EPA proposed rule on carbon emissions from existing power plants

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Rick Lancaster
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Great River Energy

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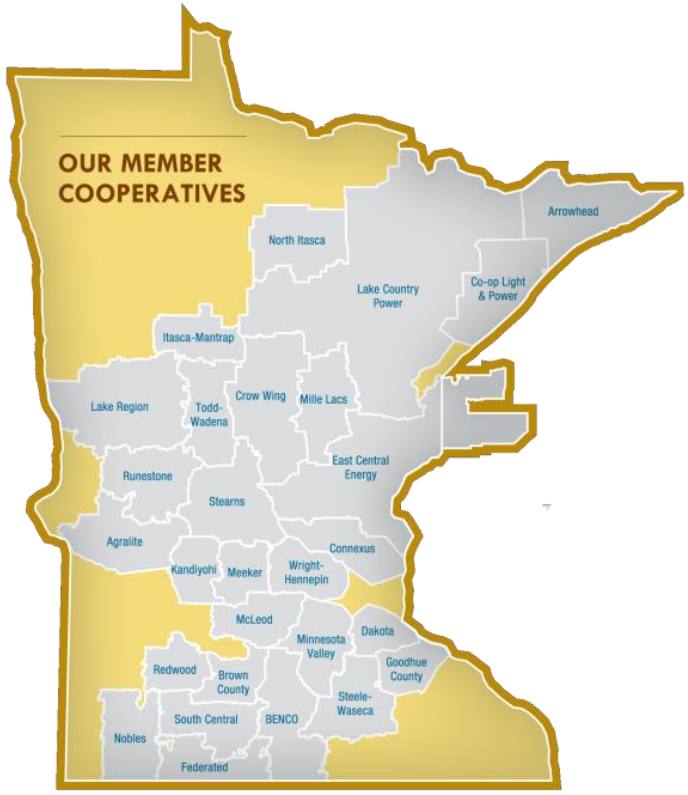
GRE and our membership

- 28 member cooperatives – 1.7 million consumers
- 4th largest G&T in the nation
  - $3.7 billion total assets
  - $2.8 billion total debt
  - $980.4 million revenue
- 880 employees (MN and ND)
- 3,619 MW generation
- 4,660 miles transmission



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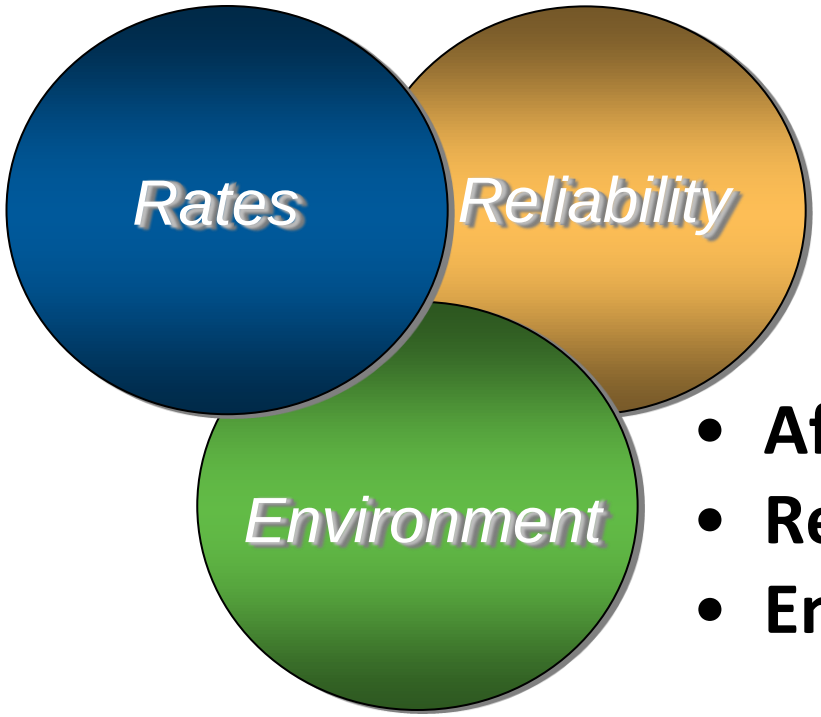
Our triple bottom line…



- **Affordable rates**
- **Reliable electric service**
- **Environmental stewardship**

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Great River Energy's members rely on coal plants

- Coal Creek Station 1142 MW
- Stanton Station 187 MW
- Spiritwood Station 99 MW
- 67% of GRE's energy comes from coal
- GRE's North Dakota coal-fired plants are the economic foundation for our members' affordable rates

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Great River Energy's Minnesota generation

- 1404 MW of gas-fired peaking plants provide reliability, all in Minnesota
- 31 MW waste-to-energy plant provides renewable energy (Elk River, MN)
- 468 MW of wind purchases, including 317 in Minnesota
- 322 kW of solar in Maple Grove, plus 360 kW planned

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Great River Energy prepared for carbon regulation

- Accelerate depreciation of Coal Creek and Stanton Stations
- Reduced CO_2 emissions 20% below 2005 levels
- Reduce reliance on coal
- Meet growth with conservation, energy efficiency renewables, natural gas, and the market
- Use municipal waste for power generation; don't landfill it
- Work with our members to develop solar and other nontraditional generation

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Impact of the proposed rule on Great River Energy

- North Dakota carbon intensity reduction requirement is 11%
  - DryFining™ coal refining system reduces CO_2 emissions by 4%
  - Spiritwood combined heat and power plant is half as carbon intensive as conventional coal
- Minnesota carbon intensity requirement is 41%
  - GRE's Minnesota generation is low or no carbon
  - GRE is meeting Minnesota's renewable energy standard and conservation goals

