

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

For Planning Years July 1, 2011 through June 30, 2021

Submitted to
NORTH DAKOTA PUBLIC SERVICE COMMISSION
July 15, 2011



**MONTANA-DAKOTA
UTILITIES CO.**

A Division of MDU Resources Group, Inc.

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

For Planning Years July 1, 2011 through June 30, 2021

Submitted to
NORTH DAKOTA PUBLIC SERVICE COMMISSION
July 15, 2011

MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.
400 North 4th Street
Bismarck, North Dakota 58501

INTRODUCTION

Enclosed are data comprising the Montana-Dakota Utilities Co. (Montana-Dakota) "Ten Year Plan" for North Dakota Electric Properties filed in compliance with NDCC §49-22-04 and NDAC §69-06-02-01 and 02.

	<u>Page</u>	
SCHEDULE A	EXISTING ENERGY CONVERSION FACILITIES	2
SCHEDULE B	ENERGY CONVERSION FACILITIES UNDER CONSTRUCTION	2
SCHEDULE C	PROPOSED ENERGY CONVERSION FACILITIES ON WHICH CONSTRUCTION IS INTENDED WITHIN THE ENSUING FIVE YEARS	2
SCHEDULE D	PROPOSED ENERGY CONVERSION FACILITIES DURING THE NEXT TEN-YEAR TIME PERIOD	4
SCHEDULE E	EXISTING TRANSMISSION FACILITIES (ELECTRIC)	4
SCHEDULE G	PROPOSED TRANSMISSION FACILITIES ON WHICH CONSTRUCTION IS INTENDED WITHIN THE ENSUING FIVE YEARS (ELECTRIC)	5
SCHEDULE I	PROPOSED TRANSMISSION FACILITIES DURING THE NEXT TEN YEAR TIME PERIOD (ELECTRIC)	5
SCHEDULE J	REGIONAL COORDINATION	5
SCHEDULE K	ENVIRONMENTAL INFORMATION	7
SCHEDULE L	PROJECTED DEMAND FOR SERVICE	9
APPENDIX A	FORM EIA-923	
EXHIBIT A	LOCATION OF PROPOSED COMBUSTION TURBINE	
EXHIBIT B	TIMELINE & MILESTONES FOR PROPOSED COMBUSTION TURBINE	
EXHIBIT C	NORTH DAKOTA ELECTRIC SYSTEM MAP	

SCHEDULE A

EXISTING ENERGY CONVERSION FACILITIES

The existing energy conversion facilities subject to this filing and located in North Dakota are the 415 MW Coyote Station near Beulah in which Montana-Dakota has a 25 percent ownership interest, the 103 MW Heskett Station in Mandan, which is wholly owned by Montana-Dakota, a 10 MW gas turbine facility located in Williston, a 5.3 MW waste heat recovery unit located near Glen Ullin, and the 19.5 MW Cedar Hills wind project located near Rhame. Energy Information Administration Form No. EIA-923, "Power Plant Operations Report" for the R.M. Heskett Station for the year 2010 is attached as Appendix A.1. Otter Tail Power Company of Fergus Falls, Minnesota operates the Coyote Station and reports all information required by Schedule A.

The 10 MW gas turbine facility in Williston is scheduled to be retired by the end of 2011. No additional energy conversion facilities are committed to be retired in the next ten years.

