400 North Fourth Street Bismarck, ND 58501 701-222-7900

July 1, 2022

Ms. Patricia Van Gerpen Executive Director South Dakota Public Utilities Commission State Capitol Building 500 East Capitol Pierre, SD 57501-5070

Re: Ten-Year Plan

Montana-Dakota Utilities Co. herewith electronically submits its Ten-Year Plan in accordance with South Dakota Administrative Rules Chapter 20:10:21.

If you should have any questions, please feel free to contact me at 701-222-7855.

Sincerely,

/s/ Travis R. Jacobson

Travis R. Jacobson Director of Regulatory Affairs

# MONTANA-DAKOTA UTILITIES CO. TEN YEAR PLAN FOR SOUTH DAKOTA ELECTRIC PROPERTIES

For Planning Years January 1, 2022 through December 31, 2031

#### Submitted to

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION JULY 1, 2022



A Subsidiary of MDU Resources Group, Inc.

In the Community to Serve®

# MONTANA-DAKOTA UTILITIES CO. TEN YEAR PLAN FOR SOUTH DAKOTA ELECTRIC PROPERTIES

For Planning Years January 1, 2022 through December 31, 2031

#### Submitted to

#### SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

July 1, 2022

MONTANA-DAKOTA UTILITIES CO.

400 North 4th Street Bismarck, North Dakota 58501

# Table of Contents

20:10:21:04 Existing Energy Conversion Facilities	1
Heskett – Unit 1	1
Heskett – Unit 2	1
Heskett – Unit 3	2
Lewis & Clark – Unit 1	2
Lewis & Clark – Unit 2	3
Glendive – Unit 1	3
Glendive – Unit 2	3
Glen Ullin Station 6 (ORMAT)	4
Miles City	4
Cedar Hills	5
Diamond Willow	5
Thunder Spirit	5
Coyote	6
Big Stone	6
Portable Generator Unit 2	7
Portable Generator Unit 3	7
20:10:21:05 Proposed Energy Conversion Facilities	7
20:10:21:06 Existing Transmission Facilities	8
20:10:21:07 Proposed Transmission Facilities	8
20:10:21:08 Coordination of Plans	8
20:10:21:09 Single Regional Plans	9
20:10:21:10 Submission of Regional Plan	10
20:10:21:11 Utility Relationships	10
20:10:21:12 Efforts to Minimize Adverse Effects	10
20:10:21:13 Efforts Relating to Load Management	11
20:10:21:14 List of Report	12
20:10:21:15 Changes in Status of Facilities	12
20:10:21:16 Projected Electric Demand (Megawatts)	12
20:10:21:17 Changes in Electric Energy (Megawatt-hours)	13
20:10:21:18 Map of Service Area	

#### 20:10:21:04 Existing Energy Conversion Facilities

#### Heskett – Unit 1

- Location: 2025 38th St, Mandan, ND 58554
- Type and nameplate capacity: Steam, 20 MW nameplate capacity, 20.6 MW accredited capacity in the 2020-21 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 77,210 MWh
  - **2021** 92,209 MWh
- Water source and annual acre-ft use and consumption: Missouri River
  - **2020** 18,275 acre-ft used in a once through cooling loop, 10.67 acre-ft consumed to make up for closed-loop losses and fire suppression.
  - **2021** 19,498 acre-ft used in a once through cooling loop, 21.33 acre-ft consumed to make up for closed-loop losses and fire suppression.
- Fuel type, source, annual consumption: Lignite coal from Dakota Westmoreland Beulah mine, tires from Liberty.
  - $\circ$  **2020** 70,001 tons of coal, 3,478 tons of tires.
  - $\circ$  **2021** 81,473 tons of coal, 4,131 tons of tires.
- Projected date of removal from service: Retired on February 24, 2022
  - o Reason Aging unit and no longer economically viable.

