
STAFF MEMORANDUM

TO: COMMISSIONERS AND ADVISORS
FROM: PATRICK STEFFENSEN, ERIC PAULSON, AND KRISTEN EDWARDS
RE: EL21-028 - In the Matter of the Petition of Northern States Power Company dba Xcel Energy for Approval of its 2022 Infrastructure Rider Project Eligibility and Factor Update
DATE: December 14, 2021

BACKGROUND

On October 1, 2021, the South Dakota Public Utilities Commission (Commission) received a petition from Northern States Power Company dba Xcel Energy (Xcel) for approval of its 2022 Infrastructure Rider Project Eligibility and Factor Update.

The Infrastructure Rider was established in Docket EL12-046 and was revised in Docket EL14-058 to require annual Commission-approved filings. Since then, the Company has made annual filings requesting approval of revenue requirements, project eligibility, and rates. The Infrastructure Rider is based on estimated costs of the capital projects subject to annual true-up to their actual costs and recoveries. The Infrastructure Rider was last updated in Docket EL20-026, with rates effective January 1, 2021.

In this current filing, Xcel requests the Commission's approval of project eligibility for two new wind projects and O&M expenses associated with wind investments. Additionally, Xcel asks for approval of the Infrastructure Rider Tracker Report and true-up for the 2021 revenue requirement, and 2022 Infrastructure rider revenue requirements of approximately \$30.0 million. The Company proposes to revise the Infrastructure Rider Adjustment Factor from the current rate of \$0.011897 per kWh to \$0.013865 per kWh, effective January 1, 2022. Xcel estimates the average bill impact for a typical residential customer using 750 kWh per month to be \$10.40 per month, an increase of \$1.48 per month compared to 2021 bill impacts.

Staff's recommendation is based on its analysis of Xcel's filing, discovery information, relevant statutes, and previous Commission orders. Staff reviewed updates regarding previously approved projects, new proposed projects, the 2021 tracker report, the forecasted 2022 revenue requirement, and rate calculations.

EXISTING PROJECT UPDATES

Several wind projects were approved for inclusion in the Infrastructure Rider in Dockets EL18-040, EL19-035, and EL20-026 with projected in-service dates in 2020 and 2021. Updates regarding these wind projects are discussed below.

Crowned Ridge II – The Crowned Ridge Build-Own-Transfer (BOT) project was approved in Docket EL18-040. This Crowned Ridge Wind Project, located in Codington, Deuel, and Grant counties in South Dakota, initially consisted of two parts: a 300 MW PPA (Crowned Ridge I) and 300 MW through a BOT arrangement (Crowned Ridge II). Due to a MISO study that identified high costs associated with required transmission upgrades, only 200 MW of Crowned Ridge I and 200 MW of Crowned Ridge II were ultimately built. The Infrastructure Rider only includes the 200 MW of Crowned Ridge II, which was built by NextEra Energy Resources, LLC and subsequently transferred to and now owned by Xcel. Commercial operation was initially expected in the fourth quarter of 2019 but was later updated to an expected in-service date of December 2020 in Docket EL19-035. Xcel indicates in this filing that Crowned Ridge II achieved commercial operation in late 2020. Xcel confirmed in response to Staff discovery¹ that the project qualifies for 100 percent Production Tax Credits (PTCs).

Blazing Star II – The 200 MW Blazing Star II project was approved in Docket EL19-035. This project extends the Blazing Star I project footprint east and south. The project was initially slated for commercial operation in September 2020 but was later updated to February 2021 in Docket EL20-026, following some delays experienced. Xcel indicates in this filing that Blazing Star II achieved commercial operation in January 2021. Xcel confirmed in response to Staff discovery² that the project qualifies for 100 percent PTCs.

Freeborn – The Freeborn project was also approved in Docket EL19-035 and is a 200 MW project located near Glenville, Minnesota. Similar to Blazing Star II, the Freeborn project was updated in EL20-026 from a December 2020 in-service date to March 2021 due to permitting delays and global supply chain issues caused by COVID-19. Xcel indicates in this filing that Freeborn achieved commercial operation in May 2021, slightly later than anticipated a year ago. Xcel stated in response to Staff discovery³ that the project still qualifies for 100 percent PTCs.