SCHEDULE B

ENERGY CONVERSION FACILITIES UNDER CONSTRUCTION

NONE

SCHEDULE C

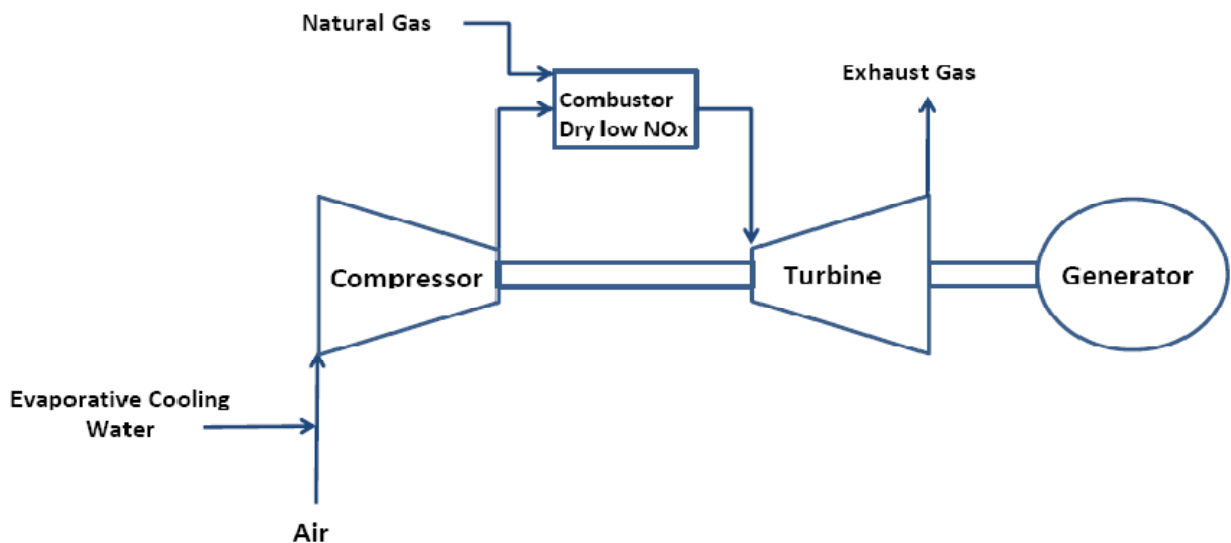
PROPOSED ENERGY CONVERSION FACILITIES ON WHICH CONSTRUCTION IS INTENDED WITHIN THE ENSUING FIVE YEARS

To meet future capacity requirements, Montana-Dakota is planning to construct, own, and operate an 88 MW Simple Cycle Combustion Turbine (SCCT) and associated facilities necessary

¹ The information historically provided by Form EIA-767 is now provided by Form EIA-923.

to interconnect with Montana-Dakota's existing electric system. The SCCT project also includes a 10-inch natural gas pipeline, approximately 24 miles in length, interconnecting with Northern Border Pipeline Company to supply the gas requirements for the turbine. The SCCT will be located near Mandan, North Dakota adjacent to Montana-Dakota's Heskett Station as shown in Exhibit A. The SCCT and the natural gas pipeline will each require a Certificate of Site Compatibility under NDCC Chapter 49-22. A Certificate of Public Convenience and Necessity has been submitted in Case No. PU-11-396.

The SCCT will be a natural gas-fired heavy-duty (Frame) type unit equipped with dry low nitrogen oxide (NO_x) combustion for emissions control and evaporative inlet air cooling for power augmentation as depicted below. The SCCT is primarily a capacity resource. It will be utilized during peaking conditions and is expected to have relatively low annual capacity factors. The tentative project Timeline and Milestones are provided in Exhibit B.



A preliminary review of air pollutant emissions from this unit indicates that nitrogen oxides, carbon monoxide, carbon dioxide, particulate matter, sulfur dioxide, and volatile organic compound pollutants will be emitted. The pollutants emitted in quantities that meet the thresholds requiring best available control technology review for pollution controls under the Prevention of Significant Deterioration (PSD) Clean Air Act requirements are nitrogen oxides, carbon monoxide, and carbon dioxide. The other pollutants mentioned are emitted in smaller amounts. Estimated pollutant concentrations will be calculated and made available to the public when the PSD permit, or Permit-to-Construct, is obtained from the North Dakota Department of Health Division of Air Quality.

There will be a periodic need to supply water to the combustion turbine for evaporative cooling of the inlet air, with the water taken from existing Heskett Station cooling water discharges. There are no water requirements for the dry low nitrogen oxide controls currently proposed for this unit. Consequently, no additional water will be withdrawn from the Missouri River for the combustion turbine operations. There will be no wastewater discharged from the combustion turbine, and therefore, no National Pollutant Discharge Elimination Permit limits are expected.

Synergies will be realized by locating this new unit near the existing Heskett Station, which already has water resources, transmission facilities, equipment, supervision, labor and other required infrastructure needed for the combustion turbine. These synergies allow Montana-Dakota to utilize resources already available, impacting the environment much less than if the combustion turbine would be constructed at a greenfield site.

