

APPENDIX O: LIST OF ACRONYMS, TERMS AND DESCRIPTION

ACRONYM	DEFINITION
2015 Plan	Minnesota Power's 2015 Integrated Resource Plan
2021 IRP	Minnesota Power's 2021 Integrated Resource Plan
2021 Plan	Minnesota Power's Preferred Resource Plan
A-CAES	Advanced Compressed Air Energy Storage
AC	Alternate Current
ACE	Affordable Clean Energy Rule
ACI	Activated Carbon Injection
AEIC	Association of Edison Illuminating Companies
AFR	Annual Electric Utility Forecast Report
AFR2020	2020 Annual Electric Utility Forecast Report
AICHO	American Indian Community Housing Organization
AMI	Advanced Metering Infrastructure
APWR	Advanced Pressurized Water Reactor
ARCOS	Automation of Reports and Consolidation Orders System
AREA	Arrowhead Regional Emissions Abatement
ARRA	American Recovery and Reinvestment Act
ASAI	Average System Availability Index
ASHPs	Air Source Heat Pumps
ASU	Air Separation Unit
BACT	Best Available Control Technology
BART	Best Available Retrofit Technology
Base Case	Foundation for Minnesota Power's 2015 Resource Plan
Basin	Basin Electric Cooperative
BEC	Boswell Energy Center
BEC1&2	Boswell Energy Center Units 1 & 2
BEC3	Boswell Energy Center 3
BEC4	Boswell Energy Center 4
BEC4 Project	BEC4 Environmental Retrofit Project
BES	Bulk Electric System
Biennial Report	Minnesota Biennial Transmission Projects Report
Bison	Bison Wind Energy Center
Bison 1	Bison 1 Wind Facility
Bison 2	Bison 2 Wind Facility
Bison 3	Bison 3 Wind Facility
Bison 4	Bison 4 Wind Facility
Boiler MACT	Maximum-Achievable Control Technology
Brayton Cycle	Gas Turbine Cycle
BSER	Best System of Emission Reduction

ACRONYM	DEFINITION
BTA	Bets Technology Available
BTU	British Thermal Units
C&I or C/I	Small Commercial and Industrial Customer Classes
CAA	Clean Air Act
CAC	Central Air Conditioning
CAES	Compressed Air Energy Storage
CAIDI	Customer Average Interruption Duration Index
CAIR	Clean Air Interstate Rule
C-BED	Community-Based Energy Development
CBSP	Consumer Behavior Study Plan
CC	Combined Cycle
CCGT	Combined Cycle Gas Turbine
CCR	Coal Combustion Residuals Regulation
CCS	Capture and Sequestration
CD	Consent Decree
CDS	Circulating Dry Scrubber
CEC	Cloquet Energy Center
CEE	Center for Energy and Environment
C/I	Commercial/Industrial
CID	Certified Interruptible Demand
CIP	Conservation Improvement Program
CIS	Customer Information System
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent Greenhouse Gases
Commission	Minnesota Public Utilities Commission
Company	Minnesota Power
Court	District of Columbia Circuit
CPA	Conservation Program Adjustment
CPP	Clean Power Plan
CPV	Concentrated PV
CSAPR	State Air Pollution Rule
CSE	Cost of Saved Energy
CSG	Community Solar Garden
CT	Combustion Turbine
D-02	Power Supply Production Transmission Allocators for 2016 to 2019
D.C. Circuit	District of Columbia Circuit
DC	Direct Current
DC Line	High Voltage Direct Current Transmission Line connecting Center, N.D. and Hermantown, Minn.
DCS	Distributed Control Systems

