

APPENDIX B – ACRONYMS & TERMS

ACRONYM / TERM	DEFINITION
AC	Alternating Current
ACE	Affordable Clean Energy rule
ACI	Activated Carbon Injection
ADMS	Advanced Distribution Management System
AEO	Annual Energy Outlook
AFC	Accelerated Fleet Change
ALJ	Administrative Law Judge
AMI	Advanced Metering Infrastructure
ASHP	Air-Source Heat Pumps
AWEA	American Wind Energy Association
BA	Balancing Authority
BACT	Best Available Control Technology
BART	Best Available Retrofit Technology
BO	Buildout Scenario
BSER	Best System of Emission Reduction
C&I	Commercial and Industrial (Customers)
CAA	Clean Air Act
CAGR	Compound Annual Growth Rate
CAIDI	Net capacity factor of power plant, typically expressed as percentage, is ratio of its actual output over period of time to its potential output if it were possible for it to operate at full nameplate capacity indefinitely.
CAIR	Clean Air Interstate Rule
CAP	Competitive Acquisition Process
Capacity Factor	Measure of how often an electric generator runs for a specific period of time. Indicates how much electricity a generator actually produces relative to the maximum it could produce at continuous full power operation during the same period.
CapX2020	Coordinated transmission development effort by group of 11 regional utilities (the CapX2020 Utilities) in MN, ND, SD and WI.
C-BED	Community-Based Energy Development
CBECS	Commercial Buildings Energy Consumption Survey
CC	Combined Cycle
CCGT	Combined Cycle Gas Turbine
CCOSS	Class Cost of Service Study
CCRs	Coal Combustion Residuals (often referred to as coal ash)
CCS	Carbon Capture and Sequestration
CEE	Center for Energy and Environment
CEL	Capacity Export Limit
CER	Capital Project Module
CERA	Cambridge Energy Research Associates

ACRONYM / TERM	DEFINITION
CFC	Continued Fleet Change
CH ₄	Methane
CHP	Combined Heat and Power
CIL	Capacity Import Limit
CIP	Conservation Improvement Program
Circuit Breaker	An electromechanical device used to configure the flow of electricity on the distribution grid. A circuit breaker is designed to open or close while electricity is flowing through the circuit. When a circuit breaker is open, no electricity is flowing through the circuit.
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalents
CON	Certificate of Need
CONE	Cost of New Entry
CPD	Coincident Peak Demand
CPNode	Commercial Pricing Mode
CRP	Certified Renewable Percentage
CSAPR	Cross-State Air Pollution Rule
CSG	Community Solar Garden
CT	Combustion Turbine
CWA	Clean Water Act
CWIP	Construction Work in Progress
DA	Day Ahead
DEM	Drive Electric Minnesota
DER	Distributed Energy Resources
DG	Distributed Generation
DIR	Dispatch Intermittent Resource Protocol
DNR	Department of Natural Resources
DOC	Department of Commerce
DOE	U.S. Department of Energy
DOI	Department of the Interior
DPP	Definitive Planning Process
DR	Demand Response
DSD	Minnesota Deemed Savings Database
DSM	Demand Side Management
E3	Energy and Environmental Economics, Inc.
ECC	Economic Carrying Charge
EE	Energy Efficiency
eGRID	Emissions and Generation Resource Integrated Database
EGU	Electric Generating Unit
EIA	Energy Information Administration
ELCC	Effective Load Carrying Capability
ELGs	Effluent Limitation Guidelines
EPA	Environmental Protection Agency

