GREAT RIVER ENERGY®

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July 1, 2008

Ms. Illona Jeffcoat-Sacco
Director
North Dakota Public Service Commission
600 East Boulevard Avenue – Department 408
Bismarck, ND 58505-0480

Dear Ms. Jeffcoat-Sacco:

Enclosed are eleven copies of *Great River Energy's (GRE) North Dakota Ten-Year Plan Report, 2008-2017* (Report) to the North Dakota Public Service Commission (Commission) as required by Chapter 49-22-04 of the North Dakota Century Code.

In accordance with Chapter 69-06-02-02 of the North Dakota Administrative Code, GRE has provided a copy or notice of the Report to the necessary parties.

GRE has included an extra copy of the Report and a self-addressed stamped envelope and requests that the Commission provide GRE with a file stamped copy.

Please contact me at (763) 445-6120 or gskarbakka@grenergy.com if you have any questions or comments.

Sincerely,

GREAT RIVER ENERGY

Glen Skarbakka
Manager, Resource Planning

Enclosures (11)

Cc: NDPSC (10)
County Auditors (4)
ND State Agencies and Officials (Letters of Confirmation only)

GRE's North Dakota Ten-Year Plan Report, 2008-2017

Submitted to
The North Dakota Public Service Commission

GREAT RIVER
ENERGY®

A Touchstone Energy® Cooperative

July 1, 2008

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INTRODUCTION

This report was prepared in accordance with the North Dakota Public Service Commission's Guidelines (Guidelines) for compliance with the requirements of Chapter 49-22-04 of the North Dakota Century Code.

Great River Energy has concluded that some information that would be provided under Sections E and F and Exhibits 3 and 5 pursuant to the Guidelines would qualify as Critical Energy Infrastructure Information (CEII) and, therefore, has not included the information in these pages. GRE offers to provide the information to the Commission upon request.

SECTION A: Existing Energy Conversion Facilities

Great River Energy's capacity consists of coal, refuse-derived fuel (RDF), wind, natural gas, and oil-fired units. The coal-fired plants are located at Stanton and Underwood, North Dakota. Since submitting its 2007 report:

- GRE has completed a major overhaul and upgrade of Coal Creek Station Unit 1. This upgrade increased the efficiency of the unit by replacing the turbine rotors with newer, more efficient designs, installing variable frequency drives on the induced air fans, and making other improvements. These improvements provide approximately 30 MW of additional output with no increase in fuel consumption. The overhaul also included environmental upgrades that included scrubber improvements and replacement of the stack liner. Other upgrades included replacement of the generator stepup transformer and rebuilding a cooling tower. Similar upgrades are planned for Unit 2 during its next major outage in 2010.

- GRE began constructing lignite drying units for Coal Creek Station Unit 1. The dryers will use waste heat from the power plant to produce beneficiated lignite from the adjacent Falkirk Mine with reduced moisture and ash content. This will increase the fuel's heat content and reduce emissions from its use. Sulfur dioxide emissions are expected to decrease by 25 percent. Mercury, CO_2, NOx, and particulate emissions are also expected to decrease due to the reduced flue gas volume and dryer density separation. The dryers are expected to be in operation by the end of 2009. GRE is marketing the dryer technology for use in other power plants.

- GRE began purchasing energy from the 100 MW Prairie Star Wind Farm located in Mower County, Minnesota.

GRE has no plans to retire any of its existing energy conversion facilities within the next ten years.

Table 1 below shows the summer season ratings of GRE's generating plants based on the most recent results of Mid-Continent Area Power Pool (MAPP) Uniform Rating of Generating Equipment (URGE) tests. The URGE result is used as the source of the capacity rating of the thermal electric generating units. For wind resources, both the nameplate capacity and the equivalent firm capacity are shown, the latter determined per MAPP accreditation rules for intermittent resources.

Table 1- GRE's Existing Energy Conversion Facilities

Unit Name	Summer Capacity (MW)
Pleasant Valley Station (Peaking)	414.9
Lakefield Junction (Peaking)	497.0
Cambridge CT (Peaking)	21.1
Cambridge CT2 (Peaking)	154.3
Maple Lake CT (Peaking)	19.4
Rock Lake CT (Peaking)	19.8
St. Bonifacius CT (Peaking)	56.2
Elk River Station 1 (RDF)	10.1
Elk River Station 2 (RDF)	10.5
Elk River Station 3 (RDF)	16.2
Stanton Station (Coal)	188.3
Stanton Station diesel	1.0
Coal Creek Station 1 (Coal)	548.4
Coal Creek Station 2 (Coal)	573.0
Coal Creek Station diesel	2.1
Genoa 3 (share of coal plant)	169.9
Chandler Wind (6 MW nameplate)	0.3
McNeilus Wind (6 MW nameplate)	0.3
Christoffer Wind (6 MW nameplate)	0.4
Trimont Wind (100 MW nameplate)	12.0
Prairie Star Wind (100 MW nameplate)	12.0
Total:	**2727.2**

SECTION B: Energy Conversion Facilities Under Construction

GRE has three facilities under construction.

North Dakota. GRE is participating in the Spiritwood Station, a combined heat and power project, with two industrial developers (an existing malting plant and a proposed ethanol plant). The project will be fueled with beneficiated lignite from Coal Creek Station and will have an overall thermal efficiency of approximately 66%. While GRE intends for Spiritwood to ultimately be a capacity and energy resource of 99 MW for GRE, the project will sell its energy into the MISO market on a merchant basis until transmission arrangements for firm deliverability are fully in place. The project is partially baseload in nature (62 MW) and partially peaking in nature (37 MW). Construction of the power plant is planned for completion by November, 2009 with commercial operation in March, 2010. Transmission for the project is expected to become available in two steps. Because of transmission limitations, only 50 MW of baseload capacity is projected to be available initially. Transmission for the remaining 49 MW (12 MW baseload and 37 MW peaking) may not become available until 2015.

