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# *Potential Impacts of a National SO<sub>2</sub> Program*

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**WRAP Forum**

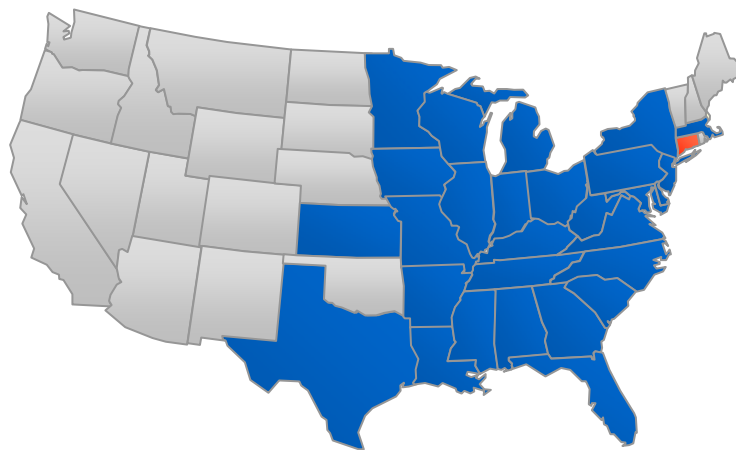
**June 3, 2004**

# Background

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- ***EPA did preliminary analysis investigating the impacts of a national SO<sub>2</sub> program based on levels consistent with the Clean Air Interstate Rule (CAIR)***
  - *The Integrated Planning Model was used to analyze the effects of a national SO<sub>2</sub> cap*
  - *The analysis also included nested SO<sub>2</sub> caps for various groupings of Western States*