SCHEDULE D

PROPOSED ENERGY CONVERSION FACILITIES DURING THE NEXT TEN-YEAR TIME PERIOD

Montana-Dakota is continually studying additional resource options to meet its customer needs. These options are addressed in Montana-Dakota's Integrated Resource Plan (2011 IRP) filed with the Commission on May 12, 2011 and designated as Case No. PU-11-158.

SCHEDULE E

EXISTING TRANSMISSION FACILITIES (ELECTRIC)

Exhibit C is a system map of North Dakota showing the location of existing transmission facilities.

There are no planned retirements of any North Dakota transmission facilities within the next ten years.

SCHEDULE G

PROPOSED TRANSMISSION FACILITIES ON WHICH CONSTRUCTION IS INTENDED WITHIN THE ENSUING FIVE YEARS (ELECTRIC)

The Midwest Independent Transmission System Operator (MISO) has established a new classification of transmission expansion projects called Multi-Value Projects (MVPs). Cost allocation for MVPs will be shared across the entire MISO footprint on a per MWh basis. There is currently one MVP project proposed to connect to Montana-Dakota's transmission system that the MISO is studying which consists of a 345 KV line connecting near the existing Ellendale Junction Substation to a location near the existing Big Stone Substation in South Dakota. If approved by the MISO, Montana-Dakota expects to be a part owner of this MVP line which is scheduled to be placed in-service by 2017.

Montana-Dakota is in the process of constructing a 30 mile 230 kV line, Case No. PU-10-164, from the existing Ellendale Junction Substation to a proposed wind farm west of Ellendale being built by enXco. This line is being constructed for the sole purpose of accommodating the interconnection and energy delivery of a proposed enXco wind farm. Construction of the 230 kV line is scheduled to be completed late 2011 or early 2012.

SCHEDULE I

PROPOSED TRANSMISSION FACILITIES DURING THE NEXT TEN YEAR TIME PERIOD (ELECTRIC)

NONE

SCHEDULE J

REGIONAL COORDINATION

Montana-Dakota has been coordinating planning, construction, and operation of electric facilities with other utilities and agencies serving North Dakota since 1945. Montana-Dakota has

agreements for joint planning and common use of area facilities with Basin Electric Power Cooperative (Basin Electric) and Western Area Power Administration (Western).

Montana-Dakota and Western have an agreement that provides for mutual wheeling and coordinates construction of transmission facilities. The current agreement is in effect through the year 2015. Montana-Dakota originally entered into this agreement with Western's predecessor, the United States Bureau of Reclamation, in 1945 and the agreement has been renewed several times since then. Over the years, 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.

Montana-Dakota has an agreement with Basin Electric that provides for joint planning and common use of transmission facilities. This agreement, first signed in 1972, is perpetual until terminated by one of the parties with a five year notice required prior to termination. 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 Energy Corporation, and Minnkota Power Cooperative, Inc. These agreements, along with the Basin Electric and Western agreements, provide for the interconnection of Montana-Dakota's bulk transmission facilities with the Mid-Continent Area Power Pool (MAPP) and MISO bulk transmission facilities.

Montana-Dakota, Otter Tail Power Company, and NorthWestern Energy Corporation own the 415 MW Big Stone generating station near Big Stone City, 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 415 MW Coyote generating plant 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 service required of it and its partners using fewer facilities.

Montana-Dakota is a transmission owning member of the MISO. The MISO is a FERC-authorized Regional Transmission Organization (RTO). The MISO commenced tariff administration for the operational control of the transmission systems of its members in February 2002. The 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 the MISO. Montana-Dakota is actively participating in the planning processes performed by the MISO, who 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.

Montana-Dakota is a member of the MAPP Transmission Planning Committee, which develops the MAPP regional plan and is responsible for interregional coordination. Although currently a member of the MAPP, because transmission planning activities are performed by the MISO in the Dakotas, Montana-Dakota has provided notification to the MAPP that it will be withdrawing as a member of the MAPP effective December 31, 2013.

Montana-Dakota is also a member of the Midwest Reliability Organization (MRO), which is a Cross-Border Regional Entity representing the upper Midwest of the United States and Canada. The MRO is organized consistent with the Energy Policy Act of 2005 and the bilateral principles between the United States and Canada.