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Reliability and affordability remain core concerns

- The nation and region rely on the market for reliable energy and low cost resources
- What affects the market affects Great River Energy and our members; no utility is an island
- Need to carefully analyze the rule's impact on reliability and cost

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Great River Energy advocacy regarding the proposed rule

- Multiple efforts to shape the final rule, including
  - Midwestern Power Sector Collaborative
  - Minnesota Rural Electric Association
  - National Rural Electric Cooperative Association
- Work with federal and state policymakers

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Midwestern Power Sector Collaborative overview

- Began early 2012 following exploratory meeting in 2011
- **Minnesota leadership**: early state-level dialogue on EPA rules in 2011 involving MN PCA and key stakeholders inspired this regional effort
- **Project rationale:**
  - The Midwest/Northern Plains is potentially significantly affected by EPA regulation of carbon emissions from existing power plants under Section 111(d) of the Clean Air Act
  - Consensus among coal-based power companies, state regulators and environmental advocates on flexible, least-cost ways to achieve emissions reductions can have significant influence on how EPA crafts the final federal rule

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Midwestern Collaborative overview (cont.)

- ***Two years of patient, respectful dialogue*** led to recommendations to EPA in November 2013:
  - Agreement on guiding principles and flexible, cost-effective framework for achieving emissions reductions from existing power plants
  - First detailed consensus among coal-based power companies, regulators and advocates in this arena
- **Engagement does not mean endorsement:**
  - States and stakeholders have mutual interest in shaping a potential federal rule, even though some participants oppose EPA exercising Clean Air Act authority to regulate power plant CO_2 emissions

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Midwestern Collaborative participants and observers

State Regulators

- **Delanie Breuer**, executive assistant to Commissioner Nowack, Wisconsin Public Service Commission (observer)
- **Vince Hellwig,** chief, Air Quality Division, Michigan Department of Environmental Quality
- **Robert Kenney**, chairman, Missouri Public Service Commission (observer)
- **John Lyons,** assistant secretary, Climate Policy, Kentucky Energy & Environment Cabinet (observer)
- **Bart Sponseller**, director, Air Bureau, Wisconsin Department of Natural Resources (observer)
- **Doug Scott,** chairman, Illinois Commerce Commission
- **David Thornton,** associate commissioner**,** Minnesota Pollution Control Agency
- **Nicholas Evans**, public utilities engineer, Michigan Public Service Commission

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Midwestern Collaborative participants (cont.)

Regulated Utilities

- **Jack Ihle**, director of environmental policy/**Nicholas Martin**, manager, environmental policy, Xcel Energy
- **Kris McKinney**, manager, environmental policy, We Energies (observer)
- **Greg Ryan**, senior technology specialist, DTE Energy, Inc.

Generation and Transmission Cooperatives

- **Bob Ambrose**, director, governmental affairs/**Mary Jo Roth**, manager, environmental services, Great River Energy
- **Steve Tomac**, senior legislative representative, Basin Electric Power Cooperative (observer)
- **Brian Warner**, VP, environmental strategy, Wolverine Power Cooperative

Merchant Generator

- **Shawn Konary,** environmental director, NRG (parent company of Midwest Generation)/**Maria Race**, director of asset management, NRG

Municipal Joint Action Agency

- **Andy Kellen**, vice president, power supply resources, WPPI Energy

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Midwestern Collaborative participants (cont.)

Environmental Organizations

- **Mike Bull**, director of policy and communications, Center for Energy and Environment
- **Megan Ceronsky**, attorney, Environmental Defense Fund
- **Trent Dougherty**, managing director, legal affairs, Ohio Environmental Council
- **Steve Frenkel**, midwest director, Union of Concerned Scientists
- **Charles Griffith**, climate and energy program director, Ecology Center
- **Keith Reopelle**, senior policy director, Clean Wisconsin
- **Conrad Schneider**, advocacy director, Clean Air Task Force

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Overview of MPSC recommendations

- **Unprecedented agreement among coal-reliant power companies, states and environmental organizations** on key principles to guide federal regulation under Sec. 111(d) of Clean Air Act. Issues the principles address include:
  - Achieving meaningful emissions reductions, while ensuring system reliability and affordability;
  - Providing regulatory certainty and consistent investment signals;
  - Acknowledging states' opportunity and legal authority to tailor flexible, cost-effective alternatives to meet federal requirements;
  - Recognizing past and future emissions reductions achieved through industry investment and early action and through state renewable energy, energy efficiency and other policies; and
  - Enabling and encouraging states, at their option, to develop multi-state compliance solutions that take advantage of regional, market and other economic efficiencies to achieve environmental outcomes.

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Overview of recommendations (cont.)

- Agreement on flexible compliance options that states and industry can adapt to their economic needs, resource mix and policies:
  - Compliance with existing state renewables, efficiency & other policies;
  - Power plant retirements;
  - Addition of new renewables and efficiency standards, programs and investments;
  - Fuel-switching or co-firing with a lower-emitting fuel;
  - Demand side management, load shifting and demand response;
  - Carbon capture, utilization and storage through CO_2-enhanced oil recovery or other geologic storage;
  - Utilization of waste heat and generation by combined heat and power units;
  - Power plant boiler heat rate improvements;
  - Generator turbine efficiency increases; and
  - Improvements in transmission and distribution to reduce line loss.

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Thank you

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