#### Heskett - Unit 2

- Location: 2025 38th St, Mandan, ND 58554
- Type and nameplate capacity: Steam, 66 MW nameplate capacity, 67.3 MW accredited capacity in the 2020-21 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 457,937 MWh
  - o **2021** 475,986 MWh
- Water source and annual acre-ft use and consumption: Missouri River
  - o **2020** 36,551 acre-ft used in a once through cooling loop, 21.33 acre-ft consumed to make up for closed-loop losses and fire suppression.
  - **2021** 38,997 acre-ft used in a once through cooling loop, 27.93 acre-ft consumed to make up for closed-loop losses and fire suppression.
- Fuel type, source, annual consumption: Lignite coal from Dakota Westmoreland Beulah mine, natural gas from Montana-Dakota.
  - $\circ$  **2020** 370,535 tons of coal, 224 dekatherms of natural gas.
  - $\circ$  2021 387,508 tons of coal, 293 dekatherms of natural gas.
- Projected date of removal from service: Retired January 30, 2022
  - o Reason Aging unit and no longer economically viable.

#### Heskett – Unit 3

- Location: 2025 38th St, Mandan, ND 58554
- Type and nameplate capacity: Combustion Turbine, 89 MW nameplate capacity, 73.5 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 1,331 MWh
  - **2021** 7,325 MWh
- Water source and annual acre-ft use and consumption: Water use and consumption for Heskett 3 is negligible. It is not metered separately from Heskett 1 and 2, so it is included in the water use and consumption for those units. It is used for evaporative cooling and fire suppression and comes from the Missouri River.
- Fuel type, source, annual consumption: Natural gas from Northern Border Pipeline.
  - $\circ$  2020 19,537 dekatherms of natural gas.
  - $\circ$  2021 121,177 dekatherms of natural gas.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### Lewis & Clark – Unit 1

- Location: 53023 Highway 23, Sidney, MT 59270
- Type and nameplate capacity: Steam, 44 MW nameplate capacity, 41.4 MW accredited capacity in the 2019-20 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 259,409 MWh
  - **2021** 72,210 MWh
- Water source and annual acre-ft use and consumption: Yellow Stone River
  - **2020** 25,869 acre-ft used in a once through cooling loop, 15.81 acre-ft consumed to make up for closed-loop losses and fire suppression.
  - 2021 6,957 acre-ft used in a once through cooling loop, 4.23 acre-ft consumed to make up for closed-loop losses and fire suppression. Quarter 1 only as unit was decommissioned after.
- Fuel type, source, annual consumption: Lignite coal from Dakota Westmoreland Savage mine.
  - $\circ$  **2020** 232,678 tons of coal.
  - $\circ$  **2021** 63,857 tons of coal. Quarter 1 only as unit was decommissioned after.
- Projected date of removal from service: Retired March 31, 2021
  - o Reason Aging unit and no longer economically viable

#### Lewis & Clark – Unit 2

- Location: 12234 County Road 350, Sidney, MT 59270
- Type and nameplate capacity: Reciprocating Internal Combustion Engine, 18.7 MW nameplate capacity, 18 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 1,613 MWh
  - $\circ$  **2021** 3,779 MWh
- Water source and annual acre-ft use and consumption: Yellow Stone River
  - $\circ$  **2020** 0.03 acre-ft consumed.
  - $\circ$  **2021** 0.03 acre-ft consumed.
- Fuel type, source, annual consumption: Natural gas from Northern Border Pipeline.
  - $\circ$  2020 14,405 dekatherms of natural gas.
  - $\circ$  2021 33,196 dekatherms of natural gas.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### Glendive - Unit 1

- Location: 336 FAS 335, Glendive, MT 59330
- Type and nameplate capacity: Combustion Turbine: Base, 34.8 MW or 34.2 MW nameplate capacity for natural gas and diesel respectively, 26.7 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 63.4 MWh
  - **2021** 5,486.2 MWh
- Water source and annual acre-ft use and consumption: Glendive City Water Supply, used for fogging/power augmentation during surge testing.
  - $\circ$  **2020** 0 acre-ft consumed.
  - $\circ$  **2021** 0.002 acre-ft consumed.
- Fuel type, source, annual consumption: Natural gas from WBI Energy, No. 2 diesel from Cross Petroleum.
  - o 2020 932 dekatherms of natural gas, 0 gallons of diesel.
  - o **2021** 79,667 dekatherms of natural gas, 0 gallons of diesel.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### Glendive - Unit 2

- Location: 336 FAS 335, Glendive, MT 59330
- Type and nameplate capacity: Combustion Turbine, 40.7 MW nameplate

capacity, 36.4 MW accredited capacity in the 2022-23 MISO Planning Year.