Jeffers – Jeffers Wind was approved in Docket EL20-026 and is a 44 MW repowering project in Cottonwood County, Minnesota. The project included new Vestas rotors (consisting of the hub and three blades), nacelles, switchgear, and electrical cabling. In addition to the greater output generated at Jeffers, the repowering requalified the project for new PTCs. Xcel indicates in this filing that Jeffers achieved commercial operation in January 2021, slightly later than the December 23, 2020 estimate

¹ Xcel Response to Staff DR 1-5

² Xcel Response to Staff DR 1-5

³ Xcel Response to Staff DR 1-5

provided in Docket EL20-026. Xcel stated in response to Staff discovery⁴ that the project still qualifies for 100 percent PTCs.

Community Wind North – Community Wind North was approved in Docket EL20-026 and is a 26.4 MW repowering project in Lincoln County, Minnesota. The project included new Vestas rotors (consisting of the hub and three blades), nacelles, switchgear, and electrical cabling. In addition to the greater output generated at Community Wind North, the repowering requalified the project for new PTCs. Xcel indicates in this filing that Community Wind North achieved commercial operation in January 2021, slightly later than the December 23, 2020 estimate provided in Docket EL20-026. Xcel stated in response to Staff discovery⁵ that the project still qualifies for 100 percent PTCs.

Mower Wind – Mower Wind was approved in Docket EL20-026 and is a 98.9 MW repowering project in Mower County, Minnesota. The project included new hubs, blades, and gear drives. In addition to the greater output generated at Mower Wind, the repowering requalified the project for new PTCs. Xcel indicates in this filing that Mower Wind achieved commercial operation December 2020, slightly earlier than the January 2021 estimate provided in Docket EL20-026. Xcel stated in response to Staff discovery⁶ that the project qualifies for 100 percent PTCs.

Dakota Range I and II – The Dakota Range I & II (Dakota Range) project was approved in Docket EL20-026 and is a 302.4 MW self-build wind project located 20 miles north of Watertown, South Dakota. In Docket EL18-003, the Commission granted a permit to construct the wind facility on July 23, 2018 and granted the transfer of the permit to Xcel on March 9, 2020. Xcel now forecasts the project will achieve commercial operation in early January 2022.

The Dakota Range project was originally expected to qualify for PTCs at the 80 percent level. The IRS has since extended the period within which projects need to reach commercial operation to obtain 100 percent qualification for PTCs. In response to modified IRS guidance, Xcel identified wind turbine equipment in its inventory that could be deployed on this project to meet the continuous construction requirements and qualify for PTCs at the 100 percent level. Xcel expects these efforts to save ratepayers \$80 to \$90 million over the life of the project.

UPDATED TREATMENT OF O&M EXPENSES

SDCL 49-34A-73 states in part “notwithstanding anything in this chapter to the contrary, an electric utility that is subject to rate regulation by the commission and plans plant additions that are expected to have a material impact on rates may make an application to the commission for a phase in rate plan to provide for the phase in of expected rate increases resulting from plant additions”. SDCL 49-34A-73.1 then defines plant additions for purposes of this statute as “investments in fixed generation, transmission, and distribution assets, whether purchased or constructed, including operations and maintenance expenses directly related to those fixed assets, real property, and new power purchases”.

⁴ Xcel Response to Staff DR 1-5

⁵ Xcel Response to Staff DR 1-5

⁶ Xcel Response to Staff DR 1-5

Even though Xcel has not included the operations and maintenance expenses that are directly related to its “fixed assets, real property, and new power purchases” in prior infrastructure rider dockets, it has included approximately \$2.6 million in wind farm O&M expenses in its 2022 revenue requirement. Xcel indicated in response to Staff discovery⁷ that the impacts of the wind farm O&M expenses have become particularly acute in the past two years as most of the wind investments included in the infrastructure rider have been placed in service within that timeframe. As a result, Xcel expects these expenses to drive even lower earned returns (than the 2020 weather-normalized return on equity of 8.48 percent) in 2021 and beyond. Thus, Xcel states the impacts of the new wind O&M expenses have become material in a way they were not for much of the past six years.

