

Regional Haze: The Better-than-BART Rule

Webinar

Pilot Project for the Electric Power Sector
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BART

- ❑ Best Available Retrofit Technology (BART) applies to “BART-eligible” sources of certain types, sizes, and ages.
- ❑ Depending on the cost of available control technology options, visibility benefits, and remaining age, “BART-eligible” sources may drop out, or become “BART-subject”.
- ❑ If BART-subject, the level of control is determined by balancing the same factors, plus energy and non-air environmental effects.
- ❑ EPA has issued guidance containing presumptions about level of control, but states have discretion within a reasonable range if they have followed a reasoned decision process.
- ❑ Compliance must be within 5 years of EPA approval of the SIP.

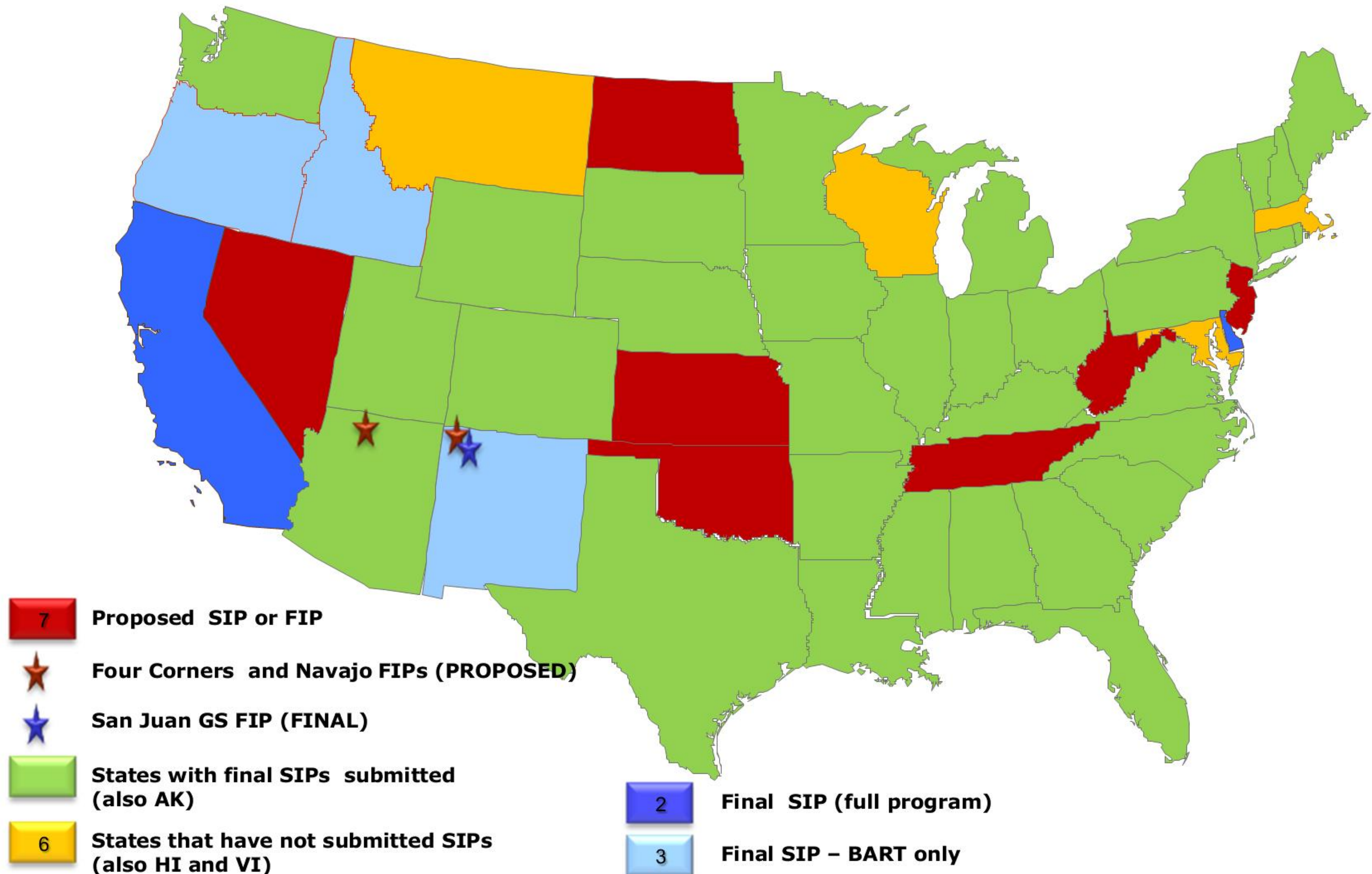


EPA Actions on Regional Haze SIPs

- ❑ Only CA and DE have fully-approved RH SIPs
- ❑ Multiple environmental groups (NPCA) filed a complaint for EPA's:
 - Failure to take action on submitted SIPs for states that did not receive a 'finding of failure to submit' notice in January 2009, and
 - Failure to promulgate FIPs for states that did receive a 'findings' notice.
 - Action schedules for 10 states already governed by separate Consent Decrees
 - Combined with the earlier settlements, a settlement with NPCA would establish a schedule that would cover all 50 states plus DC and the Virgin Islands
- ❑ FIPs:
 - Final BART FIP for the San Juan Generating Station in New Mexico (4 units)
 - Proposed BART FIP for NO_x for the Four Corners Power Plant NM (5 units)
 - Proposed BART FIP for NO_x for 3 EGUs (5 total units) for North Dakota
 - Proposed BART FIP for SO₂ for 3 EGUs (6 total units) for Oklahoma

Regional Haze SIP/FIP Status

(September 2011)





MN's BART-eligible EGUs

Table 9.1: Minnesota Facilities with BART-eligible Units

BART Source Category Name	SIC Code	Facility ID	Facility Name	BART Emission Units (Emission Unit No.)
Fossil Fuel-fired Steam Electric Plants > 250 MMBtu/hour -- Electric Generating Units (EGU)	4931	2709900001	Austin Utilities NE Power Station	*Boiler No. 1 (EU001)
