

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

July 1, 2020

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. (Montana-Dakota), a Division of MDU Resources Group, Inc., 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

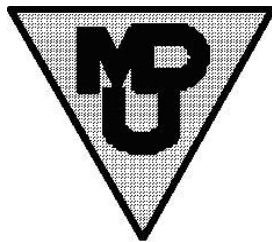
Travis R. Jacobson
Director of Regulatory Affairs

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

For Planning Years January 1, 2020 through December 31, 2029

Submitted to

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION JULY 1, 2020



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UTILITIES CO.**

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Exhibit A – South Dakota Electric System Map

20:10:21:04 Existing Energy Conversion Facilities

Montana-Dakota Utilities Co. (Montana-Dakota) has a 22.7 percent ownership in the 475 MW coal-fired Big Stone Plant located near Big Stone City, South Dakota. Otter Tail Power Company of Fergus Falls, Minnesota, operates the plant and reports all information required by 20:10:21:04.

20:10:21:05 Proposed Energy Conversion Facilities

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

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 planning to complete the construction of a 40-mile 115 kV transmission line from the existing Ellendale Junction substation in North Dakota to a 115/41.6kV substation near Leola, South Dakota by the end of 2020. This line is being developed to support existing load and improve reliability in the area.

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 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 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 Western 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 to serve approximately one-half of its customer load in western North Dakota and eastern Montana.

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.

The U.S. Environmental Protection Agency (EPA) has finalized significant air emissions regulations for coal-fired electric generating facilities and has proposed significant new regulations that aim to reduce air emissions, including GHGs, at fossil-fired electric generating facilities and pollutants in wastewater discharges. The EPA also published a final rule in the Federal Register on April 17, 2015, for management of coal ash at coal-fired electric generating facilities. The culmination of all various pending environmental requirements, including any new EPA rulemaking to reduce carbon dioxide emissions from existing fossil fuel fired electric generating units, may result in the retirement of existing coal-fired baseload units earlier than otherwise would occur. Montana-Dakota will continue to monitor regulation changes and will take both proposed and final regulations into consideration when planning for future resource needs.

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 2019; both plans are on file with the Public Utilities Commission.

Currently, Montana-Dakota has approximately 40 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 (6.68% in 2019) 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 REPORTS

None

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

None

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

Year	South Dakota		Montana-Dakota Integrated System	
	Summer Peak Demand (MW)*	Winter Peak Demand (MW)*	Summer Peak Demand (MW)*	Winter Peak Demand (MW)*
2020	28.1	26.3	592.6	554.5
2021	28.0	26.6	608.3	578.5
2022	27.8	26.9	627.0	608.3
2023	27.8	27.2	638.7	624.9
2024	27.9	27.4	646.8	634.3
2025	28.1	27.6	653.9	641.7
2026	28.3	27.8	661.2	649.7
2027	28.5	28.0	668.1	656.8
2028	28.8	28.3	675.0	663.8
2029	29.0	28.5	681.9	670.9