NEW PROPOSED PROJECTS

Northern Wind – The Northern Wind project is a build-own-transfer (BOT) proposal between Xcel and ALLETE Clean Energy located in Murray County, Minnesota. This project consists of a buy-out of an existing 100 MW purchased power agreement (PPA) and a 20 MW expansion immediately adjacent to the existing facility. Costs of the existing PPA are currently being recovered from South Dakota ratepayers through the Fuel Clause. Under the proposal the existing 100 MW will be repowered to extend the life of the project, reduce long-term costs, and requalify the project for PTCs. Xcel has indicated in response to discovery⁸ that the repowered turbines will use updated equipment and technology and that none of the existing turbine components will be reused. Even though the repowered portion of the project will remain at 100 MW⁹, the repowering will increase wind power production, as the net capacity factor will increase from the current 33.8 percent.

As is the case with all its wind projects, Xcel performed an initial screening analysis, as shown in Attachment 10A, to evaluate Northern Wind. This analysis simply provides a comparison of a scenario with and without the Northern Wind repower, buy-out, and expansion by using a forecast of market energy prices as a proxy for the value of energy. This analysis does not include a value for the capacity benefit of the project, nor does it perform a system wide analysis of the impact on the need for future resources. As shown on Attachment 10A, this initial analysis shows a lifetime customer benefit of \$1.4 million.

Xcel also performs software modeling for each of its proposed wind projects for a more inclusive and in-depth analysis of customer benefits. This analysis used the Encompass capacity expansion model which optimizes the resources added to Xcel’s system with and without the Northern Wind project. This modeling performs a simulated dispatch and provides a present value of the costs of each scenario for comparison. This amount includes savings due to the incremental energy from the Northern Wind project as well as capacity savings due to the impact on the capacity expansion plan. This initial run of the detailed modeling shows a lifetime customer benefit of \$54 million¹⁰.

⁷ Xcel Response to Staff DR 1-1

⁸ Xcel Response to Staff DR 1-13

⁹ Xcel Response to Staff DR 1-27

¹⁰ Attachment 10, page 5

Given the recent increases in the natural gas market prices, Staff asked Xcel if they would rerun the Northern Wind modeling with updated fuel costs. Surprisingly, this update shows overall lower long term forecasted fuel costs, resulting in lower net benefits to customers. In fact, the simplified high-level spreadsheet analysis now shows a net customer cost of \$27.2 million. However, this is only an initial screening tool, and the initial simplified high-level spreadsheet analysis filed with the initial petition showed a net benefit, therefore already advancing the analysis to the Encompass modeling step. When the more in-depth Encompass modeling was rerun with the updated long term forecasted fuel costs, the project still showed a net customer benefit of \$15 million¹¹.

Xcel has indicated in discovery¹² that FERC has approved the Commercial Operation Date extension and the Federal Aviation Administration has issued the Determinations of No Hazard for the expansion portion of the project. The Northern Wind site permit will likely be heard by the Minnesota PUC in February 2022. If approved, project construction is expected to start in the second quarter of 2022, and the project is expected to be in-service December 2022. This would qualify the project for PTCs at the 80 percent level.

Nobles Wind – Nobles Wind is a 201 MW wind facility in Nobles County, Minnesota. This facility was originally placed into service in 2010 and consisted of 134 GE 1.5 MW SLE turbines. This project will repower the facility by replacing the internal nacelle components, hub, and blades; leaving the original tower, nacelle bed plate, and outer fiberglass shell; and refurbishing the generators. The repowering will result in 1.6 MW turbines for a total nameplate capacity of 214.4 MW. With this increased capacity and an increase in the capacity factor from the current 38.9 percent, the repowering will result in an increase in wind power production. Along with the increase in production, the repowering will extend the lives of the turbines, reduce long-term costs, and requalify the project for PTCs.

Xcel performed the initial screening analysis, as described above and shown in Attachment 10B, to evaluate Nobles Wind. This analysis simply provided a comparison of a scenario with and without the Nobles Wind repower by using a forecast of market energy prices as a proxy for the value of energy. This analysis did not include a value for the capacity benefit of the project, nor did it perform a system wide analysis of the impact on the need for future resources. As shown on Attachment 10B, this analysis shows a lifetime customer benefit of \$35.8 million.