- Net capacity and annual MWh production:
  - o **2020** 789.5 MWh
  - o **2021** 10,859.8 MWh
- Water source and annual acre-ft use and consumption: Glendive City Water Supply, used for fogging/power augmentation during surge testing.
  - $\circ$  2020 0.006 acre-ft consumed.
  - $\circ$  2021 0.009 acre-ft consumed.
- Fuel type, source, annual consumption: Natural gas from WBI Energy, No. 2 diesel from Cross Petroleum.
  - o 2020 8,051 dekatherms of natural gas, 18,151 gallons of diesel.
  - o **2021** 112,028 dekatherms of natural gas, 19,303 gallons of diesel.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### **Glen Ullin Station 6 (ORMAT)**

- Location: 4090 62<sup>nd</sup> Ave, Glen Ullin, ND 58631
- Type and nameplate capacity: Waste Heat, 7.5 MW nameplate capacity, 3.3 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 29,812.7 MWh
  - o **2021** 44,770.6 MWh
- Water source and annual acre-ft use and consumption: Glen Ullin Station 6 does not use or consume water.
- Fuel type, source, annual consumption: This generating unit is a renewable Combined Heat and Power unit. It takes waste heat from a Northern Border compression station and converts it to electricity.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### **Miles City**

- Location: 4642 E Leighton Boulevard, Miles City, MT 59301
- Type and nameplate capacity: Combustion Turbine: Base, 23.2 MW or 23.8 MW nameplate capacity for natural gas or diesel respectively, 18.6 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - **2020** 349.2 MWh
  - o **2021** 2,974.4 MWh
- Water source and annual acre-ft use and consumption: Glendive City Water Supply, used for fogging/power augmentation during surge testing.
  - $\circ$  2020 0.001 acre-ft consumed.

- $\circ$  2021 0.004 acre-ft consumed.
- Fuel type, source, annual consumption: Natural gas from WBI energy, No. 2 diesel from Cross Petroleum.
  - o **2020** 5,654 dekatherms of natural gas, 2,324 gallons of diesel.
  - o **2021** 45,390 dekatherms of natural gas, 0 gallons of diesel.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### Cedar Hills

- Location: 8104 163<sup>rd</sup> Ave SW, Rhame, ND 58651
- Type and nameplate capacity: Wind, 19.5 MW nameplate capacity, 3.8 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - **2020** 55,889.2 MWh
  - **2021** 58, 221.1 MWh
- Cedar Hills is a wind farm and does not have any water or fuel consumption.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### **Diamond Willow**

- Location: 326 10<sup>th</sup> St SE, Baker, MT 59313
- Type and nameplate capacity: Wind, 30 MW nameplate capacity, 5.3 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 98,781 MWh
  - o **2021** 92,756.7 MWh
- Diamond Willow is a wind farm and does not have any water or fuel consumption.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### **Thunder Spirit**

- Location: 206 3<sup>rd</sup> Ave NE, Hettinger, ND 58639
- Type and nameplate capacity: Wind, 155.5 MW nameplate capacity, 24.6 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 600,626 MWh
  - **2021** 556,575 MWh
- Thunder Spirit is a wind farm and does not have any water or fuel consumption.
- Projected date of removal from service: Montana-Dakota currently has no plans to

remove this unit from service.

#### Coyote

- Location: 6240 13<sup>th</sup> St, Beulah, ND 58523
- Type and nameplate capacity: Steam, 427 MW is the total nameplate capacity, but Montana-Dakota only has a 25% share, bringing Montana-Dakota's nameplate capacity to 107 MW with an accredited capacity of 94 MW in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 590,865.5 MWh (Montana-Dakota's 25% share)
  - o **2021** 660,173.4 MWh (Montana-Dakota's 25% share)
- Water source and annual acre-ft consumption: Missouri River. Data provided by Otter Tail Power Company.
  - $\circ$  2020 5,232 acre-ft consumed
  - $\circ$  2021 3,547 acre-ft consumed.
- Fuel type, source, annual consumption: Lignite coal from Coyote Creek Mine. Data provided by Otter Tail Power Company.
  - $\circ$  **2020** 1,969,501 tons of coal.
  - $\circ$  **2021** 2,022,579 tons of coal.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### **Big Stone**

