MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	April 26, 2018		Agenda Item **6
Company	Northern States Power Company (d/b/a Xcel Energy)		
Docket No.	**E002/M-17-694** **In the Matter of Xcel Energy's Petition for Approval of the Acquisition of 302.4 MW Dakota Range Wind Project**		
Issues	Should the Commission approve Northern States Power Company's Petition?		
Staff	Sean Stalpes Kelly Martone	sean.stalpes@state.mn.us kelly.martone@state.mn.us	651-201-2252 651-201-2245

✓ **Relevant Documents**	**Date**
Xcel Energy, *Petition*	September 26, 2017
Department of Commerce, *Comments*	November 30, 2017
Laborers District Council of Minnesota and North Dakota, *Comments*	December 1, 2017
Laborers-Employers Cooperation and Education Trust, *Comments*	December 1, 2017
Xcel Energy, *Reply Comments*	December 14, 2017
Department of Commerce, *Supplemental Comments*	January 4, 2018
Xcel Energy, *Supplemental Filing*	March 16, 2018

Table of Contents

I. Statement of the Issues

Should the Commission approve Xcel Energy's petition to build, own, and operate the 302.4 MW Dakota Range wind project?

Should the Commission approve an aggregate, symmetrical capital cap for the initial construction of the project?

Should the Commission allow Xcel to use its Capital Services affiliate agreement for Dakota Range?

Is the 302.4 MW proposed Dakota Range wind project is a reasonable and prudent way to meet Xcel's obligations under the Minnesota Renewable Energy Standard (RES)?

II. Background

Dakota Range I and II (Dakota Range) is a 302.4 MW self-build wind project with an expected in-service date of 2021. Dakota Range is being developed by APEX AGL, LLC (APEX). As shown by the figure below, Dakota Range will be located in northeastern South Dakota.

Figure 1: Dakota Range Wind Project Location

The estimated Levelized Cost of Energy[1] (LCOE) of Dakota Range was designated as trade secret information; however, Xcel noted that the LCOE "compares favorably to the Company's recently approved wind projects,"[2] referring to the projects approved in Xcel's 1,550 MW wind portfolio (Blazing Star I and II, Foxtail, Freeborn, Lake Benton, and Clean Energy #1).[3]

Notably, Dakota Range is only eligible for 80% of the federal wind production tax credit (PTC), whereas the wind projects in Xcel's 1,550 MW were eligible for 100% of the PTC. But, like the

[1] LCOE is a method of evaluation in which the capacity, energy, and other cost elements in project proposals are translated into dollars-per-megawatt hour ($/MWh) metric. Levelized prices for Dakota Range are a fixed $/MWh price that have the same net present value as the actual cost streams Xcel generated in its Strategist analysis.

[2] Xcel Petition, at 3.

[3] Docket No. 16-777.

1,550 MW portfolio, Xcel was able to maximize its PTC benefit by securing enough turbines through its "pre-existing relationship with Vestas" and "Capital Services affiliate agreement"[4] to satisfy the safe harbor provision of the tax law.[5]

The expected net capacity factor and annual energy production of Dakota Range was also designated as trade secret. The wind performance analysis can be found on page 11 in the Trade Secret version of the Petition. Xcel did make its project curtailment assumption public, and Xcel assumes that, over the lifetime of the project, curtailment will average approximately 4%. This is consistent with the curtailment assumption in Xcel's 1,550 MW wind acquisition docket.

A. Circumstances Leading to the Dakota Range Proposal

Also like the 1,550 MW wind portfolio, Dakota Range emerged from the Company's 2016 wind request for proposals (the 2016 RFP). There were a total of 95 proposals received in response to the 2016 RFP, with 26 continuing to the final rankings.

To evaluate each bid, Xcel calculated the LCOE for all proposals, then ranked them by categorizing lowest cost proposals into "buckets," with the lowest LCOE projects comprising "Bucket 1," the next tier into "Bucket 2," and so forth.

Next, projects received a "non-price score," which considered aspects such as permitting, site control, and transmission. The results of the LCOE review and non-price review were used to develop the final project ranking.

At the conclusion of Xcel's evaluation process, the Company sent a recommended shortlist of bids to the Independent Auditor before proceeding to negotiations. The Dakota Range I-II bid did not proceed to the shortlist, as it was not ranked among the top three buckets.

APEX provided several combinations of bids for Dakota Range, including Purchased Power Agreements (PPA) and Build-Own-Transfer (BOT) options, as illustrated in Xcel's December 14, 2017 reply comments.

Table 1
APEX Project Options

Bid Format	Project Makeup	LCOE
		[PROTECTED DATA BEGINS
700 MW PPA	Dakota Range I-V	
300 MW PPA	Dakota Range III-IV	
300 MW BOT	Dakota Range I-II	
300 MW PPA	Dakota Range I-II	
		PROTECTED DATA ENDS]

[4] Xcel Petition, at 8.

[5] Under the Consolidated Appropriations Act of 2016, wind facilities can qualify for the "safe harbor" clause of the PTC by either (1) commencing "physical work of significant nature" at the project site or at a factory on equipment for the project or (2) incurring at least 5% of the total project cost.

According to Xcel, at the time, "The Dakota Range I-II BOT and PPA bid options both fell outside of the third bucket."[6] However, after being declined initially, Xcel explained that "through discussions with both APEX and Vestas, we found an opportunity to further reduce the overall cost (and LCOE) by converting the project from a BOT to a self-build project."[7] Furthermore, Xcel noted, "While APEX initially submitted a bid into our RFP with their costs and estimates, we compiled our own costs and estimates as the plans transitioned into a Company-built project."[8]

B. MISO, Generator Interconnection Agreements, and Transmission Certainty

Xcel frequently emphasized that one of the main unique advantages Dakota Range has relative to other prospective wind projects (and even some already approved in its 1,550 MW wind portfolio) is "transmission certainty." Xcel defines transmission certainty as follows:

> A project is considered to have "transmission certainty" when there is little or no risk that additional transmission upgrades will be required for the project and the costs associated with the transmission upgrades are known.[9]

Since the close of the RFP process for the 1,550 MW wind acquisition, several changes have occurred that Xcel believes makes the Dakota Range I-II a particularly attractive wind project:

1. MISO's August 2015 Definitive Planning Phase (DPP) Study Cycle concluded, which assigned a reasonable amount of network upgrades in the fourth quarter of 2017 (Dakota Range Generator Interconnection Agreement [GIA]).[10] This had not been completed by the initial 2016 RFP evaluation phase. Completion of this study afforded the project substantially greater transmission certainty, and the lack of this certainty initially was a primary reason why the project did not move forward.

2. The network upgrades lowered the total expected project costs and increased Xcel's confidence in the project's ability to reach commercial operation.

3. The Company conducted additional due diligence on other outstanding project issues and confirmed the viability of the project on all fronts.[11]

4. Xcel has secured its own safe harbor turbines, which qualifies the project for 80% of the wind PTC.[12,13]

---

[6] Xcel responses to Information Request, Question 10 for docket 17-694 filed on December 22, 2017.

[7] Xcel reply comments (December 14, 2017), at 3.

[8] Petition, at 12.

[9] Xcel response to PUC Information Request No. 4 (October 2, 2017).

[10] Petition, at 10.

[11] Xcel Petition Docket E002/M-17-694 filed on 09/26/2017 at page 2.

[12] Xcel Petition Docket E002/M-17-694 filed on 09/26/2017 at page 8.

[13] Xcel has been assured delivery of turbines by 2021 to meet the in-service date requirement of four years from

5. Further cost reductions could be realized by converting the project into a self-build.[14,15]

To explain bullet point #1 in slightly more detail, the MISO Definitive Planning Phase (DPP) is a generation interconnection study process. In short, if new generation capacity is in the planning picture, the DPP can inform a potential network upgrade cost associated with the proposed generation. It may even change the in-service date of the generation, per the MISO Tariff. (There is a way to interconnect with provisional GIA, but in that case the generator would bear a huge risk of paying for any network upgrade MISO requires based on the completed DPP study.)

The fact that Dakota Range has gone through the DPP means that the facility and interconnection costs have been studied and are fairly well-known—i.e. higher-than-expected transmission costs are not likely. In addition, according to Xcel, "Unlike so many 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."[16]

Xcel further noted that the next group of projects with transmission certainty will come from the MISO generator interconnection studies for the February 2016 Study cycle:

> The February 2016 study cycle should have transmission certainty around mid-year 2018, when all system and facility studies are expected to complete. However, it is unclear at this time if viable projects will emerge from the February 2016 Cycle, or if they will be commercially available. The August 2016 study will likely be completed in late-2018 or early-2019, again with the same uncertainties surrounding whether viable projects will ultimately emerge.[17]

Staff notes that, while the transmission-related advantages of Dakota Range is one of the project's primary benefits Xcel cites, the Dakota Range I-II option never received a non-price score because it was not included in one of the top three buckets. This further means that the Dakota Range I-II option was never evaluated by the Independent Auditor. However, because Dakota Range I-V (700 MW PPA) and Dakota Range III-IV (300 MW PPA) *were* categorized in the third bucket and therefore *did* receive non-price scores, Xcel inferred that the Dakota Range I-II BOT option "would have received one of the highest non-price scores" if it had been included in one of the top buckets.[18]

---

the beginning of construction.

[14] Xcel Petition Docket E002/M-17-694 filed on 09/26/2017 at page 9.

[15] Xcel Reply Comments Docket E002/M-17-694 filed on 12/14/2017 at page 3.

[16] Xcel Supplement (March 16, 2018), at 2.

[17] Xcel response to PUC Information Request No. 4 (October 12, 2017).

[18] Xcel responses to PUC Information Request No. 10 (December 22, 2017).

C. Capital Services Affiliate Agreement

In addition to allowing the Company to build, own, and operate Dakota Range, Xcel requests the Commission approve for Dakota Range the use of the Company's Capital Services affiliate agreement approved by the Commission in Docket No. 17-215.

In August 2016, the Company established an affiliate, Capital Services, LLC, to act as a service company within the Xcel Energy Inc. corporate family, except Capital Services is a "special purpose" service company. Capital Services will provide certain wind generation equipment procured from a non-affiliated vendor to the Company.

