



Rules to Limit Interstate Transport of Utility Emissions: Clean Air Interstate Rule (CAIR) Cross State Air Pollution Rule (CSAPR)

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TVA Navigating Environmental Regulations in the Utility Sector...

You can be on the correct path, planning to the correct targets, and still be concerned about being overtaken!

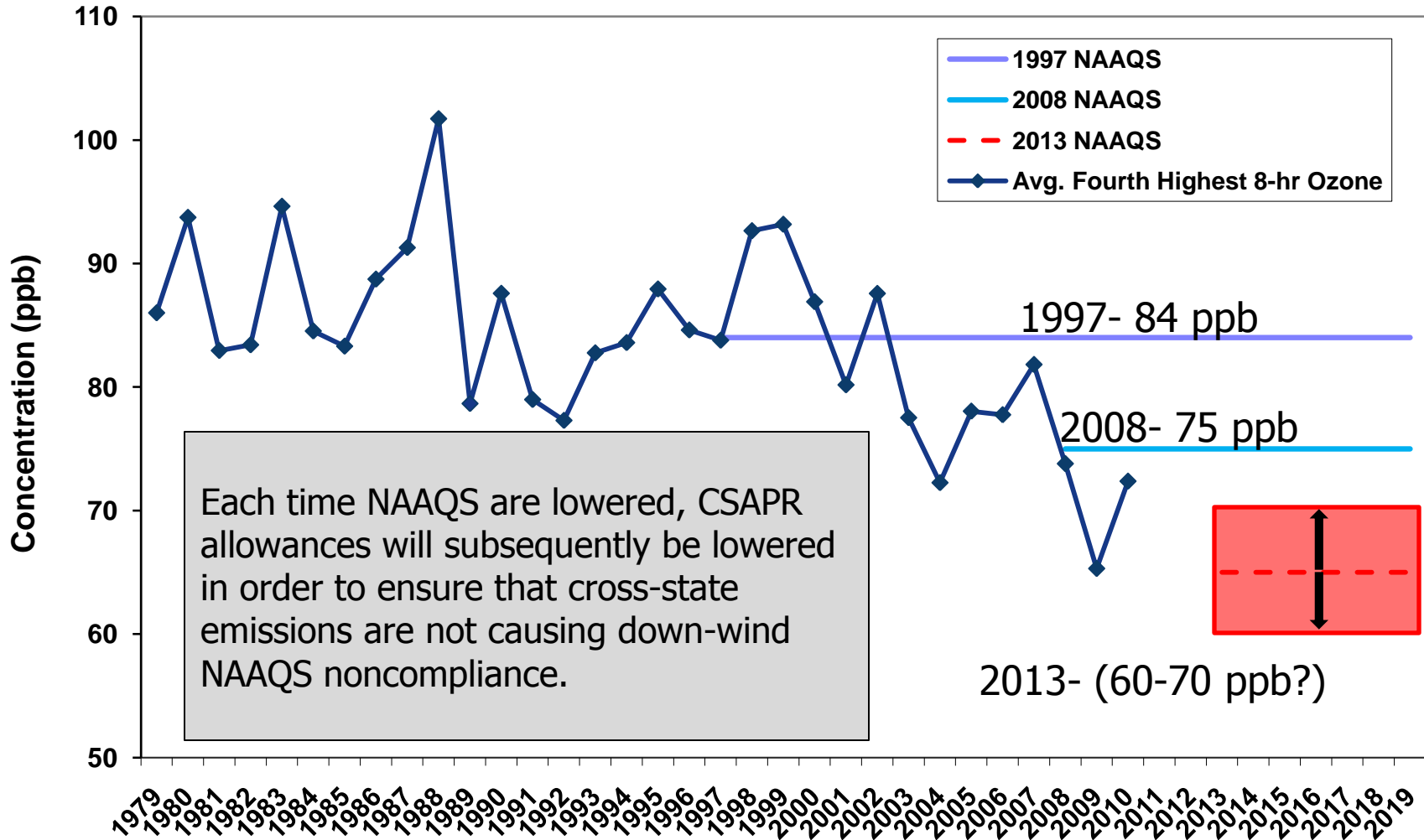