Minnesota. GRE has begun construction of a 175 MW, dual fuel (natural gas and oil), simple cycle combustion turbine to be located adjacent to its Elk River, Minnesota facilities. The facility is scheduled to be in operation in the first half of 2009.

Iberdrola Renewables has begun construction of the 99 MW Elm Creek Wind Farm for GRE in Martin and Mower Counties, Minnesota. The facility is expected to be in commercial operation before the end of 2008. Iberdrola will own the facility and sell all of the output to GRE under a long term power purchase agreement.

SECTION C: Proposed Energy Conversion Facilities on Which Construction is Intended Within the Ensuing Five Years

Other than those noted in Sections A and B, GRE has no other specific proposed energy conversion facilities as defined by Chapter 49-22-03 of the North Dakota Century Code.

While GRE has identified no specific facilities for construction in the next five years, GRE is investigating a number of options to meet its future needs, including additional wind generation to comply with Minnesota's Renewable Energy Standard.

SECTION D: Proposed Energy Conversion Facilities During the Next Ten-Year Time Period

Other than those noted in Sections A and B, GRE has no other specific proposed energy conversion facilities as defined by Chapter 49-22-03 of the North Dakota Century Code.

While GRE has identified no specific facilities for construction in the next ten years, GRE is investigating a number of options to meet its future needs, including additional wind generation to comply with Minnesota's Renewable Energy Standard and additional natural gas peaking and combined cycle generation. GRE has also identified a need for additional baseload energy in the 2020 timeframe and is investigating alternatives to meet that need, including coal with carbon capture, nuclear, and hydro.

Coal-to-Liquids. GRE, Headwaters Energy Services, and North American Coal Corporation have established American Lignite Energy to explore development of a North Dakota coal-based refinery to produce liquid transportation fuels. The partners are evaluating whether development of a coal-based refinery is viable. If constructed, the facility could produce liquid transportation fuels such as gasoline and liquefied petroleum gas (both propane and butane) as well as certain petrochemical feedstocks and carbon dioxide for enhanced oil recovery. If the project proceeds, engineering and permitting of the facility could take at least two years. Construction would require at least four additional years.

SECTION E: Existing Transmission Facilities (Electric)

GRE has concluded that its existing transmission facilities qualify as CEII. A map of the transmission facilities that GRE owns and operates in North Dakota will be made available upon request. Summary information on GRE's North Dakota transmission facilities is provided in Table 2.

Table 2 – GRE's Existing Electric Transmission Facilities in North Dakota

Facility	Voltage (kV)	AC/DC	Install Year
Stanton – Leland Olds	230	AC	1966
Stanton – Mchenry Tap	230	AC	1966
Mchenry Tap – Mchenry	230	AC	1966
Mchenry – Balta	230	AC	1966
Balta – Ramsey	230	AC	1966
Ramsey – Prairie	230	AC	1966
Stanton – Square Butte	230	AC	1966
Square Butte – Center	230	AC	1966
Mchenry Tap – Coal Creek	230	AC	1979
Stanton - Coal Creek	230	AC	1979
Coal Creek – Dickinson, Minnesota	± 400	DC	1979

GRE is not planning to retire any existing transmission facility within the next ten years.

The Commission's Guidelines require a copy of Federal Energy Regulatory Commission (FERC) Form 12. The information previously provided in FERC Form 12 is now found in FERC Form 715. A copy of GRE's most recent filing is available upon request.

SECTION F: Existing Transmission Facilities (Pipeline)

GRE has a water pipeline and accompanying pumping station located near Coal Creek Station that has been in service since August 1, 1979. GRE concludes that the information qualifies as CEII and therefore has not provided it in this document. However, specific information on the facilities and a map will be provided upon request.

SECTION G: Proposed Transmission Facilities on Which Construction is Intended Within the Ensuing Five Years (Electric)

GRE has submitted four service requests to the Midwest Independent Transmission System Operator (MISO) associated with the Spiritwood project that is described in Section B. Two of the requests are for 50 MW (generator interconnection and transmission service requests) and the other two are for 49 MW (generator interconnection and transmission service requests). Studies for the two 50 MW requests have been completed and an interconnection agreement has been executed. The 50 MW transmission study identified the need for transmission upgrades in Minnesota and none in North Dakota. Studies for the 49 MW requests are still pending.

GRE's participation in the CapX 2020 transmission initiative is described in Section J. One of three 345 kV transmission lines making up "Phase I" would begin at the Maple River Substation near Fargo and terminate at Monticello, Minnesota with intermediate substations near Alexandria and St. Cloud, Minnesota. General corridors have been identified and activities for acquiring permits are underway, including the following major permits:

- North Dakota:
  - Certificate of Public Convenience and Necessity (CPCN)
  - Certificate of Corridor Compatibility
  - Route Permit
- Minnesota:
  - Certificate of Need
  - Route Permit
- Federal
  - National Environmental Policy Act compliance
  - U.S. Army Corps of Engineers
  - U.S. Fish and Wildlife Service

The project is targeted to be in-service by 2013-2014.

SECTION H: Proposed Transmission Facilities on Which Construction is Intended Within the Ensuing Five Years (Pipeline)

None.

SECTION I: Proposed Transmission Facilities During the Next Ten-Year Period (Electric and Pipeline)

None.