In September 2016, Capital Services executed a Master Supply Agreement (MSA) with Vestas-American Wind Technology, Inc. (Vestas) for the provision of wind turbines to support the Company's proposed 750 MW self-build wind projects in Docket No. 16-777 (the 1,550 MW portfolio). Also in 2016, Capital Services made payments of approximately $200 million for PTC safe-harbor wind generation equipment for up to 2,500 MW of potential Xcel Energy Operating Company-owned wind projects.

On March 15, 2017, Xcel filed a petition for approval of a Sale of Components Agreement between Xcel and Capital Services, and the Commission approved the petition on July 13, 2017.

For Dakota Range, Capital Services is currently negotiating a fixed price MSA with Vestas for the provision of wind turbines.[19] Pursuant to the agreed-upon terms, Xcel will secure sufficient turbine equipment to meet the five percent safe harbor requirement.

If the Commission approves the use of Xcel's Capital Services affiliate agreement, Xcel will (1) include reporting of the charges billed by Capital Services in the Company's annual jurisdictional report within the affiliate transaction section; and (2) provide a one-time report to the Commission with a breakdown of total costs for the wind generation equipment procured from Capital Services for Dakota Range within 60 days after the transfer to NSP is complete.

If the Commission authorizes Xcel to build Dakota Range, the Department supports the use of the Capital Services affiliate to supply Dakota Range's wind turbines using Xcel's proposed agreement.[20]

D. Economic Analysis

Xcel used the capacity expansion model, Strategist, to evaluate the project's economic benefit. In summary, Xcel explained:

> To evaluate the impact on our customers of the proposed wind portfolio, we used the Strategist resource planning model. The Strategist planning model simulates

[19] The term "currently" was used in Xcel's September 26, 2017 Petition. Staff is unaware of the January 25, 2018 status of the MSA.

[20] Department supplement comments (January 4, 2018), at 4.

> 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 approved by the Commission in Docket No. E002/M-16-777.[21]

1. The September 2017 Petition and March 2018 Supplement

The majority of Xcel's economic data is included in its September 26, 2017 Petition; the initial Petition includes the assumptions used, provides detail on the expansion plans from the modeling, and explains the modeling methodology.

However, on March 16, 2018, Xcel made a supplemental filing (Supplement) to include financial impacts from the 2017 Tax Cuts and Jobs Act (TCJA), as well as updates to a few of the project's assumptions, including expected transmission upgrade costs. Therefore, the two documents are very compatible, and the Supplement does not make the petition antiquated. The Petition contains more context and analytical discussion, and the March 2018 Supplement includes up-to-date estimates of customer savings, rate impacts, and a revised LCOE.

Importantly, the impact of the TCJA resulted in a substantially higher LCOE. However, as Xcel explained in its Supplement—much of which with trade secret designation—the Company was able to offset a large share of the impact to the LCOE. This occurred by the following means: Xcel received a higher-than-expected (maximum, in fact) grant from the South Dakota Board of Economic Development; MISO substantially reduced the estimate of transmission upgrades and interconnection costs; and Xcel reduced its forecast for O&M services.

Most of the other underlying assumptions from the Petition remained the same for the Supplement. As Xcel noted in its Supplement, aside from a few updated parameters, "All other assumptions are the same as those discussed in our initial Petition."[22] The expansion plans are the same and, for the most part, so are the avoided costs.[23] Finally, in both filings, the results of Xcel's economic modeling analysis show that Dakota Range will result in net savings for customers under all scenarios and sensitivities tested.

One of the main differences between the two filings can be seen by comparing the "New Wind, 300 MW" row of Table 4 and Table 2 of the Petition and Supplement, respectively.[24,25] These

---

[21] Xcel Petition, at 14.

[22] Xcel Supplement (March 16, 2018), at 5.

[23] One thing to note is that Xcel made a small adjustment to the capacity credit, which corresponds to the cost of a generic natural gas combustion turbine (CT).

[24] There is a small rate decrease in 2018-2019, which, according to the Microsoft Excel Live model, is due to AFUDC Income Offset and Deferred Income Tax Expense. To limit space, and because these savings are small, staff decided not to include them in the excerpted table above.

[25] Staff notes that Table 2 only shows data through 2027. Thus, in PUC Information Request No. 19, staff

largely stem from the impacts of the TCJA, but also the aforementioned updated transmission costs, O&M forecast, and grant from the South Dakota Board of Economic Development. The table below compares the ownership-related revenue requirements in the 2020-2030 timeframe.[26]

Incremental Rev. Req., New Ownership Wind (in $millions)											
Filing	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Petition (Sept 2017)	1.4	2.1	23.8	23.9	23.9	24.8	19.6	6.3	(4.3)	(6.6)	(6.2)
Supplement (March 2018)	1.0	2.0	20.6	20.3	19.7	20.1	19.9	21.1	22.4	22.5	9.2

The following excerpt includes Xcel's explanation for the short-term changes to the revenue requirement between the two filings:

> [T]he Tax Cuts and Jobs Act (TCJA) impacts the revenue requirement in several ways: the gross-up of the PTC is lower, taxes on the project are reduced, the deferred tax liability decreases, and the timeframe for recovery of the deferred tax asset is extended by three years. Taken together, the impacts of the TCJA result in an increase in the revenue requirement for Dakota Range. The increased revenue requirement was largely offset due to lower transmission upgrade and interconnection costs, a larger than originally estimated grant from the South Dakota Board of Economic Development and lower O&M costs.
>
> The lower transmission cost and higher grant award results in lower rate base and lower return on rate base as reflected in the updated revenue requirement model. The lower O&M projection results in a dollar for dollar reduction in the expense included in the revenue requirement. Considered on an annual basis, these cost reductions offset the impacts of the TCJA and result in an updated revenue requirement that is lower than initially filed in 2021-2025 due to the lower rate base and O&M expense. The updated revenue requirement is higher in 2026-2031 because the lower rate base and O&M expense do not fully offset the increase due to the TCJA and the relative impact of the extended DTA deferral, which is greatest during this period. Finally, from 2032-2046, the revenue requirement is lower than initially filed, again due to the lower rate base and O&M projections.[27]

Of note, the excerpt above refers to the 2021-2046 time period. Staff notes this is because Dakota Range as modeled starts generating in 2021 and stops generating in 2046.

---

requested Xcel provide a complete table. Years 2028 and 2029 are from Xcel response to PUC IR 19.

[26] Years 2028-2030 incorporated data from Xcel's responses to PUC Information Requests 14 and 19.

[27] Xcel response to PUC Information Request No. 21 (March 28, 2018).

2. Projected Net Savings

Table 1 below shows the updated present value of societal cost (PVSC) and present value of revenue requirement (PVRR) savings.[28] The base PVSC assumptions include a regulated cost of $21.50 for each ton of CO_2 emitted in 2022, escalating at two percent thereafter, as well as externality costs for emissions of criteria pollutants and CO_2 before 2022. The PVRR savings do not include CO_2 costs or other externality costs and do not include a surplus capacity credit.

Table 1: Incremental PVSC and PVRR Savings from Reference Case
($millions)

	PVSC								
	Base	Markets Off	Low Gas Price	High Gas Price	Low CO_2 Extern	High CO_2 Extern	+5% Cap Factor	-5% Cap Factor	Preferred Plan Renew
Reference Case	0	0	0	0	0	0	0	0	0
Dakota Range	(295)	(206)	(225)	(384)	(220)	(459)	(377)	(211)	(269)

	PVRR								
	Base	Markets Off	Low Gas Price	High Gas Price			+5% Cap Factor	-5% Cap Factor	Preferred Plan Renew
Reference Case	0	0	0	0			0	0	0
Dakota Range	(167)	(118)	(91)	(259)			(229)	(105)	(122)

Table 2 of Xcel's Supplement, below, shows the incremental revenue requirement impact of Dakota Range. Xcel projects a short-term net rate impact until 2024, which is offset by selling energy into the MISO market, avoiding MISO market purchases, and displacing existing generation.[29]

Table 2: Incremental Revenue Requirement Impact Proposed Project
($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)**

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

[28] Xcel Supplement (March 16, 2018), at 6.

[29] Revenue requirements were spread system-wide, but Xcel then applied a jurisdictional allocator to determine the costs allocated to the Minnesota jurisdiction.

Xcel's Supplement contains a substantial amount of information with Trade Secret designation, which makes it difficult to publicly discuss how Xcel was able to bring down the LCOE to a pre-TCJA level. Thus, staff refers the Commission to those areas of the trade secret portions of Xcel's Supplement that had the greatest impact. Particularly noteworthy is Xcel's revised forecast for O&M services, as this had a significant impact on the LCOE. Lastly, staff notes that the Commission might have to close the hearing to be able to learn more about Xcel's recent negotiations with vendors and contractors, especially those which have taken place since the initial petition.

E. Production Tax Credit

Under the December 2015 legislation, wind facilities must begin construction in 2018 to qualify for the 80% PTC "safe harbor." By law, there are two ways to begin construction for purposes of the safe harbor: (1) commencing "physical work of significant nature" at the project site or at a factory on equipment for the project or (2) incurring at least five percent of the total project cost.[30]

As Xcel explained in its Supplement, the TCJA does not actually change the value of PTCs; at 80% eligibility, the PTCs will continue to be earned at $0.019/kWh, adjusted annually for inflation and year of operation. The TCJA's impact is that the lower corporate tax rate reduces the tax gross-up factor, which lowers the customer credit associated with PTCs on wind assets. (In ratemaking, PTCs are grossed-up at the applicable tax rate and credited to customers.)[31]

Offsetting the lower credit from 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, it outweighs the reduction in revenue requirements due to the lower tax rate on our asset investment and increases the revenue requirements and LCOE of the Dakota Range project.

F. Symmetrical Cost Cap

Lastly, Xcel requests that the Commission approve an aggregate, symmetrical capital cap for the initial construction of the project, which is consistent with the self-build portion of the Company's 1,550 MW wind portfolio. Under this method, Xcel would track and recover costs separately. Also, Xcel will forgo the recovery of any costs that exceed the proposal (plus financing costs) and, in turn, the Company would retain any cost-savings.