Xcel also performed software modeling for Nobles Wind for a more inclusive and in-depth analysis of customer benefits. This analysis used the Encompass capacity expansion model which optimizes the resources added to Xcel's system with and without the Nobles Wind project. This modeling performed a simulated dispatch and provided a present value of the costs of each scenario for comparison. This amount included savings due to the incremental energy from the Nobles Wind project as well as capacity savings due to the impact on the capacity expansion plan. This modeling shows a lifetime customer benefit of \$47.3 million¹³.

¹¹ Email to Staff on 12/14/2021

¹² Xcel Response to Staff DR 1-13

¹³ Xcel Response to Staff DR 2-2

According to Xcel's discovery responses, this project is anticipated to go into service December 2022¹⁴, which would qualify it for PTCs at the 80 percent¹⁵ level. It was originally anticipated during the modeling described above that the project would earn 60 percent PTCs. Xcel has indicated that the change to 80 percent PTCs would increase the lifetime customer benefit using the simplified approach shown in Attachment 10B from \$35.8 million to \$68.6 million¹⁶ while the Encompass modeling would increase from \$47.3 million to \$80.1 million¹⁷.

We then had Xcel perform a similar analysis for Nobles Wind to that performed for Northern Wind using updated long term fuel costs (and 80 percent PTCs). This analysis of Nobles Wind still showed a net customer benefit of \$2.3 million¹⁸ using the simplified high-level spreadsheet analysis and a net customer benefit of \$58 million using the more in-depth Encompass modeling¹⁹.

2021 TRACKER REPORT

The Infrastructure Rider rate approved in Docket EL20-026 was based on the estimated 2021 revenue requirements associated with 74 approved projects. In this docket, Staff reviewed the initially filed 2021 project revenue requirement of \$26,661,908 to determine if the costs were prudent and at the lowest reasonable cost to ratepayers. As described in the Company's initial petition, the 2021 forecast for projects in the Infrastructure Rider is \$401,658 less at this time compared to the estimate provided in Docket EL20-026.

Staff also reviewed the Company's calculation of the under/over collection of costs incorporated in the new Infrastructure Rider rate, comparing actual recoveries to actual costs. The Company's initial filing estimated a 2021 over-collection of \$2,404,891, including carrying charges.

While analyzing the workpapers²⁰, it was discovered there was an error in the calculation of deferred taxes, where the deferred tax rate was using only post-Tax Cuts and Jobs Act (TCJA) tax rates. Projects that were placed into service prior to the passage of the TCJA (in 2017) should've had some deferred taxes calculated at the pre-TCJA tax rate and some at the post-TCJA tax rate. This error has been corrected and explained further in Xcel's updated filing on December 10, 2021.

This correction decreases the 2020 project revenue requirement by \$203,167 (from \$18,299,427 to \$18,096,260), decreases the 2021 project revenue requirement by \$366,221 (from \$26,661,908 to \$26,295,687), and decreases the 2022 project revenue requirement by \$515,298 (from \$32,406,147 to \$31,890,849), as shown on Updated Attachment 2.

¹⁴ Xcel Response to Staff DR 1-15

¹⁵ Xcel Response to Staff DR 1-5

¹⁶ Xcel Response to Staff DR 2-18, Attachment B

¹⁷ Xcel Response to Staff DR 2-12

¹⁸ Xcel Response to Staff DR 2-12, Attachment C

¹⁹ Email to Staff on 12/14/2021

²⁰ Xcel Response to Staff DR 1-7

Using Updated Attachment 2, the 2021 forecast for projects in the Infrastructure Rider is \$767,877 less at this time compared to the estimate provided in Docket EL20-026.

The correction then provides a revised 2021 overcollection of \$2,979,794, including updated carrying charges, as shown on Updated Attachment 2.

2022 INFRASTRUCTURE RIDER REVENUE REQUIREMENT

Xcel's initial petition proposed a 2022 revenue requirement of \$30,001,256, based on the proposed 2021 over-collection of \$2,404,891 and the 2022 revenue requirements associated with 76 projects, with two of these being new projects not previously approved for recovery in prior dockets, and O&M associated with wind projects.

