

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

For Planning Years January 1, 2000 through December 31, 2009

Submitted to

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION  
JULY 1, 2000



**MONTANA-DAKOTA  
UTILITIES CO.**

A Division of MDU Resources Group, Inc.

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400 North 4th Street  
Bismarck, North Dakota 58501**

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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 interest in the Big Stone Plant located near Big Stone, South Dakota. Otter Tail Power Company of Fergus Falls, Minnesota operates the plant and will report information required by 20:10:21:04.

20:10:21:05

Proposed Energy Conversion Facilities

Montana-Dakota currently has no plans to construct energy conversion facilities in South Dakota within the next ten years.

Montana-Dakota has no transmission facilities of 250 kilovolts (kV) or more in South Dakota. Exhibit A shows the 115 kV and 46 kV transmission network which serves Montana-Dakota's South Dakota customers. It 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 (Western) of Billings, Montana, have built 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. Western owns the South Dakota portion of this facility.

20:10:21:07

Proposed Transmission Facilities

Montana-Dakota has no plans for new transmission lines of 250 kV or higher voltage.

Montana-Dakota has been coordinating the construction and operation of electric facilities with other utilities and agencies serving South Dakota since 1945. Montana-Dakota is presently involved in agreements for joint planning and common use of area facilities: agreement with Basin Electric through the year 2007 and agreement with Western through the year 2015.

In 1945, Montana-Dakota signed a wheeling agreement with the United States Bureau of Reclamation, now Western, which coordinated construction of transmission facilities. This agreement was renewed in 1956 and again in 1988. Over the years since, cooperation among Montana-Dakota, Western, and rural electric cooperatives has resulted in numerous interconnections between Montana-Dakota's and Western's systems, avoiding duplication of hundreds of miles of transmission facilities.

In 1972, a thirty-five year agreement was entered into with Basin Electric which provides for joint planning and common use of facilities. Joint planning involving Montana-Dakota and Basin Electric and its member cooperatives continues to provide maximum utilization and benefit of existing and new transmission facilities. Load flow studies provided for under this agreement assure that adequate facilities will be provided to meet expected long-range demands.

Montana-Dakota has interconnection agreements with Otter Tail Power Company, Northwestern Public Service Company, and Minnkota Power Cooperative, Inc. These agreements, along with the aforementioned Basin Electric and Western agreements, provide for the interconnection of Montana-Dakota's bulk transmission facilities with the Mid-Continent Area Power Pool (MAPP) bulk transmission facilities.

Montana-Dakota is a member of the MAPP Regional Transmission Committee, which oversees regional transmission planning through its Transmission Planning Subcommittee. Montana-Dakota is active in the Red River Valley Subregional Planning Group of the Transmission Planning Subcommittee. The objective of the Red River Valley Subregional Planning Group is to provide coordinated planning of transmission systems in North Dakota, South Dakota, and western Minnesota for Montana-Dakota, Otter Tail Power, Minnkota Power Cooperative, Great River Energy, Northwestern Public Service, Minnesota Power, and Northern States Power. The group in turn coordinates with other subregional planning groups in MAPP to provide a coordinated regional transmission plan for MAPP.

Montana-Dakota joined Otter Tail Power Company and Northwestern Public Service Company in 1970 to construct, operate, and maintain the 415 megawatt (MW) Big Stone generating station near Big Stone, South Dakota, and associated bulk transmission facilities. Montana-Dakota currently owns 22.7 percent of the Big Stone Plant. This cooperative effort permits Montana-Dakota to realize economic benefits from construction and operation of a large generating station and to provide the service required of it and its partners through fewer facilities and minimal environmental impact.

In addition, Montana-Dakota is a participant in another joint venture with Minnkota Power Cooperative (agent for Northern Municipal Power Agency), Otter Tail Power Company, and Northwestern Public Service Company; namely the 415 MW Coyote generating station located near Beulah, North Dakota, and associated bulk transmission facilities. Montana-Dakota currently owns 25 percent of the Coyote Station and realizes the same benefits as those derived from the Big Stone Plant.