G. The Resource Acquisition Process and Modified Track 2 Process

Finally, as a lead-in to the Department's comments, staff will discuss the Commission's resource acquisition and modified "Track 2" processes. (The Department recommends the Commission deny the project without prejudice on procedural grounds.)

---

[30] Xcel Petition, at 8.

[31] Xcel Supplement, at 3.

The Commission (in 2006) approved methods in which Xcel should undergo when acquiring new system resources (differing when Xcel intends to be a bidder versus when it does not). The process was established to ensure transparency, increase competition, and establish a fair playing field for third party generators looking to connect on Xcel's system. The 'Track processes' - among other things - requires:

- a competitive bidding process when Xcel *does not* submit a proposal in a competitive resource procurement process (Track 1), and

- a Certificate-of-Need-like process when Xcel *does* submit a proposal (Track 2).[32]

Due to party agreement in the last IRP docket, the Commission approved a competitive bidding process for use in a defined and anticipated near-term circumstance. A process modification was created -the 'Modified Track 2'– for the purpose of acquiring new wind and solar resources in the 2016-2021 timeframe (in order to meet deadlines related to use of the PTC) and, as intended, was used for the 1,550 MW wind acquisition that occurred in Commission Docket 16-777.

In the 'Modified Track 2' process, it was assumed that any wind or solar RFP would produce robust results (and therefore be easily compared) and not require a contested case. Xcel and the Department agreed to certain terms that would provide transparency in the case that Xcel also submitted proposals. Xcel submitted its proposals the day prior to the RFP bids being due and established firewalls within the company. Additionally, the process utilized an independent auditor to evaluate the company's work to ensure it was unbiased and fair. The specific process to follow was (summarized by the Department of Commerce in their initial comments):

> This process requires that Xcel issue a request for proposals (RFP) for projects from independent power producers (IPPs) and then show that its proposal is worthy of selection in light on the projects proposed by IPPs. To ensure that the comparison to IPP projects is valid and Xcel does not have an unfair advantage, RFP responses must be received *shortly after* Xcel submits a proposal. The modified Track 2 process also requires that Xcel justify its proposal in light of the six factors that the Commission must consider when evaluating a request for a certificate of need exemption under Minn. Stat. § 216B.243, subd. 9.[33]

For the current proposal, Xcel did not use a new competitive bidding process and instead proposed a previously rejected project due to improved price factors. The DOC clearly outlines the Modified Track 2 steps and compares this to the steps taken by Xcel, which is also

[32] In the Matter of Northern States Power Company d/b/a Xcel Energy's Application for Approval of its 2004 Resource Plan, Docket No. E-002/RP-04-1752, Order Establishing Resource Acquisition Process, Establishing Bidding Process Under Minn. Stat. § 216B.2422, Subd. 5, and Requiring Compliance Filing (May 31, 2006). More detail on the lengthy history of the two-track bidding process can be found in the Department's Comments, pp. 44–50. (July 8, 2016).

[33] Department initial comments, at 2.

summarized later in the parties' comments section.[34]

III. Parties' Comments

A. Department of Commerce

The Department recommends the Commission deny the petition without prejudice. In its Supplemental comments, the Department enumerated several reasons why it is important that Xcel adheres to processes required by Commission order:

1. Approving a resource acquisition when a utility has deviated from a process required by a Commission Order would send a message that Commission Orders must not necessarily be followed.

2. There is no way to know with sufficient certainty and transparency that the project is best (particularly on a cost basis) due to the lack of a concurrent, transparent, and independently audited bidding process. Instead, the Commission must rely on educated guesses and Xcel's judgment.

3. Approving a resource acquisition when a utility has deviated from a process required by a Commission Order and not used a concurrent, transparent, and independently audited bidding process allows a utility to take further advantage of information asymmetries and thus bend the resource-acquisition process to benefit their shareholders instead of ratepayers. Approval increases the likelihood of this situation occurring in the future.

4. Approval could reduce the confidence of potential suppliers in the objectivity, good faith, and predictability of the competitive processes used in Minnesota, thereby harming future resource acquisitions and putting at risk the ability of utilities to acquire least-cost resources.

5. A substitute project or projects acquired through a new process could be just as good as or better than Dakota Range. Indeed, a substitute project could be simply an updated version of Dakota Range, as denial of the current petition does not preclude Xcel or Apex from re-proposing Dakota Range in a new bidding process. In addition, Xcel has communicated to the Department that the Company has secured the wind turbines needed to obtain the 2017 production tax credit (PTC) value for Dakota Range and could likely use those turbines to receive the 2017 PTC for a substitute project.[35]

Pursuant to the 15-21 Order, Xcel followed the modified Track 2 process to select the 750 MW of self-build projects approved in Docket No. E002/M-16-777 (a subset of the total 1,550 MW approved in that docket), as follows:

[34] DOC Initial Comments, at 4.

[35] Department supplement (January 4, 2018), at 2, Table 1.

1. Xcel contacted wind developers about pre-construction wind farms that the Company could buy and then build itself.

2. After reviewing price and non-price criteria for the pre-construction wind-farms, Xcel selected four pre-construction wind farms, with would have an expected cumulative capacity of 750 MW after the wind farms were constructed.

3. Xcel issued an RFP for projects from IPPs.

4. On October 24, 2016, the day before receiving responses to the RFP, Xcel submitted a petition requesting approval of the 750 MW of self-build projects selected in the second step. Xcel justified the selection of the projects by describing the due-diligence process Xcel undertook to select the projects and the 216B.243 subd. 9 factors, including why Xcel selected the projects instead of alternative projects, as required under the second factor ("alternative approaches for supplying the renewable energy to be supplied by the proposed facility").5

5. Xcel evaluated the bids responding to the RFP and selected 800 MW of IPP projects based on price and non-price criteria. Xcel's selection process was overseen and confirmed appropriate by a third-party auditor, Leidos Engineering LLC. 6. On March 16, 2017, Xcel submitted a supplemental petition in 16-777 requesting approval of the 800 MW of IPP projects selected in the fifth step. Xcel also used the results of the RFP issued in the third step to justify the 750 MW of self-build projects proposed in the fourth step.

In contrast, Xcel did not follow the modified Track 2 process or another sufficiently competitive process to select Dakota Range I-II. Rather, Xcel selected Dakota Range I-II as follows:

1. Apex Clean Energy (Apex), the developer of Dakota Range I-II, bid Dakota Range I-II in response to the 2016 RFP issued in the third step above, as both a build-own-transfer (BOT) project, under which an IPP builds a project and then transfers ownership to Xcel, and power purchase agreement (PPA), under which an IPP builds a project and then sells the project's output to Xcel under a contract.

2. Xcel rejected the two Dakota Range I-II bids because neither bid scored adequately in the price and non-price criteria used to evaluate bids in the RFP.

3. Apex contacted Xcel shortly after conclusion of the RFP to inform Xcel that Apex wanted to reduce the pricing of their bid. However, the RFP rules did not allow Xcel to allow a bid modification.

4. Xcel selected other IPP projects, as described in the fifth step above, but Xcel and Apex maintained contact.

5. Xcel decided it wanted to buy Dakota Range I-II (not yet in the construction stage) from Apex, because the price and non-price aspects of Dakota Range I-II had improved to Xcel's satisfaction. The purchase and sale agreement (PSA) Xcel intends to use to buy

the current Dakota Range I-II assets is included in Xcel's petition as trade-secret Attachment B.

6. Xcel filed the petition in this docket requesting approval of the Dakota Range I-II acquisition and justifying the acquisition by comparing Dakota Range I-II to the projects acquired in Docket No. E002/M-16-777.

Under the process just described, Xcel did not follow the first requirement of the modified Track 2 process, which states that Xcel must justify a self-build proposal in light of the results of an RFP for IPP projects, for which proposals must be received shortly after Xcel submits its self-build proposal. Instead, Xcel attempted to justify Dakota Range I-II in light of the IPP and self-build projects selected in Docket No. E002/M-16-777 and thus the 2016 RFP results, which are now a year old.[36]

The Department's Supplemental comments made further recommendations in the event the Commission approves Xcel's petition to acquire Dakota Range. Specifically, the Department recommended that if the Commission finds that Xcel's proposal to build, own, and operate Dakota Range is in the public interest, the Department recommends the Commission:

- Approve the Company's request to set an aggregate, symmetrical cap on initial capital costs;

- Allow Xcel's Capital Services affiliate to supply Dakota Range's wind turbines using Xcel's proposed agreement;

- Take no action on the Company's request for confirmation that Dakota Range is a reasonable and prudent way for Xcel to meet its renewable energy standard (RES) obligation;

- Include the following ratepayer protections:

    - the Commission will hold Xcel accountable for the price and terms used to evaluate Dakota Range;
    - ratepayers will not be put at risk for any assumed benefits that do not materialize;
    - ratepayers must be sufficiently protected from risks associated with the non-deliverability of accredited capacity and/or energy from Dakota Range;
    - Xcel must report in its monthly fuel clause filings and annual automatic adjustment filings the amount of any curtailment payments, along with explanations for the curtailments, for Dakota Range;
    - Xcel must clearly account for all costs incurred for Dakota Range;

[36] Department supplemental comments (January 4, 2018) at 4.

- Xcel must file a compliance filing in January 2019 that provides an update on the status of Dakota Range, and must file, annually thereafter, a compliance filing that includes the actual delivered energy and actual accredited capacity; and
- Xcel must report quarterly, until Dakota Range is in service, project failures along with the options available to the Commission to remedy any failures that occur.

B. Laborers-Employers Cooperation & Education Trust (LECET)

The LECET of Iowa, South Dakota, and Nebraska is a joint labor-management committee formed by the Laborers' International Union of North America and its signatory contractors. While they take no current position on the merits of this project, the LECET wishes to engage in the potential construction, utility, demolition and other related projects. They believe this project "has the potential to affect the construction industry in several surrounding states, including South Dakota, where the proposed wind farm is to be located." LECET is poised to engage in the formal fact finding process and be involved in the conversation to determine the merits of the project. They may share their position or clarify their remarks at a later date when more information is available.