- Location: Big Stone City, SD
- Type and nameplate capacity: Steam, 475 MW is the total nameplate capacity, but Montana-Dakota only has a 22.7% share, bringing Montana-Dakota's nameplate capacity to 108 MW with and accredited capacity of 106.8 MW in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 416,024.3 MW (Montana-Dakota's 22.7% share)
  - o **2021** 395,241.1 MW (Montana-Dakota's 22.7% share)
- Water source and annual acre-ft consumption: Big Stone Lake. Data provided by Otter Tail Power Company.
  - $\circ$  2020 2,175 acre-ft consumed.
  - $\circ$  **2021** 3,447 acre-ft consumed.
- Fuel type, source, annual consumption: Sub-bituminous coal from Peabody Energy. Data provided by Otter Tail Power Company.
  - $\circ$  **2020** 1,049,584 tons of coal.
  - $\circ$  **2021** 1,244,369 tons of coal.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### Portable Generator Unit 2

- Location: Currently in Sidney, MT 59270
- Type and nameplate capacity: 1,825 kW nameplate capacity, 2 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 10,513 MWh (Units 2 and 3 combined)
  - o **2021** 14,811 MWh (Units 2 and 3 combined)
- Water source and annual acre-ft consumption: The portable generators do not use or consume water.
- Fuel type, source, annual consumption: No. 2 diesel from Agland Co-op.
  - $\circ$  2020 575 gallons of diesel.
  - $\circ$  2021 817 gallons of diesel.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

#### Portable Generator Unit 3

- Location: Currently in Poplar, MT 59255
- Type and nameplate capacity: 1,825 kW nameplate capacity, 1.9 MW accredited capacity in the 2022-23 MISO Planning Year.
- Net capacity and annual MWh production:
  - o **2020** 10,513 MWh (Units 2 and 3 combined)
  - o **2021** 14,811 MWh (Units 2 and 3 combined)
- Water source and annual acre-ft consumption: The portable generators do not use or consume water.
- Fuel type, source, annual consumption: No. 2 diesel from Metz Fuel & Service, Inc.
  - $\circ$  2020 633 gallons of diesel.
  - $\circ$  2021 725 gallons of diesel.
- Projected date of removal from service: Montana-Dakota currently has no plans to remove this unit from service.

### 20:10:21:05 Proposed Energy Conversion Facilities

Montana-Dakota is currently in the process of building a simple cycle combustion turbine generating resource (88 MW), which will help meet future energy and demand requirements from its customers in an economic and reliable fashion. Heskett 4 will be located in North Dakota beside the current Heskett 3 simple cycle combustion turbine which gives Montana-Dakota the ability to utilize existing air permit emissions, land, natural gas pipelines, and interconnection facilities. The site is designed to convert Heskett 3 and 4 into a combined cycle facility with the addition of heat recovery boilers and a steam turbine generator in the future if needed. Heskett 4 is expected to be brought online by May 31, 2023.

#### **20:10:21:06** Existing Transmission Facilities

Montana-Dakota and Otter Tail Power Company jointly own a 345 kV transmission line extending from Big Stone, South Dakota to Ellendale, North Dakota. A jointly owned substation with Otter Tail Power Company, Twin Brooks, was added to this transmission line in May 2020.

Exhibit A shows the 115 kV and 46 kV transmission network which serves Montana-Dakota's South Dakota customers. The Exhibit also shows 47.5 miles of 230 kV line extending northwesterly from the Big Stone Plant. This line transmits electric energy from the Big Stone Plant to Montana-Dakota's transmission network. Montana-Dakota owns this portion of the transmission line. Otter Tail Power Company owns the remaining portion of the line extending northerly.

Montana-Dakota, Basin Electric Power Cooperative (Basin Electric) of Bismarck, North Dakota, and Western Area Power Administration (WAPA) of Billings, Montana, own a 230 kV transmission line extending from Miles City, Montana through Baker, Montana; Bowman, North Dakota; and Hettinger, North Dakota to New Underwood, South Dakota. WAPA owns the South Dakota portion of this facility.