	4931	2713700027	Hibbing Public Utilities	North boiler (EU003)
	4911	2703100001	MN Power, Taconite Harbor	*Boiler no. 3 (EU003)
	4911	2706100004	MN Power, Boswell Energy Center	*Boiler no. 3 (EU003)
	4931	2701500010	New Ulm Public Utilities	No. 4 boiler (EU003)
	4911	2711100002	Otter Tail Power Hoot Lake	*Unit 3 boiler (EU003)
	4911	2710900011	Rochester Public Utilities, Silver Lake	Unit #3 boiler, *Unit #4 boiler (EU003, EU004)
	4911	2713700028	Virginia Public Utilities	Boiler no. 9 (EU003)
	4911	2714100004	Xcel Energy, Sherco	*Boilers 1 and 2 (EU001,EU002)
	4911	2716300005	Xcel Energy, Allen S King	*Boiler 1 (EU001)
	4911	2705300015	Xcel Energy, Riverside	*Boiler 8 (EU003)



Better-Than-BART: The Basics

- EPA's 1999 Regional Haze Rule established the general principle that an alternative program (for example, a cap-and-trade program covering additional sources) may substitute for source-specific BART, if it is "better than BART" in producing progress towards the goal of achieving natural visibility conditions.
- Two-pronged test:
 - The alternative program can't make any Class I area have worse visibility than if nothing new were done to meet the BART requirement.
 - Compared to BART, there must be an improvement on average across all affected Class I areas. For example, some Class I areas could be better under BART, as long as more areas are better under the alternative program.
- Some details of how to do the two-pronged test were refined in 2005 and 2006 following successful litigation.



CAIR Better-Than-BART Rule

- ❑ In 2006, EPA completed a rule that determined that CAIR met both prongs,
 - Only for the states subject to CAIR
 - Only for EGUs
 - Only for SO₂ and NO_x, and only if a pollutant is subject to the program in that state
- ❑ The rule survived legal challenge by environmental groups opposed to the use of averaging in the second prong of the “better than BART” test.
- ❑ Most states in CAIR took the opportunity to avoid adopting BART rules for individual EGUs.
- ❑ The Court of Appeals remanded CAIR and ordered EPA to replace it. EPA cannot approve Regional Haze SIPs that relied on CAIR.