SECTION J: Regional Coordination

The electric grid is heavily interconnected and must be evaluated, operated, and expanded in a coordinated manner to assure reliability and cost-effectiveness. GRE's transmission planning is closely coordinated with other organizations. GRE is a member of and participates directly in several regional entities:

- MISO, which in addition to administering the TEMT, also has responsibilities for regional transmission planning and expansion as part of its role as a FERC-recognized Regional Transmission Operator. Further information about MISO is available on-line at *www.midwestiso.org.* MISO's transmission expansion plans (MTEP-07 being the most-recent approved plan) are also available at that web site under the "Planning" tab.
- The Midwest Reliability Organization (MRO), an organization of regional utilities established to develop regional reliability standards and ensure compliance with standards of the North American Electric Reliability Corporation (NERC) as well as its own. Further information about MRO is available on-line at *www.midwestreliability.org* and about NERC at *www.nerc.com.*
- The Mid-continent Area Power Pool (MAPP), which has historically provided resource pooling and transmission coordination functions for its members across a large part of the upper Midwest. Over time, these functions are being transitioned to MISO as they evolve, at least for GRE. Further information about MAPP is available on-line at *www.mapp.org*.
- The Minnesota Transmission Owners (MTO) group, a consortium of 14 sponsoring utilities and three participating government agencies, fulfills the utilities statutory obligations for transmission planning in the state of Minnesota. These obligations include the development of the Minnesota Biennial Transmission Plan, as well as studies associated with meeting the Minnesota Renewable Energy Standard (RES) and the Distributed Renewable Generation (DRG) study requirements. Further information about the MTO group is available at *www.MinnElecTrans.com*.
- CapX 2020, a joint initiative of eleven regional transmission utilities to develop a long-range vision and extra high voltage transmission expansion projects to ensure that load in the region can be served reliably, provide outlet capability for renewable and other generation additions and facilitate energy markets. As a first phase of transmission expansion, the CapX 2020 utilities are pursuing Certificates of Need and route permits for four transmission lines:
    - The **Twin Cities -La Crosse 345 kV Project** is an approximately 150-mile transmission line project between the southeast corner of the Twin Cities, Rochester and La Crosse, Wisconsin. This project also includes two new 161 kV transmission lines from a new Rochester Substation into Rochester.
    - The **Twin Cities - Fargo 345 kV Project** is an approximately 250-mile, 345 kV transmission line between Monticello, St. Cloud, Alexandria and Fargo, North Dakota.
    - The **Twin Cities - Brookings County 345 kV Project** is an approximately 200-mile, 345 kV transmission line between the southeast corner of the Twin Cities and Brookings County, South Dakota. This project also includes a 25-mile, 345 kV segment from Marshall to a new Hazel Creek Substation in the Granite Falls area, and an 8- to 10-mile, 230 kV transmission line from Hazel Creek to the Minnesota Valley Substation in Granite Falls.

- The **Bemidji - Boswell 230 kV Project** is a 68 mile, 230 kV transmission line project from the Wilton substation near Bemidji to the Boswell substation near Grand Rapids.

CapX 2020 and the MTO group are also engaged in several planning studies that will provide an updated vision of the transmission system to meet needs further into the future. That includes delivering renewable energy in quantities sufficient to meet the renewable energy requirements of states in the region. The studies are being closely coordinated with MISO, neighboring transmission owning utilities and a diverse group of stakeholders formalized as the Technical Review Committee. MISO also has numerous studies underway with similar objectives, but that consider a broader geographic area. The CapX 2020 utilities actively participate in those studies. The first four studies listed below will provide a roadmap for transmission expansion that is efficient and assures that subsequent projects will integrate well, meet future needs and provide flexibility for changing conditions.

- Vision Study 2016: Produce an updated Vision Plan that addresses reliability-driven needs and also emphasizes the transmission requirements to meet the Minnesota Renewable Energy Standard 2016 milestone and regional renewable energy supply needs.
- Vision Study 2025: Similar to Vision Study 2016, but focused transmission to meet the Minnesota Renewable Energy Standard 2025 milestone, renewable energy supply needs for the region and broader market areas, future baseload generation needs and a possible new higher voltage transmission overlay.
- Generation and Transmission Optimization Study: Analyze the tradeoffs between locating generation, primarily renewables, closer to load centers which would require less transmission versus locating it in areas further from the load centers which may have certain offsetting advantages, such as better average wind speeds.

Further information about CapX 2020, the proposed projects, and studies is available on-line at *www.capx2020.com*.

- Subregional Planning Groups (SPGs) meet regularly to provide a forum for coordination and discussion of transmission issues and proposed projects among participating utilities and other interested stakeholders.

Recommended Measures for Regional Coordination:

None.

SECTION K: Environmental Information

Clean Air Act Title IV Requirements. Coal Creek Station and Stanton Station, as well as several of GRE's combustion turbine stations, have affected units under the federal acid rain regulations (Title IV of the Clean Air Act Amendments).

These regulations limit NO_X levels at Coal Creek Station to 0.40 lb/MMBtu at each unit and at Stanton Station to 0.46 lb/MMBtu for Unit 1 and 0.40 lb/MMBtu for Unit 10. The facilities have complied with their applicable limits through the installation of low NO_X burners and other combustion controls including over-fire air.

The acid rain program also places limits on emissions of SO_2 and creates a market for SO_2 emission allowances. Under this program, the U.S. Environmental Protection Agency allots a specified number of SO_2 allowances to each unit for each year. Utilities are free to:

- "under-control" and buy allowances,
- "over-control" and sell allowances, or
    - hold allowances for future use;
    - trade or transfer allowances in power sales or other transactions,
    - pool allowances with other utilities to mitigate risk, or
    - use allowance futures contracts and options to hedge against future price changes.

Upgrades have been made to the scrubbers on both units at Coal Creek Station and on Unit 10 at Stanton Station. Coal Creek Station's two units are allotted 44,497 allowances per year. GRE also has installed a pollution control, energy recovery and emission reduction project at Coal Creek Station whereby the plant provides steam for an adjacent ethanol plant.

Stanton Station's two units are allotted 8,781 allowances per year. In 2004, Stanton Station switched from lignite to Powder River Basin (PRB) coal, resulting in lower emissions. Stanton Station is currently designing a SO_2 scrubber for Unit 1.

No additional modifications should be required for continued compliance with the SO_2 provisions of the acid rain program.

Fly Ash Sales. Since 2003, GRE has actively participated in the EPA's Coal Combustion Products Partnership (C2P2) to promote the benefits of coal combustion products – including fly ash.

As a by-product of coal combustion, GRE generates approximately 520,000 tons of fly ash per year at Coal Creek Station. Historically, fly ash was stored in landfills, but over the last ten years GRE has been very successful in finding alternative uses for it. It is primarily used as a partial replacement for cement, which makes the concrete stronger and more durable than concrete made with cement alone. It has also been used in other products. For example, fly ash was used in the backing of the carpet in GRE's new headquarters building.

