



July 2, 2009

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Illona Jeffcoat-Sacco
Executive Secretary
North Dakota Public Service Commission
State Capitol Building
Bismarck, ND 58505

PUBLIC SERVICE COMMISSION

RE: Minnesota Power's Ten Year Plan – July 2009

Dear Ms. Jeffcoat-Sacco:

Enclosed are ten paper copies of Minnesota Power's North Dakota Ten-Year Plan pursuant to N.D.C.C. § 49-22-04. Notice of the filing of this plan will be given pursuant to N.D. Admin. Code 69-06-02-02 to the state agencies and officers as designated in N.D. Admin. Code 69-06-01-05. A copy of Minnesota Power's Ten Year Plan will also be filed with the Morton and Oliver county auditors.

If you have any questions, or need additional information, please contact me at the number listed below.

Sincerely,

David R. Moeller

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Enc.

cc: Oliver County Auditor
Morton County Auditor

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2009 Ten Year Plan

Pages: 7

Allete, Inc.

David Moeller, MN Power

TEN-YEAR PLAN

Minnesota Power
An operating division of ALLETE, Inc.
Duluth, Minnesota

Prepared for the North Dakota Public Service Commission
Pursuant to Section 49-22-04 of the
North Dakota Century Code

July 2009

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Minnesota Power's
TEN-YEAR PLAN

INTRODUCTION

Minnesota Power, an operating division of ALLETE, Inc., provides retail electric service to northeastern Minnesota and wholesale service to 16 municipal customers in Minnesota and two private utilities in Wisconsin. Minnesota Power has historically maintained an energy resource portfolio of coal, hydro, and biomass. In an effort to meet Minnesota's Renewable Energy Standard (Minn. Stat. § 216B.1691) and diversify its energy resource portfolio, Minnesota Power has been implementing a renewable development plan that began with 98.6-MW of purchased wind energy from the Oliver I and II Wind Energy Centers in Oliver County, North Dakota. Minnesota Power also currently purchases 227,500 kW from Square Butte Electric Cooperative's Milton R. Young Unit 2 plant that is delivered via Square Butte Electric Cooperative's +/- 250kV direct current transmission line ("DC Line") that runs between the Square Butte Substation in Center, North Dakota and Minnesota Power's Arrowhead Substation near Duluth, Minnesota.

Minnesota Power's Ten-Year Plan

SECTION A: Existing Energy Conversion Facilities

Hydro Operations—114.6 MW

- St. Louis River System—85.6 MW
 - Knife Falls Hydro Electric Station—1.9 MW
 - Scanlon Hydro Electric Station—1.4 MW
 - Thomson Hydro Electric Station—71.3 MW
 - Fond du Lac Hydro Electric Station—11.0 MW
- Winton Hydro Electric Station—4.0 MW
- Prairie River Hydro Electric Station—0.5 MW
- Mississippi River System—24.5 MW
 - Little Falls Hydro Electric Station—4.4 MW
 - Blanchard Hydro Electric Station—16.5 MW
 - Sylvan Hydro Electric Station—1.9 MW
 - Pillager Hydro Electric Station—1.7 MW

Hibbard Energy Center—54.2 MW (summer), 47.2 MW (winter)

Boswell Energy Center Units 1 and 2—138 MW

Boswell Energy Center Unit 3—350.5 MW

Boswell Energy Center Unit 4—535 MW (428.8 MW Minnesota Power capacity)

Laskin Energy Center Units 1 and 2—110 MW

Cloquet Energy Center—22.1 MW

Taconite Ridge Wind Energy Center—25 MW

(Non-regulated) Rapids Energy Center—30.8 MW

Purchases

- Square Butte—Young 2—227.5 MW in 2009 and thereafter
- Oliver County Wind Energy Centers I and II—98.6 MW
- Wing River Wind—2.5 MW

Minnesota Power's 2008 Integrated Resource Plan in MPUC Docket No. E015/RP-07-1357 (available on the MPUC's eDockets website: <https://www.edockets.state.mn.us/EFiling/search.jsp>) provides further information on these generation facilities and is available upon request. Minnesota Power will be filing an updated Integrated Resource Plan by October 1, 2009.