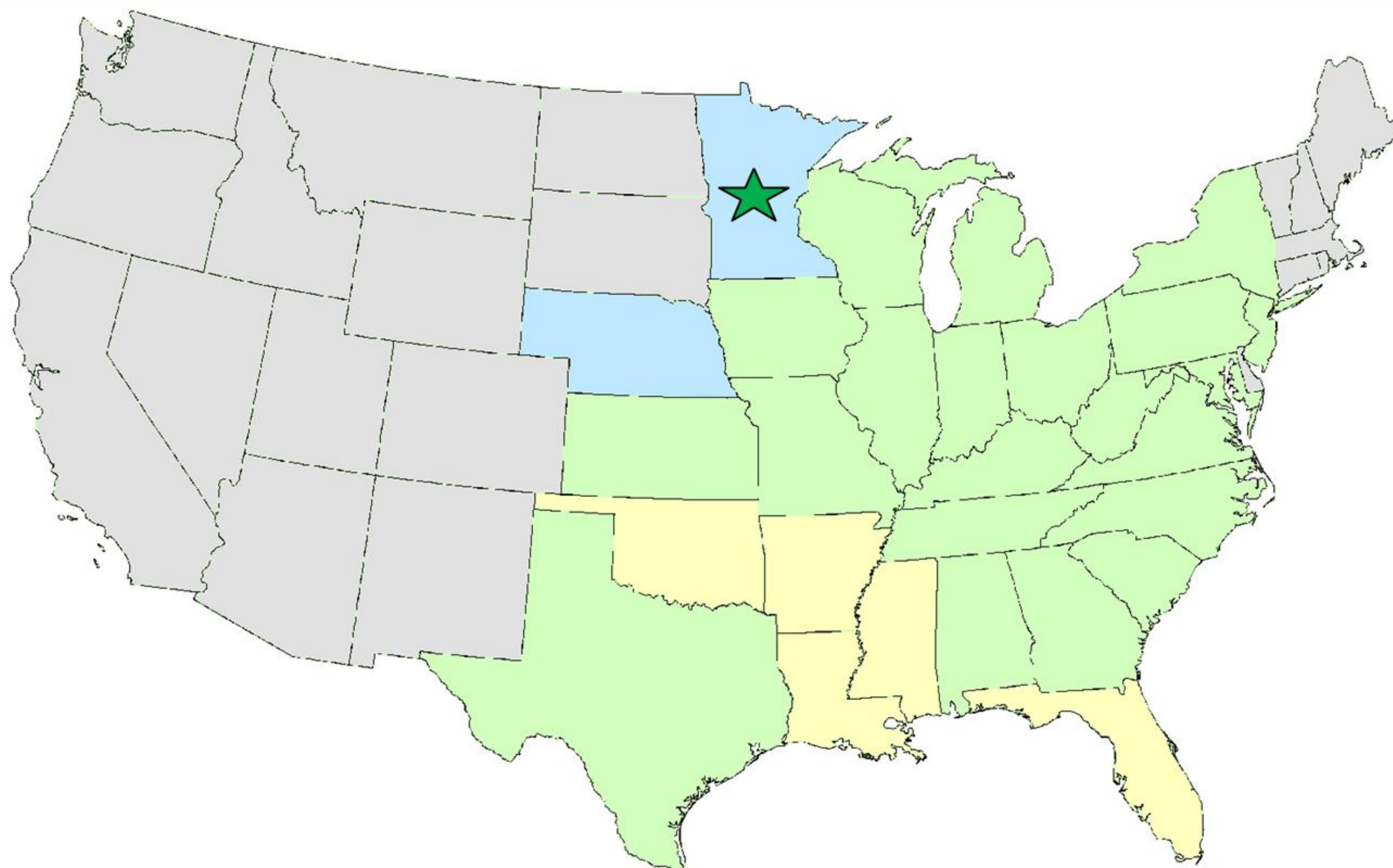
Cross-State Air Pollution Rule

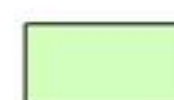
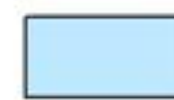




