

South Dakota Infrastructure Rider 2019 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. EL17-039:

MNGP Extended Power Uprate (Monticello LCM/EPU) (w/o 10245258)

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)

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. EL17-039:

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 Ctrls (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. EL17-039:

SHC 3 Turbine EHC Controls (w/o 11487740)
PI-Screenhouse CI Header P (w/o 11100514)
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:

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)

Additional Settlement Agreement Exhibit C Projects

The following project was among those identified in Exhibit C to the Settlement Agreement approved by the Commission in Docket No. EL14-058 and has forecasted revenue requirements beginning in 2019. Exhibit C provided the list of specific capital projects for which potential Rider cost recovery may be requested in future Infrastructure Rider filings.

PI 1R Transformer Replacement (11503753)

The PI 1R Transformer Replacement project will replace the 1R large power transformer at the Prairie Island Nuclear Plant, Unit 1 in a planned manner before the end of the transformer's useful life. Large power transformers have a typical life expectancy of 40 years. The 1R transformer has been in operation for 47 years and has had a high power factor since its installation. A high power factor indicates potential degradation of winding(s), bushing(s) and/or insulation. Also, moisture may be present in the oil and/or insulation material and metal particle contamination may be a factor in the increased power factor. To maintain equipment reliability, and to prevent a potential outage, it is prudent to replace this transformer at this time. As part of this project, the old transformer and fire protection system will be removed and replaced with a new transformer and fire protection system. We anticipate installation of the transformer and fire protection system during March 2019.

New Proposed Rider Projects

Per the Settlement Stipulation in Docket No. GE17-003 approved by the Commission on July 18, 2018, during the two-year base rate moratorium period (through 2019) 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 projects:

G100-Blazing Star I Wind Farm

The 200 MW Blazing Star I Wind Project is being developed by Geronimo Energy and is located on approximately 37,200 acres in Hansonville, Hendricks, and Marble Townships, Minnesota. Total capital costs for this project include estimated transmission upgrades and interconnection costs as well as anticipated siting and permitting costs. Primary construction activities on the Blazing Star I Wind Project will occur in 2019. Under the current projected schedule, we anticipate that

commercial operation will be achieved by December 2019.

Five separate work order numbers delineate the various project cost components as follows:

- **A.0001701.001**
This work order includes the costs related to the design, materials and labor needed to build the turbines, access roads, and the collector system, which are the underground cables that run from the turbines into the substation.
- **A0001701.002**
This work order includes the land purchased for holding the substation and the project operations building. The land on which the turbines will be built is leased land and is not a cost under this work order.
- **A0001701.003**
This work order includes the costs related to design, materials and labor for building the transmission line.
- **TSG S - A0001701.004**
This work order includes the costs related to the design, materials and labor needed to build the collector substation.
- **Tline - A0001701.005**
This work order includes the costs of the network upgrades associated with the project.

FOX G100-Foxtail Wind Farm

The 150 MW Foxtail Wind Project is being developed by an affiliate of NextEra Energy Inc., and is located on an approximately 20,000 acre site located 20 miles West of Ellendale, North Dakota. Total capital costs for this project include estimated transmission upgrades and interconnection costs as well as anticipated siting and permitting costs. Engineering and some procurement occurred in 2017. Primary construction activities on the Foxtail Project will occur in 2018 and 2019. Under the current projected schedule, we anticipate that commercial operation will be achieved by September 2019.

Four separate work order numbers delineate the various project cost components as follows:

- **A.0001703.001**
This work order includes the costs related to the design, materials and labor

needed to build the turbines, access roads, and the collector system, which are the underground cables that run from the turbines into the substation.

- **Land - A0001703.002**

This work order includes the land purchased for holding the substation and the project operations building. The land on which the turbines will be built is leased land and is not a cost under this work order.

- **TSG 230 - A0001703.003**

This work order includes the costs related to design, materials and labor for building the transmission line.

- **TSG Sub - A0001703.004**

This work order includes the costs related to the design, materials and labor needed to build the collector substation.

G100-Crowned Ridge BOT Wind Farm (A0001705.001)

The Crowned Ridge Wind Project has two parts: 300 MW of nameplate capacity through a PPA and 300.6 MW of nameplate capacity through a build-own-transfer arrangement. The Infrastructure Rider rate request includes only costs associated with the build-own-transfer component of this project. This wind energy generation facility will be located in Codington, Deuel and Grant Counties in South Dakota. The project will be built by NextEra, which is the largest developer of wind energy in the United States with more than 12,400 MW of installed wind capacity in the U.S. and Canada. The anticipated commercial operation date for the project is the fourth quarter of 2019. The construction and permitting timeline are consistent with the ability to achieve 100 percent PTC value on the full nameplate capacity proposed by the bidder.