C. Laborers District Council of Minnesota and North Dakota

The Laborers District Council of Minnesota and North Dakota (Laborers Union) and its five Local Unions, represent more than 12,000 construction workers and public employees in Minnesota, North Dakota and Northwestern Wisconsin. They are affiliated with the Laborers International Union of North America (LIUNA), a 500,000 member-strong organization that fights on behalf of construction workers in the U.S. and Canada.

After reviewing Xcel's Dakota Range I-II proposal and the Department's comments, the Laborers Union "strongly supports the development of energy resources" and understands the Department's concerns. They believe the proposal is in the best interest of ratepayers and state residents if the project is able to capture PTCs and "create high-quality construction jobs for Minnesotans and South Dakotans who live near the site of the proposed project." The Laborers Union goes on to say "[i]f Dakota Range I and II were built under terms similar to those of Xcel's nearby Blazing Star I and II wind projects," they believe the project will provide "significant benefits to Minnesotan workers." The Laborers Union hopes the Commission will not dismiss the potential benefits of the proposal.

IV. Staff Analysis

As discussed previously, the Department recommends the Commission deny Xcel's Petition without prejudice; however, the Department did acknowledge that Dakota Range would be a cost-effective resource addition. In other words, Xcel and the Department appear to agree that Dakota Range will benefit ratepayers.

In the sections that follow, staff will discuss the merits of a few of Xcel's arguments supporting its position that Dakota Range will provide net benefits to ratepayers. Staff will also discuss

other aspects of Xcel's petition, such as consistency with the resource plan and the departure from Commission's required processes for resource acquisition, which Xcel acknowledges.

As a preliminary matter, staff notes that while the following sections point to several potential limitations of Xcel's economic analysis and possibly even mischaracterizations of past Commission orders, it is undisputable that Dakota Range is a very competitively priced wind project. Its LCOE is among the lowest for wind projects ever proposed to the Commission. Additionally, in Xcel's Strategist analysis, Dakota Range provided net benefits under every scenario tested, with and without carbon costs. These are important factors to keep in mind.

So while staff remains concerned about several key issues, the following sections are not intended to reflect reasons why the Commission should deny the project based on price. With this being said, the Commission might likewise be concerned about similar issues, such as the timing of when benefits might be realized, whether some claimed benefits might be realized at all, and, frankly, generally questionable modeling choices on the part of the Company. In short, staff does not dispute the fact Dakota Range is a very inexpensive wind project, relatively speaking. At the same time, however, the LCOE is not the only factor to consider, and it is not a foregone conclusion that the project is in the ratepayers' interests.

A. Dakota Range as a Backup Project

In Xcel's reply comments, the Company noted that to aid the Commission's consideration of this project, it is important to first establish context. Staff agrees. However, staff disagrees with Xcel on what the appropriate context is.

Xcel remarked that its Dakota Range proposal "is consistent with … the Commission's **suggestion** during the July 2017 wind acquisition docket hearing that the Company should continue to evaluate and bring forward wind projects."[37] (Emphasis added by staff.) Xcel also claimed that the Dakota Range project "addresses the Commission's and stakeholders' concerns that the Company have backup projects available should one of the projects in the recently approved 1,550 MW portfolio not reach commercial operation."[38] Then, in its reply comments, Xcel reiterated the point that "as a matter of context," the Commission's July 2017 hearing suggested Xcel pursue backup wind projects, and Xcel "listened carefully to this feedback."[39]

The Commission's order in the 1,550 MW wind acquisition docket did not mention backup projects, except to summarize the Clean Energy Organizations (CEO) comments. CEO was supportive of the maximum possible extent of wind that emerged out of Xcel's wind RFP. CEO was concerned at the time about the possibility that one or more of Xcel's proposed wind

[37] Xcel Petition, at 1.

[38] Xcel Petition, at 23.

[39] Xcel reply comments (December 14, 2017), at 3.

projects might fall through, and therefore offered a recommendation that would require Xcel to seek another project in the event one in its 1,550 MW portfolio failed to come to fruition.[40]

The Commission speaks through its orders, and what is not in its orders cannot be inferred. The fact is the Commission declined to adopt CEO's recommendation, so if the Commission was concerned about backup wind projects or projects falling through, presumably it would have adopted CEO's recommended decision option.

Still, staff sought clarity on what Xcel meant by "the Commission's suggestion" because what signal, exactly, the Commission gave Xcel was not clear. In response to PUC Information Request No. 3, Xcel referred to a statement a Commissioner made at the July 2017 hearing, which noted that "there's nothing to preclude Xcel from pursuing additional wind if it's economic to do so."[41] Not only could this statement realistically apply to any resource acquisition docket at any time, but more to the point, comments made during deliberations should not be conflated with Commission orders.

The most important indicator, though, that Xcel is not merely responding to the Commission's and stakeholders' feedback is that discussions with APEX and Vestas to build Dakota Range have been ongoing since the 2016 RFP. In fact, Xcel stated, "we have maintained communication with many of the bidders in the RFP, and we have continued to evaluate wind-related proposals over the course of 2017."[42] Indeed, Xcel has been negotiating several wind projects, and Dakota Range is one of five previously declined projects Xcel sought to negotiate as an ownership option.[43] Communications with these developers started well-before the Commission's July 2017 hearing, presumably with some intent in mind.

Regardless, there do not appear to be new circumstances which justify the need for a backup project to begin with. For example, Xcel was required to file annual and quarterly reports in compliance with the Commission's September 1, 2017 Order in the wind acquisition docket. Xcel's most recent compliance report, filed on January 31, 2018, noted that "all of the projects approved in the 1,550 MW portfolio (Foxtail, Blazing Star I and II, Freeborn, Crowned Ridge, Lake Benton, and Clean Energy #1) are on track and thus there is no need for any remedies or options at this time."[44]

B. Shareholder and Customer Interests

The appropriate context, at least from staff's perspective, is that Dakota Range is a financial investment opportunity that will continue the Company's rate base growth strategy, which also has some urgency due to the gradual phase-out of the wind PTC.

---

[40] Docket No. 16-777, Clean Energy Organizations comments (May 1, 2017), at 4-5.

[41] Xcel response to PUC Information Request No. 3.

[42] Xcel reply comments (December 14, 2017), at 7.

[43] Xcel reply comments (December 14, 2017), at 5-6.

[44] Docket No. 16-777, Xcel compliance filing (January 31, 2018), at 3.

One possible takeaway from Xcel's petition and comments is that it might leave an impression that there is disproportionate attention given to shareholder interests, which is not to say Xcel fails to make a satisfactory case for customer benefits as well. Several factors might justify this view, as well as whether possible long-term customer benefits are worth the short-term rate impacts and overall (and significant) dollars to be spent. Some factors include:

- Without Dakota Range, Xcel projects it will be in compliance with the Minnesota Renewable Energy Standard through 2044;[45]

- Xcel projects a net capacity surplus of roughly 900 MW through 2023;[46] and

- Xcel has substantial excess energy on its system, so much so that the primary financial benefit of Dakota Range through 2028 is selling energy into the MISO market.[47,48] This is despite the fact that the price (revenue) Xcel receives for its excess energy, on a $/MWh basis, is quite low. (The $/MWh of MISO sales are only half of the $/MWh of market purchases.[49])

Given the upfront rate impact and the uncertainty in long-term avoided costs, the Company could have considered a PPA structure, but it seems a PPA was never on the table. Xcel explained in its reply comments that the Company considered four other bids, but they were excluded from consideration "because the Company was unable to successfully negotiate with them on the BOT option."[50]

Any generation investment for an investor-owned utility must balance shareholder returns, customer costs, and environmental impacts. Xcel's 1,550 MW wind acquisition proceeding achieved this balance very effectively; the wind portfolio Xcel proposed in that case (1) was consistent with the resource plan; (2) allowed the Company to take advantage of 100% of the PTC; (3) extended Xcel's RES compliance into the 2040s; (4) will substantially reduce CO_2 emissions; and (5) included a blend of ownership projects that allow Xcel to grow its rate base and PPAs that do not have large upfront capital costs borne by ratepayers.

In this instance, there is a clear financial benefit to the Company. Dakota Range advances Xcel's "Steel-for-Fuel" initiative it has actively been promoting, which will enable Xcel to stay on track to meet its long-term EPS (earnings per share) growth rate of 5% to 6%, grow its rate base by 6.5%-7% Company-wide, and spend $18.5 billion in CapEx ($7.8 billion for NSPM) over the

---

[45] *In the Matter of Xcel Energy's Petition for Approval of 1,550 MW of Wind Generation*, Docket 16-777, Xcel response to PUC Information Request No. 6 (April 24, 2017).

[46] *In the Matter of Xcel Energy's 2016-2030 Integrated Resource Plan*, Docket No. 15-21, Xcel Energy January 29, 2016 Supplement, at 12.

[47] Xcel Petition, at 21 (Table 4).

[48] Xcel Response to PUC IR No. 19.

[49] *In the Matter of Xcel Energy's 2016-2030 Integrated Resource Plan*, Docket No. 15-21, Initial Filing, Appendix J, at 17 of 45.

[50] Xcel reply comments (December 14, 2017), at 6.

2018-2022 timeframe.[51] This is in light of the fact that in 2017, Northern States Power-Minnesota (NSPM) had a weather-adjusted electric sales growth rate of -0.7%.[52]

As will be discussed in later sections, the customer-side benefits carry far more uncertainty. This is not to say, however, that Dakota Range is necessarily unreasonable or that it isn't in the public interest. But due the magnitude of costs that are known to occur and given the timing of when customer savings *may* occur, staff does not believe it is unreasonable, either, to question whether Xcel is, at this juncture, moving too aggressively on its rate base expansion plan.

Staff has no problem with Xcel maximizing its shareholder interests, but the ratepayer benefit should be just as clear, and the appropriate Commission processes should be used. In this case, since the project would have a net cost in the short-term and questionable net benefits in the intermediate-term, and because Xcel did not follow the modified Track 2 process appropriately, Dakota Range's relatively low LCOE is not the only factor worth considering.