#### 20:10:21:07 Proposed Transmission Facilities

Montana-Dakota is continually studying additional transmission options to meet its customer needs. Montana-Dakota is not currently proposing to build any new transmission facilities in South Dakota.

#### 20:10:21:08 Coordination of Plans

Montana-Dakota has been coordinating the planning, construction, and operation of electric facilities with other utilities and agencies serving South Dakota since 1945. Montana-Dakota has interconnection agreements with Basin Electric, WAPA, Otter Tail Power Company, Northwestern Energy Corporation, and Minnkota Power Cooperative, Inc. These agreements provide for the interconnection of Montana-Dakota's bulk transmission facilities with the WAPA transmission network and MISO bulk transmission facilities.

Montana-Dakota is a transmission owning member of Midcontinent Independent System Operator (MISO). MISO is a FERC-authorized Regional Transmission Organization (RTO). MISO commenced tariff administration for the operational control of the transmission systems of its members in February 2002. MISO commenced its energy market on April 1, 2005. The MISO Ancillary Services Market started on January 6, 2009, at which time Montana-Dakota became a

Local Balancing Authority within MISO. Montana-Dakota actively participates in the planning processes performed by MISO, which has the obligation to coordinate the planning of transmission facilities. Two of the planning processes mandated by the Federal Energy Regulatory Commission (FERC) are generator interconnection and delivery service. The third process is related to expansion planning through the MISO Transmission Expansion Plan. As part of the market operation, Montana-Dakota's generating units are dispatched by MISO.

Montana-Dakota and WAPA historically had an agreement that provided for mutual wheeling and coordinated construction of transmission facilities. This agreement expired on January 1, 2016. WAPA and Basin Electric joined the Southwest Power Pool (SPP) in October 2015 and with the expiration of the WAPA Transmission Service Agreement (TSA) on January 1, 2016, Montana-Dakota began taking Network Integrated Transmission Service (NITS) from SPP in South Dakota, in western North Dakota, and eastern Montana which totals approximately one half of its interconnected system customer load. Montana-Dakota has offset NITS charges by receiving credits for its transmission facilities that are used to facilitate SPP transmission service.

Montana-Dakota, Otter Tail Power Company, and Northwestern Energy Corporation own the 475 megawatt (MW) Big Stone generating station near Big Stone, South Dakota, and associated bulk transmission facilities. Montana-Dakota owns 22.7 percent of the Big Stone Plant. In addition, Montana-Dakota is a participant in another joint venture with Minnkota Power Cooperative, Inc. (agent for Northern Municipal Power Agency), Otter Tail Power Company, and Northwestern Energy Corporation. This is the 427 MW Coyote generating station near Beulah, North Dakota, and associated bulk transmission facilities. Montana-Dakota currently owns 25 percent of the Coyote Station. These cooperative efforts permit Montana-Dakota to realize economic benefits from construction and operation of a large generating station and to provide the electric generation required of it and its partners through fewer facilities.

Montana-Dakota is also a member of the Midwest Reliability Organization (MRO), which is a Cross-Border Regional Entity representing the Midwestern United States and Canada. The MRO is one of six regional entities in North America operating under authority through a delegation agreement with the North American Electric Reliability Corporation (NERC). The primary focus of the MRO is developing and ensuring compliance with regional and international standards and performing assessments of the grid's ability to meet the demands for electricity.

#### 20:10:21:09 Single Regional Plans

Montana-Dakota's membership in MISO provides coordination in operating facilities and assistance in developing joint facilities. If Montana-Dakota has any proposed facilities in sections 20:10:21:05 and 20:10:21:07 these facilities would be part of the MISO Transmission Expansion Plan.

#### 20:10:21:10 Submission of Regional Plan

Montana-Dakota submits to MISO its transmission plans for inclusion into the MISO Transmission Expansion Plan.

#### 20:10:21:11 Utility Relationships

Montana-Dakota has several agreements with other electric utilities in its service area. These are described in Section 20:10:21:08. In addition, Montana-Dakota is a member of MISO, which coordinates the joint operation and planning of electric facilities over the Region and permits Montana-Dakota to participate in the benefits and economics derived from large bulk electric systems. Montana-Dakota is also a member of the MRO.