G100-Lake Benton BOT Wind Farm (A0001706.001)

The Lake Benton Wind Farm will have 100.2 MW of nameplate capacity and will be located in Pipestone County southeast of Lake Benton, Minnesota. The project is a repowering of the existing Lake Benton II wind facility that currently contracts its power through a PPA to NSP and has been in operation since May 2000. Like Crowned Ridge, the project will be built by NextEra. The anticipated commercial operation date is fourth quarter 2019. The construction and permitting timeline is consistent with the ability to achieve 100 percent PTC value on the full nameplate capacity. The current PPA will be suspended at a date to be determined prior to the start of construction on the new facility. Formal decommissioning of the existing facility will occur sometime in early 2019. The existing, higher-priced PPA was set to expire in 2025, so with the proposed repowering build-own-transfer project, we

expect to gain at least an additional 19 years of cost-effective generation for the benefit of our customers.

Benson Biomass PPA Termination Costs

After receiving regulatory approvals from the Minnesota Public Utilities Commission (MPUC), the North Dakota Public Services Commission, and the Federal Energy Regulatory Commission, NSPM has acquired a 62.3 MW (nameplate) biomass-fired electric generation plant from Benson Power, LLC, has terminated a multi-year Power Purchase Agreement between NSPM and Benson Power, and will shut down and dismantle the Benson Power Facility and remediate the plant site.

The Benson Power project was constructed as a result of Minnesota's 1994 Prairie Island Cask Storage Authorization Act, granting approval to further operate the Prairie Island and Monticello nuclear power plants, and to store on-site the spent fuel from those facilities. As part of the legislation, the Company was mandated to construct and operate, or contract to construct, 125 MW of installed capacity generated by farm grown closed-loop biomass.

In 2017, additional Minnesota legislation amended the biomass mandate, allowing the MPUC to approve an amended biomass PPA, the early termination of a biomass PPA, or the purchase and closure of a biomass facility. The Company filed a petition to terminate the PPA with Benson Power, acquire the Benson Power biomass plant, and subsequently close the facility with the MPUC on June 30, 2017.¹ The Minnesota Commission issued its final Order approving the petition on March 28, 2018.

The pricing under the Benson Power PPA was significantly higher than current wholesale electric market prices, as well as more expensive than most other generation resources in the NSP System portfolio. As a result, we entered negotiations with the objective of saving customers money and optimizing the overall NSPM portfolio. NSPM terminated the Benson PPA and made a contract termination payment to Benson Power in July 2018. The Company will discontinue operations of the Benson Power Facility later in 2018, and then dismantle the Benson Power Facility and remediate the facility site, work that is anticipated to be complete by 2020. The NSP System will generate or procure replacement resources to replace the Benson Power PPA resources at a cost lower than the cost under the Benson Power PPA.

¹ Docket No. E002/M-17-530 (*Petition for Approval to Terminate the PPA with Benson Power, LLC, Acquire the Benson/Fibrominn Plant, and Close the Facility*).

The total costs of the Benson Transaction to be recorded as a regulatory asset by NSPM and amortized are estimated at \$106.8 million. The revenue requirements included in this cost recovery request are the South Dakota jurisdictional share of the \$106.8 million total transaction cost. The benefits of the Benson Transaction significantly exceed its costs, however. The NSPM 2017 estimated net NSP System production cost savings of approximately \$345 million on a net present value (“NPV”) basis and \$480 million on a nominal basis over the remaining life of the Benson PPA. South Dakota customers would realize about 5.1 percent of these savings, or about \$18 million (NPV).

The Commission issued its Order approving the Company’s request for deferred accounting of this project in Docket No. EL18-027 on June 28, 2018. Further support for the estimated cost savings is provided in Attachment 9A. The cost savings due to the termination of the PPA and the costs of the replacement energy will be reflected in the fuel clause. The costs included in the Infrastructure Rider reflect the revenue requirements of the transaction and reflect the actual timing of the termination.