Re-using the fly ash avoids cement production, reducing CO_2 emissions in the cement production process. For each ton of fly ash that is used as a cement replacement, greenhouse gas emissions are estimated to be reduced by just over 0.8 tons. Since 1998, nearly 2.5 million cumulative tons of CO_2 have been avoided through GRE's fly ash re-use.

By re-using the fly ash, GRE also avoids storing it in landfills, resulting in cost savings of over $4 per ton. Since 1998, over $10 million in cumulative landfilling costs have been avoided through re-use.

Stanton Station fly ash has been used to replace cement and scoria fines as a product to absorb the oil/water sludge created during oil well drilling and for soil stabilization. Today nearly all the Stanton fly ash is used in the oil field industry.

Cogeneration for an Ethanol Plant. GRE completed integration of Blue Flint Ethanol with Coal Creek Station, which provides steam for their distiller's grain drying and other system thermal requirements. In addition to the benefit of using low pressure steam that would normally be unused, the project will result in much lower emissions than a stand-alone ethanol project.

The primary benefit of locating the ethanol plant adjacent to Coal Creek Station is to allow for beneficial use of low temperature/quality energy from Coal Creek Station by the ethanol facility. Approximately 60 percent of the process steam for the ethanol facility will come from recovery and use of low pressure steam at Coal Creek Station. This steam is not usable in Coal Creek Station's steam cycle, and it would normally be rejected to the cooling towers as waste heat. The remaining 40 percent of the ethanol plant's process steam needs are for higher pressure steam, which also comes from Coal Creek Station.

As part of the cogeneration project, several improvements were completed at Coal Creek Station that will result in large emission reductions. With respect to SO_2 emissions, these include installation of liquid distribution rings, upgrades to the mist eliminator wash system, and the addition of air heater seals. These improvements are expected to reduce net SO_2 emissions from the station by approximately 900 tons per year. With respect to NO_X emissions, the improvements include installation of new manual tilt drives on the Unit 1 separated over-fire air compartments. The new tilt drives in conjunction with the reduced air heater leaks are expected to reduce NO_X emissions by approximately 600 tons per year.

Coal Drying Project. In January 2003, the U.S. Department of Energy selected GRE's Coal Creek Station to participate in a clean coal technology project. Through the project, Coal Creek Station conducted a large-scale coal-drying study to determine if it is feasible to dry large quantities of lignite for use at the plant. Lignite has a high moisture and ash content. By reducing the moisture and ash content, less coal is required to generate the same amount of electricity. This also results in fewer emissions. Through the project, the moisture content of lignite will be reduced from 38 percent to less than 30 percent. This will improve the quality of lignite - making it closer to the quality of PRB sub-bituminous coal from Montana and Wyoming. As a result, efficiencies will increase by 2.8 to 5 percent. Sulfur dioxide emissions are expected to decrease by 25 percent. Mercury, carbon dioxide, nitrogen oxides and particulate emissions are also all expected to decrease due to the reduction of the flue gas volume and dryer density separation.

A dryer is under construction at Coal Creek Station and is expected to be in operation by 4th quarter 2009. GRE is pursuing marketing the dryer technology for use in other power plants.

Future Environmental Regulations. Following is a discussion of future environmental regulations that may affect GRE's operations.

Regional Haze. The U.S. Environmental Protection Agency (EPA) published final regional haze regulations in 1999. The goal of these regulations is to improve visibility in

Class 1 areas, such as national parks and wilderness areas, to reach "natural conditions" by 2064. The rule requires certain power plants to install Best Available Retrofit Technology (BART) to control SO_2, NO_X and Particulate Matter (PM). Since 2005, GRE has been working closely with the North Dakota Department of Health (NDDH) and has provided detailed BART analyses for each affected unit that identifies feasible control options for each pollutant, cost estimates for the respective controls, expected emission rates and associated visibility improvements for each combination of controls. NDDH is expected to issue their final BART determination soon. These emission controls must be installed and operational no later than 5 years after EPA approves the North Dakota BART State Implementation Plan (SIP), which may be as soon as 2013. Coal Creek and Stanton stations have been working diligently on their BART control strategies and do not anticipate any difficulty meeting the regulatory timelines.

In 2018, NDDH will start the second round of regional haze reductions. Cost effective controls and associated visibility improvements will again be determined for all emission sources in the state with an effective date of 2023 for any applicable control requirements.

National Ambient Air Quality Standards. The U.S. Environmental Protection Agency (EPA) periodically reviews the National Ambient Air Quality Standards (NAAQS) to determine the protectiveness of the existing standard. In 2008, the eight-hour ozone standard was changed from 0.08 parts per million to 0.075 parts per million. The one-hour ozone standard was revoked except in limited areas of the country. A new fine particulate matter (PM2.5) standard was created in 1997 at a maximum annual average of 15 micrograms per cubic meter and the maximum 24-hour average was revised in 2006 to be 35 micrograms per cubic meter.

Minnesota and North Dakota are in attainment with the revised ozone and PM2.5 NAAQS. As such, the NAAQS change is not expected to directly impact GRE's operating plants. Indirectly, the Clean Air Interstate Rule (CAIR), developed to assist non-attainment areas come into compliance with the limits, will affect GRE's Minnesota facilities.

Mercury. Since the late 1990s, GRE has been an industry leader in researching mercury reduction technologies at our plants. We continue to work with partners such as the Electric Power Research Institute (EPRI), U.S. Department of Energy (DOE), and North Dakota's Energy & Environmental Research Center (EERC) to identify and test novel mercury reduction technologies.

In 2005, the EPA published its Clean Air Mercury Rule (CAMR). Coal Creek and Stanton stations were covered by this rule and had made plans to install controls and monitor their emissions in compliance with this cap and trade program. The CAMR was then vacated by the U.S. Court of Appeals for the DC Circuit on February 8, 2008. The EPA sought review by the full district court, which request was denied. The time for appeal has not yet expired.