20:10:21:09

Single Regional Plans

Other than the coordination of plans described in 20:10:21:08, Montana-Dakota is not aware of any single regional plan. The MAPP membership provides coordination in operating facilities and assistance in developing joint facilities.

20:10:21:10

Submission of Regional Plan

There are no formal regional plans to be submitted.

Montana-Dakota has several agreements with other electric utilities in its service area. These are described in Section 20:10:21:08 on the coordination of plans. In addition, Montana-Dakota is a member of the Mid-Continent Area Power Pool which coordinates the joint operation and planning of electric facilities over a large area and permits Montana-Dakota to participate in the benefits and economics derived from large power pools.

The Corporate Environmental Policy of MDU Resources Group, Inc., the parent corporation of Montana-Dakota, states that:

*Our 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 support environmental laws and regulations that are based on sound science and cost-effective technology; and*
- *To meet or surpass all applicable environmental laws, regulations and permit requirements.*

Montana-Dakota maintains a liaison 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 to maximize operational efficiency and economic benefits and to minimize impacts upon 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 federal, state, and local laws and with the Public Utilities Commission's rules and regulations.

Specifically, Montana-Dakota has developed plans to comply with the requirements of Title IV of the Clean Air Act Amendments of 1990 at all of its wholly-owned and jointly-owned generating stations. Continuous Emission Monitoring Systems were operational and certified by January 1, 1995. This equipment must meet very stringent accuracy and availability requirements and produces very detailed reports on emissions which are used by the U.S. Environmental Protection Agency and the states to ensure that emission requirements are being achieved. Also, Montana-Dakota has appointed a Designated Representative and alternate, as required by the Act, for all of its generating stations. In 1995, Montana-Dakota developed Acid Rain permit applications required by the Act. Operating permit application under Title V were submitted to state regulatory agencies in 1996.

The effects of load management programs in South Dakota are expected to be relatively uncertain for the reported ten-year period. This is because the number of customers served by Montana-Dakota in South Dakota is a small percentage (8.6% in 1999) of those served on Montana-Dakota's Integrated System which comprises the service territories in Montana, North Dakota, and South Dakota. In addition, a high percentage of these are residential customers located in small communities with no industry and few large commercial establishments.

There are, however, some load management procedures available to customers on a voluntary basis which may be beneficial in reducing peak load demand.

1. Montana-Dakota offers financial incentive to those customers willing to switch to an alternate fuel source for their space heating requirements during periods of high demand on Montana-Dakota's Interconnected System. Marketed as the "Econo Heat" program, these dual-fuel space heating service rates also include controlled electric water heating.
2. Montana-Dakota offers optional residential and general service time-of-day rates which provide for low "off-peak" rates and a higher "on-peak" rates. This service offers an incentive to those customers who are willing to shift loads away from the time of day where loads are heaviest on the system.
3. For many years, Montana-Dakota has been offering bulletins, pamphlets, advertisements, and personal assistance on energy management and conservation techniques which provide customers with information on how to use energy wisely.
4. Montana-Dakota provides customized energy audits to commercial and industrial customers upon request. Depending on customer needs and desires, those audits may vary from simple walk-through to detailed energy analysis.
5. Since 1987, Montana-Dakota has implemented a planning process known as Integrated Resource Planning (IRP). The process analyzes supply-side options and demand-side management (DSM) programs on an equal basis to determine the most economical 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 load management and conservation.

The first Integrated Resource Plan was published in October 1989, and the most recent Integrated Resource Plan was published on September 15, 1999; both Plans are on file with the Public Utilities Commission. The results of the 1999 Plan indicate a commercial peak-shaving program -- interruptible electric service -- implemented in 2001 would benefit Montana-Dakota customers. Furthermore, Montana-Dakota is continuing the IRP effort and will constantly review the customers' needs as well as the benefits provided by the DSM programs.

20:10:21:14

LIST OF REPORTS

NONE

20:10:21:15

Changes in Status of Facilities

No changes have occurred in Montana-Dakota facilities.