#### 20:10:21:12 Efforts to Minimize Adverse Effects

Montana-Dakota Utilities Co.'s Environmental Policy states that:

The Company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Our environmental goals are:

- To minimize waste and maximize resources:
- To be a good steward of the environment while providing high quality and reasonably priced products and services; and
- To comply with or surpass all applicable environmental laws, regulations, and permit requirements.

Montana-Dakota maintains good relations with local, state, and federal agencies involved with environmental protection and land use planning in its service area.

Transmission and energy conversion facilities will be designed and located in such a manner as to maximize operational efficiency and economic benefits and to minimize impacts on agriculture, extractable resources, health and safety, plant and animal life, communications, and the visual effect on the surrounding area. Transmission and energy conversion facilities will be sited in compliance with the federal, state, and local laws and with the Public Service Commission's rules and regulations.

Montana-Dakota strives to maintain compliance and operate in an environmentally proactive manner, while taking into consideration the cost to customers. Montana-Dakota actively provides comments to federal and state legislative and regulatory activity related to environmental issues, including air emissions, greenhouse gases (GHG), waste disposal, and water discharges. The Company has also established memberships in relevant trade organizations to assist in monitoring the potential impact of proposed legislation and regulation to the Company's operations.

#### 20:10:21:13 Efforts Relating to Load Management

Montana-Dakota uses an Integrated Resource Planning method that analyzes both supply-side options and demand-side management (DSM) programs. This planning method evaluates various means of providing electric energy to Montana-Dakota customers. Examples of supply-side options include central generating stations or alternate energy sources, while DSM programs include demand response and energy efficiency. Montana-Dakota first implemented Integrated Resource Planning in 1987 with the first integrated resource plan (IRP) being published in October 1989, and the most recent IRP was published in July 2021 in North Dakota and September 2021 in Montana; both plans are on file with the Public Utilities Commission.

Currently, Montana-Dakota has approximately 40.4 MW of demand response on its Integrated System which comprises the service territories in Montana, North Dakota, and South Dakota. Based on analysis presented in the IRP, Montana-Dakota has implemented and will continue to add additional customers to the programs below:

DSM programs Programs by state

**Residential Programs** 

LED Lighting MT

**Commercial Programs** 

Lighting MT Partnership Program MT

Commercial Demand Response MT, ND, SD Interruptible Rate Demand Response MT, ND

The effects of load management programs in South Dakota are, however, expected to be relatively small for the reported ten-year period. This is because the number of customers served by Montana-Dakota in South Dakota is a small percentage (6.63% in 2021) of those served on the Integrated System. In addition, a high percentage of these are residential customers located in small communities with no industry and few large commercial establishments.

# **20:10:21:14** List of Report

None.

# 20:10:21:15 Changes in Status of Facilities

None.

20:10:21:16 Projected Electric Demand (Megawatts)

	South Dakota		Montana-Dakota Integrated System	
Year	Summer Peak	Winter Peak	Summer Peak	Winter Peak
	Demand (MW)*	Demand (MW)*	Demand (MW)*	Demand (MW)*
2022	27.8	27.7	580.6	579.0
2023	28.0	27.9	586.6	583.8
2024	28.2	28.0	593.4	590.4
2025	28.4	28.2	600.2	596.7
2026	28.5	28.4	607.0	603.3
2027	28.7	28.5	613.8	609.5
2028	28.9	28.7	620.8	616.6
2029	29.1	28.9	627.7	623.2
2030	29.2	29.0	634.8	630.4
2031	29.3	29.1	641.9	637.6

<sup>\*</sup>Montana-Dakota Integrated System and South Dakota Summer and Winter Peak Demands are represented as net of Energy Efficiency

20:10:21:17 Changes in Electric Energy (Megawatt-hours)

South Dakota

Year	Total Annual Energy	Percentage of
1 Cui	(MWh)	Change
2022	156,685	
2023	157,587	0.58%
2024	158,485	0.57%
2025	159,413	0.59%
2026	160,336	0.58%
2027	161,173	0.52%
2028	162,090	0.57%
2029	162,999	0.56%
2030	163,912	0.56%
2031	164,818	0.55%

# **20:10:21:18 Map of Service Area**

Enclosed is Exhibit A which shows Montana-Dakota's South Dakota Service Area.