SCHEDULE K

ENVIRONMENTAL INFORMATION

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 comply with or exceed 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 its facilities in an environmentally proactive manner, while taking into consideration the cost to customers. Montana-Dakota actively monitors federal and state legislative and regulatory activity related to environmental issues, including air emissions, greenhouse gases (GHG), waste disposal and water discharges.

The U.S. Environmental Protection Agency (EPA) has made known that it intends to propose several significant new air emissions, waste disposal and water discharge regulations aiming to reduce impacts from air emissions, including GHGs, pollutants in wastewater discharges and management of coal ash at coal-fired electric generating facilities. The culmination of all various pending environmental requirements may result in the retirement of existing coal-fired baseload units earlier than otherwise would occur. Montana-Dakota will continue to monitor the impacts from proposed regulations and will take the regulations into consideration when planning for future resource needs.

SCHEDULE L

PROJECTED DEMAND FOR SERVICE

The load data reported in this plan are the result of Montana-Dakota's *2011-2030 Electric Load Forecast* dated December 31, 2010.

1. Projected Peak Load for 2011-2021

The demand forecast was developed using an econometric model whose methodology is documented in detail in Attachment A of the 2011 IRP.

The summer peak is the highest monthly peak demand forecast for the summer months in the given year. The winter peak is the highest of the monthly peak demand forecast for the winter season occurring at the end of the given year or the beginning of the following calendar year. The projected demands shown in MW below represent the load at the customer level plus the demand due to system losses. System losses include energy losses on the transmission and distribution systems and energy that is unaccounted for such as power theft or stray currents. The summer peak demand reflects the demand reduction due to customer loads under demand side management (DSM) which includes interruptible large power service. This service is offered to large customers who allow their loads to be subject to possible interruptions in exchange for a reduced rate. Currently, Montana-Dakota has 7.6 MW of interruptible loads on its Integrated System.

a. Integrated System

PROJECTED DEMAND (MW)

YEAR	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SUMMER	500.0	516.7	537.1	546.1	561.8	570.6	579.3	588.1	597.1	606.0	615.0
WINTER	450.3	469.4	489.5	498.3	513.5	521.8	529.9	538.2	546.7	554.9	563.2

GROWTH RATE (%)

YEAR	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SUMMER	--	3.3	3.9	1.7	2.9	1.6	1.5	1.5	1.5	1.5	1.5
WINTER	--	4.2	4.3	1.8	3.1	1.6	1.6	1.6	1.6	1.5	1.5

Historically, for the period 2005-2010 the summer peak demand increased at an average rate of 0.8 percent per year while winter peak demand increased at an average rate of 4.0 percent per year. The projected average growth rates for the period 2011-2021 are 1.8 percent for the summer peak and 1.9 percent for the winter peak.

b. North Dakota

PROJECTED DEMAND (MW)

YEAR	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SUMMER	339.8	350.3	364.3	370.4	381.2	387.2	393.2	399.2	405.3	411.4	417.6
WINTER	307.0	320.0	333.7	339.7	350.1	355.7	361.2	366.9	372.7	378.3	383.9

GROWTH RATE (%)

YEAR	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SUMMER	--	3.1	4.0	1.7	2.9	1.6	1.5	1.5	1.5	1.5	1.5
WINTER	--	4.2	4.3	1.8	3.1	1.6	1.5	1.6	1.6	1.5	1.5

2. Projected Energy for 2011-2021

The projected annual energy, shown in gigawatt-hours (GWh), for Montana-Dakota's Integrated System is as follows:

Year	Annual Energy (GWh)	Year	Annual Energy (GWh)
2011	2,745.1	2017	3,267.3
2012	2,849.7	2018	3,322.6
2013	3,000.6	2019	3,378.8
2014	3,059.0	2020	3,433.6
2015	3,157.7	2021	3,489.4
2016	3,212.9		

Historically, for the period 2005-2010, Montana-Dakota has experienced an average annual increase of 3.0 percent for energy consumption. The projected average growth rate for the period 2011-2021 is 2.4 percent.

Based on the forecast, Montana-Dakota's existing and committed generation resources along with DSM are adequate to serve its projected load obligations through May 2015 with some small capacity purchases discussed in Montana-Dakota's 2011 IRP.