The updated filing to correct the deferred tax error decreases this overall revenue requirement by \$1,090,201 to \$28,911,055, as shown on Updated Attachment 2. This corrected amount uses the corrected 2022 revenue requirements of \$31,890,849 and the corrected over-collection balance of \$2,979,794 (which takes into account corrected 2020 and 2021 revenue requirements, including updated carrying charges).

2022 INFRASTRUCTURE RIDER ADJUSTMENT FACTOR

The Infrastructure Rider rate is designed to be implemented effective January 1, 2022. The rate is calculated based on forecasted sales from January 2022 through December 2022. The Infrastructure Rider rate based on the corrected 2022 estimate of overall revenue requirements of \$28,911,055 is \$0.013361 per kWh, as shown on Updated Attachment 1. The corrected average residential bill impact of the 2022 Infrastructure Rider is \$10.02 per month, an increase of \$1.10 per month compared to the average residential bill impact of the 2021 Infrastructure Rider of \$8.92 per month.

ANNUAL REPORT ON WIND PROJECTS PERFORMANCE

In past rate case and infrastructure rider dockets, Xcel agreed to report information related to capital costs, operating costs, and plant performance for the Pleasant Valley, Border, Courtenay, Blazing Star I, Crowned Ridge II, Foxtail, Lake Benton, Blazing Star II, Freeborn, Dakota Range I & II, Jeffers, Community Wind North, and Mower projects once completed and in-service, so that Staff may assess the actual economics of the projects. It should be noted that all wind farms had an increase in average annual capacity factors from 2019 to 2020²¹.

Xcel provided the Wind Project Performance Annual Report information for calendar year 2020 in Attachment 12 for Pleasant Valley, Border, Courtenay, Foxtail, Lake Benton, Blazing Star I, and Crowned Ridge II, as these were the only projects placed in-service by the end of 2020. Xcel agrees to provide this information for Blazing Star II, Freeborn, Dakota Range I & II, Jeffers, Community Wind North, Mower, Northern, and Nobles in subsequent infrastructure rider filings as the projects are placed in-service.

²¹ Xcel Response to Staff DR 1-22

Pleasant Valley has an operating capacity of 200 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$331.8 million through 2020. The actual costs were below the original forecasted costs of \$342.9 million. For 2020, Pleasant Valley produced 810,229,800 kWh of gross energy and had a net production of 789,514,604 kWh, had 9,329,076 kWh in total curtailment, and an average annual capacity factor of 45.5%.

Borders Wind has an operating capacity of 150 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$261.6 million through 2020. The actual costs were slightly less than the original forecasted costs of \$261.8 million. For 2020, Border Wind produced 685,747,300 kWh of gross energy and had a net production of 673,367,282 kWh, had 5,677,832 kWh in total curtailment, and an average annual capacity factor of 51.2%.

Courtenay Wind has an operating capacity of 200 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$289.9 million through 2020. The actual costs were below the original forecasted costs of \$300 million. For 2020, Courtenay Wind produced 721,380,100 kWh of gross energy and had a net production of 702,464,081 kWh, had 4,144,856 kWh in total curtailment, and a capacity factor of 41.0%.

Foxtail has an operating capacity of 150 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$232.5 million through 2020. The actual costs were below the original forecasted costs of \$242.4 million. For 2020, Foxtail produced 624,495,180 kWh of gross energy, had a net production of 614,298,657 kWh, had 8,899,280 kWh in total curtailment, and a capacity factor of 46.7%.

Lake Benton has an operating capacity of 100 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$155.3 million through 2020. The actual costs were below the original forecasted costs of \$166.7 million. For 2020, Lake Benton produced 458,206,661 kWh of gross energy and had a net production of 454,995,019 kWh, had 465,000 kWh in total curtailment, and a capacity factor of 52.1%.

Blazing Star I has an operating capacity of 200 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$315.1 million through 2020. The actual costs were below the original forecasted costs of \$318.8 million. For April through December 2020, Blazing Star I produced 577,416,075 kWh of gross energy and had a net production of 567,194,533 kWh, had 69,630 kWh in total curtailment, and a capacity factor of 43.4%.

Crowned Ridge II has an operating capacity of 200 MW and has a total capital cost to build the facility, including transmission, but excluding AFUDC, of \$293.6 million through 2020. The actual costs were below the original forecasted costs of \$315.4 million. For December 2020, Crowned Ridge II produced 44,552,898 kWh of gross energy and had a net production of 43,763,099 kWh, had 0 kWh in total curtailment, and a capacity factor of 60.6%.