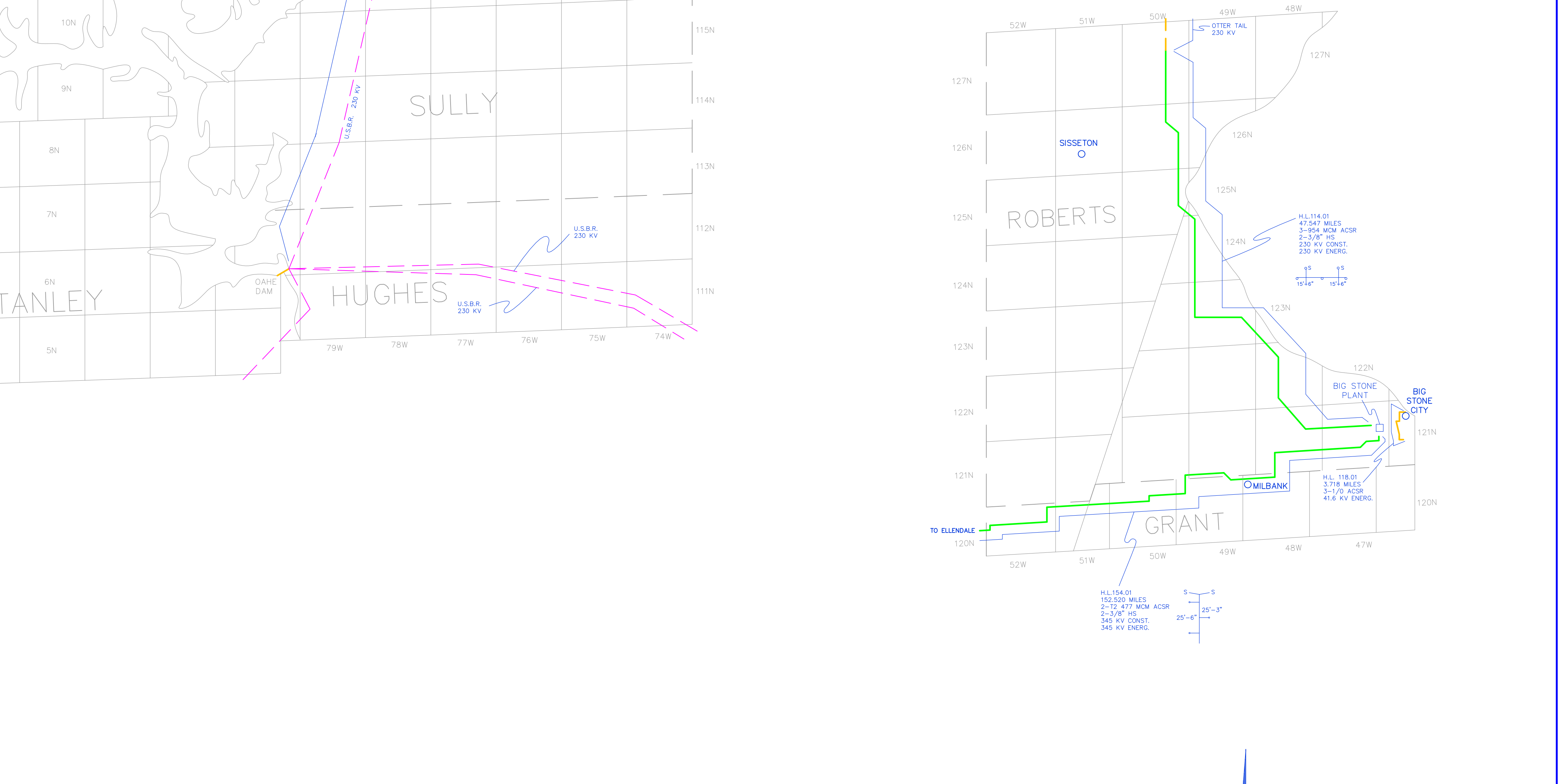
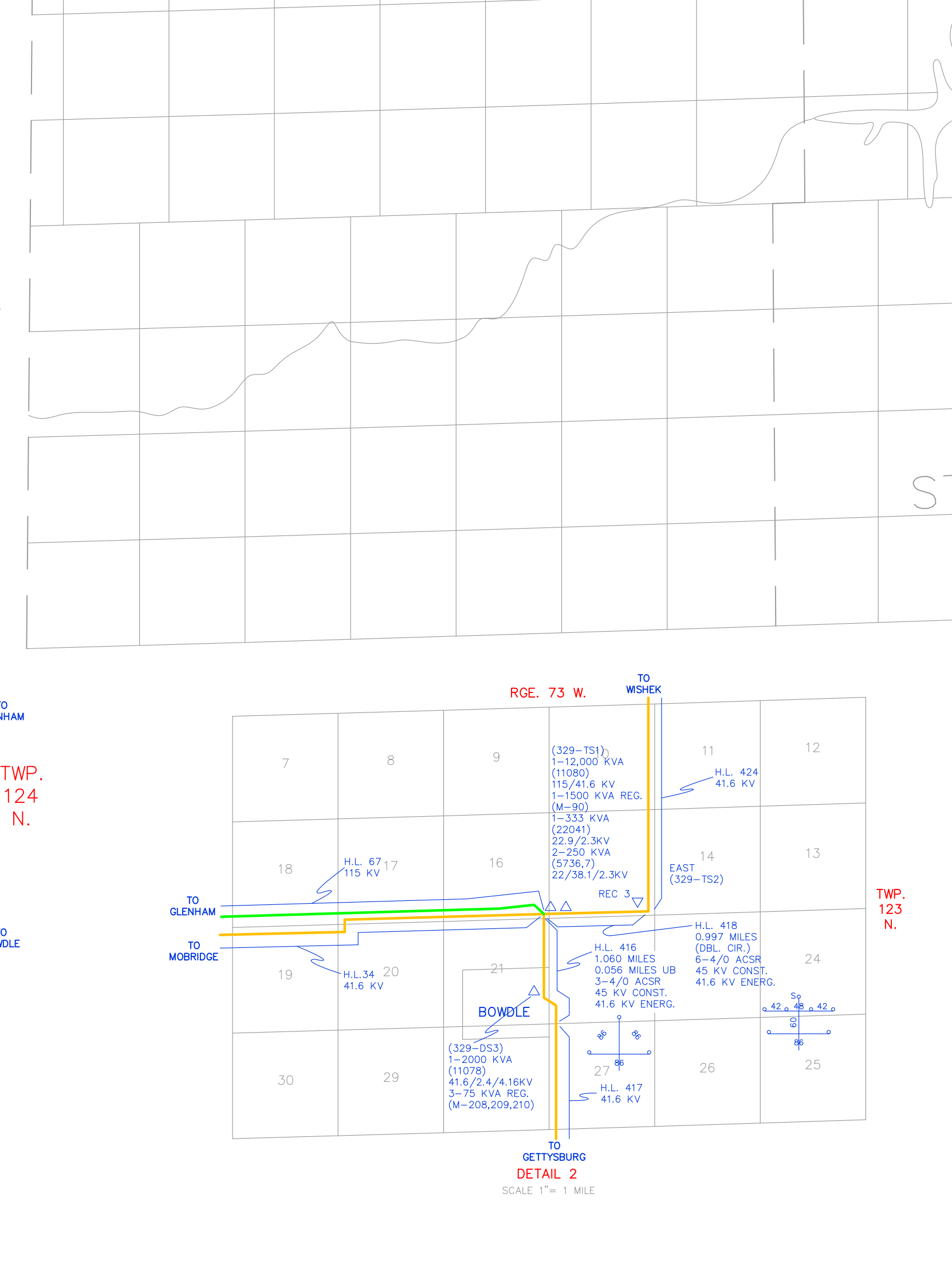
