GREAT RIVER ENERGY
And
WRIGHT-HENNEPIN COOPERATIVE ELECTRIC ASSOCIATION

APPLICATION TO THE
MINNESOTA PUBLIC UTILITIES COMMISSION
FOR
CERTIFICATE OF NEED

AND
DRAFT ENVIRONMENTAL REPORT

PLYMOUTH-MAPLE GROVE
LARGE HIGH VOLTAGE
TRANSMISSION LINE

November 14, 2002

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LIST OF ACRONYMS

ACRONYMS	
AC	Alternating current
ACSR	Aluminum conductor steel reinforced
ACSS	Aluminum conductor steel supported
ATV	All-terrain vehicle
BPA	Bonneville Power Administration
Btu/kW	British Thermal Units per kilowatt
CFL	Compact fluorescent lights
C/I-A	Commercial/Industrial-Agriculture
CIP	Conservation Improvement Program
CP	Cooperative Power Association
CTs	Combustion turbines
dB(A)	Decibel
DC	Direct current
DSM	Demand Side Management
EMF	Electromagnetic fields
EPA	Environmental Protection Agency
EPR	Ethylene-propylene rubber
ETS	Electric thermal storage
FERC	Federal Energy Regulatory Commission
G	Gauss
GAP	Generator Assistance Program
GRE	Great River Energy
GSHP	Ground-source heat pumps
HDD	Horizontal directional drilling
HEL	Highly erodible soils
kV	Kilovolt
KVA	Kilovolt-ampere
kW	Kilowatt
kWh	Kilowatt hour
LHVTL	Large high voltage transmission line
LRLF	Long-Range Load Forecast
MAPP	Mid-Continent Area Power Pool
MBWG	Modeling Building Working Group
MEQB	Minnesota Environmental Quality Board
MG	Milligauss
MHz	Megahertz
MnDNR	Minnesota Department of Natural Resources
MnDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
MSL	Mean sea level
MVARS	One million voltamp reactance

ACRONYMS	
MW	Megawatt
MWh	Megawatt hour
NAC	Noise area classifications
NAERO	North American Electric Reliability Organization
NERC	North American Electric Reliability Council
NESC	National Electric Safety Code
NOx	Nitrogen Oxides
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
OSHA	Occupational Safety and Health Administration
ppm	Parts per million
PRS	Power Requirements Study
Regional Plan	Regional Transmission Plan
RTC	Regional Transmission Council
RUS	Rural Utilities Service
SO_2	Sulfur Dioxide
SPGS	Sub-Regional Planning Groups
TCTT	Twin Cities Tree Trust
TPSC	Transmission Planning Subcommittee
UPA	United Power Association
USDA	United States Department of Agriculture
V/M	Volts per meter
VARS	Voltamp reactance
VHF	Very high frequency
WHCEA	Wright-Hennepin Cooperative Electric Association
XLPE	Cross-linked polyethylene

Application for a Certificate of Need for a Large High Voltage Transmission Line to Support Increased Load Growth in the Plymouth - Maple Grove Area

Pursuant to Minn. Stat. § 216B.243 and Minn. Rules pt. 7849.1020, Great River Energy (GRE) hereby makes application to the Minnesota Public Utilities Commission (Commission) for a Certificate of Need for a large high voltage transmission line (LHVTL) in Hennepin County, Minnesota to meet the electrical needs of one of GRE's member cooperatives, Wright-Hennepin Cooperative Electric Association (WHCEA), for WHCEA customers located in the Plymouth – Maple Grove area.

The Application is divided into 13 sections as follows:

1. **INTRODUCTION** – provides background information on GRE and WHCEA, a brief justification for the project, a summary of alternatives considered, and information regarding statutory requirements.

2. **NEED SUMMARY** – describes the need for the proposed project as required by Minn. Rules pt. 7849.0240.

3. **PROPOSED LINE AND ALTERNATIVES** – provides a detailed description of the proposed project and the alternatives considered as required by Minn. Rules pts. 7849.0260, subp. A and B, and 7849.0320

4. **COST ANALYSIS** – discusses costs of the proposed project and alternatives and other information required under Minn. Rules pt. 7849.0260, subp. C.

5. **SYSTEM CAPACITY** – provides information on transmission planning programs and criteria (Minn. Rules pt. 7849.0280, subp. A) and a graph depicting monthly adjusted net demand and monthly adjusted net capability (Minn. Rules pt. 7849.0280, subp. H).

6. **PEAK DEMAND/ANNUAL CONSUMPTION FORECAST** – contains data concerning peak demand and annual electrical consumption in the WHCEA service area, forecast, and forecast methodology as required by Minn. Rules pt. 7849.0270.

7. **ENERGY CONSERVATION AND LOAD MANAGEMENT PROGRAMS** – describes energy conservation and load management programs of GRE (generally) and WHCEA (specifically) as required by Minn. Rules pt. 7849.0290.

8. **CONSEQUENCES OF DELAY ON SYSTEM** – discusses anticipated consequences to the transmission system if the proposed project were delayed (Minn. Rules pt. 7949.0300).

9. **PHYSICAL, ELECTRICAL AND HEALTH AND SAFETY CHARACTERISTICS OF TRANSMISSION LINES** – provides information on health and safety issues, right of way requirements, and construction, operation, and maintenance practices for the overhead and underground alternatives considered as required by Minn. Rules pt. 7949.0330, subp. A-F.

10. **ENVIRONMENTAL INFORMATION** – provides a narrative description of the major environmental features between the endpoints of the proposed transmission system and the area within three miles of the endpoints as required by Minn. Rules pt. 7949.0330, subp. G.

11. **ALTERNATIVE OF NO FACILITY** – provides information for the alternative of no facility as required by Minn. Rules pt. 7849.0340.

12. **SUMMARY** – summarizes the key elements of the Certificate of Need Application.

13. **REFERENCES** – a list of documents referenced in the Application.