

South Dakota Infrastructure Rider 2021 Project List and Descriptions

Existing Rider Projects

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL14-058, and re-affirmed for cost recovery most recently in Docket No. EL19-035:

- MNGP Extended Power Uprate (Monticello LCM/EPU) (w/o 10245258)¹
- PI-9 TN-40 Casks (Prairie Island Casks #39-47) (w/o 11101522)
- PI-Relicense ISFSI (Prairie Island ISFSI Relicensing) (w/o 10798851)
- PI U2 Generator Replacement (w/o 11808202)
- PI U2 GSU Transformer Replacement (w/o 11808219)
- MNGP EDG Tornado Missile Protection (w/o 11946062)
- MNGP Fukushima Modifications (w/o 11503439)
- PI LR Ph II-U2 MRP-227A Implementation (w/o 11812440)
- PI-NFPA 805 Fire Model (w/o 11044898)
- PI U2 HDTP Speed Control Upgrade (w/o 11230621)
- BRD0C Border Wind ND (w/o 11551351)
- PLV0C Pleasant Valley Wind (w/o 11869600)
- SHC1C U1 Couton Bottom Replacement (w/o 10935185)
- BDS0C Install Package Boiler (w/o 11345791)
- SHC3C Motor Control Sys PL (w/o 11487734)
- Midtown 115kV line (w/os 11219377 and 11627836)
- NSM0953 Galloping Mitigation (w/o 11892875)
- GIST-III Computer Software (w/o 11465739)
- Hiawatha Dam Interconnect Substation (w/o 11083245)
- Scott County 345 kV Expansion, Substation (w/o 11806389)
- BS-Fcst-BD-SW-CM-M (w/o 11218029)
- PI-Repl Instrument Air Compressor (w/o 10799550)

¹ To implement a provision of the Settlement, cost recovery for the Monticello LCM/EPU project did not roll into base rates, but rather remained in the Infrastructure Rider.

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL15-038, and re-affirmed for cost recovery most recently in Docket No. EL19-035:

- Prairie 3rd 230/115 kV tra (w/o 11491534)
- PI Emerg Resp Equipment FLEX (w/o 11634222)
- PI U1 HDTP Speed Control U (w/o 11101124)
- SHC2 U2 DCS Controls Repl (w/o 11648818)
- SHC2C U2 Turbine EHC Ctrl (w/o 11488127)
- Dynamic EMS Environment Phase (w/o 10818773)
- Work and Asset Ph 1 SW MN (w/o 11491932)
- MNGP Security Physical Upgrade (w/o 12076265)
- PI Sfgds CL Pump Redesign (w/o 12075477)
- 760-Red Wing to Wabasha (w/o 11776427)
- NSM0953 Galloping Mitigation (w/o 12077207& 12051340)
- HBC7C U7 HGP/Combustion Inspec (w/o 10785655)
- SHC1C U1 DCS Controls Repl PH (w/o 11350867)
- MNGP Rplc IMUX Front End Proce (w/o 11366818)
- GIST-II Computer SoftwareNSPM (w/o 11434783)
- MNGP Cyber Security 08-09 (w/o 11468481)
- Purch EMS DEMS Ph2 HW MN (w/o 11584375)
- PI Fan Coil Unit Face Repl (w/o 11812451)
- PI NFPA 805 -08 Fire Detection (w/o 11825933)
- MNGP EDG Fuel Oil Train Separa (w/o 11926489)
- PI FLEX Storage Building (w/o 12035378)
- CRT0C Courtenay Wind Farm Construct (w/o 12173639)
- RIV9C-U9 HGP Inspection No 1 (w/o 11215945)

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL16-032, and re-affirmed for cost recovery most recently in Docket No. EL19-035:

- PI-Screenhouse Cl Header P (w/o 11100514)
- SHC 3 Turbine EHC Controls (w/o 11487740)
- SHC3 Boiler Intermediate and Finishing Superheater replacement (A.0001574.147)
- PI Reactor Coolant Pump Rebuild (A.0000035.211)
- MT TSTF-523 Vent Installation (A.0000029.015)
- MT EDG Fuel Oil Pump Mtr Rplc 1R28 (A.0000017.116)
- MT KM 480VAC Cubicle Rplc (A.0000029.018)

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL17-039, and re-affirmed for cost recovery most recently in Docket No. EL19-035:

- MNGP Hardened Vents & Filt (11871747 / A.0000043.005)
- PI 2M 2RS 2RX Transformer (11503758 / A.0000035.170)
- PI U1 Generator Replacemnt (11808178 / A.0000037.003)
- MNGP DAS & PPCS Rplc (A.0000017.003)
- MNGP 2018 Dry Fuel Storage Loa (A.0000060.001)
- PI 4.16 KV Bus Modifications (A.0000040.016)
- NSPM Tline ELR 2016 69kV Line (A.0000504.025)

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL18-040, and re-affirmed for cost recovery most recently in Docket No. EL19-035:

- PI 1R Transformer Replacement (11503753)
- G100-Blazing Star I Wind Farm (A.0001701.001, A0001701.002, A0001701.003, A0001701.004, A0001701.005)
- FOX G100-Foxtail Wind Farm (A.0001703.001, A.0001703.002, A.0001703.003, A.0001703.004)
- G100-Crowned Ridge BOT Wind Farm (A0001705.001)
- G100-Lake Benton BOT Wind Farm (A0001706.001)
- Benson Biomass PPA Termination Costs
- Laurentian Biomass PPA Termination Costs
- Pine Bend Landfill Gas PPA Termination Costs

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL19-035:

