

The logo for Consumers Energy features the company name in a bold, blue, italicized sans-serif font. The text is positioned to the left of a thick, green, curved swoosh that starts thin on the left and tapers to a point on the right, resembling a stylized 'C' or a protective shield.

Consumers Energy

Count on Us

Michigan Municipal Electric Association

***The Train Wreck-
Environmental Regulations on Coal Fired Power Plants***

September 15, 2011

Nancy Popa

Regulatory Environment

EPA Issues New
Regulation to regulate
Greenhouse Gas
Emissions

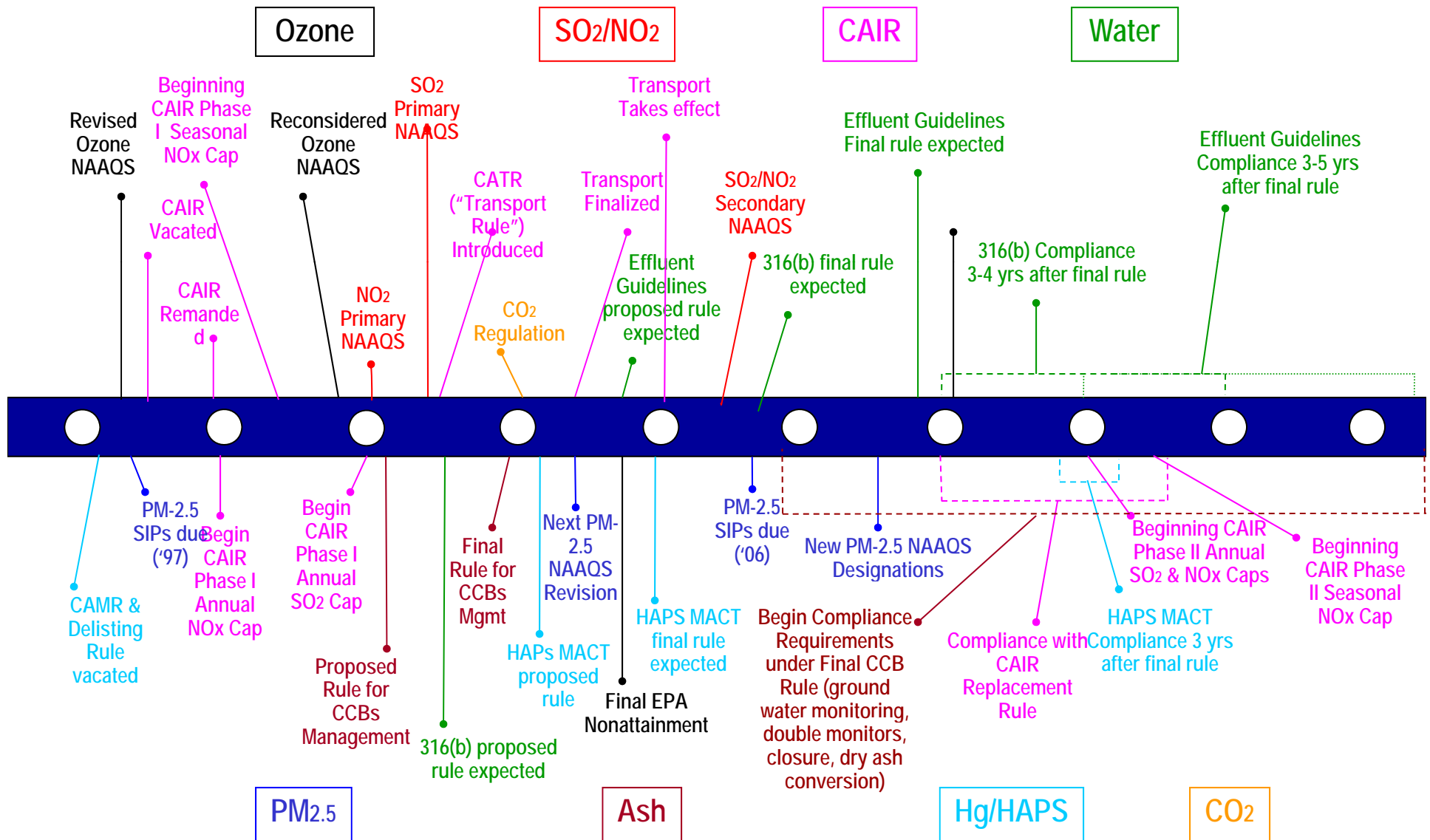
EPA Settles 20th
NSR Enforcement Suit

EPA To Regulate
Toxic Coal Ash

EPA Proposes Regulation to Reduce
Emissions from Coal Plants

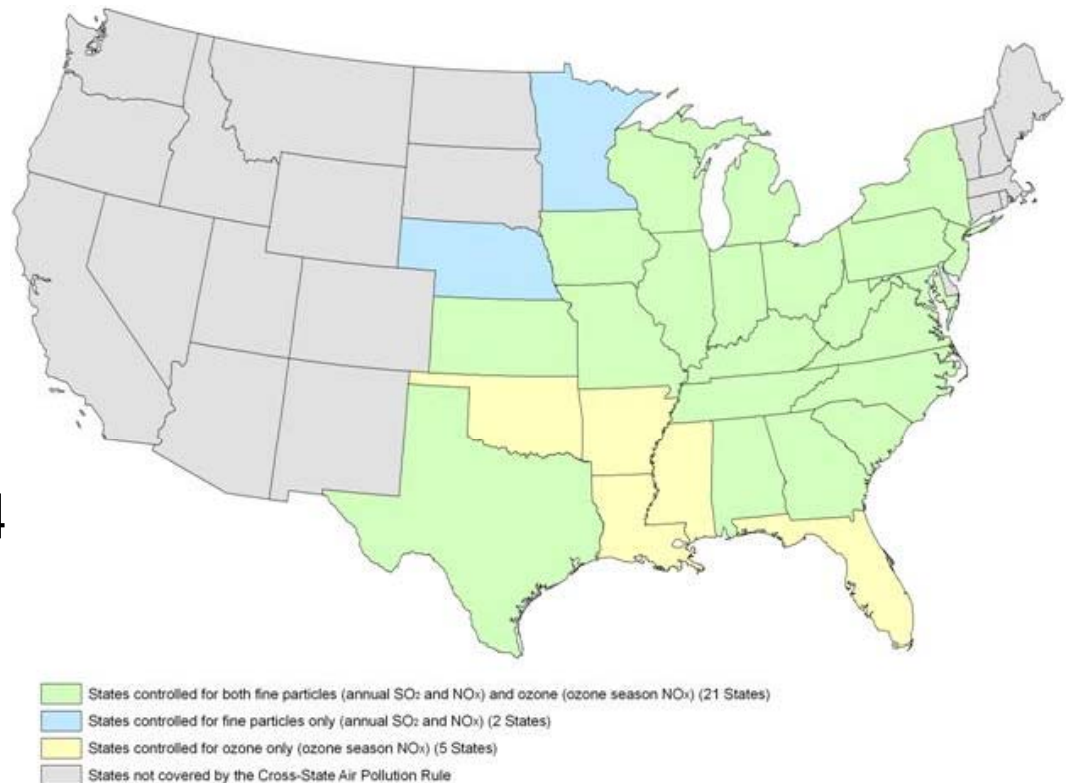


Environmental Regulatory Timeline for Coal Units



Clean Air Interstate Rule.... Clean Air Transport Rule.... Cross State Air Pollution Rule

- Replacement rule for the remanded Clean Air Interstate Rule (CAIR)
- Final July 7 2011
 - Takes effect January 2012
 - Further reductions in 2014
 - Regional Cap w/ Limited Trading



EGU MACT-Air Toxics Rule

- Proposed regulation requiring control of hazardous air pollutants at every coal and oil facility in the U.S.
 - Acid gases
 - Mercury
 - Metals
 - Organic Compounds
- Strict compliance deadline
 - 3 years following promulgation
 - Possibly a 1 year extension if under construction
- Final rule expected November 2011
 - Compliance November 2014 + 1 year

Compliance Issues

- CSAPR
 - No time to install controls
 - Complex strategies needed to blend fuels, anticipate dispatch
 - Allowance market expected to be illiquid
 - Retirements are an option
- EGU MACT
 - Controlling every unit by 2015 impossible
 - Simpler technologies unproven
