

EPA's Proposed Clean Power Rule

111(d) Greenhouse Gas Emissions
Standards of Performance for Existing
Fossil Fuel Electric Generating Units



Background

- June 2013: President Obama's Climate Action Plan
- Regulations for new plants – a.k.a. 111(b)
- Regulations for existing plants – a.k.a. 111(d)



— PRESIDENT OBAMA'S PLAN TO —
ADDRESS CLIMATE CHANGE

- ✓ Reduce carbon pollution from power plants and build cars that burn less fuel.
- ✓ Cut energy waste from our homes and businesses.
- ✓ Help states and cities prepare for the impacts of climate change.
- ✓ Lead global efforts to address climate change.

Wh.gov/Climate-Change #ActOnClimate



New Power Plants: 111(b)

- Clean Air Act Section 111(b)
- New Source Performance Standard (NSPS)
- Plants built after proposal (Jan. 8, 2014)



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Existing Power Plants: 111(d)

- Applies to existing fossil fuel power plants
- Establishes emission guidelines
- States responsible for plans



Clean Power Plant Proposed Rule Overview

- Overall goal
 - Reduce utility-sector CO₂ emissions 30% by 2030 (2005 baseline)
- Identifies a “Best System of Emission Reductions”
 - Minnesota recognized for our system
- Allows great flexibility for compliance

Carbon Dioxide Emissions in Minnesota

- ▣ Next Generation Energy Act
- ▣ Renewable Energy Standard
- ▣ Electric Efficiency Standard
- ▣ Emission reduction statutes



Expected Costs and Benefits

- EPA's national estimates
 - Public health and climate benefits: \$55 billion to \$93 billion per year in 2030
 - Costs: \$7.3 billion to \$8.8 billion
- Minnesota-specific costs and benefits
 - not yet determined
- Co-benefits
 - reductions in ozone and fine particles



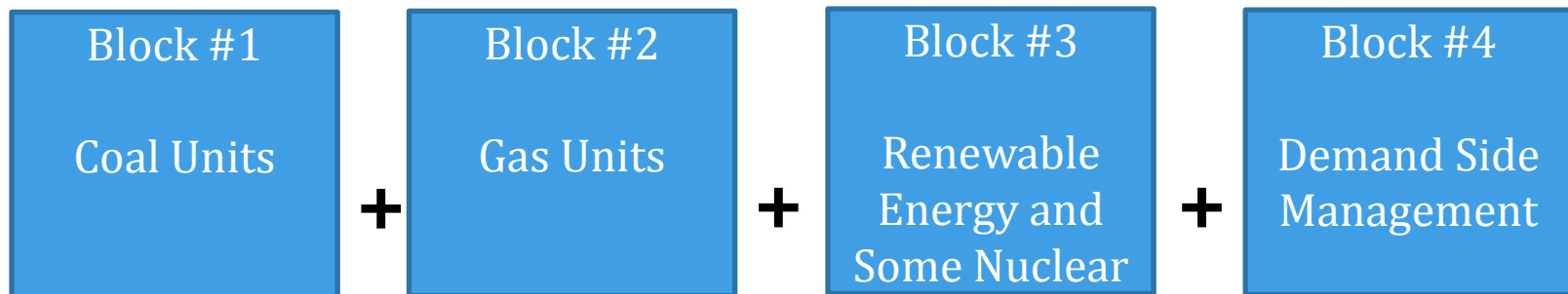
State by State Emission Reduction Targets

- Baseline generation & emission year = 2012
- State emission rate targets
 - Pounds of CO₂/megawatt hour (lbs CO₂/MWh)
 - Interim target for 2020-2029
 - Final target for 2030 and beyond



State by State Emission Reduction Targets

- EPA calculated pathway to achieve targets
 - Not binding on states
 - States establish pathway in a state plan
 - State plan must achieve emission rate targets
- State goals set by using 4 building blocks



Targets Cont.

▣ Coal Units

- ▣ 2012 Heat Rates
- ▣ 2012 Utilizations
- ▣ Target assumes 6% heat-rate efficiency upgrades across the board

▣ Gas Units

- ▣ Target assumes gas units running at 70% capacity
- ▣ 2012 capacity used by EPA = 24%



Targets Cont.

- Renewable Energy
 - Use regional data for current renewable generation and renewable energy standards
 - EPA assigned Minnesota 15% renewable energy generation for 2020-2030
- Nuclear
 - Opaque national assumption
- Demand Side Management
 - Assumes 1.5% per year improvement in energy efficiency (no exempt sectors)

Compliance – State Implementation Plans

- Flexibility – States have wide latitude in determining how to meet the goals
 - Unit specific limits
 - Utility portfolio approach
 - Emission rate or mass targets
 - Multi-state compliance options encouraged
- Plans due July 1, 2016 (1 or 2 year extensions)
- Permanent, verifiable, enforceable



Major Issues/Questions (so far)

- Minnesota's target looks more aggressive than 30% and more aggressive than neighboring states
- Treatment of "early action"
- SHERCO 3 was off-line in 2012
- Regional renewable energy credit rewards
Minnesota
- Hydro power?



Next Steps

- ▣ Continue to deconstruct target calculations
- ▣ MPCA and Commerce are developing a list of questions
- ▣ Conference call with EPA to better understand our specific situation
- ▣ Regroup our Power Sector stakeholder group



Conclusions

- MPCA is pleased with EPA's approach
- Provides flexibility
- Minnesota's approaches recognized
- Compliments existing policy
- Need to understand EPA's targets