C. Consistency with the Resource Plan

This section will explore Xcel's claim that Dakota Range "is consistent with the Commission's January 2017 Order in [Xcel's] integrated resource planning docket."[53,54] The main issue staff will address is the size and timing of Xcel's wind additions proposed and approved in the IRP.

Xcel's "Current Preferred Plan," as outlined in the Company's January 29, 2016 *Supplement to Resource Plan*, shown below, included 800 MW of new wind in 2019 and another 400 MW in 2022. In other words, as the table below shows, what Xcel requested the Commission approve, reject, or modify in the IRP was 1,200 MW by 2022. No additional wind was added until 2025:

> We show the resource additions we propose with our Current Preferred Plan in Table 2 below.

Table 2: Current Preferred Plan Expansion Plan[8] (MW ICAP[9])

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Large Solar	-	-	-	-	200	-	200	100	100	200	100	100	-	400	-	-	1,400
Wind	-	-	-	-	800	-	-	400	-	-	400	200	-	-	-	-	1,800
CT	-	-	-	-	-	-	-	-	-	-	460	690	230	230	-	230	1,840
Fargo CT	-	-	-	-	-	-	-	-	-	-	230	-	-	-	-	-	230
Sherco CC	-	-	-	-	-	-	-	-	-	-	-	-	786	-	-	-	786

Note: Resources are shown in their first full year of operation and will go into service the year prior.

In its IRP comments, the Department offered a "Preferred Plan," which included 1,000 MW of new wind in 2019 and another 500 MW in 2021 (i.e. 1,500 MW in total by 2021).[55] Given this,

---

[51] Xcel Energy, UBS Minneapolis Investor Meetings (April 11, 2018), http://investors.xcelenergy.com/Cache/1001235142.PDF?O=PDF&T=&Y=&D=&FID=1001235142&iid=4025308

[52] *Id*.

[53] Xcel Petition, at 1.

[54] Docket No. 15-21.

[55] Docket No. 15-21, Department comments (July 8, 2016), at 11.

in reply comments, Xcel requested authorization to add "at least 1,000 MW and possibly as much as 1,500 MW of wind resources in the pre-2020 timeframe."[56]

The Commission's January 11, 2017 Order did not explicitly modify Xcel's proposed amount of wind (800 MW by 2020), but it adopted Xcel's "at least 1,000 MW" request and made a general finding that this amount could be prudent, subject to evaluation on a case-by-case basis:

> It is reasonable to acquire at least 1000 MW of wind by 2019. Acquisition of greater than 1000 MW may be approved upon submission of evidence such as price, bidder qualifications, rate impact, transmission availability, and location.[57]

Xcel and the Department agree that Dakota Range is consistent with the IRP, although they state it slightly differently.

Xcel directly states that Dakota Range "is consistent with the Commission's January 2017 Order."[58] This could mean it is Xcel's view that 1,850 MW of wind by 2021 is consistent with the size and timing of wind the Commission approved. Alternatively, it could mean that because the Commission placed no limit, only a floor, on the amount of wind Xcel could add, any cost-effective wind is consistent with the Commission's resource plan order. Staff would note, though, that a general finding is not the same as a modification to the action plan Xcel proposed.

The Department, in contrast, only references its own IRP modeling analysis, in which the Department found that up to 2,000 MW of wind is cost-effective. It should be noted, though, that the Department's test of incremental wind up to 2,000 MW was not mentioned or discussed in the Commission's order.

The Department noted that since it tested increments of wind up to 2,000 MW of new wind and the model took all of it, this means that Xcel has "a balance of at least 450 MW that is still beneficial to add."[59] Again, while this statement is an accurate reflection of the record, it is not reflective of the Commission's order, and the Department does not claim it to be.

Staff believes this distinction is important because Xcel is trying to establish a direct link between 1,850 MW of wind and the Commission's IRP order, whereas the Department is not.

Previously, staff noted that one concern the Commission might have is the timing of the rate impacts; that is, the Commission could give more attention to the short-term rate impact and perhaps not focus exclusively on the present value of total net benefits over the entire duration of the investment.

---

[56] Docket No. 15-21, Xcel reply comments (August 12, 2016), at 8.

[57] Docket No. 15-21, Commission Order, ordering paragraph 3.

[58] Xcel Petition, at 1.

[59] Department comments (November 30, 2017), at 2.

The upfront capital expenditures in this case will create a short-term rate impact. This creates a different set of ratepayer concerns than a PPA structure. Relative to a PPA, utility-owned assets generally have higher costs in the early years when the rate base value is highest. Generally speaking, a PPA structure, which is the structure the Department models in resource planning, just examines whether the energy payment lowers the system costs.

D. The Dakota Range Expansion Plan

An appropriate way to frame the short- to intermediate-term rate impact is that Dakota Range will cost ratepayers roughly $20 million per year through 2029 (see "New Ownership Wind" row of Table 2 on page 8 of Xcel's March 2018 Supplement and Xcel's response to PUC IR #19). Thus, an appropriate way to frame the near- to intermediate-term net benefits is to assess whether and to what extent Dakota Range will save ratepayers more than $20 million per year through the same timeframe.

To be able to assess whether the projected customer savings reflect reliable, credible estimates, it is important to first consider the expansion plans in the model. This is because the cost-effectiveness of Dakota Range depends on what is avoided (capacity, fuel, emissions, and so forth). For this reason, all expansion plans should reflect a reasonable future generation landscape, acknowledging that the very long-term is nearly impossible to predict with any great certitude.

Attachment C of Xcel's Petition lists the three expansion plans Xcel used for its analysis:

- Reference Case Expansion Plan;
- Dakota Range Expansion Plan; and
- Dakota Range Expansion Plan with Preferred Plan Renewables.

Attachment C shows the generation additions by expansion plan from years 2017-2053. (Dakota Range is modeled to be operational from 2021-2046.) Notably, Tables 1-5 of Xcel's Petition—which show the customer savings, levelized cost analysis, incremental revenue requirement, and rate impact—are comparisons of the Dakota Range Expansion Plan to the Reference Case. Perplexingly, these two expansion plans used neither the Company's proposed integrated resource plan (IRP)—its "Current Preferred Plan" as it was called at the time—nor the Commission-modified and approved IRP. Instead, Xcel considered a "Preferred Plan Renewables" case *as a sensitivity*, and even this plan is quite different than Xcel's approved IRP.

In terms of total capacity by generation type, the Reference Case and the Dakota Range Expansion Plan are exactly the same, except of course for the inclusion of Dakota Range. Staff will discuss avoided capacity costs later in this briefing paper, but for now, it is worth noting that no capacity is actually avoided, only deferred, yet the model still includes substantial avoided capacity cost savings.

In the Reference Case (and, therefore, in the "Dakota Range Expansion Plan"), Xcel removed all of its planned renewable energy after 2020. The "Preferred Plan Renewables" sensitivity includes some planned renewable energy, and the effect of this is that the net benefit of

Dakota Range is reduced by $45 million.[60] So by deviating from the "Current Preferred Plan" proposed in its IRP and removing large amounts of renewables, Xcel substantially improved the economics of Dakota Range.

Xcel explained its rationale for removing planned renewable energy from the Reference Case on page 16 of its Petition:

> Our base assumptions do not include additional renewables beyond 2020. However, our preferred plan in our recent IRP included additions of solar and wind beyond what we proposed here. We note that, all else equal, additions of non-dispatchable resources will result in diminishing system benefits as future increments are added. Thus, we believe it is appropriate to analyze the impacts of the proposed portfolio without diminishing its value by assuming additions of renewable resources.[61]

Setting aside the fact that Xcel is arguing in a petition for approval of a non-dispatchable resource that non-dispatchable resources have diminishing system benefits, Xcel provides no evidence in support of its claim. In fact, in Xcel's petition in the 1,550 MW wind acquisition docket, Xcel took an opposite position.

In its 1,550 MW wind petition, Xcel cited the Minnesota Renewable Energy Integration and Transmission Study (MRITS), which evaluated increasing the Minnesota RES to 40% by 2030 (and higher proportions thereafter). Xcel emphasized in its 1,550 MW wind petition that "[a] key finding of the MRITS indicated that with upgrades to existing transmission, the grid can be successfully operated for all hours of the year with minimal curtailment of renewable energy."[62]

Xcel also did not incorporate the Commission's modification in its resource plan order that requires the Company to achieve 400 MW of additional demand response by 2023, which may have some implications for Xcel's projected avoided capacity costs. Table 7 of Attachment C of the Petition, below, shows that Xcel's forecasted load management actually goes down from year 2017 (853 MW) to year 2053 (849 MW):

Table 7: 2017 Load Management Forecast

July Demand (MW)	2017	2018	2019	2020	2021	2022	2023	2024
LMF	853	864	880	896	911	926	933	940
July Demand (MW)	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
LMF	947	948	944	940	936	932	928	924
July Demand (MW)	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
LMF	920	916	913	909	905	901	898	894
July Demand (MW)	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**
LMF	891	887	884	880	877	873	870	866
July Demand (MW)	**2049**	**2050**	**2051**	**2052**	**2053**			
LMF	863	860	856	853	849			

[60] According to Table 1 of the March 16, 2018 Supplement, the incremental revenue requirement savings is $167 million, whereas it is $122 million in the Preferred Plan Renewables sensitivity.

[61] Xcel Petition, at 16.

[62] Docket No. 16-777, Xcel Petition (March 16, 2017), at 34.

According to Table 2 of the March 2018 Supplement, in 2027 alone, Xcel projects $15.4 million in avoided capacity cost savings. (The total net savings for that year are projected to be $16.6 million.) In the 2027-2030 timeframe—the last four years of the approved IRP—avoided capacity cost savings from Dakota Range total $38 million.[63]

As mentioned, Xcel's three expansion plans are provided in full in Attachment C of Xcel's Petition. To limit space, staff produced an excerpted table of "Table 3: Dakota Range Expansion Plan" to show the amount of capacity by fuel type. As the table shows, Xcel included no new renewables (beyond Dakota Range), but it adds more than 12,000 MW of new natural gas.