SECTION B: Energy Conversion Facilities Under Construction

None currently, though subject to receipt of all applicable permits, including a Certificate of Site Compatibility from the North Dakota Public Service Commission (PU-09-151), Minnesota Power will begin construction fall 2009 of its Bison I Wind Project in Morton and Oliver counties. The Bison I Wind Project will be 76 MW in size, consisting of 33 2.3-MW wind turbine generators.

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

Minnesota Power intends to construct at least 375 MW of wind projects in North Dakota. The initial Bison I Wind Project will be placed in-service in two phases beginning in 2010. The remaining 300MW would be installed at future dates, depending on a number of different factors, including when Minnkota Cooperative completes its new 345kV AC transmission outlet. Minnesota Power will make individual applications to the North Dakota Public Service for approval of these additional North Dakota wind facilities.

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

See response to Section C.

SECTION E: Existing Transmission Facilities (Electric)

Minnesota Power currently does not own any transmission facilities in North Dakota. Subject to regulatory approvals from the Minnesota Public Utilities Commission, the Federal Energy Regulatory Commission, and the North Dakota Public Service Commission, Minnesota Power is planning on acquiring Square Butte Electric Cooperative's +/- 250kV direct current transmission line ("DC Line") that runs 465 miles between the Square Butte Substation in Center, North Dakota and Minnesota Power's Arrowhead Substation near Duluth, Minnesota.

North Dakota Public Service Commission approval is necessary to transfer three Route Permits and three Certificates of Corridor Compatibility issued to Square Butte for minor rerouting of the DC Line in North Dakota (N.D.C.C. § 49-22-07).

SECTION F: Existing Transmission Facilities (Pipeline)

None

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

Minnesota Power is planning to construct in 2010 a new 230kV AC transmission line, approximately 22 miles in length that is required to transmit wind generation from the Bison I Wind Project substation to the proposed point of interconnection within the existing Square Butte Substation near Center, North Dakota.

Minnesota Power is also planning to upgrade the capacity of the DC Line to assure deliverability of the Bison I Wind Project. To accomplish this upgrade, Minnesota Power has entered into a transmission service agreement with Square Butte (subject to installation of a \$5.6 million

transmission system improvement project at the Square Butte substation) to increase the DC Line capacity from 500MW to 550MW by 2013.

Minnesota Power is a participant in the CapX2020 transmission initiative, which includes the Twin Cities – Fargo 345 kV Project that would begin near Fargo, North Dakota and terminate at Monticello, Minnesota.

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 Time Period (Electric and Pipeline)

Minnesota Power may need to construct additional generator-outlet transmission facilities to deliver wind from project sites to the Square Butte Substation.

SECTION J: Regional coordination

Minnesota Power's 2008 Integrated Resource Plan in MPUC Docket No. E015/RP-07-1357 (available on the MPUC's eDockets website: <https://www.edockets.state.mn.us/EFiling/search.jsp>) contained extensive transmission and regional coordination information in Appendix F and is available upon request. Minnesota Power will be filing an updated Integrated Resource Plan by October 1, 2009.

SECTION K: Environmental information

Minnesota Power's 2008 Integrated Resource Plan in MPUC Docket No. E015/RP-07-1357 (available on the MPUC's eDockets website: <https://www.edockets.state.mn.us/EFiling/search.jsp>) contained extensive environmental information in Appendix E and is available upon request. Minnesota Power will be filing an updated Integrated Resource Plan by October 1, 2009.

SECTION L: Projected demand for service

Minnesota Power's 2008 Integrated Resource Plan in MPUC Docket No. E015/RP-07-1357 (available on the MPUC's eDockets website: <https://www.edockets.state.mn.us/EFiling/search.jsp>) contained extensive demand and energy forecasting information and is available upon request. Minnesota Power will be filing an updated Integrated Resource Plan by October 1, 2009. Minnesota Power also files annually with the MPUC an Annual Forecast Report in accordance with MPUC rules and that can be made available upon request.