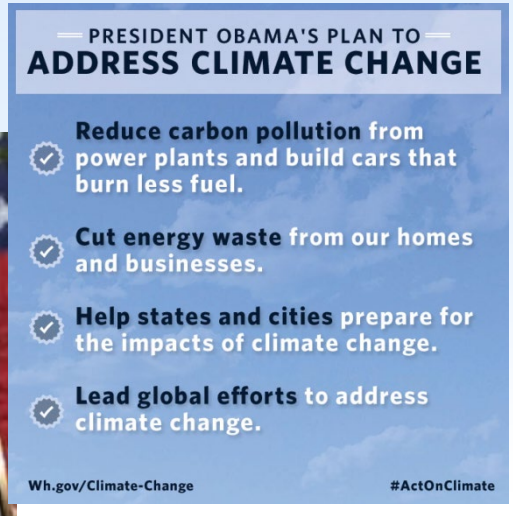
EPA's Proposed Clean Power Rule

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

Minnesota Pollution Control Agency

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)



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

Minnesota Pollution Control Agency

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Clean Power Plant Proposed Rule Overview

- Overall goal
  - Reduce utility-sector CO_2 emissions 30% by 2030 (2005 baseline)
- Identifies a "Best System of Emission Reductions"
  - Minnesota recognized for our system
- Allows great flexibility for compliance

Expected Costs and Benefits

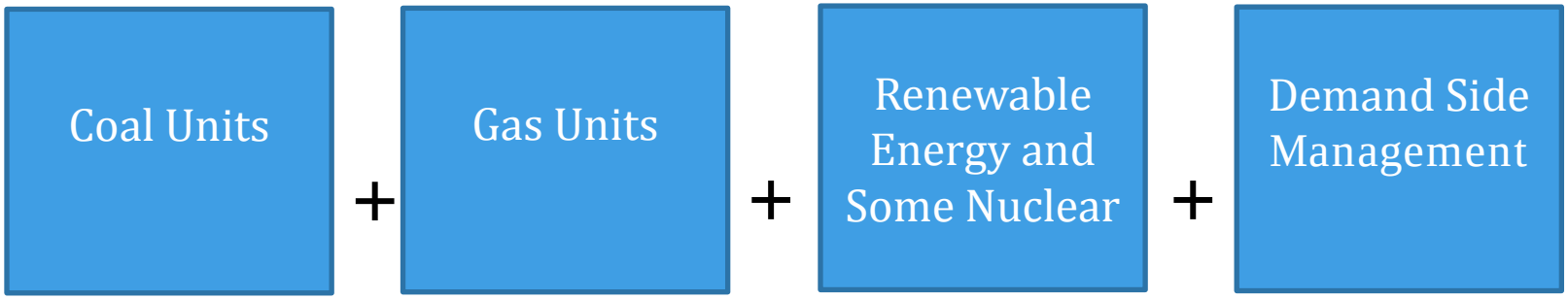
- EPA's national estimates
  - Public health and climate benefits: $55 billion to $93 billion per year in 2030
  - Costs: $7.3 billion to $8.8 billion
- Minnesota-specific costs and benefits
  - not yet determined
- Co-benefits
  - reductions in ozone and fine particles

State by State Emission Reduction Targets

- Baseline generation & emission year = 2012
- State emission rate targets
  - Pounds of CO_2/megawatt hour (lbs CO_2/MWh)
  - Interim target for 2020-2029
  - Final target for 2030 and beyond
- Proposed Minnesota rates
  - 2020-2029 911 lbs CO_2/MWh
  - 2030 873 lbs CO_2/MWh

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