epa.gov/airtransport

- ❑ CSAPR defines upwind state obligations to reduce pollution significantly contributing to downwind nonattainment and maintenance areas for 1997 PM_{2.5}/Ozone NAAQS & 2006 PM_{2.5} NAAQS.
- ❑ CSAPR put FIPs in place for all affected states, requiring EGUs to participate in the EPA-run trading programs. A state can replace the FIP with its own SIP, but approval of the SIP is guaranteed only if it is essentially identical except for the allocation of allowances.
- ❑ CAIR will continue to be implemented through 2011.
- ❑ CSAPR Phase I begins 2012 and Phase II begins 2014.
- ❑ Key Dates
 - October 31, 2011: EPA intends to finalize supplemental proposal adding Iowa, Kansas, Michigan, Missouri, Oklahoma, and Wisconsin to the ozone season NO_x program. All except Oklahoma are already covered by annual NO_x program.
 - October 17, 2011: Deadline to notify EPA that state wants to replace 2013 FIP allocations with state allocations
 - April 2, 2012: Deadline for 2013 state allocation SIPs
 - December 3, 2012: Deadline for 2014+ state allocation SIPs

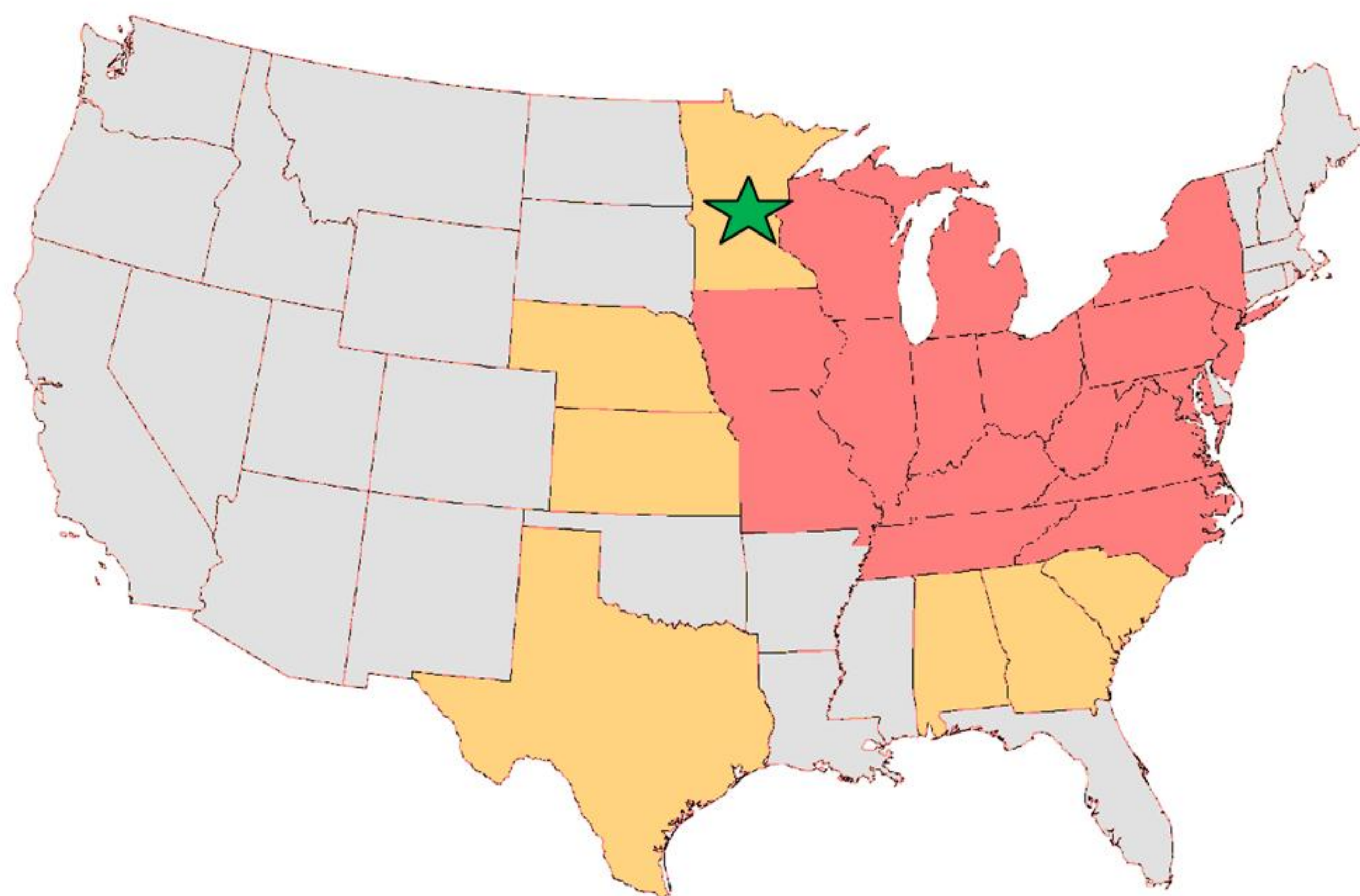
States Covered by CSAPR



-  States controlled for both fine particles (annual SO₂ and NO_x) and ozone (ozone season NO_x) (21 States)
-  States controlled for fine particles only (annual SO₂ and NO_x) (2 States)
-  States controlled for ozone only (ozone season NO_x) (5 States)
-  States not covered by the Cross-State Air Pollution Rule

*This map includes states covered in the supplemental notice of proposed rulemaking.

Separate SO₂ Control Groups



- Group 1 States (16 States)
- Group 2 States (7 States)
- States not covered by the annual Cross-State Air Pollution Rule

- Annual SO₂ reductions: Phase I (2012) and Phase II (2014)
- Two SO₂ Control Groups