Projected Electric Demand (Megawatts)

<u>Year</u>	<u>South Dakota</u>		<u>Integrated System</u>	
	<u>Summer Peak Demand (MW)</u>	<u>Winter Peak Demand (MW)</u>	<u>Summer Peak Demand (MW)</u>	<u>Winter Peak Demand (MW)</u>
2000	26.3	22.6	420.9	371.2
2001	26.6	22.8	425.7	374.5
2002	26.9	23.0	430.6	377.8
2003	27.2	23.2	435.4	381.1
2004	27.5	23.4	440.3	384.4
2005	27.8	23.6	445.1	387.7
2006	28.1	23.9	450.0	391.0
2007	28.4	24.1	454.8	394.3
2008	28.7	24.3	459.7	397.6
2009	29.0	24.5	464.5	400.9

20:10:21:17

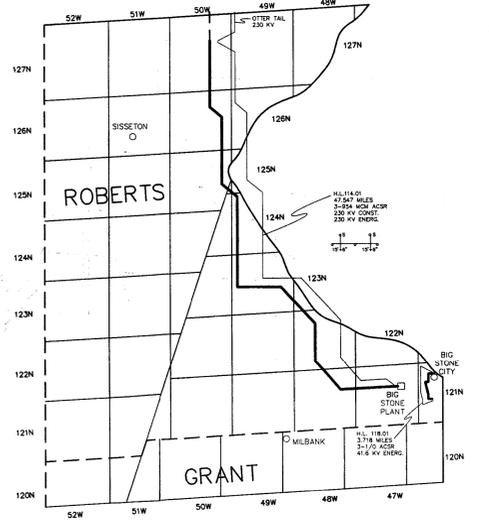
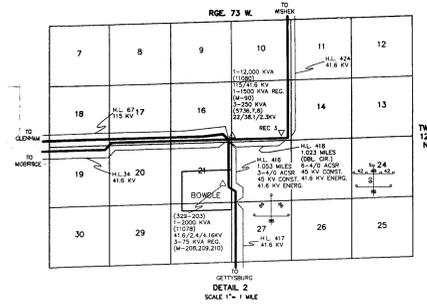
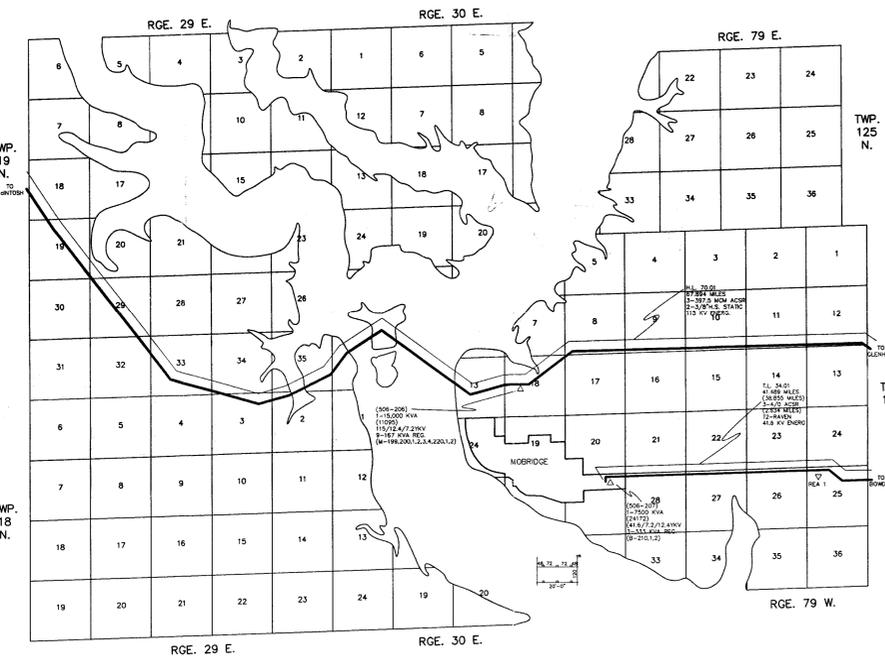
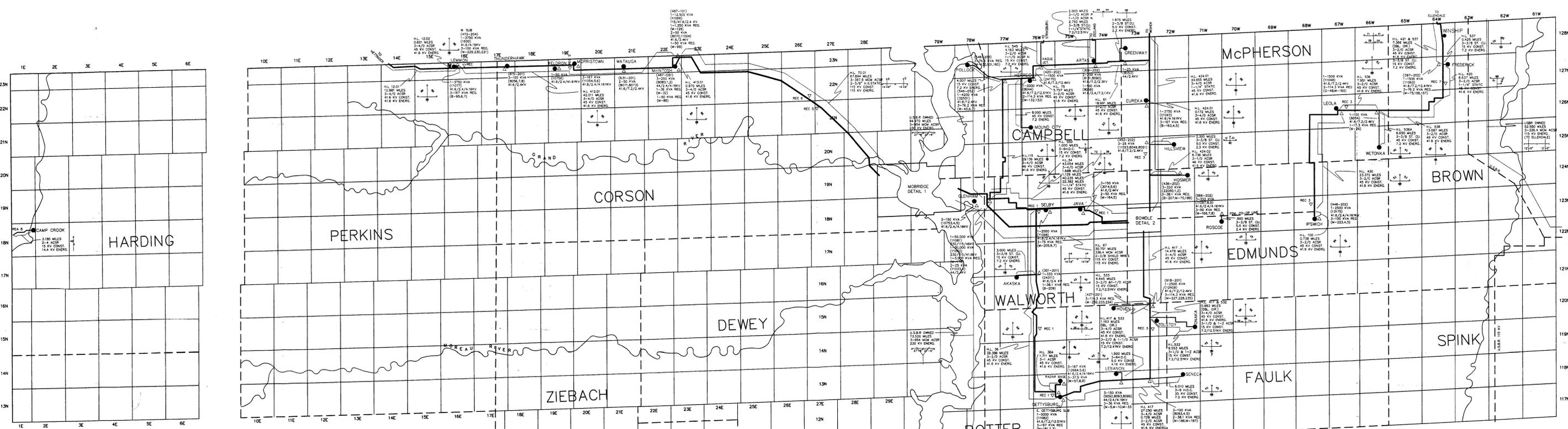
Changes in Electric Energy (Megawatt-hours)