 - Retirements are an option

Complexity and Uncertainty

- Technologies
- Construction Management
- Economic Decisions
- Financial
- Litigation



CWA §316b

- Proposed April 20, 2011
- No blanket requirement for cooling towers
- Final in July 2012
- 5 years of Studies
- Technology installations 2018 or 2019



CWA §316b-Applicability

<2MGD

- Impingement Std
- Best Professional Judgment

>2MGD
<125MGD

- Impingement Std
- Entrainment Std
- 9 Factor C/B

>125MGD

- Impingement Std
- Entrainment Std
- 9 Factor C/B
- 4 Peer Reviewed Studies

Ash Management/Effluent Guidelines

- Federal Ash rules proposed June 2010
- Effluent Guidelines to be proposed July 2012
- Closure of ash impoundments, lining of bottom ash ponds or dry bottom ash handling with physical chemical treatment



What Was Proposed?

Subtitle C

- Closure of Impoundments or lined with composite liner and leachate collection system
 - Landfills require impervious covers, monitoring
-
- Regulated by EPA/State
 - All ash hazardous
 - Co-disposed liquid waste hazardous

Subtitle D

- Closure of impoundments or lined with composite liner and leachate collection system
 - Landfills require impervious covers, monitoring
-
- Self-implementing rules
 - Enforcement by citizen suit

Impacts of Environmental Regulations

- Retirement Decision Difficult
 - Increase in dispatch costs
 - Low natural gas prices
 - Allowance price uncertain
- US Retirements Forecasted
 - 6 MW-65 MW
 - US Coal Capacity ~310 MW
- Costs
 - Billions in capital
 - High O&M impacting dispatch costs
 - Customer rate impacts significant



What does it all mean?

- Tremendous uncertainty
- The beginning of significant changes in the industry
 - Retirements
 - Fuel Changes
- Customer cost increases
- Compliance risks



QUESTIONS?