NET WIND BENEFITS

Net Present Values of Wind Projects

The Northern Wind and Nobles Wind analysis provided above explains the two types of net benefit calculations Xcel performs when it is analyzing the economic viability of a wind project. The analysis performed by modeling software, such as Encompass, provides a more detailed analysis of the impact of the project on Xcel's system and corresponding benefit to ratepayers. The simplified spreadsheet analysis is performed as an initial screening tool to evaluate each project and provides an initial bar the projects must reach to be considered for further analysis using the Encompass model.

It is difficult to perform similar analysis to this after the fact because it is difficult, if not impossible, to know how units would've been dispatched in the absence of the wind facilities, when market purchases or sales would've been necessary, or what market energy or fuel prices would've been. Further, even if extraordinary events would change the net benefits years after they were initially projected by Xcel, it doesn't change the facts that were available to Xcel at the time of the initial decision to complete a project. The following chart provides a recap of the net benefits as calculated by Xcel's modeling software prior to each project being added to its portfolio (and prior to the Northern Wind and Nobles Wind reruns using updated long term fuel costs).

Wind Farm	MW	PVRR - Base Case (\$ millions)	PVRR - Low Fuel* (\$ millions)
Courtenay	200	(\$60)	(\$10)
Pleasant Valley	200	(\$90)	(\$17)
Border	150	(\$45)	\$8
Crowned Ridge II	200	(\$182)	(\$110)
Lake Benton	100	(\$91)	(\$55)
Blazing Star I	200	(\$182)	(\$110)
Blazing Star II	200	(\$182)	(\$110)
Foxtail	150	(\$136)	(\$83)
Freeborn	200	(\$182)	(\$110)
Dakota Range I & II	302	(\$167)	(\$106)
Jeffers**	44	(\$9)	Not Available
Community Wind North***	26	0	0
Mower	99	(\$49)	(\$48)
Nobles	214	(\$80)	(\$61)
Northern	120	(\$54)	(\$39)
TOTAL	2405	(\$1,509)	(\$851)
* Includes low natural gas, coal, and market prices			
** A low gas PVRR was not run for Jeffers			
*** Xcel recovers a proxy price instead of the total cost of the project			

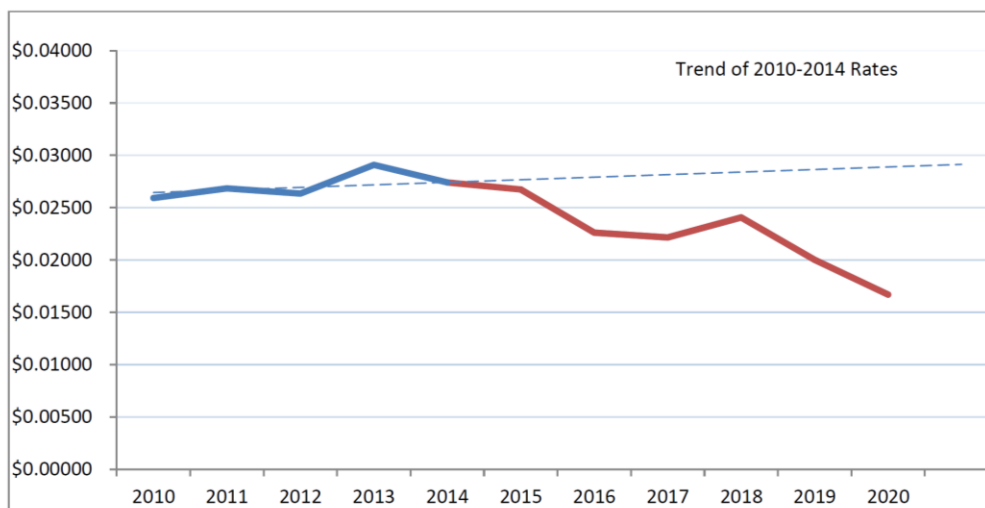
This modeling is typically performed under a base case scenario and a low fuel cost scenario. A high fuel cost scenario was not analyzed, as it would only increase the net benefits to customers shown with this

modeling compared to the base case scenario. Since it is the low fuel cost scenario that would decrease net benefits to customers, Xcel also provides²² the net benefits as initially calculated by the modeling software under a low fuel cost scenario. This analysis shows that all the wind facilities provide a net benefit to customers under the base case scenario and shows that all but one of the wind facilities provide net benefits to customers even under the low fuel cost scenario. Further, the net benefits shown in the chart do not include any carbon costs or any other social costs but do include estimated congestion costs.