ACRONYM	DEFINITION
Department	Department of Commerce – Division of Energy Resources
DER	Distributed Energy Resource
DG	Distributed Generation
DG solar	Distributed Solar Generation
DLC	Direct Load Control
DOE	U.S. Department of Energy
D-Prime	End of a current ash storage facilities useful file
DPC	Dairyland Power Cooperative
DR	Demand Response
DSM	Demand Side Management
EAD/CDS	Enhanced All-Dry
ECMs	Electronically Commutated Motors
EDC	Energy Design Conference and Expo
EE	Energy Efficiency
EEI	Edison Electric Institute
EIA	Energy Information Administration
EIS	Environmental Impact Statement
ELG	Effluent Limitation Guidelines
EMS	Emergency Management System
EUDG	Energy Utility Diversity Group
EOR	Enhanced Oil Recovery
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
EQB	Environmental Quality Board
ESP	Electrostatic Precipitator
EV	Electric Vehicle
FCA	Facilities Construction Agreement
FEED	Front-End Engineering and Design
FERC	Federal Energy Regulatory Commission
FFA	General Electric's Field Force Automation
FGD	Flue Gas Desulfurization
FLISR	Fault Location, Isolation and Service Restoration System
FPE	Fuel and Purchased Energy
FPL	Florida Power and Light
GE	General Electric
GHG	Greenhouse Gas Regulation
GNTL	Great Northern Transmission Line
GRE	Great River Energy Cooperative
GRP	Gross Regional Product
GSHPs	Ground Source Heat Pumps
GUI	Graphical and User Interface

ACRONYM	DEFINITION
HAP	Hazardous Air Pollutant
HCl	Hydrochloric Acid
HPSA	Hitachi Power Systems America
HREC	Hibbard Renewable Energy Center
HRSG	Heat Recovery Steam Generator
HVAC	Heating Ventilation & Air Conditioning
HVACR	Heating Ventilation Air Conditioning & Refrigeration
HVDC	High Voltage Direct Current
HW	Hot Water Heater
IDP	Integrated Distribution Plan
IEE&C	Integrated Energy Education and Communications
IGCC	Integrated Gasification Combined Cycle
IOU	Investor-Owned Utility
Iron Range	A range of low hills containing iron-ore in northeastern Minnesota. It extends 110 miles from Babbitt (northeast) to Grand Rapids (southwest)
ITC	Investment Tax Credit
IVR	Interactive Voice Response System
Keetac	Keewatin Taconite
Kv	Kilovolt
L&C	Load and Capability
Laskin	Laskin Energy Center
LBL	Lawrence Berkeley National Laboratory
LEA	Laurentian Energy Authority
LEC	Laskin Energy Center
LEC1&2	Laskin Energy Center, Units 1 and 2
LED	Light Emitting Diode
LIHEAP	Low Income Home Energy Assistance Program
LIUNA	Labors' International Union of North America
LL&P	Large Light & Power
LLP Schedule	Minnesota Power's Large Light and Power Service Schedule
LNB	Low NOx Burners
LNB/OFA	LNB with Over Fire Air
LNG	Liquefied Natural Gas
LOLE	MISO Loss of Load expectation Report
LP	Low Pressure Turbines
Magnetation Process™	Magnetation Mineral Reclamation process
MACT	Maximum Achievable Control Technology
MATS	Mercury and Air Toxics Rule
MDG	Million Gallons Per Day
MDM	Meter Data Management System

ACRONYM	DEFINITION
MEA	Monoethylamine Process
MERA	Minnesota Mercury Emission Reduction Act of 2006
MERP	Minnesota Metro Emissions Reduction Project
MHEB	Manitoba Hydro-Electric Board
Minnkota	Minnkota Power Cooperative
MISO	Midcontinent Independent System Operator
Missouri DNR	Missouri Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
MPUC	Minnesota Public Utilities Commission
M-RETS	Midwest Renewable Energy Tracking
MTEP	Midcontinent Transmission Expansion Planning
MTEP14	Midcontinent Transmission Expansion Plan 2014
MTTF	Mean Time to Failure
MW	Megawatt
MWh	Megawatt Hour
NAAQS	National Ambient Air Quality Standard
NaS	Sodium Sulfur
NERC	North American Electric Reliability Corporation
NGEA	Minnesota Next Generation Energy Act of 2007
NO _x	Oxides of Nitrogen
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPV	Net Present Value
NRRI	University of Minnesota Natural Resources Research Institute
NSPS	New Source Performance Standards
NTEC	Nemadji Trail Energy Center
O&M	Operating and Maintenance
Oconto	Oconto Electric Cooperative
OEM	Original Equipment Manufacturers
OFA	Over Fire Air
OMS	Outage Management System
OPG	Ontario Power Generation, Inc.
PAC	Powdered Activated Carbon
Pb	Lead
PC	Pulverized Coal
PJFF	Pulse Jet Fabric Filter
Plant 1	Magnetation Plant South of Keewatin
Plant 2	Magnetation Plant near Taconite, Minnesota
Plant 3	Magnetation Plant South of Chisholm, Minnesota
PM	Particulate Matter
PM control	Fabric Filter for Particulate Matter