<u>Year</u>	<u>South Dakota Total Annual Energy (MWh)</u>	<u>Percentage of Change</u>
2000	136919	--
2001	138263	1.0%
2002	139663	1.0%
2003	140828	0.8%
2004	141917	0.8%
2005	143194	0.9%
2006	144351	0.8%
2007	145155	0.6%
2008	145852	0.5%
2009	146906	0.7%

20:10:21:18

Map of Service Area

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



DETAIL 1  
SCALE 1" = 1 MILE

DETAIL 2  
SCALE 1" = 1 MILE

LEGEND

- REC**
- 1 - CAM-WAL ELEC. CO-OP., INC.
  - 2 - GAHE ELEC. CO-OP., INC.
  - 3 - FEM ELEC. CO-OP., INC.
  - 4 - GRAND ELEC. CO-OP., INC.
  - 5 - MOREAU-GRAND ELEC. CO-OP., INC.
  - 6 - MOR-GRAN-SOU ELEC. CO-OP., INC.
  - 7 - NORTHERN ELEC. CO-OP., INC. (ABERDEEN)
  - 8 - SOUTHEAST ELEC. CO-OP., INC.
- SYMBOLS**
- MDU CO 345,230,115 KV LINES
  - MDU CO 57,69 KV LINES
  - MDU CO 41,6,33 KV LINES
  - MDU CO DIST. LINES (22 KV AND BELOW)
  - - - USBR AND UPA LINES
  - TOWNS SERVED BY MDU CO
  - ▲ ELECTRIC SUBSTATIONS
  - ELECTRIC POWER PLANT OR SUBSTATION
  - ▽ REC TAPS

SYSTEM MAP OF ELECTRICAL PROPERTIES IN SOUTH DAKOTA			
MONTANA-DAKOTA UTILITIES CO.			
DRAWN BY	DATE	APPROVED	SCALE
RAK	12-21-99	RAK	1" = 20,000'
RAK	12-31-99		
RAK	12-31-99		
RAK	12-31-99		
KOPP	2-1-00		
KOPP	NO CHANGE	1-27-99	