- Sherco Unit 3 Unit Protection PLC (11488116)
- Blazing Star II Wind Project (A.0001702.001, A0001702.002, A0001702.003, A0001702.004, A0001701.005)
- Freeborn Wind Project (A.0001704.001, A0001702.002, A0001702.003, A0001702.004, A0001702.005)

The following projects were approved for recovery by the Commission in the Company's Infrastructure Rider in Docket No. EL20-026:

- Dakota Range I and II (A.0001707.001)
- Jeffers Wind (A.0001721.001)
- Community Wind North (NA)
- Mower County (A.0001724.001)

New Proposed Rider Projects

Per the Settlement Stipulation in Docket No. GE17-003 approved by the Commission on July 18, 2018, the Company is allowed to seek recovery through the Infrastructure Rider of new wind generation projects and the costs of terminating certain biomass power purchase agreements – subject to the Commission granting the

Company's request for deferred accounting for those costs in Docket No. EL18-027. The Commission issued its Order approving the Company's request for deferred accounting in Docket No. EL18-027 on June 28, 2018. As such, the Company seeks eligibility determination for the following new wind projects:

Northern Wind

The Northern Wind project is a build-own-transfer (BOT) proposal between the Company and ALLETE Clean Energy (ALLETE) for a repowered, 120 megawatt (MW) facility (Northern Wind) located in Murray County, Minnesota. The project is planned to be a complete replacement and expansion of the existing Chanarambie and Viking wind projects located in Murray County, Minnesota, from which the Company currently purchases energy through purchased power agreements (PPAs). Under the proposal, the existing 100 MW of wind at the two sites will be repowered.² The repowered project will increase wind power production at the site and provide customer savings.

The Company issued an RFP for wind projects in the wake of the COVID-19 pandemic that would drive job creation, achieve cost savings for customers, and support the Company's clean energy policy goals. Specifically, the proposed project is expected to result in \$54 million on a present value of revenue requirements (PVR) basis over its lifetime.

ALLETE and the Company have also identified a 20 MW greenfield expansion opportunity with Rock Aetna Power Partners, LLC (Rock Aetna) immediately adjacent to the existing facility, which would increase the total project proposal to 120 MW. However, there are two additional considerations for development of the Rock Aetna site. First, the executed generation interconnection agreement (GIA) for the Rock Aetna site requires FERC approval to change the COD from December 1, 2021 to December 1, 2022. Rock Aetna filed a COD waiver request with FERC on February 4, 2021 and requested that FERC "act expeditiously in approving this Waiver Request by no later than February 28, 2021."

² Repowering projects are an opportunity for the Company to extend the lives and reduce the long-term costs of wind facilities currently serving the NSP system by refurbishing turbines with updated equipment and technology.

Second, the site expansion presents a potential North American Aerospace Defense Command (NORAD) radar saturation issue, which will be addressed as part of the site permit approval. The radar saturation will be addressed as part of the Determinations of No Hazard (DNHs) issued by the Federal Aviation Administration (FAA). As part of that process, the FAA will work with NORAD to determine if it has any concerns with the proximity of the Northern Wind facility to the Tyler Radar facility. ALLETE is responsible for obtaining the DNHs and, under the PSA, the DNHs must be acquired by the firm date.

As a result of both of these considerations, the PSA is structured to allow the 100 MW repower to move forward even if ALLETE is unable to achieve site permitting for the Rock Aetna portion of the facility. If ALLETE is unable to obtain FERC approval of the COD waiver request or the necessary DNHs from the FAA, the Company will move forward with the 100 MW repowering and will not be required to pay for any costs associated with the Rock Aetna portion of the project.

The current target Commercial Operation Date (COD) is December 1, 2022, pending FERC approval. If approved, ALLETE will deliver a fully repowered project on the COD, and the Company will assume full ownership of the facility. The project is expected to have a 25-year life.

Xcel Energy will buy out the existing PPA and purchase the entire repowered and expanded Northern Wind facility for \$210 million. The agreement includes **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** for the 100 MW of repowering and **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** for the additional 20 MW.

Additionally, the project is expected to qualify for **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** production tax credit (PTC).

See Attachment 9A for a cost-benefit analysis of the Northern Wind project.

Nobles Wind Repower

Nobles is a 201 MW wind facility located on approximately 27,465 acres of land in Nobles County, Minnesota. The facility was originally placed into service in 2010, interconnecting at the Nobles 34.5 kV substation, where NSP is also the Transmission

Owner. This project will repower the full capacity of the facility, **[PROTECTED DATA BEGINS**

PROTECTED DATA ENDS], and it will continue to use the existing interconnection.³ We expect the repowered project will commence operation in 2022, and that the repowering work will extend Nobles' useful life, to 23 years from the repowered project's COD.

The Nobles Repower is expected to achieve a net capacity factor (NCF) of approximately **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]**, resulting in an average annual production of approximately **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** per year, depending on final layout and turbine selection. This represents an efficiency gain of approximately **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** over the existing facility's average annual gross energy production levels. Total capital costs for the Nobles Repower are currently estimated at approximately **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** including AFUDC, which also covers decommissioning expenses for the removed components. Given the estimated COD of 2023, we believe the project will qualify for **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** percent PTCs over its first ten years of repowered operation. The estimated LCOE for the project is **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]**, which represents a **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]** reduction relative to the existing facility.

As with the Northern Wind project, this project is part of a larger repowering portfolio the Company has planned in the wake of the COVID-19 pandemic to drive job creation, achieve cost savings for customers, and support the Company's clean energy policy goals.

See Attachment 9B for a cost-benefit analysis of the Nobles Wind Repower project.

³ The Company does plan to submit a Permissible Technology Advancements (PTA) request to MISO. The repowering is not expected to constitute a material modification to the GIA and thus does not require an amendment.