The Need For Interstate Transport Rule

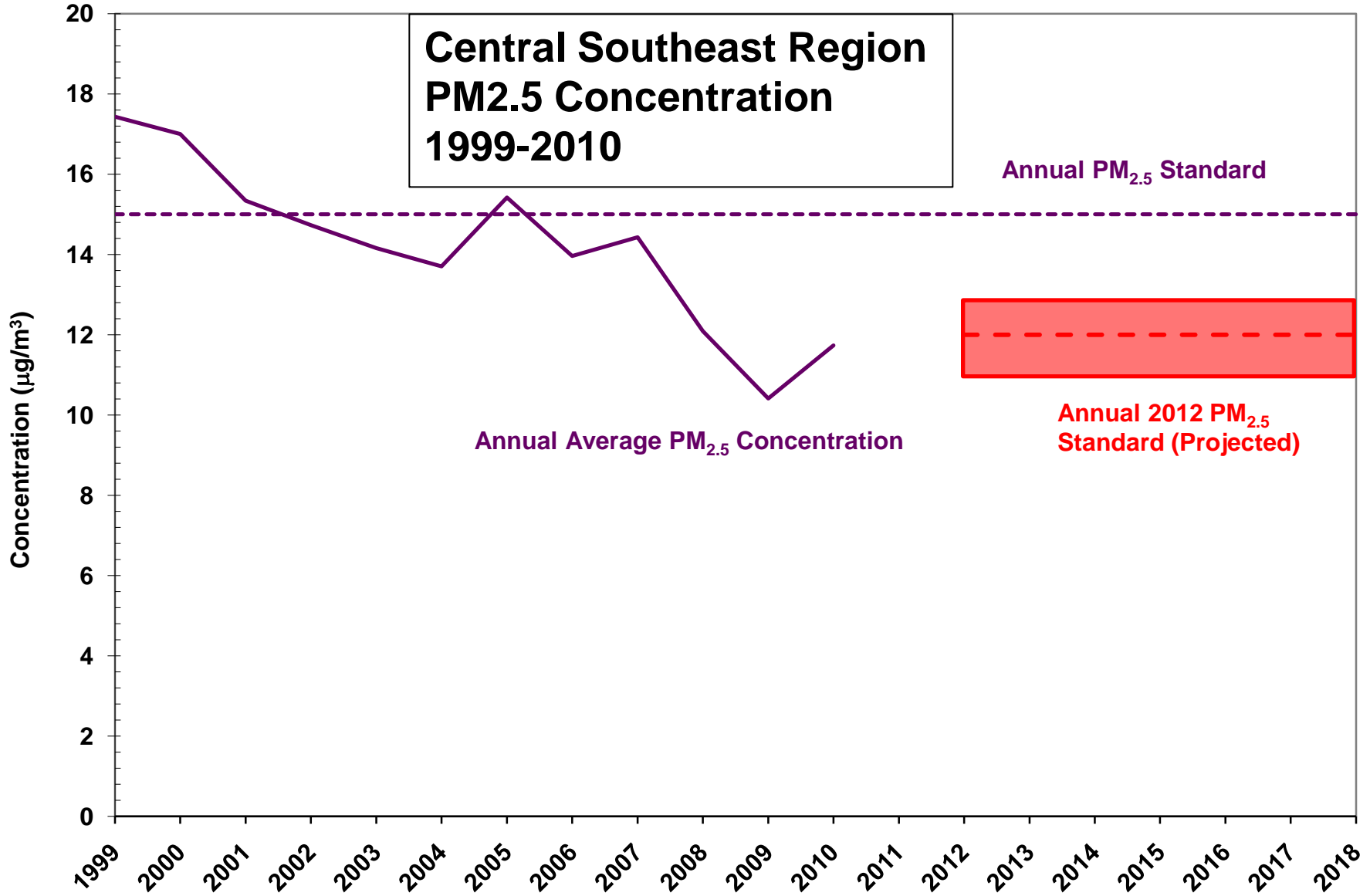
- Interstate Transport Rules are driven by NAAQS compliance. EPA includes states that significantly contribute to nonattainment and/or interference with maintenance of the 1997 ozone National Ambient Air Quality Standard (NAAQS) in other states.
- Historically, we have had:
 - NOx SIP Call
 - CAIR
 - And now, CSAPR