If the DC circuit court ruling holds, EPA will be required to develop Maximum Achievable Control Technology (MACT) standards under Section 112 of the Clean Air Act, which could take several years. EPA has indicated that the likely rule would require 90 percent removal and is likely to issue final rules in 2010. Since GRE has conducted and continues to conduct significant mercury reduction research at our plants, we are uniquely positioned to respond to either a CAMR or MACT regulatory program once finalized.

Clean Air Interstate Rule. The Clean Air Interstate Rule (CAIR), a two-emission rule, was signed March 10, 2005 by the EPA Administrator. CAIR requires reductions in emissions from states that will contribute significantly to non-attainment of, or interfere with the maintenance of, the PM2.5 and/or the 8-hour ozone National Ambient Air Quality Standards (NAAQS). Minnesota has been identified as a significant contributor in the PM2.5 NAAQS and will be required to reduce SO_2 and NO_X emissions. Therefore, GRE's Minnesota facilities will be required to comply with the CAIR provisions. CAIR emission reductions will be implemented in two phases: Phase I will begin in 2009 and 2010 for NO_X and SO_2, respectively, and Phase II will begin in 2015.

CAIR SO_2 emission reductions are based on Title IV Phase II allowance levels. Required SO_2 emission reductions are 50 percent in 2010 and 65 percent in 2015. CAIR NO_X emission reductions are based on emissions from facilities in existence at the time of rule promulgation. A new allowance system is being implemented for NO_X emissions. Required NO_X emission reductions are approximately 56 percent in 2009 (from units in existence from 1999 - 2002) and 64 percent in 2015.

The state of Minnesota currently has no plans to submit a State Implementation Plan (SIP) for CAIR. CAIR administration in Minnesota is proceeding under the U.S. Environmental Protection Agency's Federal Implementation Plan (FIP) published in 2006 with amendments in 2007.

Greenhouse Gas Emissions There is currently no state or federal regulation of CO_2 emissions. The United States has not signed the Kyoto Protocol and it is not likely to sign any international agreement under the current administration. Nevertheless, GRE continues to evaluate its greenhouse gas emissions and assess opportunities for carbon reduction.

GRE actively participated in Minnesota's Climate Change Advisory Group process to develop a state action plan. GRE is involved with the Midwest Governors Association's Energy Initiatives and has a seat on the Energy Efficiency Advisory Group. GRE is a partner in the U.S. Environmental Protection Agency's SF_6 Emission Reduction Partnership for Electric Power Systems program whereby GRE establishes and reports progress towards annual SF_6 (sulfur hexafluoride) reduction goals. GRE continues to be a funding member of the Energy & Environmental Research Center's Plains CO_2 Reduction partnership (PCO_2R) which conducts research into CO_2 sequestration. We have an established cross-functional carbon team that is evaluating opportunities for carbon reduction and offsets. GRE has been tracking and voluntarily reporting its greenhouse gas emissions since 1995. GRE is a Founding Reporter of The Climate Registry. In assessing generating technologies to meet its customers' needs, GRE includes externality costs for CO_2 emissions.

Impaired Waters and Total Maximum Daily Loads. Every two years the U.S. Environmental Protection Agency (EPA), under the Clean Water Act, requires states to publish and submit an updated list of waters that do not meet designated uses due to pollutant impacts. The impaired waters list, 303(d) list, includes lakes, streams and rivers with impairments for use as drinking water, fishable waters, swimming, industrial use and/or irrigation.

Once the water body is listed, the state must begin the process of addressing the impairment. The first stage of this process is development of a Total Maximum Daily Load (TMDL). A TMDL is the total maximum daily pollutant load a water body can receive from all sources while maintaining applicable water quality standards and supporting the water body's designated uses.

The development of a TMDL is designed to assess the load on a water body from point sources, non-point sources, and natural background conditions. Once these loads are quantified, each source can be assigned a given amount of pollutant load expected to ensure the receiving water body will meet water quality standards and designated uses.

At this time states are generally in the water body assessment phase, but TMDLs have either been developed or are in development for an increasing number of water bodies. As this process proceeds, TMDLs will likely be developed for water bodies to which GRE either has or is seeking permitted discharges. This could change discharge limits, result in limits for additional analytical parameters or even possibly preclude permitting of a new or expanded discharge to a given water body. The most likely affected parameters include mercury, phosphorous, total suspended solids, and temperature.

In many instances the impairments mentioned above have significant contributions from non-point and natural background sources. Due to the difficulty in controlling the loads from these sources, significant reduction goals may be allocated to point sources such as GRE's permitted discharges. Retrofitting existing facilities and implementing new pollutant reduction technologies will likely require significant capital expenditure to achieve relatively small reductions for a given pollutant. Based on this it appears pollutant trading and restoration projects will play a significant role in the TMDL process. GRE will continue to monitor TMDL development and assess potential impacts to our facilities.

Aquatic Life Protection at Cooling Water Intake Structures. Section 316(b) of the Clean Water Act requires that the location, design, construction, and capacity of a cooling water intake structure (CWIS) reflect the best available technology (BAT) for minimizing environmental impact including threat to aquatic life. As part of a settlement agreement, the EPA began development of new regulations to address impacts to aquatic life at CWIS's. The new regulations consist of three phases. Phase I (released December 18, 2001) applies to new facilities with a CWIS. Phase II became final July 9, 2004 and applies to existing utility power plants that have an NPDES permit and a CWIS with a design capacity of greater than 50 million gallons per day (mgd). Phase III was proposed November 24, 2004 and applies to non-utility CWIS's greater than 50 mgd. The Phase II rule was remanded back to the EPA by the 2nd Circuit Court in early 2008. Currently, the EPA is rewriting the rule to address the Court findings.