Table 3: Dakota Range Expansion Plan	
Resource	**Total (MW)**
Large Solar (all in 2017)[64]	262
Generic Wind	-
Wind Projects[65]	1,850
Nat. Gas CT	3,912
Nat. Gas CC	7,347
Sherco Nat. Gas CC	786
All Resources	***14,157***

Of this capacity, about 11,000 MW of new natural gas is outside of the IRP planning period, and except for Black Dog 6 and Mankato II, even the gas units within the IRP timeframe have not been approved by the Commission. Nevertheless, a large share of the benefits Dakota Range is assumed to provide is offsetting this hypothetical generation.

To be fair, Dakota Range is evaluated as a long-term asset extending well-beyond the IRP timeframe, so the model must plan for *something*. And staff acknowledges that it is overly onerous to expect Xcel to file the equivalent of a system-optimized resource plan extending through 2046 (when Dakota Range stops generating). So, at this time, Xcel believes the most reasonable representation of the future, even though it is inconsistent with its own "Current Preferred Plan" and the Commission's modified IRP,[66] is that after 2021 the Company will add 26 generic natural gas plants, including the Sherco CC, and nothing else.

[63] Staff refers the Commission to Xcel's response to PUC Information Request No. 19 to see the complete row of Avoided Capacity Costs through the entire modeled time horizon.

[64] All expansion plans include Xcel's "small solar" forecast, which assumes that 580 MW of small solar will be added by 2020.

[65] The Wind Projects include the 1,550 MW of wind approved in Docket No. 16-777, plus Dakota Range.

[66] In its resource plan, the Commission moved to "change Xcel's planned CT additions in the 2025–2030 time frame to provide instead for adding the most cost-effective combination of resources consistent with state energy policies, including but not limited to the following resource options: large hydropower, short-term life extensions of Xcel-owned peaking units, natural gas combustion turbines, demand response, utility-scale solar generation, energy storage, and combined heat and power."

Xcel could argue (although it hasn't) that a natural gas combined cycle plant is just a stand-in for intermediate capacity, and a combustion turbine is just a stand-in for peaking capacity. However, this argument devalues other stated benefits of Dakota Range, such as hedging against gas prices, displacing fossil fuel generation, or avoiding CO_2 emissions. Further, CTs and CCs are very capital-intensive ways to provide incremental capacity.

E. Avoided Production and Capacity Costs

Tables 2 and 3 of the Company's Petition (on pages 19-20) show the results of Xcel's LCOE analysis of Dakota Range. (Again, this compares the Dakota Range Expansion Plan to the Reference Case.) The levelized cost analysis was conducted using two metrics, PVSC (societal costs) and PVRR (revenue requirements), which essentially means with and without the inclusion of CO_2 costs. The tables shown below are from the Public version of the Petition:

Table 2: PVSC Levelized Costs Analysis – $/MWh

	Dakota Range
LCOE	[PROTECTED DATA BEGINS PROTECTED DATA ENDS]
Wind Integration	$0.57
Wind Congestion	$3.39
Wind Induced Coal Cycling	$1.44
Avoided Production and Capacity Costs	($44.05)
Avoided Emission Costs	($7.43)
Net Cost/(Benefit)	[PROTECTED DATA BEGINS PROTECTED DATA ENDS]

Table 3: PVRR Levelized Costs Analysis - $/MWh

	Dakota Range
LCOE	[PROTECTED DATA BEGINS PROTECTED DATA ENDS]
Wind Integration	$0.57
Wind Congestion	$3.39
Wind Induced Coal Cycling	$1.44
Avoided Production and Capacity Costs	($40.83)
Avoided Emission Costs	$0.00
Net Cost/(Benefit)	[PROTECTED DATA BEGINS PROTECTED DATA ENDS]

As shown, Xcel expects substantial cost savings in the form of "Avoided Production and Capacity Costs," which amount to more than $40/MWh in savings under both metrics.

Applying the PVSC metric (Table 2, on the left), Xcel estimates that Dakota Range will offset $44.05/MWh of Avoided Production and Capacity Costs. Avoided production costs are 75% of the total, and avoided capacity costs are 25% of the total.[67]

Applying the PVRR metric (Table 3, on the right), Xcel estimates that Dakota Range will offset $40.83/MWh of Avoided Production and Capacity Costs. Avoided production costs are 70% of the total, and avoided capacity costs are 30% of the total.[68]

In the next sections, staff will discuss avoided capacity costs and avoided production costs separately.

[67] Xcel Response to PUC Information Request No. 13.a.

[68] Xcel Response to PUC Information Request No. 13.b.

1. Avoided Capacity Costs

Table 4 of Xcel's Petition and Table 2 of Xcel's Supplement show the forecasted incremental annual rate impact by category (new wind, capacity and production cost savings, MISO purchases and sales, and wind integration, congestion and cycling costs). As mentioned, these tables only go through year 2027, but the entire modeled time horizon can be found in Xcel's response to PUC IR No. 19.

Shown below is a table comparing the expansion plans in years 2027-2035 (from Attachment C) to the avoided capacity costs in those years (from Xcel's response to PUC IR No. 19).[69] This is to illustrate how capacity cost savings accrue from *delaying*, not avoiding, capacity. For example, as shown in the table, in year 2027, a 230 MW CT is deferred to year 2028, and Xcel projects $15.4 million in ratepayer savings as a result. A similar result occurs when a CT selected in 2029 is delayed until 2030:

Capacity Additions (in MW) by Resource Type

		2027	2028	2029	2030	2031	2032	2033	2034	2035	Total MW
Reference Case	CT	460	230	230		230					4262
	CC					778	778		778	778	
Dakota Range	CT	230	460		230	230	460				4722
	CC					778			778	1556	

Capacity Cost Savings (in $M) for Dakota Range Expansion Plan, Compared to Reference Case

		2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Dakota Range	(in $M)	$ (15.40)	$ (3.10)	$ (16.00)	$ (3.30)	$ -	$ (72.50)	$ (88.40)	$ (90.20)	$ 20.90	$ (268.00)

When combined cycle (CC) capacity is delayed, the avoided capacity costs are far greater. For example, as shown in the 2032-2034 timeframe, in 2032, a CC is replaced with a CT, which has a much lower $ per kW capital cost. According to Xcel, "The capacity cost savings from deferring the capital expense of a CC are large in the modeling."[70] However, the CC is added back to the Dakota Range Expansion Plan in 2035, although by this time nearly $270 million in avoided capacity cost savings have accrued, even though there is more total capacity added in the Dakota Range Expansion Plan than the Reference Case during this timeframe.

As previously noted, Xcel did not include any of the incremental demand response as required by the Commission's IRP Order, and the Commission did not approve any of Xcel's generic natural gas plants listed above. It is unknown what impact this could have on Xcel's projection that Dakota Range will yield roughly $40 million in avoided capacity cost savings in years 2027-2030.

[69] Of note, except for the Dakota Range unit, the expansion plans for the Reference Case and Dakota Range Expansion Plan are exactly the same prior to 2027.

[70] Xcel Response to PUC Information Request No. 16.

Xcel (and probably the Department) will likely be able to explain how the model produces these outcomes. At this time, staff's primary concerns with regard to the estimated avoided capacity cost savings include the following:

1. Using Xcel's assumptions for the wind capacity credit, Dakota Range will amount to only 47 MW of accredited capacity.

2. Comparing the Reference Case to the Dakota Range Expansion Plan, there is no capacity that is actually avoided. The megawatts of CT units and the megawatts of CC units are exactly the same in both expansion plans.

3. Over the modeled time horizon, Xcel estimates nearly $450 million in avoided capacity cost savings from the 47 MW Dakota Range project, according to Xcel's response to PUC Information Request No. 19.

4. No new renewable energy or load management was considered after 2021, except as a sensitivity (the result of which was decreased net benefits).

Next, staff will discuss production costs, which includes displaced generation, avoided MISO market purchases, and avoided emissions.

2. Avoided Production Costs

One of staff's concerns about the "out-years"—that is, years outside of the 2016-2030 resource plan timeframe—is that they are treated in a completely different manner than how Xcel actually does least-cost planning. Typically, Xcel would assess several combinations of ways to reduce energy costs *as well as* meeting its planning reserve requirements in all planning years. That does not appear to be what the model did in this case. Here, whenever there was a capacity shortage, then model picked up either a gas CT or a gas CC.

Ultimately, the Commission may find that, while modeling limitations may exist, the calculated net benefit is so large that uncertainty is appropriately accounted for. After all, Xcel's economic analysis clearly indicates substantial net benefits, and the Commission could determine that some amount of net benefits are more likely than not to materialize, eventually. Nevertheless, in this section, staff will discuss what it perceives to be limitations of the out-years analysis, which consists solely of about 11 gigawatts of new natural gas capacity.

All three of Xcel's expansion plans assume the addition of the 1,550 MW of wind generation approved in Docket No. 16-777. This amount already displaces many of Xcel's existing, high-cost generating resources. In fact, as shown by the table in Xcel Response to PUC Information Request No. 12, many of Xcel's existing units are running very little, and some are not running at all. Thus, there is less very high cost generation for Dakota Range to offset in the near-term.