CSAPR Is Driven By NAAQS Compliance

Central Southeast Region Ozone Concentrations 1979 to 2010

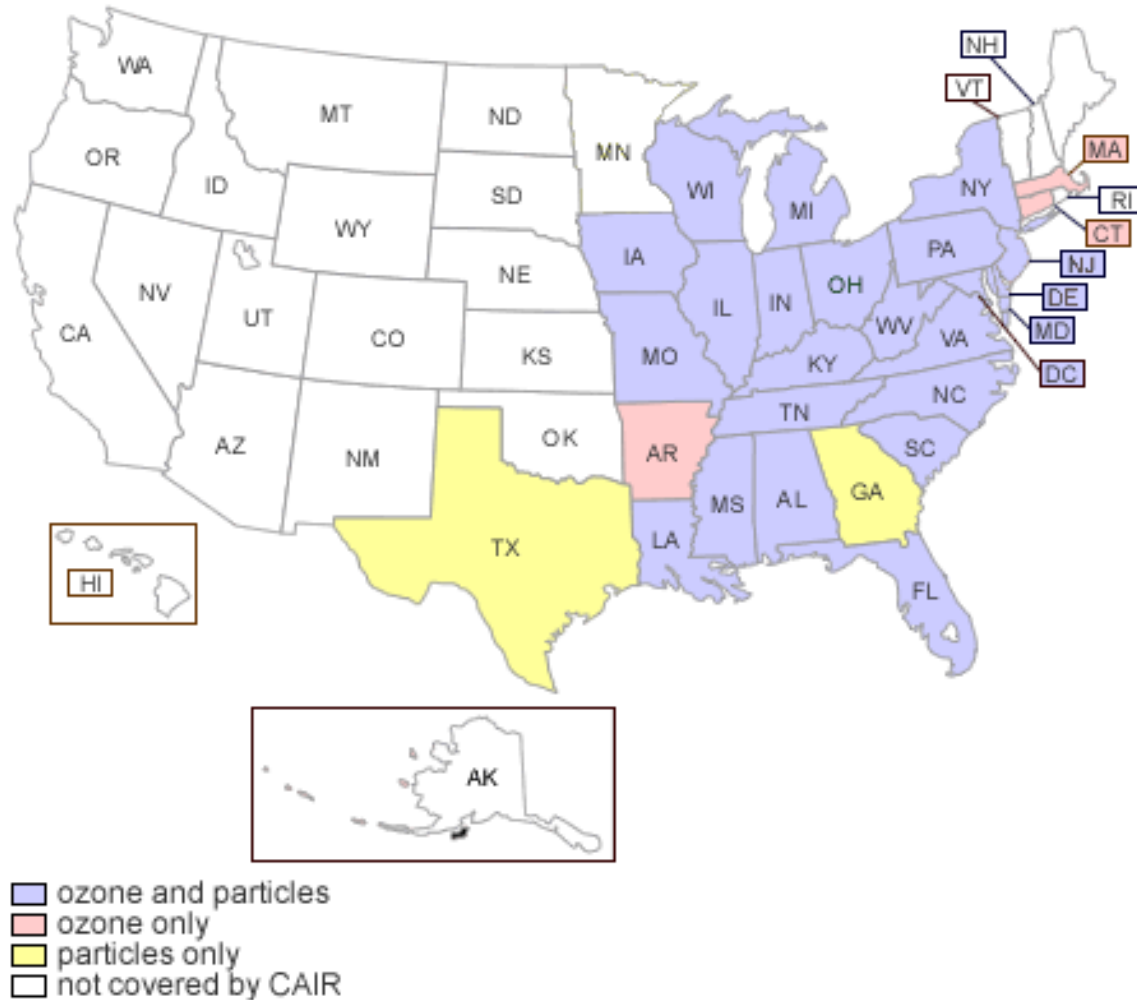


CSAPR Is Driven By NAAQS Compliance



Clean Air Interstate Rule (CAIR)