Phase I of the rule applies to any new facilities with an NPDES permit and a CWIS design of greater than 2 mgd. The rule provides a two-track decision making process of either installing highly protective intake technologies or conducting a site-specific analysis of the proposed CWIS's impacts to aquatic life. The study must demonstrate the proposed CWIS will be adequately protective of aquatic life. Any new projects planning to utilize surface water for cooling purposes will have to address Phase I of the rule.

Phase II of the rule is for existing utility CWIS's based on the parameters mentioned above. The previous Phase II rule applied performance standards based on the size of the intake, the amount of water it withdraws and the source water body type. With the Phase II portion currently being rewritten by the EPA, specific performance standards and what constitutes "best available technology" are unknown at this time.

Any new requirements will affect Stanton Station and Elk River Station. Currently both stations have completed initial strategy analyses for compliance with the new rule and are conducting baseline and limited planning exercises based on available information.

SECTION L: Projected Demand for Service

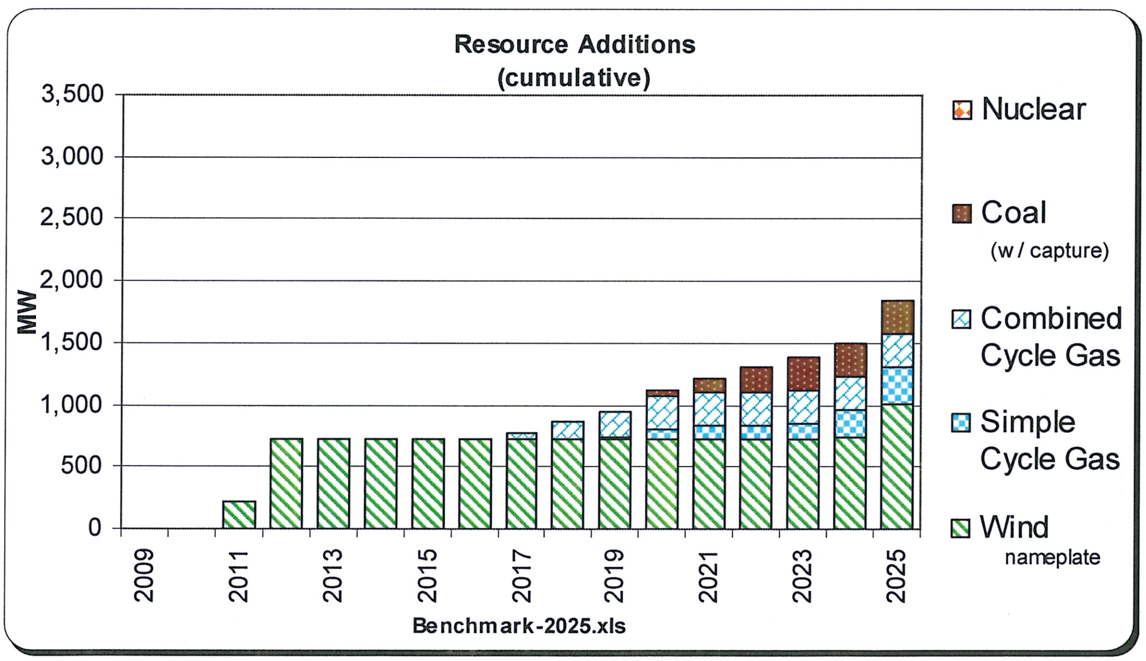
Projected Demand. GRE's forecasted peak demands and energy requirements are provided in Exhibit 4.

Manner and Extent of Meeting Projected Demand. In addition to GRE's current and planned generation capability, GRE has entered into a number of transactions of various types and durations with other utilities. These transactions help to utilize GRE's resources more effectively while deferring the need for new additions. GRE is a full transmission and market participant of the Midwest Independent Transmission System Operator (MISO), which operates short term energy markets that provide economic dispatch of generation and transmission congestion management over a broad region.

Meeting summer peaks is GRE's primary resource capacity concern. GRE added combustion turbines in 2001, 2002, and 2007 and has started construction of a 175 MW combustion turbine at Elk River, Minnesota, to be in service in 2009.

GRE is aggressively pursuing additional opportunities for conservation, energy efficiency, and load management. GRE, in concert with its member systems, will strive to meet the 1.5% Energy Conservation Policy Goal established by Minnesota statute, though it will be a difficult challenge. If the Energy Conservation Policy Goal is met, GRE will need the additional resources, identified generically in Figure 1:

Figure 1 – GRE Resource Plan (Cumulative Capacity Additions)



In the next five years, the only resource additions indicated are wind. Since there is no assurance that the federal Production Tax Credit will be extended indefinitely, there is an incentive to acquire wind resources ahead of GRE's needs.

GRE will need additional natural gas fired generation around the 2017 timeframe. No commitment decision is necessary now since such resources have relatively short lead times, although we will continue to develop options. The specific timing and types of these additions (simple cycle or combined cycle) will depend on market conditions, fuel costs, and the pace of demand and energy growth.

GRE will need additional low/no carbon baseload resources around 2020. Although the chart above shows coal with CO_2 capture as meeting this need, there is enough uncertainty about the costs and future availability of resources such as nuclear and advanced coal with carbon capture that there is no clear choice at this time. Since any of these alternatives involve significant challenges and long lead times, GRE is conducting early work to develop options.

In addition to the above resources, GRE intends to continue pursuing unique opportunities such as improvements to existing facilities, biomass and other non-wind renewables, combined heat and power projects, and energy storage (both utility-side and customer-side).

Load Centers. The service areas of GRE's 28 member cooperatives, shown in Figure 2, are located mainly in Minnesota and a small area in northwestern Wisconsin. Twenty of the member cooperatives are all-requirements customers. Eight purchase a fixed amount of capacity and associated energy from GRE and will meet their growth with purchases from other energy suppliers. Resources to serve their growth are not included in the resource additions chart above.

Fuel Sources and Transportation. Stanton Station originally burned lignite, but switched to Power River Basin subbituminous coal in 2004. The coal is mined near Decker Montana and is transported to the plant via rail.