Laurentian Biomass PPA Termination Costs

After receiving regulatory approvals from the Minnesota Public Utilities Commission (MPUC) and the North Dakota Public Services Commission, Xcel Energy has terminated a Power Purchase Agreement (PPA) with Laurentian Energy Authority I, LLC (LEA). LEA owns and operates two biomass plants, a 20 MW unit in Hibbing and a 15 MW unit in Virginia, Minnesota. The PPA was significantly above current market prices as well as most other resources in the NSPM portfolio and had a 20-year term that would run through December 31, 2026. As a result, we entered negotiations with the objective of saving customers money and optimizing the overall NSPM portfolio. NSPM terminated the Laurentian PPA and made a contract termination payment in July 2018.

The Laurentian Energy projects were constructed as a result of Minnesota’s 1994 Prairie Island Cask Storage Authorization Act, granting approval to further operate the Prairie Island and Monticello nuclear power plants, and to store on-site the spent fuel from those facilities. As part of the legislation, the Company was mandated to construct and operate, or contract to construct, 125 MW of installed capacity generated by farm grown closed-loop biomass.

In 2017, additional Minnesota legislation amended the biomass mandate, allowing the MPUC to approve an amended biomass PPA, the early termination of a biomass PPA, or the purchase and closure of a biomass facility. The Company filed a petition

to terminate the Laurentian PPA with the MPUC on July 14, 2017.² The Minnesota Commission issued its final Order approving the petition on March 28, 2018.

Based on the termination agreement, the Company will pay the Laurentian Energy Authority \$108.5 million over a six year period in equal annual payments of about \$18.08 million, on a total Company basis. The revenue requirements included in this cost recovery request are the South Dakota jurisdictional share of the \$108.5 million total transaction cost. Due to the high costs of the existing PPA, even after accounting for the PPA termination costs as well as any potential replacement energy costs, we expect NSPM customers will see a Net Present Value (NPV) savings of approximately \$87 million (\$122 million nominally) over the life of the PPA. South Dakota customers would realize about 5.1 percent of these savings, or about \$4 million (NPV).

The Commission issued its Order approving the Company's request for deferred accounting of this project in Docket No. EL18-027 on June 28, 2018. Further support for the estimated cost savings is provided in Attachment 9A. The cost savings due to the termination of the PPA and the costs of the replacement energy will be reflected in the fuel clause. The costs included in the Infrastructure Rider reflect the revenue requirements of the transaction and reflect the actual timing of the termination.

Pine Bend Landfill Gas PPA Termination Costs

After receiving regulatory approvals from the Minnesota Public Utilities Commission (MPUC) and the North Dakota Public Services Commission, Xcel Energy has terminated a Power Purchase Agreement (PPA) with Gas Recovery Systems (GRS) who owns and operates the 12 NW Pine Bend landfill gas facility in Dakota County, Minnesota. The Company and GRS entered into the PPA on September 20, 1994 for a term ending on December 31, 2025. The Pine Bend project was developed as a Qualifying Facility under the federal Public Utilities Regulatory Policies Act (PURPA) and Minn. Stat. 216B.164, Subd. 2.

The Company filed a petition to terminate the Laurentian PPA with the MPUC on July 30, 2017.³ The Minnesota Commission issued its final Order approving the petition on November 8, 2017.

² Docket No. E002/M-17-551 (*Petition for Approval to Terminate the Laurentian PPA*)

³ Docket No. E002/M-17-531 (*Petition for Approval to Terminate the Pine Bend PPA*)

Based on the terms of the agreement, the Company will pay GRS the monthly difference between the current PPA price and the average monthly Locational Marginal Price (LMP) at the NSP.NSP node plus \$10 per MWh, based on 3,000 MWh per month. If the difference is negative, no payment will be made to GRS for that month. The termination agreement specifies that the Company will continue to make the termination payments until the earlier of three years from the effective date or when GRS has received \$1.1 million through the monthly payments. This transaction will achieve about \$5 million (NPV) in savings for NSPM customers over the remaining years of the PPA. South Dakota customers should realize about 5.1 percent of these savings, or about \$300,000 (NPV).

The Commission issued its Order approving the Company's request for deferred accounting of this project in Docket No. EL18-027 on June 28, 2018.

The costs associated with this PPA termination are included with the Laurentian PPA termination line item in the attachments to this filing. Further support for the estimated cost savings is provided in Attachment 9A. The cost savings due to the termination of the PPA and the costs of the replacement energy will be reflected in the fuel clause. The costs included in the Infrastructure Rider reflect the revenue requirements of the transaction and reflect the actual timing of the termination.