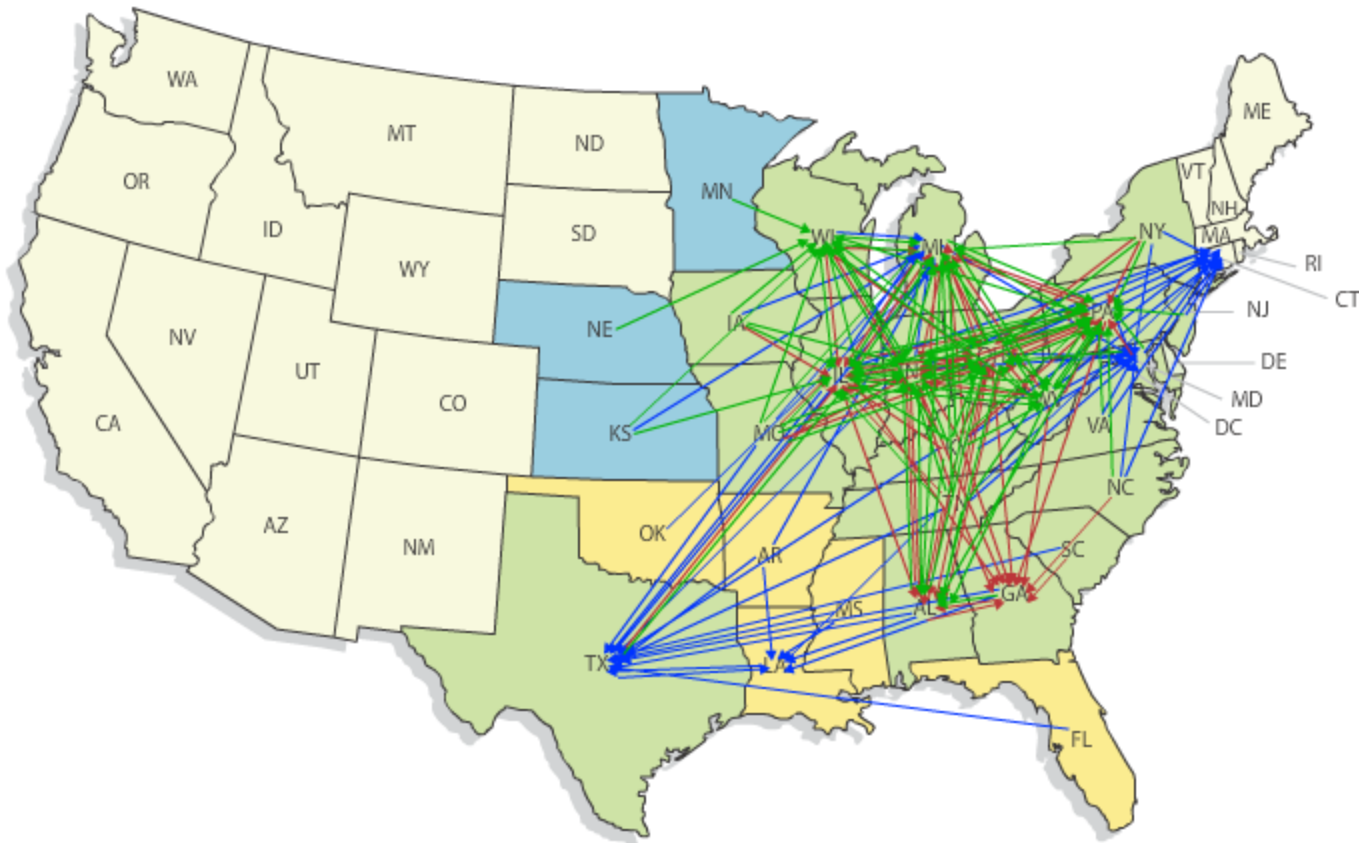
- CAIR is comprised of two programs:
- NOx
 - Phase I (2009)
 - Phase II (2015)
- SO2
 - Phase I (2010)
 - Phase II (2015)
- In 2008, the D.C. Circuit Court overturned CAIR but it was kept in place until a replacement rule could be developed.