Coal Creek Station's generating units burn lignite that is mined at the adjacent Falkirk Mine and transported to the plant via trucks and conveyor belts.

The Elk River generating plant burns refuse-derived fuel. Municipal wastes are transported by truck to a processing plant near Elk River where it is converted to usable fuel. The RDF is trucked to the Elk River generating facility.

GRE has two combustion turbine peaking facilities (Pleasant Valley and Lakefield Junction) located in southern Minnesota. These facilities use natural gas as their primary fuel which is transported by pipelines and fuel oil as a back-up fuel, which is transported by truck.

GRE has five combustion turbine peaking facilities (Cambridge I, Cambridge II, Rock Lake, Maple Lake, and St. Bonifacius) located in central Minnesota. Except for Cambridge II which is fueled by natural gas, the remaining facilities use fuel oil, which is transported by truck. St. Bonifacius is also connected to a fuel oil pipeline, which adds a fuel transport option.

Figure 2 – GRE's Members and Their Service Areas

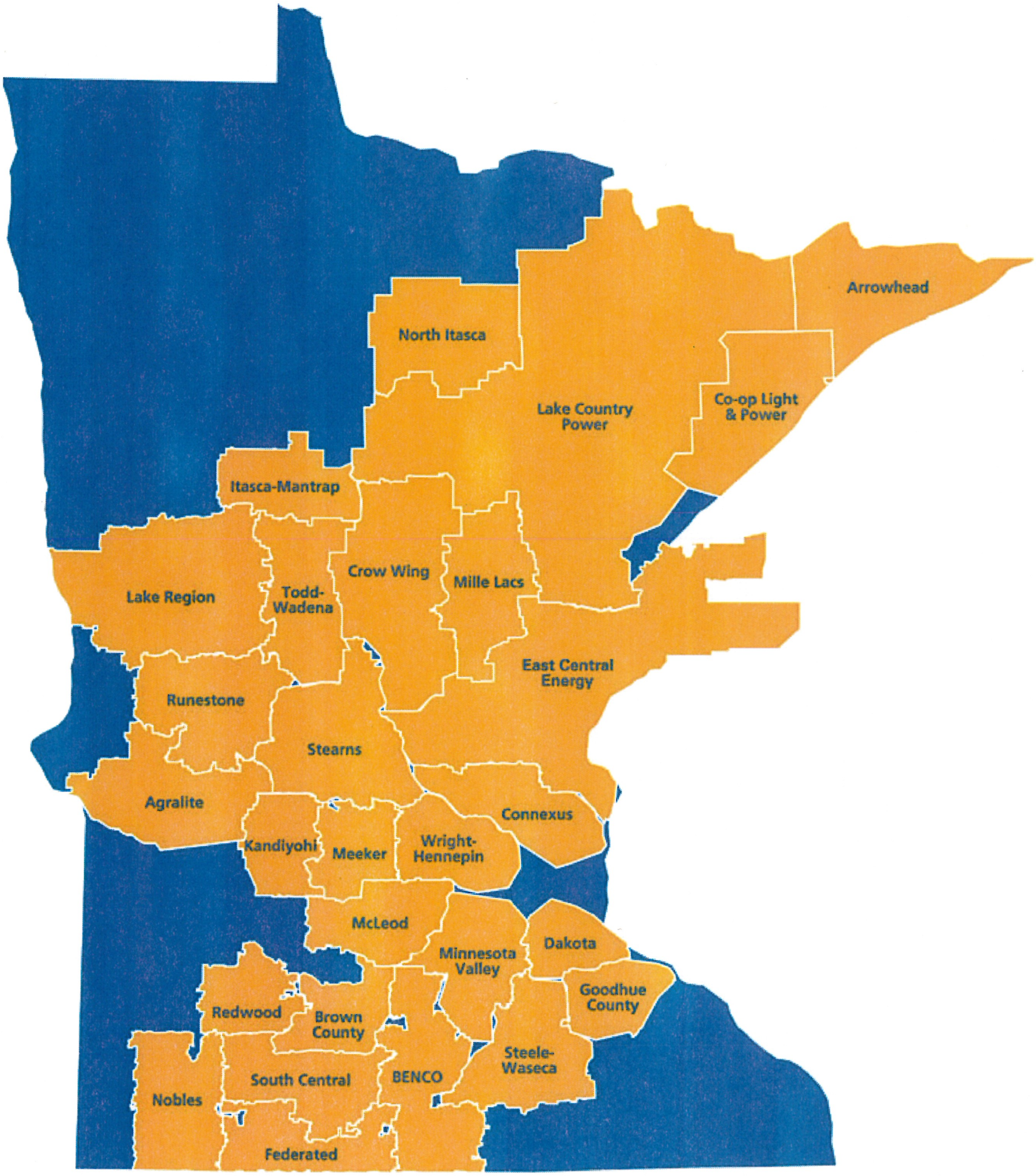


Exhibit 1

U.S. Department of Energy
Energy Information Administration Form EIA-767

(Forms supplied upon request.)

Exhibit 2

Federal Energy Regulatory Commission Form 715

(Forms supplied upon request.)

Exhibit 3

Location of the Coal Creek Station

Water Intake Pipeline

(Map supplied upon request.)

Exhibit 4

Projected Load Growth

and

Forecast Methodology

Demand and Energy Forecasts

For resource planning purposes GRE developed an econometric forecast of demand and energy. This forecast accounts for a slowdown in housing starts, which is assumed to persist through mid-2009. A Monte-Carlo model was then used to develop 50% and 90% probability forecasts. GRE uses 50% probability forecasts for energy planning and 90% probability forecasts for long-range capacity planning. The forecasts were reduced for the additional conservation / energy efficiency that would be required to achieve the Minnesota 1.5% Energy Conservation Policy Goal.

The forecast addresses all of the loads of all of GRE's member systems. Since eight of those member systems have fixed the amounts of capacity and associated energy to be supplied by GRE, their growth is accounted for with non-specific resources to be supplied by others.