 - Group 1 – 2012 cap lower in 2014 based on \$2,300/ton reductions
 - Group 2 – 2012 cap only based on \$500/ton reductions
- NO_x caps (annual and ozone season) based on \$500/ton reductions



CSAPR Better-Than-BART Rule

- ❑ EPA is developing a rule that would determine that CSAPR is better-than-BART based on the two-prong test and appropriate air quality modeling.
- ❑ Modeling results are in, and we are moving forward. We are aiming to be done in Spring 2012, which is very rapid for EPA rules.
- ❑ Once this rule is done, any CSAPR state could satisfy the BART requirement by making a brief SIP revision to declare its intention.
 - Only for EGUs
 - Only for SO₂ and NO_x, and only if a pollutant is subject to the program in that state.
 - MN is in CSAPR for annual SO₂ and annual NO_x.
- ❑ As noted on Slide 3, we've now been sued on every state's Regional Haze SIP. We already have deadlines for some (mostly in the west) and expect deadlines to be established soon for the rest.
 - In the case of MN, we must either approve the SIP (which was submitted late) or do a FIP for all or part of the requirements. The deadline will be set by negotiation or by court order.
- ❑ If/when EPA is forced to do a FIP for BART, EPA can use the same approach.
 - Our plan is to do this for the states that had relied on CAIR before it was remanded.
 - New CSAPR states?

CSAPR Better-than-BART

Modeling



- ❑ Same modeling platform as for CSAPR: CAMx, etc.
- ❑ Same 2014 base case scenario as CSAPR, to represent no new action to meet BART.
- ❑ Two new 2014 scenarios to use in the two-prong test
 - 48-state source-specific EGU BART.
 - ❑ Assuming all BART-eligible EGU are also BART-subject, and stringent levels of control. This avoids weakness in case of a legal challenge.
 - CSAPR in the CSAPR states and source-specific BART elsewhere.