Montana-Dakota is constantly reviewing its capacity addition requirements as well as the feasibility of the potential DSM programs under the IRP process. Table 3-3 in the 2011 IRP Main Report contains a full list of DSM programs expected to be implemented or continue to be implemented by Montana-Dakota.

3. Load Centers

Montana-Dakota's load centers for the Integrated System, defined as areas with 10 MW or more of load in a limited geographical area, in North Dakota are Bismarck-Mandan, Beulah, Dickinson, and Williston and in Montana are Glendive, Sidney, and Miles City.

APPENDIX A

Form EIA-923

EIA-923 - Schedule 8 for Heskett
Schedule 8 Part A. Annual Byproduct Disposition

No Byproducts

By Product	Disposal				Sale or Beneficial Use				Storage			Total		
	On-Site Landfill	On-Site Ponds	Disposal site	Off-site	Sold	Used site	On-Site	Used site	Off-site	Stored site	On-Site		Stored site	Off-site
Fly ash from standard boiler/PCD units														
Fly ash from units with dry FGD														
Fly ash from FBC units	34.8													
Bottom ash from standard boiler units														
Bottom (bed) ash from FBC units	1.7							1.6						
FGD Gypsum														
Other FGD byproducts														
Ash from coal gasification (IGCC) units														
Other (specify via footnote on SCHEDULE 9)														
Steam Sales (MMBtu)														

Schedule 8 Part B. Financial Information

Operation and Maintenance (O&M) Expenditures During Year (Thousand Dollars)						
Type	Fly Ash	Bottom Ash	Flue Gas Desulfurization	Water Pollution Abatement	Other Pollution Abatement	Total
Collection	121.1	70.8				228
Disposal						
Other						
Capital Expenditures for New Structures and Equipment During Year, Excluding Land and Interest Expense (Thousand Dollars)						
Type	Air Pollution Abatement	Water Pollution Abatement	Solid/Contained Waste	Other Pollution Abatement		
Amount	347.3	None	70	None		

Byproduct Sales Revenue During Year (Thousand Dollars)						
Type	Fly Ash	Bottom Ash	Fly and Bottom Ash Sold Intermingled	Flue Gas Desulfurization Byproducts	Other Byproduct Revenue	Total
Amount	0	0	0	na	na	0

Schedule 8 Part C. Boiler Information Nitrogen Oxide Emission Controls				
__X__ No NOx Controls for Unit B1				
Boiler ID	NOx Control In-Service (hours)	NOx Emission Rate (lbs/MMBtu)		
		Entire Year	May through September	
B1	na			
B2	6538	0.373	0.347	

Schedule 8 Part D. Cooling System Information, Annual Operations										
Cooling System ID	Cooling System Status	Annual Amount of Chlorine added to Cooling Water	Average Annual Rate of Cooling Water (0.1 cu ft/sec)			Maximum Cooling Water Temperature at Intake		Maximum Cooling Water Temperature at Discharge Outlet		Cooling Water Temp
			Withdrawal	Discharge	Consumption	Average Monthly Temp	Maximum Monthly Temp	Average Monthly Temp	Maximum Monthly Temp	Measured or Estimated?
C12	OP	0				61.44	76.44			