The CAIR Replacement Rule: CSAPR

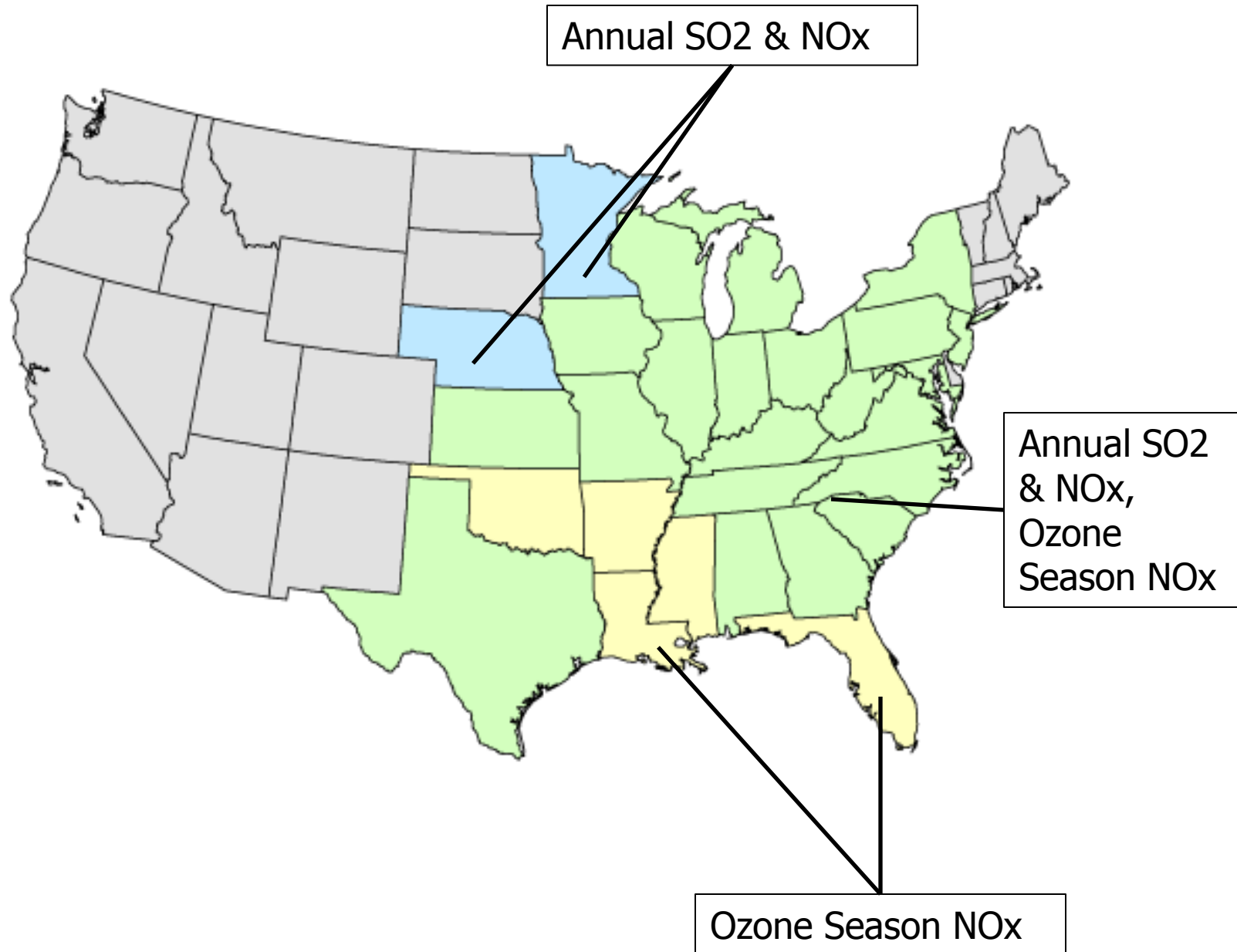
- CSAPR is a SO₂ and NO_x cap and trade rule with trading limitations.
- Each state within a program has annual CY state emissions budgets (caps) beginning in 2012 with budget reductions in some states in 2014
- Final CSAPR caps were more stringent than CAIR and Proposed Clean Air Transport Rule
- Four separate emissions allowance trading programs
 - Ozone Season NO_x (20 states)
 - Annual NO_x (23 states)
 - SO₂ Group 1 states (16 states)
 - SO₂ Group 2 states (7 states)
- NO_x trading is allowed between all states in the NO_x programs
- SO₂ trading is only allowed within each SO₂ group of states
- State budgets have been allocated to existing emissions sources and for new unit set asides. Unused new unit set asides are redistributed to existing sources.
- States have the opportunity to reallocate allowances as early as 2013 under State Implementation Plans (SIPs)

Interstate Emissions- "Who's Zoomin' Who"