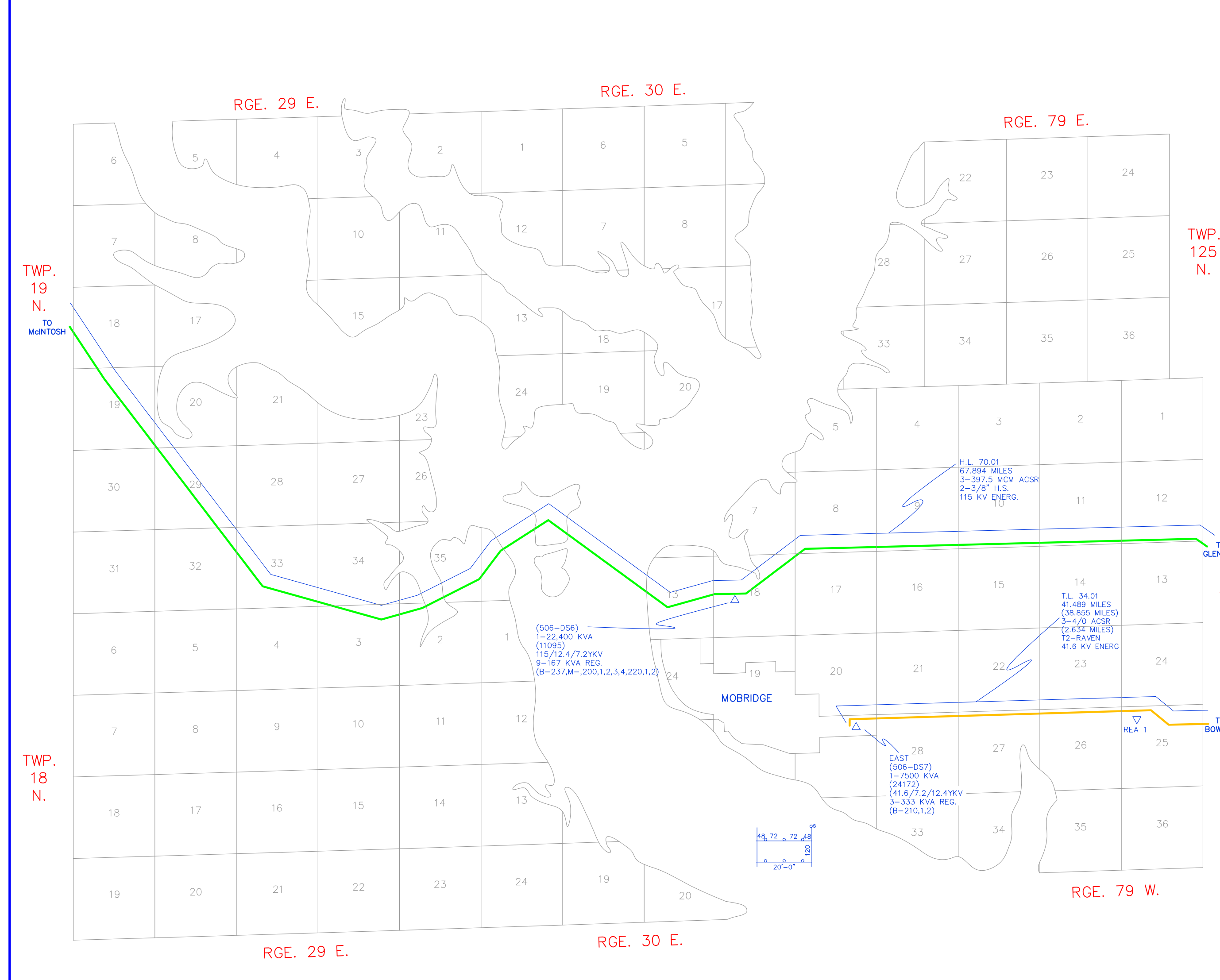
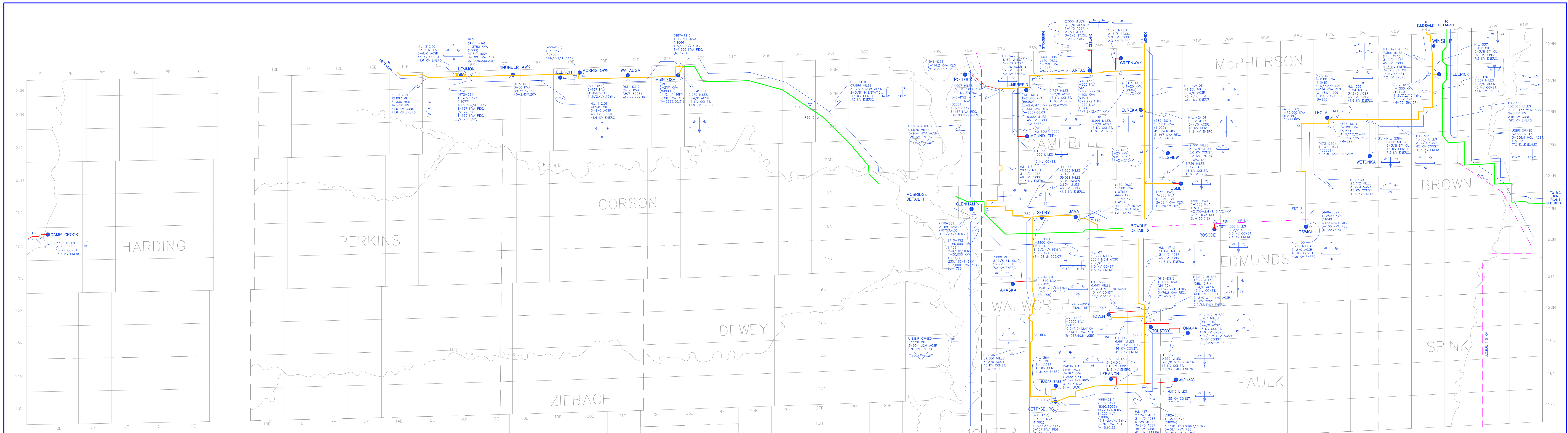
*Montana-Dakota Integrated System and South Dakota Summer and Winter Peak Demands are represented as net of Energy Efficiency