ACRONYM / TERM	DEFINITION
EPA Clean Air Act 111d Rule	Draft regulation to reduce carbon dioxide gas emissions from existing power plants that burn coal and other fossil fuels.
EPRI	Electric Power Research Institute
EQB	Environmental Quality Board
ESA	Endangered Species Act
EVs	Electric Vehicles
Externality Values	Range of environmental costs.
FAN	Field Area Networks
Fault	Abnormal condition on electric system, such as short circuit, broken wire or intermittent connection.
Feeder	Lines connecting distribution substations to taps.
FERC	Federal Energy Regulatory Commission
FERC Order 1000	Rule mandating how public utility transmission providers plan for and allocate costs of new projects on regional and interregional basis.
FIPs	Federal Implementation Plans
FL&U	Fuel Lost and Unaccounted
FLISR	Fault Location, Isolation, and Service Restoration
FWS	U.S. Fish and Wildlife Service
Gas Burn	Energy from New Natural Gas Generation
GAF	Generation Module
GHG	Greenhouse Gas
GW	Gigawatt
GWh	Gigawatt Hour
GWP	Global Warming Potential
HDVs	Heavy-Duty Vehicles
HVAC	High-Voltage Alternating Current
HVDC	High-Voltage Direct Current
IB MACT	Hazardous Air Pollutants from Industrial Boilers
IBEW	International Brotherhood of Electrical Workers
ICAP	Installed Capacity Value
ICE	Internal Combustion Engine
IDP	Integrated Distribution Plan
IDS	Interdepartmental Sales
IGCC	Integrated Gasification Combined Cycle
INPO	Institute of Nuclear Power Operations
IPCC	Intergovernmental Panel on Climate Change
IPPs	Independent Power Producers
IRP	Integrated Resource Plan
ITC	Investment Tax Credit
ISOs	Independent System Operators
JCOSS	Jurisdictional Cost of Service Study
kV	Kilovolt

ACRONYM / TERM	DEFINITION
kVA	Kilovolt Amps: 1,000 Volt-Amps. Volt is measure of force of electricity. Amp (Ampere) is measure of flow of electricity.
kWh	Kilowatt
LAF	Load Module
LBA	Load Balancing Authorities
LCM	Life Cycle Management
LCOE	Levelized Cost of Energy
LCOS	Levelized Cost of Storage
LCR	Local Clearing Requirement
LDV _x	Light-Duty Vehicles
LEAP	Long-range Energy Alternatives Planning
LED	Solid State Lighting
LFC	Limited Fleet Change
LMF	Load Management Forecast
LMPs	Locational Marginal Prices
LOLE	Loss of Load Expectation
LOLP	Loss of Load Probability
LRR	Local Reliability Requirement
LRZ	Local Resource Zone
LSE	Load Serving Entities
LTRA	Long Term Reliability Assessment
MATS	National Emission Standards for Hazardous Air Pollutants for Coal- and Oil-Fired Power Plants. This rule is often referred to as the Mercury and Air Toxics Standard.
MDVs	Medium-Duty Vehicles
MEC	Mankato Energy Center
MEFF	Minnesota Energy Future Framework
MGP	Manufactured Gas Plants
MISO	Midcontinent Independent System Operator, Inc.: Non-profit organization providing reliable coordination and regional planning services including: regional planning, generation interconnection, maintenance coordination, market monitoring and dispute resolution.
MMBTU	Million British Thermal Units
MMERA	Minnesota Mercury Emissions Reduction Act
MPCA	Minnesota Pollution Control Agency
MPUC	Minnesota Public Utilities Commission
M-RETS	Midwest Renewable Energy Tracking System
MTEP	MISO Transmission Expansion Plan
MW	Megawatt
MWh	Megawatt Hour
MVA	Mega Volt Amps: 1,000,000 amps or 1,000 kVA

ACRONYM / TERM	DEFINITION
MVP	Multi Value Project: Regional transmission solutions that meet one or more of three goals: reliably and economically enable regional public policy needs, provide multiple types of regional economic value, and provide a combination of regional reliability and economic value.
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NDPSC	North Dakota Public Service Commission
NEEP	Northeast Energy Efficiency Partnerships
NERC	North American Electric Reliability Corporation
NGEA	Minnesota's Next Generation Energy Act
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPV	Net Present Value
NRC	Nuclear Regulatory Commission
NREL	National Renewable Energy Laboratory
NSPM	Northern States Power Company-Minnesota
NSPW	Northern States Power Company-Wisconsin
NSPS	New Source Performance Standards
NSR	New Source Review Section of the Clean Air Act
O&M	Operating and Maintenance
O ₃	Ozone
OFA	Over-Fire Air
OSPA	Sales to Public Authorities
Pb	Lead
PCBs	Polychlorinated Biphenyls
PCOR	U.S. Department of Energy's Plains Carbon Dioxide Reduction Partnership
PI	Prairie Island
PIRA	Petroleum Industry Research Associates
Plume Blight	Smoke, dust, colored gas plumes, or layered haze emitted from stacks which obscure the sky or horizon and are relatable to a single source or small group of sources.
PM	Particulate Matter
PM _{2.5}	Fine Particulate Matter under 2.5 micrometers
PM ₁₀	Coarse Particulate Matter under 10 micrometers
PPA	Power Purchase Agreement
PPB	Parts Per Billion
PPM	Parts Per Million