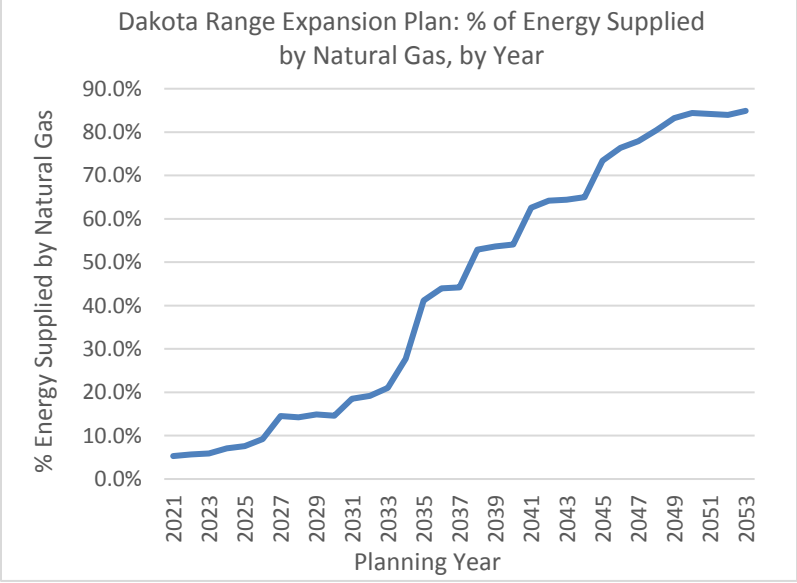
According to Xcel's modeling outputs, in the 2030s the NSP system relies much more heavily on Xcel's remaining coal units—King and Sherco 3—than at present. The system is also heavily reliant the new, generic natural gas units, even some of the peaking units that are generally

intended to run only for a small number of hours during the year. In fact, some of the generic natural gas CC units run at similar levels as the coal-fired Sherco units do today. This means that, as the system removes existing nuclear and Sherco 1 and 2, in addition to expiring PPAs, avoided production costs is largely offset generation from new generic gas plants that do not yet exist.

To illustrate the contrast between the short-term and long-term, the table below compares the average avoided production costs from 2022 (first full year of operation) through 2031 to the 2032-2046 timeframe. As shown, the average annual avoided production costs are eight times higher in the 2032-2046 timeframe ($46.96 million) than in the 2022-2031 timeframe ($6.44 million).

Timeframe	Average Annual Avoided Production Costs (in $M)
2022-2031	**($6.44)**
2032-2046	**($46.94)**

One reason for this is because the short-term represents a timeframe that optimized Xcel's system through a resource planning process. The long-term picks up only capital-intensive gas plants that in some cases replace large coal and nuclear units, and the system becomes increasingly expensive. Thus, a zero marginal cost unit like Dakota Range, which is very large in size and has higher capacity factor than Xcel's existing gas combined cycle plants, becomes increasingly valuable over time. The figure below shows Xcel's reliance on natural gas, in terms of percent of energy supply, throughout the Dakota Range Expansion Plan; this helps illustrate the value of a 302 MW wind unit with no fuel cost:[71]



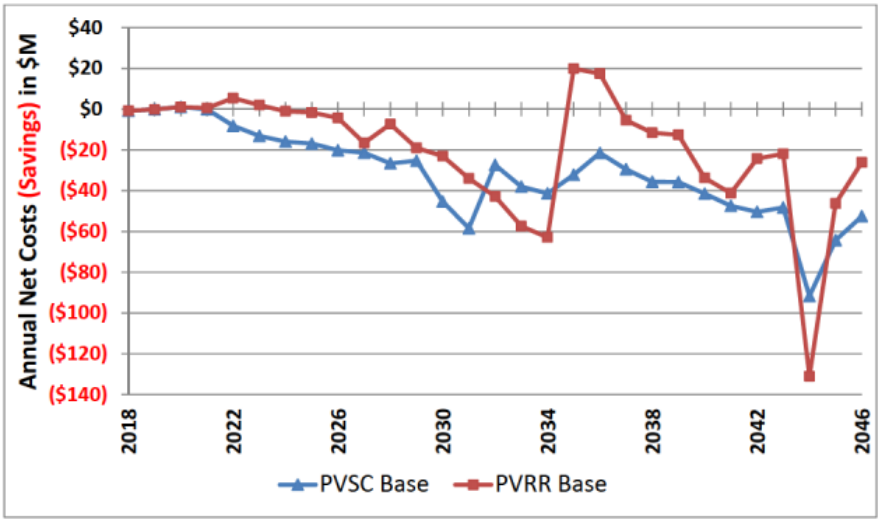
[71] Xcel response to PUC Information Request No. 22.

To be clear, staff is not urging the Commission to deny the project based on price. Xcel states that "Dakota Range is a highly competitive project," and staff agrees. The point is that while the LCOE is highly competitive, rate impacts are expected to continue on an annualized basis for several years, and one may doubt that Xcel's system will look anything like it does in the model, which challenges the credibility of the projected savings. Xcel acknowledges that short-term costs are prudent to capture these long-term benefits:

> It is important to note that the addition of the proposed wind resource creates a net cost in 2021-2025. Initially, upfront capital costs of the proposed project drives costs higher in the early years, but over the long term, customers receive significant rate benefits from avoided fuel costs and the accrual of PTCs.[72]

With this being said, as shown by Figure 1 of its Supplement, the Commission may find that Xcel's total estimated savings are sufficiently large to provide a satisfactory cushion against being wrong about the future. And taking the long view clearly indicates that Dakota Range is expected to produce substantial customer net benefits:

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



Xcel could argue that, by looking at the figure, the short-term has only minimal ratepayer impacts, especially when viewed relative to the large net savings in the long-term. But as staff noted previously, Xcel deviated from its approved IRP quite early in the modeled time horizon. In addition, some of the projected savings even in the near-term carry some degree of uncertainty. For example, as shown in Table 2 of Xcel's March 16, 2018 Supplement, in the 2022-2027 timeframe alone, Xcel projects customers will save roughly $103 million just from MISO sales and avoided MISO purchases, collectively. There are a number of factors that can change how Xcel will financially interact with the MISO market.

[72] Xcel Petition, at 19.

3. Updated O&M Forecast

Some of the Department's main concerns with Xcel's departure from the Commission's approved resource acquisition process are that "the Commission must rely on educated guesses and Xcel's judgment and it "allows [Xcel] to take further advantage of information asymmetries"[73] Staff agrees these are very crucial points.

In Xcel's March 2018 Supplemental, the Company explained various ways how it was able to offset the impact of the TCJA. Unfortunately, staff cannot explain these ways publicly, as Xcel has designated so much of its Supplement trade secret. But what staff can say is that Xcel substantially lowered its O&M forecast after the initial petition was filed and well after the bid evaluation process. Xcel noted that it "earlier this year [Xcel] began testing the market for O&M services."[74] Doing so reduced the LCOE by several dollars per MWh, which is a substantial percentage of the levelized cost.

Xcel will have to decide by the hearing how much it can publicly reveal to the Commission about its updated O&M forecast and other steps it took to offset the TCJA impact. It is worth noting, though, that only Xcel and those with whom it negotiated know the details. Therefore, to the Department's point, there are vast information asymmetries between Xcel and the Commission.

The Department recommends—but only if Dakota Range is approved—that the Commission require Xcel to file quarterly reports to establish ratepayer protections. The Commission might want to include O&M costs as part of these reports, in case Xcel cannot meet its lowered forecast.

F. Departure from the Modified Track 2 Process

As noted, the Department and Xcel agreed that Xcel departed from the approved modified process for procuring resources, however, Xcel believes it was reasonable to do so for the following reasons:

1. The Dakota Range projects had a basis in the 2016 RFP, which was highly competitive;

2. It was the next best ranked project in the 2016 RFP;

3. Due to improved pricing and increased transmission certainty, Dakota Range would have ranked within the previously approved projects' price margins;

4. Further transmission cost certainty sets it apart from any of the reasonable alternatives included in the previous evaluation; and,

[73] Department supplemental comments (January 4, 2018), at 2.

[74] Xcel supplement (March 16, 2018), at 5.

5. Use of another RFP process would have substantially impacted the risk of qualifying for the 80 percent PTC;

6. It is unlikely any new bid received in response to a new RFP would (1) be priced as competitively to Dakota Range and (2) have the same transmission cost certainty.

Staff understands and appreciates the Department's concerns about Xcel not following the Track 2 process and what that could entail for future resource acquisition proceedings. These concerns, such as Xcel's lack of adherence to process and Commission orders, have the potential impact to future bidders about the transparency and rigor of a competitive process in the State, and questions surrounding whether the least cost proposal was selected without a new market-based/RFP process to validate that assertion are all fair and reasonable. While staff has historically been protective of the competitive process to ensure that future bidders are not discouraged by such concerns, staff believes Xcel's departure from this practice is not so egregious as to avoid considering it as a project that is in the public interest.

Further, possibly failing to uphold the integrity of the Commission's processes could generally be thought to occur when there are challenges or requests to modify bids after the fact, or in other ways that may discourage bidders. Here, a multitude of bidders were selected from the RFP, the rules were adhered to, and, due to certain circumstances, another bid was negotiated after the fact as a "next in line" project. Staff shares the Department's concerns, but staff is less concerned that approval of Dakota Range, in this instance, would permanently disrupt the Commission's resource acquisition process.

The Department also argued that non-compliance with the Commission's order may loosen Xcel's requirement to comply with procedural requirements in the future. Again, staff does not believe this will necessarily be the case, but if it could, Xcel is the entity who will risk having a proposal denied. With this being said, the Department's concerns absolutely have merit.

The Department noted in their supplemental comments, "[d]espite recommending denial, the Department acknowledges that the decision to approve or deny Dakota Range is not clear-cut. Rather it is a value judgement between the advantages and disadvantages … described."[75] Staff believes the decision is truly a determination for the Commission to make.

1. Xcel's Comparisons to Courtenay Wind

Xcel argues that its Dakota Range proposal "is similar to the approach [the Company] took with the Courtenay wind farm in 2015."[76] The Department responded that, "facts in that case were substantially different because the Courtenay wind farm was originally approved as a power purchase agreement acquired through a Commission-approved process."

Staff agrees with the Department that the facts were substantially different in that case, and it was originally approved through a Commission-approved track process. In addition, Xcel

[75] DOC Supplemental Comments, Page 3.

[76] Xcel reply comments (December 14, 2017), at 7.

committed to holding the cost of the project to similar pre-approved price terms. The project in question at that time (which was a PPA arrangement) was no longer able to be pursued by the developer and therefore it was taken over by Xcel. Staff believes these situations are sufficiently different, and Xcel's comparison is without merit.

G. Seeking a New Project Following the Modified Track 2 Process

Xcel argues that Dakota Range "represents a limited-time opportunity."[77] Xcel has made this argument many times before, and history has demonstrated that when it comes to wind energy procurement, the opportunities are not so limited.