Bill Comparisons With and Without Wind Projects

Wind investments owned by Xcel ultimately decrease the costs that get recovered in the fuel clause, but it is difficult to calculate a snapshot of the net benefits provided to customers by Xcel's wind facilities at a given point in time. It is still important to analyze whether the benefits provided to customers in the form of decreased fuel costs outweighs the cost of the wind facilities passed on to customers in the infrastructure rider when analyzing whether to add new wind projects to the rider. Thus, the following exercise has been performed to show estimates of a bill comparison with and without the wind projects currently in the infrastructure rider.

First, Xcel provided²³ the following trendline analysis that shows in the five-year period from 2010 to 2014, prior to the addition of most of Xcel's major wind resources, the fuel clause rate was on an upward trend. This chart compares the actual fuel clause rates (solid line) with what the rates would've been had the 2010 through 2014 trend continued (dashed line).



²² Xcel Response to Staff DR 2-12

²³ Xcel Response to Staff DR 1-25

Xcel estimates²⁴ this to be a difference of \$0.00716 per kWh for 2019 and a difference of \$0.01072 per kWh for 2020. For a typical residential customer using 750 kWh per month, this represents a fuel clause savings of \$5.37 per month in 2019 and \$8.04 per month in 2020.

Xcel then compared²⁵ this with the costs of wind in the infrastructure rider for those same years. Backing the wind costs out of the infrastructure rider rate that was in place in 2019 and 2020 revealed that customers were charged \$2.19 per month in 2019 and \$3.87 per month in 2020 for Xcel's wind investments. Thus, given this bill comparison exercise, customers saved \$3.18 per month on their total bill in 2019 and saved \$4.17 per month on their total bill in 2020. It should be noted that changes in commodity prices likely also played a role in the decrease in actual fuel costs since 2014. That exact number is difficult to calculate, since we do not know which generation facilities would've been dispatched under varying commodity costs. However, commodity costs have been relatively stable over the last decade, so Xcel anticipates this impact to be minimal.

Xcel also performed a similar analysis for 2021²⁶, since we are now close to year-end. Due to the increased costs reflected in the fuel clause, especially of late, a typical residential customer's monthly savings in the fuel clause (as compared to the trend line) decreased to \$3.79 per month in 2021. When netted with the \$6.19 per month infrastructure rider cost effective January 1, 2021, customers experienced a net cost for wind in 2021 of \$2.40 per month. Given the timing issues at play with the various moving parts in the fuel clause and varying in-service dates of the wind projects, it can be expected there might be some years that show a net cost in this simplified analysis. However, wind investments are expected to provide net ratepayer benefits in the long term. For example, if we look at the three-year total of this exercise, the typical customer experienced a net benefit of \$59.40²⁷ from 2019 through 2021. It should also be noted, the revenue requirements for each of the wind facilities will continue to change over time, and there will be countering impacts of accumulated depreciation decreasing the revenue requirements while expiring PTCs result in increases in the fuel clause.

While actual net benefits will differ from those forecasted for a number of reasons, Staff believes all the analysis provided by Xcel gives a good indication of the savings Xcel expects its customers to receive due to the wind projects being included in the infrastructure rider rate. Xcel will continue to provide net benefit analysis of its wind projects, including updates to the information provided in Attachment 12B, so the Commission can continue to review the estimated net benefits as the projects are operational.

RECOMMENDATION

Staff recommends the Commission approve the revised Infrastructure Rider Adjustment Factor of \$.013361 per kWh and tariff sheet effective January 1, 2022.

²⁴ Xcel Response to Staff DR 2-16

²⁵ Xcel Response to Staff DR 2-16

²⁶ Xcel Response to Staff DR 2-16

²⁷ $(3.18 \times 12) + (4.17 \times 12) - (2.40 \times 12)$