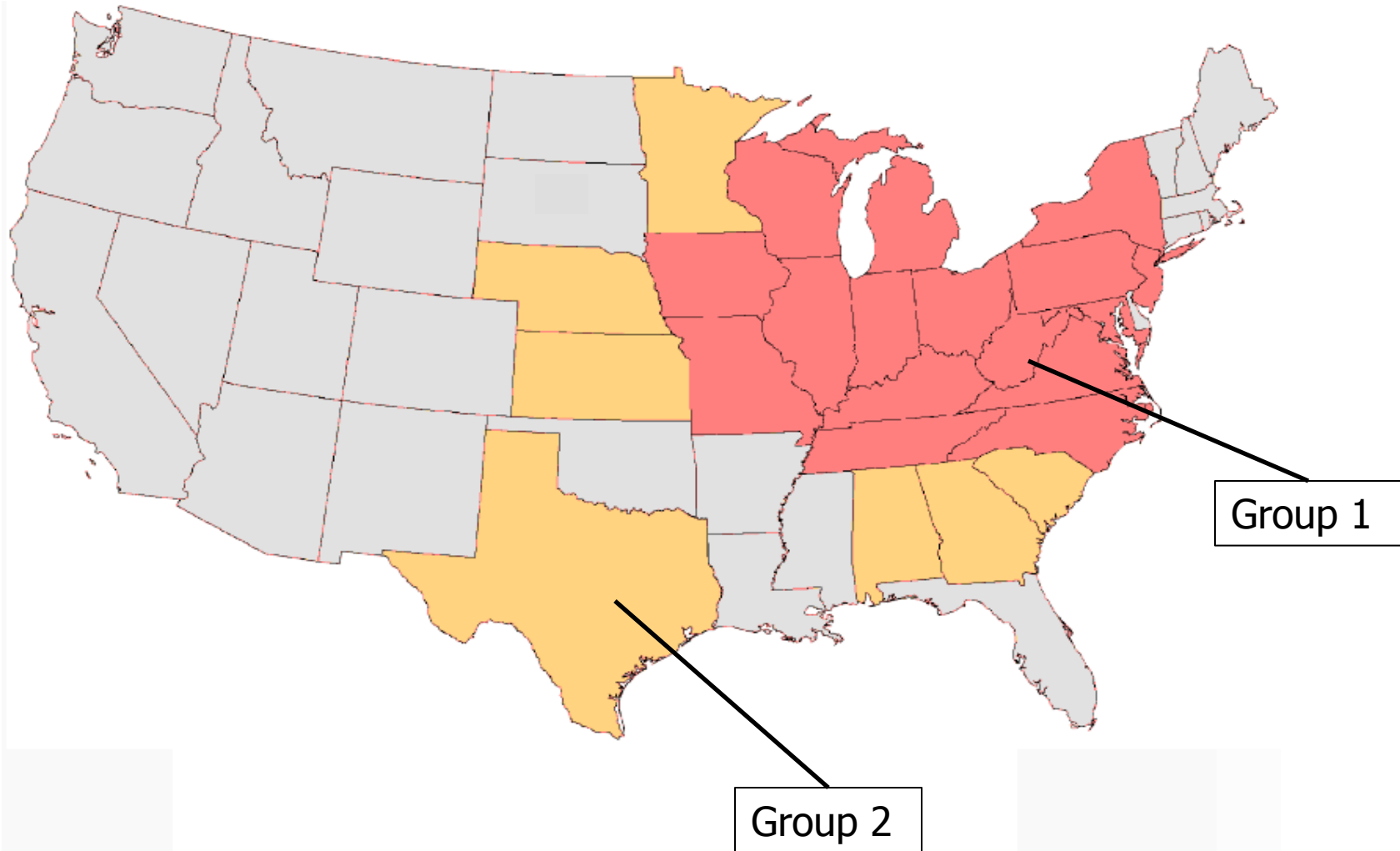


- EPA used modeling to identify "significant downwind impacts."
- Then, EPA modeled for "cost-effective controls" to set state budgets.