ACRONYM / TERM	DEFINITION
PRC	Planning Resource Credits
PRPs	Potentially Responsible Parties
PRM	Planning Reserve Margin
PRMR	Planning Reserve Margin Requirement
Proview	Expansion Planning Module
PSD	Prevention of Significant Deterioration Section of the Clean Air Act
PSHL	Public Street and Highway Lighting
PTC	Production Tax Credit
PV	Photovoltaic
PVRR	Present Value Revenue Requirement
PVSC	Present Value of Societal Costs
RA	Resource Adequacy
RAC	Reliability Assessment Commitment
RAVI	Reasonably Attributable Visibility Impairment
RCRA	Resource Conservation and Recovery Act
RDF	Refuse Derived Fuel or Renewable Development Fund
Recloser	Circuit breaker that includes mechanism to automatically close (reconnect) after set period of time. Reclosers are used to restore service after momentary fault.
RECAP	E3's Renewable Energy Capacity model
RECs	Renewable Energy Credits: A certificate representing all of the environmental attributes of one MWh of generation from a renewable resource.
Reference Case	Baseline scenario identifying necessary resource additions.
REO	Renewable Energy Objective
REPI	Renewable Energy Production Incentive
RES	Renewable Energy Standard
RESOLVE	E3's Renewable Energy Solutions model
Retrofill	Remove contaminated oil and replace with clean oil.
RFP	Request For Proposal
RGGI	United States' Regional Greenhouse Gas Initiative
RHR	Regional Haze Rule
RIIA	Renewable Integration Impact Assessment
RPS	Renewable Portfolio Standard
RSG	Revenue Sufficiency Guarantee (Charges): Direct result of production shortfalls relative to earlier forecasts.
RTF	Resource Treatment Framework
RTO	Regional Transmission Organization
S*R	Solar Rewards (Company's Program)

ACRONYM / TERM	DEFINITION
S*RC	Solar Rewards Community (Company's Community Solar Gardens Program)
SAIDI	System Average Interruption Frequency Index: Measures average number of times customer is interrupted over given period (usually monthly or annually). Lower values are better.
SAIFI	System Average Interruption Frequency Index: Measures average number of times customer is interrupted over given period (usually monthly or annually). Lower values are better.
SCADA	Supervisory Control and Data Acquisition
SCC	Social Cost of Carbon
SCR	Selective Catalytic Reduction
SDPUC	South Dakota Public Utilities Commission
SEPA	Solar Electric Power Association
SES	Minnesota Solar Energy Standard: Minn. Stat. § 216B.1691, subd. 2f, which requires 1.5% of retail sales to be sourced from new solar resources. SES is incremental to the Renewable Energy Standard (RES).
SFH	Single Family Housing
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxide
SolarTAC	Solar Technology Acceleration Center
SPP	Southwest Power Pool
SQ	Status Quo
S-RECs	Solar Renewable Energy Credits: Created from a solar resource installed after August 1, 2013 and eligible to be used for compliance with the MN Solar Energy Standard.
Switch	Electromechanical device used to configure the flow of electricity on distribution grid. A switch is designed to be opened or closed when electricity is not flowing through circuit. When switch is open, no electricity is flowing through circuit.
Tap	Final leg of distribution system before connecting to customer premises.
THI	Temperature Humidity Index
Transcos	Transmission-only entities designed to respond to the FERC Order 1000.
Transformer	Electromechanical device that converts alternating current to higher or lower voltage.
Transmission Inadequacies	Identified deficiencies in the transmission system that need to be upgraded to keep the transmission system within its defined limits.
TRC	Total Resource Cost

ACRONYM / TERM	DEFINITION
TSD	Technical Support Document
UCAP	Production Capability Value
USACE	U.S. Army Corps of Engineers
V2G	Vehicle-To-Grid
VAr	Voltage and Reactive Power
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
W2B	Wind2Battery Project
WDNR	Wisconsin Department of Natural Resources
WOTUS	Waters of the United States
WTP	Worker Transition Plan
ZRC	Zonal Resource Credit