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

Year	South Dakota Total Annual Energy (MWh)	Percentage of Change
2020	160,265	--
2021	161,439	0.73%
2022	162,614	0.72%
2023	163,832	0.74%
2024	165,056	0.74%
2025	166,224	0.70%
2026	167,482	0.75%
2027	168,767	0.76%
2028	170,058	0.76%
2029	171,373	0.77%

20:10:21:18 Map of Service Area

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



LEGEND

REC	SYMBOLS
1 - CAM-WAL ELEC. CO-OP., INC.	— MDU CO 345,230,115 KV LINES
2 - GALE ELEC. CO-OP., INC.	— MDU CO 57.69 KV LINES
3 - FEM ELEC. CO-OP., INC.	— MDU CO 41.6 KV LINES
4 - GRAND ELEC. CO-OP., INC.	— MDU CO DIST. LINES (33 KV AND BELOW)
5 - MOREAU-GRAND ELEC. CO-OP., INC.	— USBR AND UPA LINES
6 - MOR-GRAN-SOU ELEC. CO-OP., INC.	● TOWNS SERVED BY MDU CO
7 - NORTHERN ELEC. CO-OP., INC. (ABERDEEN)	▲ ELECTRIC SUBSTATIONS
8 - SOUTHEAST ELEC. CO-OP., INC.	□ ELECTRIC POWER PLANT OR SUBSTATION
	▽ REC TAPS

SYSTEM MAP OF ELECTRICAL PROPERTIES IN SOUTH DAKOTA
MONTANA-DAKOTA UTILITIES CO.

DRAWN BY	DATE	APPROVED	SCALE	DRAWING NO.
RAW	8-28-95	BAK	1"=6AM. SD. ELEC. SYS.	

REVISED			
K.O.P.P.	1-28-2012	K.O.P.P.	4-16-2018
K.O.P.P.	1-31-2013	K.O.P.P.	2-20-2019
K.O.P.P.	1-28-2014	K.O.P.P.	1-14-2020
K.O.P.P.	3-10-2015	K.O.P.P.	6-14-2020
K.O.P.P.	6-24-2016	-----	-----
K.O.P.P.	3-3-2017	-----	-----
K.O.P.P.	8-10-2017	-----	-----