For example, in 2013, Xcel filed a petition for approval of 600 MW of new wind. In that petition, Xcel noted, "Although we had indicated a target acquisition of 200 MW, we ultimately selected three projects totaling 600 MW from the competitive bidding process … based on the fact that … the pricing is historically low and therefore, very attractive."[78]

In 2015, when Xcel decided to acquire the Courtenay Wind project, the Company noted, "This renewable energy acquisition was an important part of our plan to capture unique wind pricing opportunities for our customers."[79]

In the Dakota Range petition, Xcel likened its pursuit of Dakota Range to that of Courtenay Wind, noting, "Because we had to act quickly to preserve Courtenay's PTC qualification, we could not issue a new RFP but instead compared the project to bids that were received in the 2013 RFP."[80] As it turned out, Xcel did not need to act so quickly on Courtenay; it could have waited until a new RFP was issued in 2016 to get a better price for a different project.

In December 2017, Xcel filed with its Colorado regulators an All-Source Solicitation of Bids as part of its 2016 Colorado IRP process. (Xcel issued this RFP on August 30, 2017.) Below is Attachment A of that 2017 All-Source RFP, showing that Xcel received 96 wind bids totaling over 42 GW of capacity, with a median price of about $18/MWh. This was a result Xcel characterized as "unprecedented."[81]

[77] Xcel reply comments (December 14, 2017), at 7.

[78] Docket No. 13-603, Xcel Petition for Approval of 600 MW of Wind Generation (July 13, 2013), at 7.

[79] Xcel Energy, Docket No. 15-401, Petition for Approval of the Acquisition of Courtenay Wind, at 7.

[80] Xcel reply comments (December 14, 2017), at 7.

[81] Xcel Energy, Colorado Public Utilities Commission Proceeding No. 16A-0396E, 2017 Solicitation Report, December 28, 2017 Accessed online at https://www.documentcloud.org/documents/4340162-Xcel-Solicitation-Report.html

RFP Responses by Technology

Generation Technology	# of Bids	Bid MW	# of Projects	Project MW	Median Bid Price or Equivalent	Pricing Units
Combustion Turbine/IC Engines	30	7,141	13	2,466	$ 4.80	$/kW-mo
Combustion Turbine with Battery Storage	7	804	3	476	6.20	$/kW-mo
Gas-Fired Combined Cycles	2	451	2	451		$/kW-mo
Stand-alone Battery Storage	28	2,143	21	1,614	11.30	$/kW-mo
Compressed Air Energy Storage	1	317	1	317		$/kW-mo
Wind	96	42,278	42	17,380	$ 18.10	$/MWh
Wind and Solar	5	2,612	4	2,162	19.90	$/MWh
Wind with Battery Storage	11	5,700	8	5,097	21.00	$/MWh
Solar (PV)	152	29,710	75	13,435	29.50	$/MWh
Wind and Solar and Battery Storage	7	4,048	7	4,048	30.60	$/MWh
Solar (PV) with Battery Storage	87	16,725	59	10,813	36.00	$/MWh
IC Engine with Solar	1	5	1	5		$/MWh
Waste Heat	2	21	1	11		$/MWh
Biomass	1	9	1	9		$/MWh
Total	430	111,963	238	58,283		

Thus, as history has shown, the market has allowed cost-effective wind project to still be available. Yet, Xcel makes similar arguments of urgency for Dakota Range, noting:

- "this project may likely be one of the last projects in NSPM to have transmission certainty for quite some time."[82]

- "We need to move with some expediency in order to secure the maximum production tax credits (PTC) available at this time."[83]

- "We also believe our departure from the modified Track 2 process is justified by the unique circumstances that led to our Dakota Range petition and by the impending wind-down of the PTCs."[84]

While staff does not share Xcel's sense of urgency and believes the Company's arguments for urgency might be overstated and perhaps unsubstantiated, there do seem to be a number of benefits Dakota Range can provide that are unique.

For example, what is striking about Xcel's comments is the Company's seemingly very earnest and genuine belief in the project's unique transmission benefits. Xcel's capacity expansion model may not be able to fully capture these transmission benefits relative to other prospective wind projects. Dakota Range has gone through the MISO DPP study phase, and MISO has conducted a restudy showing even lower upgrade costs than before. As such, staff believes Xcel presents a very robust case why Dakota Range is unique from a transmission perspective. If the Commission denies Dakota Range, but at the same time directs Xcel to procure a new wind project, staff would agree this carries some risk that a wind project of similar cost might not be able to provide the same transmission-related advantages.

---

[82] Petition, at 1.

[83] *Id*.

[84] Xcel reply comments, at 2.

Also, it is unequivocally true that the value of the PTC, while diminished due to TCJA, is significant. However, it is also very uncertain how the market will recalibrate in a post-PTC environment, and Xcel's Colorado RFP indicates some (but modest) continued price declines since Xcel's 2016 Minnesota RFP. Nevertheless, Xcel's discussion of the relationship between the value of the PTC at this time and the timeline required to secure an additional wind project (to the extent an additional wind project is needed at all) is accurate and important to consider.

Thus, if the Commission determines Dakota Range will benefit ratepayers—not, to be clear, to be approved solely to support any Minnesota energy policy—then strict adherence to the modified Track 2 process might not be paramount if doing so carries an associated ratepayer risk. Stated another way, if the Commission determines an additional wind project is excessive, there is no reason to re-start the process before the next resource plan. However, if the Commission believes another wind project (beyond Xcel's approved 1,550 MW) at this price is in the public interest, staff does not believe re-starting the process is mandatory and may actually come with some ratepayer risk.

H. Renewable Energy Standard (RES)

Subdivision 2a of Minnesota Statute § 216B.1645 (Power Purchase Contract or Investment) sets forth a number of conditions that must be satisfied before an investment can be recovered via the RES rider. Those conditions are as follows:

a. The investment, expenses, or costs must be prudently incurred.
b. The investment, expenses, or costs must be associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of section 216B.1691 (RES).
c. The facilities must be approved by the commission under section 216B.2422 (IRP) or 216B.243 (CN), or determined by the Commission to be reasonable and prudent under section 216B.243, subd. 9.

Xcel believes its ownerships of the Dakota Range I and II wind project satisfies these conditions and should be deemed a reasonable and prudent way to meet the Company's obligations under the Minnesota's RES and be eligible for recovery under the RES.

While the Department recommends denial without prejudice, the Department provided in its supplemental comments its recommendation for treatment of cost recovery under the RES in the event of Commission approval:

> If the Commission finds that Xcel's proposal to build, own, and operate Dakota Range is in the public interest, **the Department recommends that the Commission take no action** on the Company's request for confirmation that Dakota Range is a reasonable and prudent way for Xcel to meet its renewable energy standard (RES) obligation. To the Department's knowledge, the Commission only needs to take action on this request if Xcel requests to recover Dakota Range's costs through its RES Rider (established pursuant to Minn. Stat. §

> 216B.1645, subd. 2a, which requires such a confirmation).[85] (Emphasis added by staff.)

Staff agrees with the Department that the Commission does not need to confirm Dakota Range is a prudent way for Xcel to meet the RES. In addition to the Department's observation that the Commission only needs to take action on this request if Xcel seeks recovery through the RES Rider, on principle, Xcel is not pursuing Dakota Range because of the RES.

I. Symmetrical Cost Cap

Staff agrees with the Department that, if the Commission approves Xcel's petition to acquire Dakota Range, it is reasonable to authorize Xcel to use a symmetrical cost cap. According to the Commission's September 1, 2017 Order in the 1,550 MW wind acquisition docket, the Commission approved the same cost recovery method, further noting:

> Under Xcel's proposal, the Company retains any cost savings but must absorb any cost overruns. The Department noted that this approach has the potential to incentivize the Company to increase profits by driving down capital expenditures. But as Xcel pointed out, the cap is an aggregate cap, which protects ratepayers by spreading risk across the four projects and by leveraging the economies of scale in planning and execution. Further, the Commission will require Xcel to account for all costs related to the projects, as discussed above, and the Company's request for cost recovery will be closely examined when the Company subsequently makes a cost recovery filing.
>
> For these reasons, the Commission will approve Xcel's aggregate cost recovery cap as proposed.[86]

[DECISION OPTIONS ON NEXT PAGE]

[85] Department of Commerce, Supplemental Comments, at 4-5 (January 4, 2018).

[86] Commission Order, Docket 16-777, *In the Matter of the Petition of Xcel Energy for Approval of the Acquisition of Wind Generation from the Company's 2016-2030 Integrated Resource Plan* (September 1, 2017), at 7.

V. Decision Options

1. Allow Xcel to build, own, and operate the 302.4 MW Dakota Range wind project. (Xcel)

2. Deny Xcel's request without prejudice. (Department)

3. Approve an aggregate, symmetrical capital cap for the initial construction of the project. (Xcel, Department)

4. Approve the use of Xcel's Capital Services affiliate agreement. (Xcel, Department)

5. Confirm the 302.4 MW proposed Dakota Range wind project is a reasonable and prudent way to continue to meet our obligations under Minnesota's RES. (Xcel)

6. Include the following ratepayer protections: (Department)

    a. the Commission will hold Xcel accountable for the price and terms used to evaluate Dakota Range;

    b. ratepayers will not be put at risk for any assumed benefits that do not materialize;

    c. ratepayers must be sufficiently protected from risks associated with the non-deliverability of accredited capacity and/or energy from Dakota Range;

    d. Xcel must report in its monthly fuel clause filings and annual automatic adjustment filings the amount of any curtailment payments, along with explanations for the curtailments, for Dakota Range;

    e. Xcel must clearly account for all costs incurred for Dakota Range;

    f. Xcel must file a compliance filing in January 2019 that provides an update on the status of Dakota Range, and must file, annually thereafter, a compliance filing that includes the actual delivered energy and actual accredited capacity; and

    g. Xcel must report quarterly, until Dakota Range is in service, project failures along with the options available to the Commission to remedy any failures that occur.

    h. (Staff option) In Xcel's quarterly report, Xcel must provide a comparison of its adjusted forecast for O&M services, discussed in its March 16, 2018 supplement, and actually incurred costs for O&M services.