TVA CSAPR: 4 Programs for SO₂ and NO_x

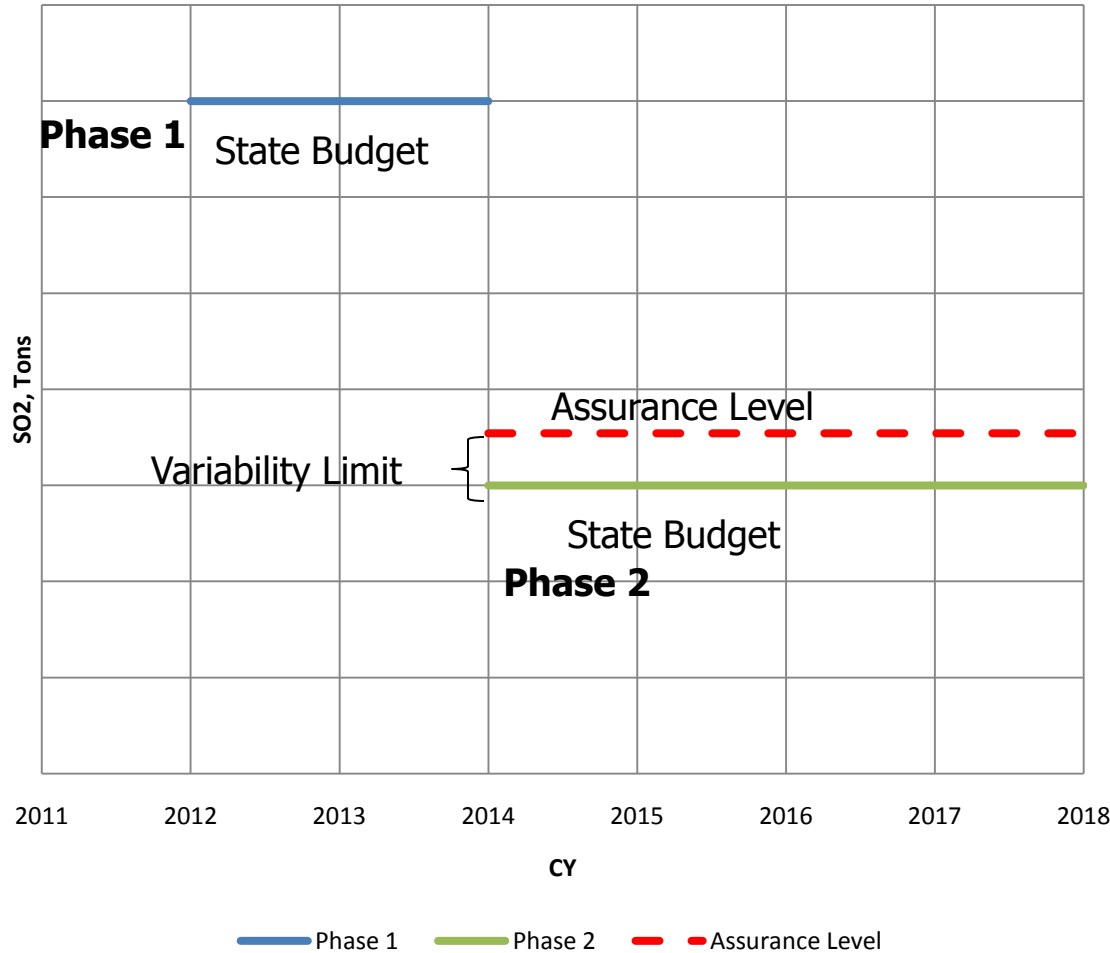


TVA CSAPR: SO2 Group 1 and Group 2 States



* No trading between Groups

SO₂ Tons - CSAPR



If a state exceeds its assurance level (budget plus variability limit), any source within that state that exceeds its assurance level, must ***surrender 3 allowances*** for each ton emitted above its assurance level.

- Variability limit = 18% of budget for SO₂ and annual NO_x
- Variability limit = 21% of budget for ozone season NO_x

Variability limits prevent utilities from buying their way to compliance

Key Components of CSAPR, cont'd.

- Sources must have sufficient allowances to cover all emissions, plus penalties, for each CY
- Unused emissions allowances may be banked and used in future years. (Banked CAIR allowances become worthless Jan. 1, 2012 and cannot be used for CSAPR compliance.)
- Units that are not operated for two consecutive years will lose their allocations two years after the two year non-operation period to the state's new unit set aside pool.
- EPA will reevaluate state caps periodically to determine if they remain adequate to protect downwind states as new NAAQS are set.