ACRONYM	DEFINITION
PM _{2.5}	Average Fine Particulate
Potential Study	Minnesota State Demand Side Management Potential Study
PPA	Power Purchase Agreement
PRB	Powder River Basin
Preferred Plan	Minnesota Power's Preferred Resource Plan
Primary Standards	NAAQS to protect human health
PRM	Planning Reserve Margin
PSC	Permanent split Capacitor
PTC	Production Tax Credit
PV	Photovoltaics
R&D	Research and Development
RAN	Resource Availability and Need
Rankine Cycle	Steam Turbine Cycle
Rapids	Rapids Energy Center
RCRA	Resource Conservation and Recovery Act
RE Program	Community-focused Small Scale Renewable Energy Program
RE/DG	Renewable Energy/Distributed Generation Technologies
REC or Rapids	Rapids Energy Center
RECs	Renewable Energy Credits
RECS	Residential Energy Consumption Survey
Regional Haze	Clean Air Visibility Rule
RES	Renewable Energy Standard
RFP	Request for Proposals
RFQ	Request for Qualification
RICE	Simple Cycle Reciprocating Internal Combustion Engine
RIM	Ratepayer Impact Measure
RMI	Rocky Mountain Institute
ROFA	Mobotec Rotating Opposed Fired Air
RPS	Renewable Portfolio Standard
RRR Adjustment	Minnesota Power's Renewable Resources Rider
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SC Aero	Simple Cycle Aero Derivative
SC GT	Simple Cycle Gas Turbine – Combustion Turbine
SCPC	Supercritical Pulverized Coal
SCR	Selective Catalytic Reduction
Secondary Standards	NAAQS to protect public welfare
SES	Solar Energy Standard
SGIG	Smart Grid Investment Grant
SIP	State Implementation Plan
SMR	Small Modular Reactor

ACRONYM	DEFINITION
SNCR	Selective Non-Catalytic Reduction
SNG	Synthetic Natural Gas
SO ₂	Sulfur Dioxides
Square Butte	Square Butte Cooperative
S-RECs	Solar Renewable Energy Credits
SSR	System Support Resource
Steam Effluent/ELG	Water Effluent Regulation
SWLP	Superior Water Light & Power
Tailoring Rule	Greenhouse Gas Tailoring rule
TCC	Tri-County Community Action
TCR	Transmission Cost Recovery Rider
TCR Adjustment	Transmission Cost Recovery Adjustment
THEC	Taconite Harbor Energy Center
THEC1&2	Taconite Harbor Energy Center Units 1 and 2
THEC3	Taconite Harbor Energy Center Unit 3
TOD	Time-of-Day Rate with Critical Peak Pricing Pilot
TOU	Time of Use Rate with Critical Peak Component
TPL	Transmission Planning
TRM	Technical Reference Manual
TVM	Telemetric Line Voltage and Outage Monitors
UCAP	Accredited Unforced Generating Capability
UMD	University of Minnesota, Duluth
UPS	Uninterruptible Power Supplies
USS	United States Steel
VEE	Validation, Editing and Estimating
VIP	Voluntary Incentives Program
WACC	Weighted Average Cost of Capital
WFGD	Wet Flue Gas Desulphurization
WLSSD	Western Lake Superior Sanitary District
WPPI	Wisconsin Public Power, Inc.
WTG	Wind Turbines
Young 2	Square Butte's Milton R. Young 2 lignite coal generating station