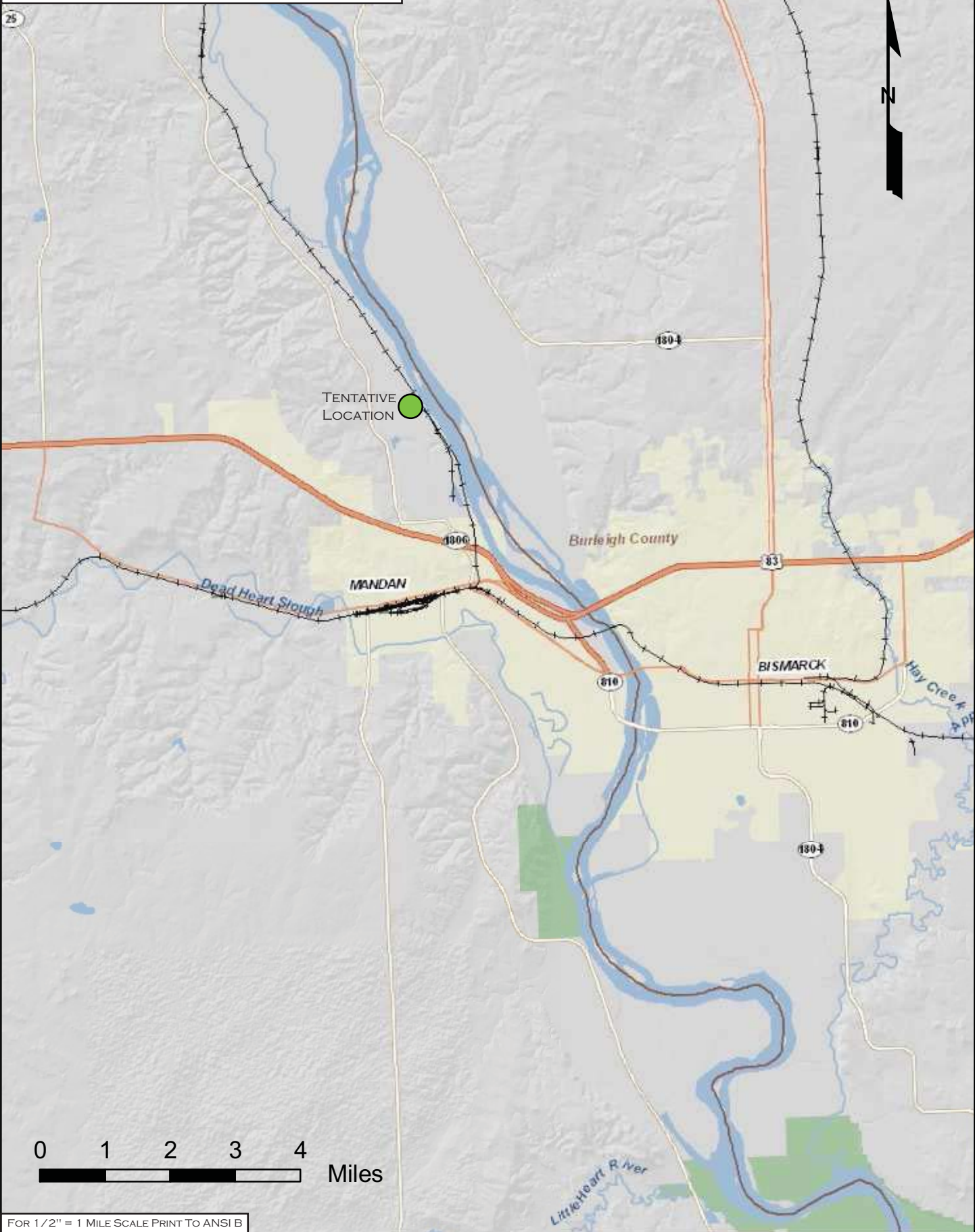
Schedule 8 Part E. Flue Gas Particulate Collection Information						
Flue Gas Particulate Collector ID	FGP Collector Status	Hours In-Service	Typical Particulate Emissions Rate (nearest 0.01 lb/MMBtu)	Removal Efficiency of Particulate Matter (nearest 0.1% by weight)		
				At Annual Operating Factor	At 100% Load or Tested Efficiency	Date of Most Recent Efficiency Test (eg, 12-2005)
ESP1	OP	6781.7	0.04	99.0	99.7	Aug-05
ESP2	OP	6531.4	0.02	97.0	99.9	Aug-05

Exhibit A

Location of Proposed Combustion Turbine

TENTATIVE LOCATION MAP FOR A PROPOSED NATURAL GAS SIMPLE CYCLE COMBUSTION TURBINE NEAR THE R.M. HESKETT STATION NORTH OF MANDAN, ND

