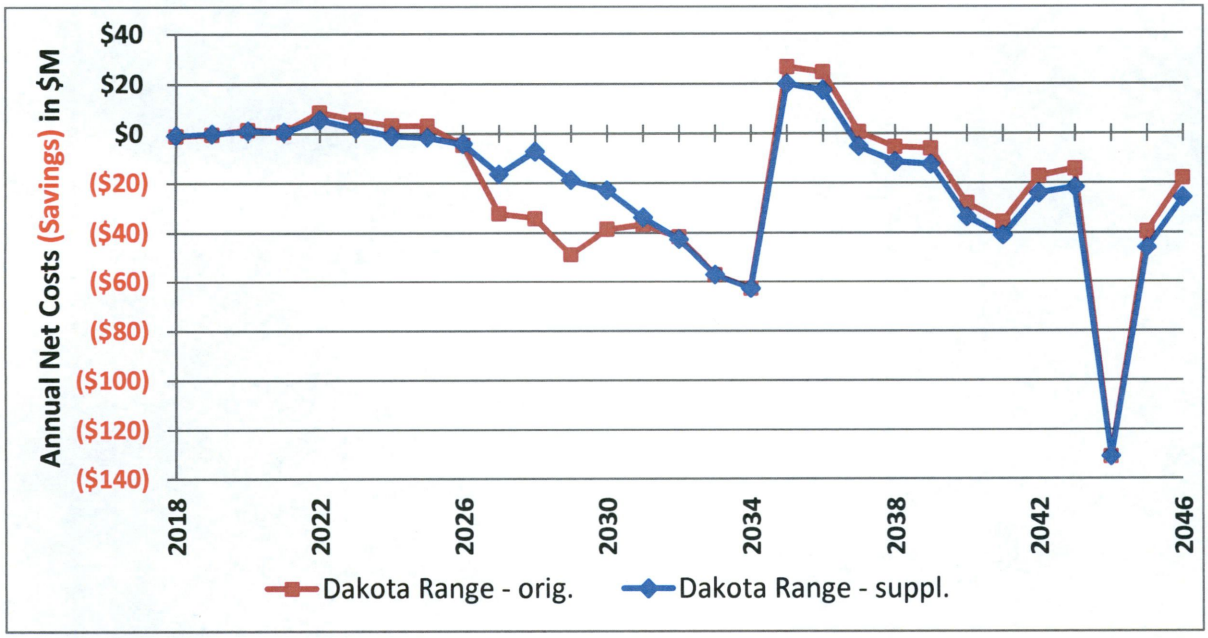


Table 2 shows the original and updated forecasted incremental annual revenue requirement impact of the wind additions through 2027. The values in the table reflect incremental costs or savings as compared to the Reference Case where Dakota Range is not included.

Table 2: Incremental System Revenue Requirement Impact Proposed Project – Initial
($millions)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
New Ownership Wind, 300MW	(0.8)	(0.1)	1.0	2.0	20.6	20.3	19.7	20.1	19.9	21.2
Capacity Cost Savings	0.0	0.0	0.0	0.0	(0.0)	(0.0)	(0.0)	0.0	0.0	(15.4)
Production Cost Savings	0.0	0.0	0.0	(0.8)	(12.8)	(13.2)	(8.8)	(14.1)	(6.4)	(1.1)
MISO Purchases	0.0	0.0	0.0	(0.6)	(2.2)	(2.5)	(6.8)	(3.4)	(6.7)	(11.0)
MISO Sales	0.0	0.0	0.0	(0.5)	(5.9)	(8.5)	(11.1)	(10.4)	(17.4)	(16.7)
Wind Congestion Costs*	0.0	0.0	0.0	0.3	3.4	3.5	3.6	3.6	3.7	3.8
Wind Integration Costs	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
Wind Coal Cycling Costs	0.0	0.0	0.0	0.1	1.7	1.8	1.8	1.8	1.9	1.9
Net Costs	**(0.8)**	**(0.1)**	**1.0**	**0.5**	**5.4**	**2.0**	**(1.0)**	**(1.7)**	**(4.3)**	**(16.6)**

Table 3: Incremental System Revenue Requirement Impact Proposed Project – Supplemental

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
New Ownership Wind, 300MW	(0.8)	(0.1)	1.0	2.0	20.6	20.3	19.7	20.1	19.9	21.2
Capacity Cost Savings	0.0	0.0	0.0	0.0	(0.0)	(0.0)	(0.0)	0.0	0.0	(15.4)
Production Cost Savings	0.0	0.0	0.0	(0.8)	(12.8)	(13.2)	(8.8)	(14.1)	(6.4)	(1.1)
MISO Purchases	0.0	0.0	0.0	(0.6)	(2.2)	(2.5)	(6.8)	(3.4)	(6.7)	(11.0)
MISO Sales	0.0	0.0	0.0	(0.5)	(5.9)	(8.5)	(11.1)	(10.4)	(17.4)	(16.7)
Wind Congestion Costs*	0.0	0.0	0.0	0.3	3.4	3.5	3.6	3.6	3.7	3.8
Wind Integration Costs	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
Wind Coal Cycling Costs	0.0	0.0	0.0	0.1	1.7	1.8	1.8	1.8	1.9	1.9
Net Costs	**(0.8)**	**(0.1)**	**1.0**	**0.5**	**5.4**	**2.0**	**(1.0)**	**(1.7)**	**(4.3)**	**(16.6)**

* Congestion Costs reflected as cost adder to wind generation rather than lower generator LMP.

Table 3, below, shows the updated forecasted incremental impact on average monthly bills in North Dakota. It is important to note that the recovery mechanism used to recover the costs of this wind addition will impact the actual timing of the recovery and the actual class allocation. We have provided an estimated impact below.

Table 3: Updated ND Forecasted Incremental Impact on Monthly Bills

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Residential	($0.01)	($0.00)	$0.02	$0.01	$0.09	$0.01	($0.01)	($0.02)	($0.06)	($0.29)
Commercial Non Demand	($0.02)	($0.00)	$0.02	$0.01	$0.12	$0.01	($0.02)	($0.03)	($0.08)	($0.35)
C&I Demand	($0.68)	($0.11)	$0.88	$0.43	$4.41	$0.15	($0.94)	($1.45)	($3.57)	($12.21)
Lighting	($0.01)	($0.00)	$0.01	$0.00	$0.04	($0.01)	($0.03)	($0.03)	($0.06)	($0.03)

CONCLUSION

We appreciate the opportunity to provide this Supplement to the Commission and parties. For all of the reasons discussed above, we continue to believe that Dakota Range wind project will provide numerous and substantial cost savings to our customers and system. We therefore respectfully reaffirm our earlier request that the Commission make an advance determination of the prudence of the 302.4 MW Dakota Range wind project.

Dated: March 23 2018

Northern States Power Company

Respectfully submitted,

/s/ David Sederquist