The following figures show GRE's energy forecast (50% probability) and demand forecasts (50% and 90% probability), compared with recent history.

Figure 4A - GRE Energy Forecast

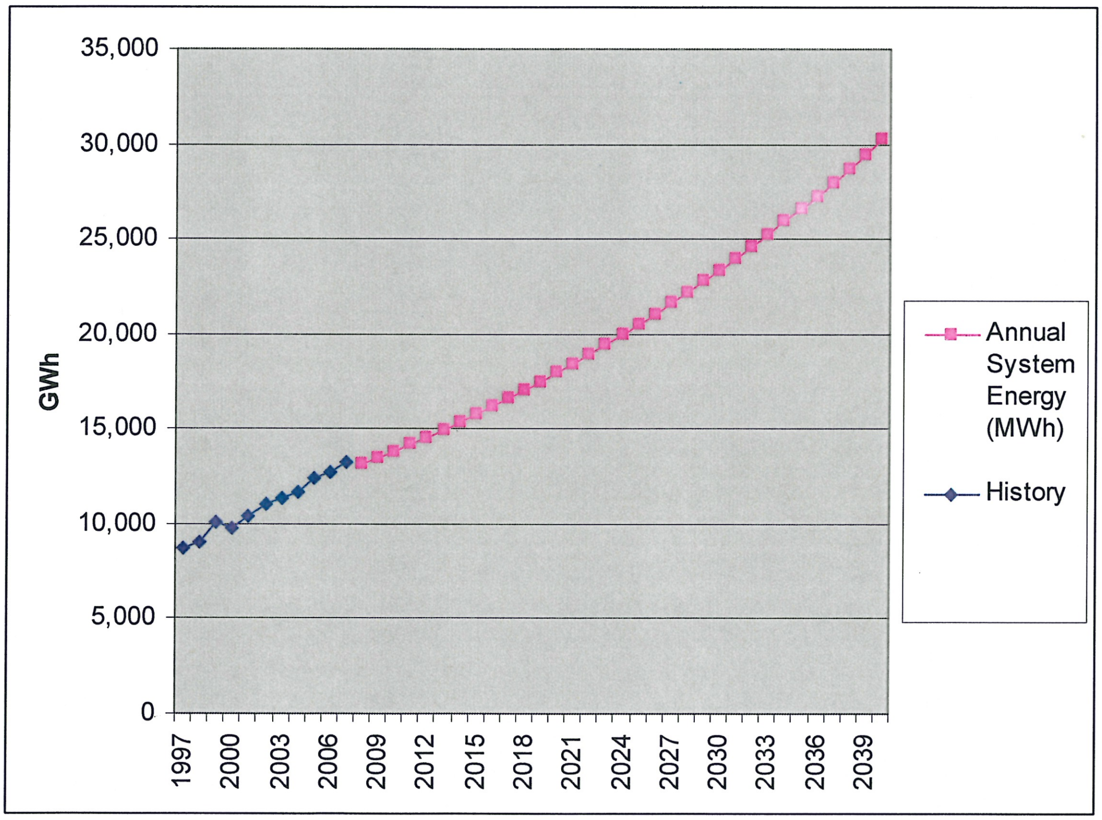


Figure 4B - GRE Demand Forecasts

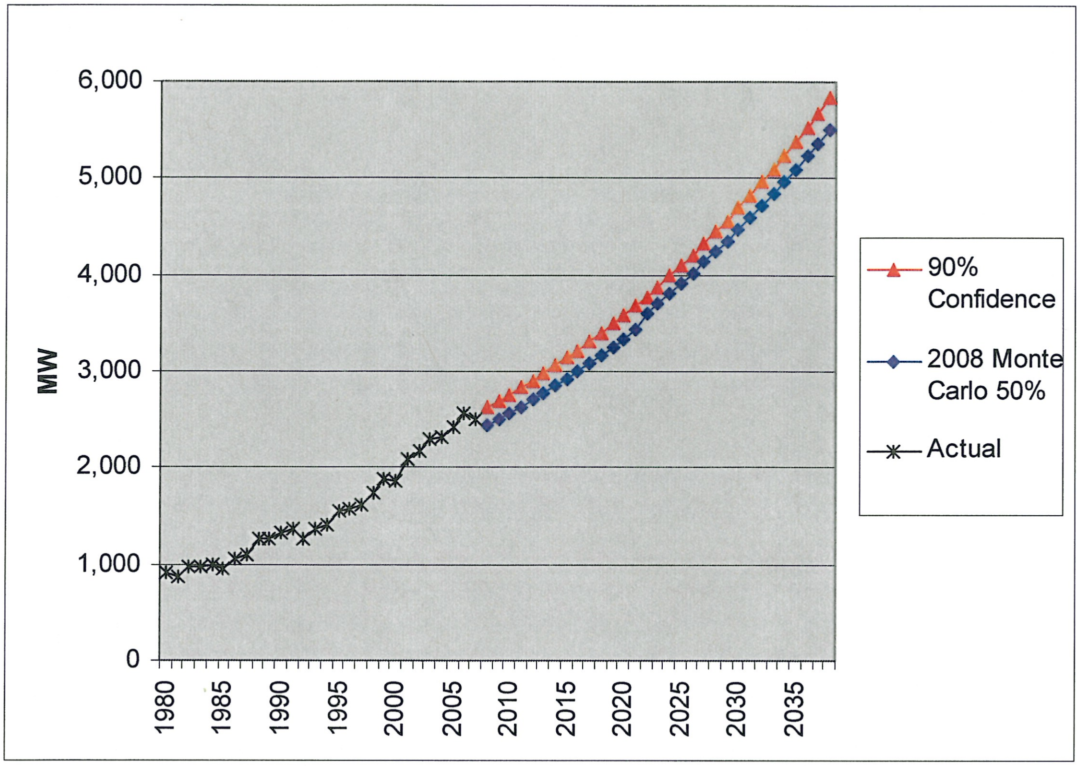


Exhibit 5

GRE

North Dakota Transmission Map

(Map supplied upon request.)