EXHIBIT A



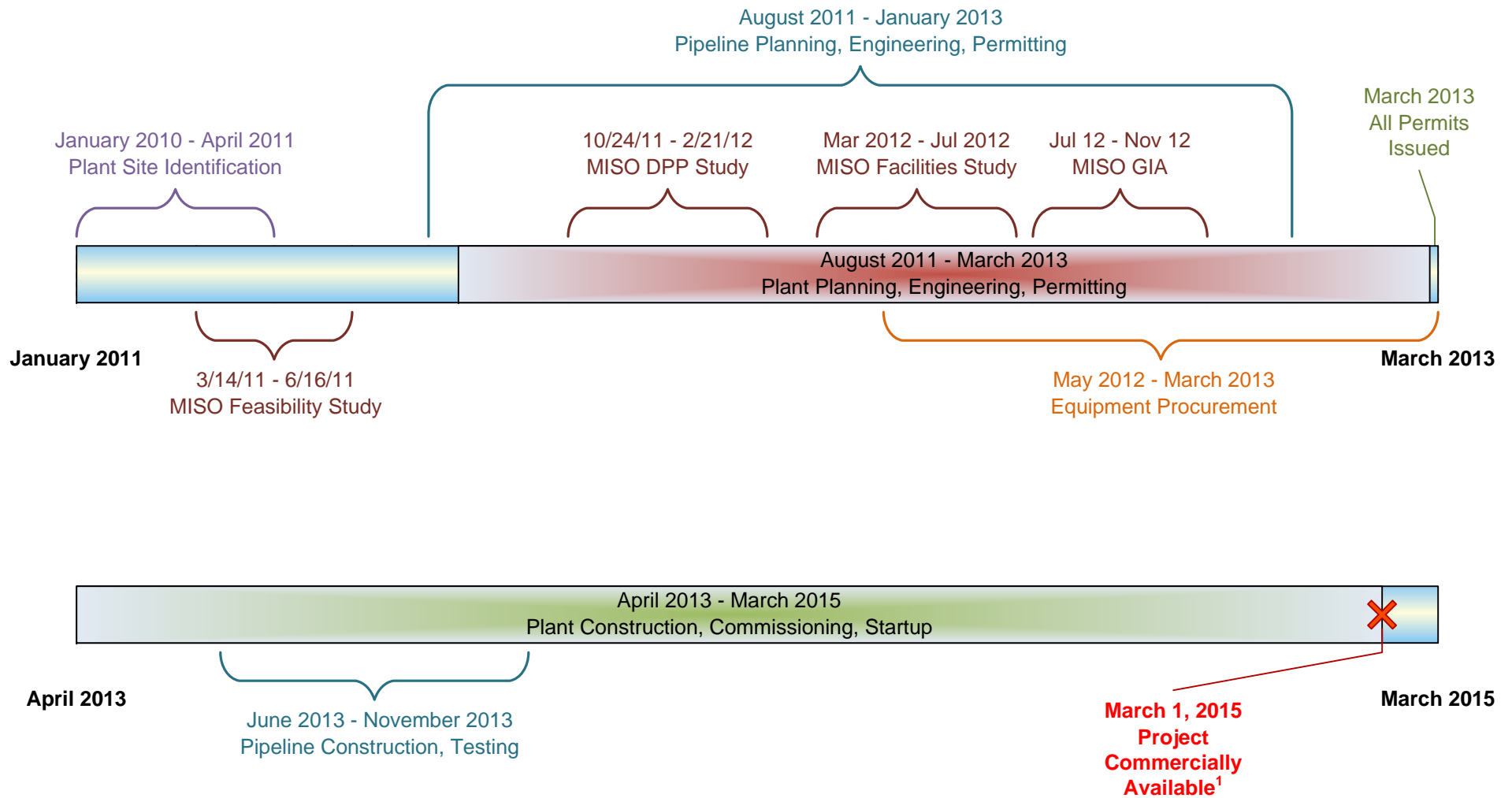
FOR 1/2" = 1 MILE SCALE PRINT TO ANSI B

Exhibit B

Timeline & Milestones for Proposed Combustion Turbine

EXHIBIT B

TIMELINE & MILESTONES FOR A PROPOSED NATURAL GAS SIMPLE CYCLE COMBUSTION TURBINE NEAR THE R.M. HESKETT STATION NORTH OF MANDAN, ND



¹ Commercially Available means the plant has achieved initial commercial production at 100% of rated capacity.

The timeline and milestones are preliminary and subject to change during detailed engineering.



Exhibit C

North Dakota Electric System Map