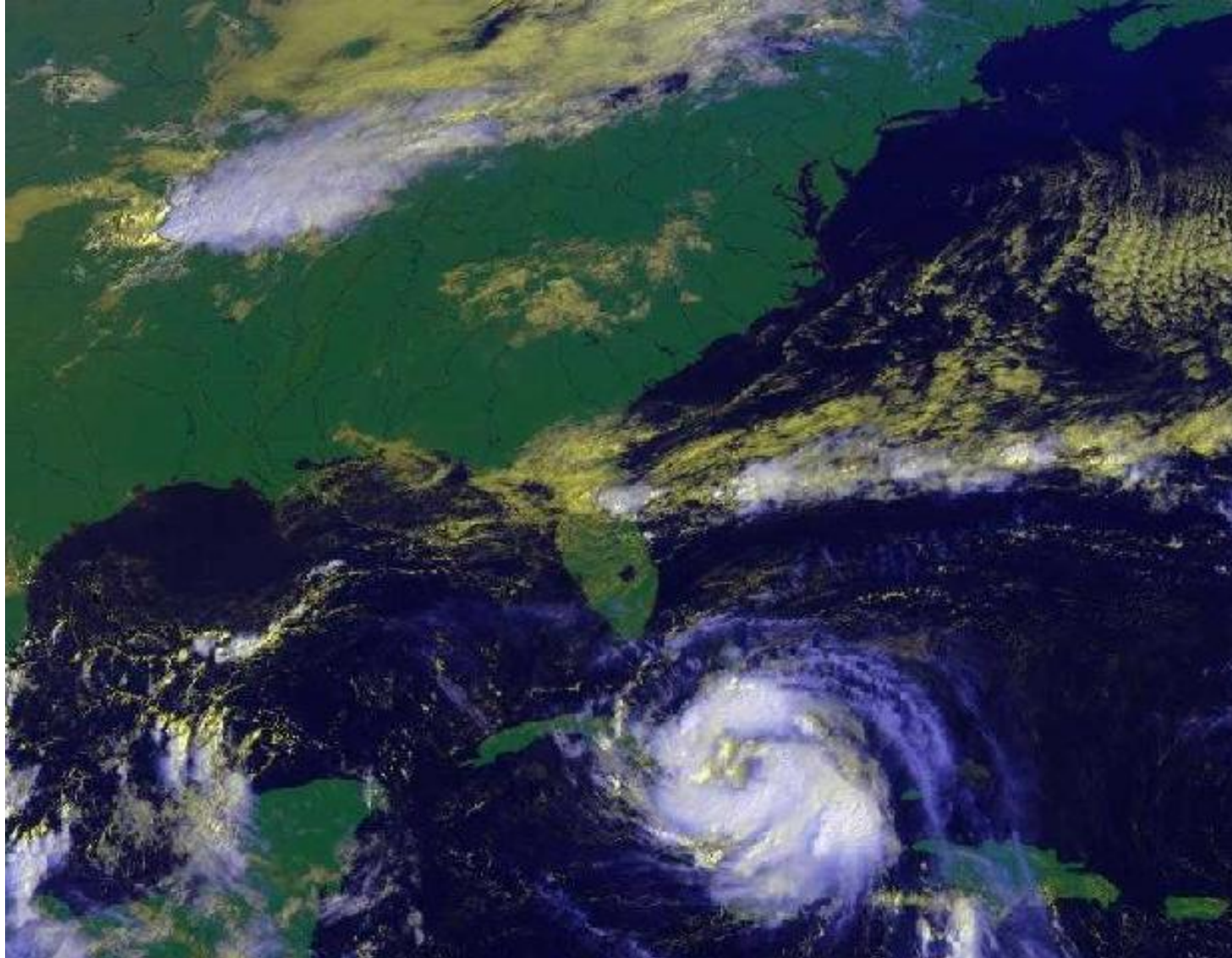
- **D.C. Circuit Court unexpectedly stayed CSAPR on Dec 30, 2011 pending resolution of multiple challenges from multiple parties. Complex litigation expected.**
- During the stay, the CAIR cap and trade program will remain in effect for utility SO₂ and NO_x to reduce interstate air pollution.
- The court is pursuing an expedited briefing schedule, with an expected hearing date of April 2012.
- The earliest final decision is expected from the court is summer 2012.



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Possible Outcomes

SO2 Tons - CSAPR (No Change, Retro 01/01/12)