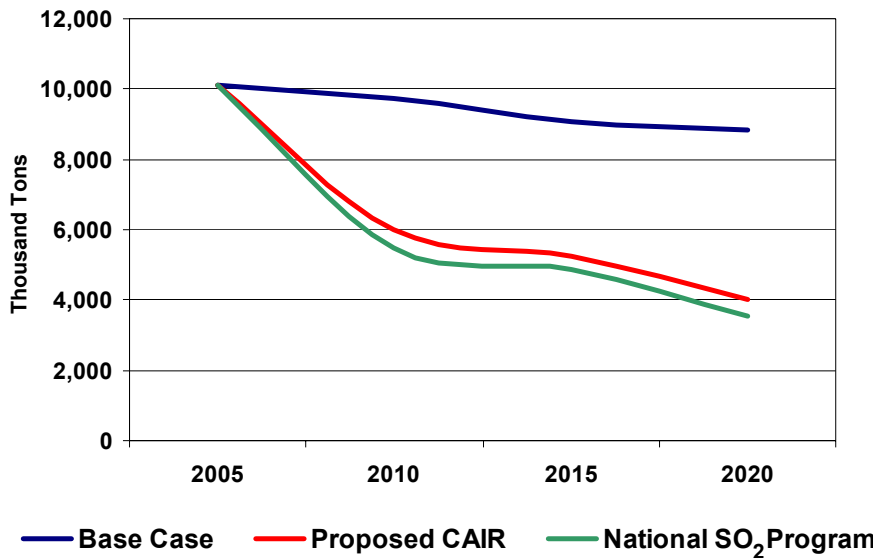
## Proposed CAIR Region



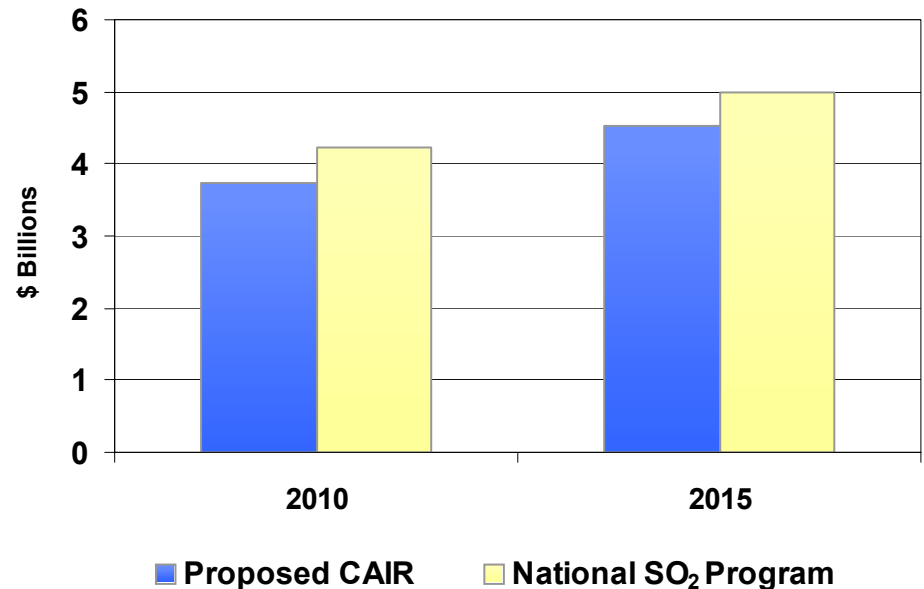
- States controlled for both SO<sub>2</sub> and NO<sub>x</sub>
- States controlled for ozone season NO<sub>x</sub> only
- States not covered under the transport rule

# Modeling Results - Emissions & Costs

## Nationwide SO<sub>2</sub> Emissions



## Annual Nationwide Incremental Costs

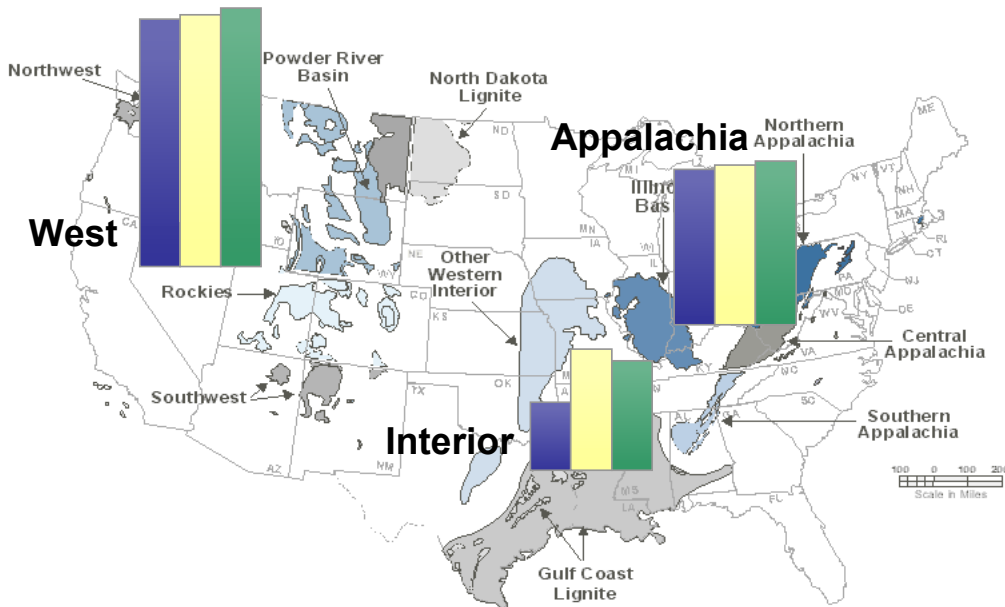


### ***Nationwide Impacts of a National SO<sub>2</sub> Cap***

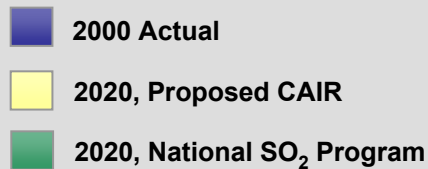
- Going national for SO<sub>2</sub> results in additional reductions of roughly 400-500 thousand tons
- The cost of incorporating the West for SO<sub>2</sub> is approximately \$280 million in 2015
- Marginal Cost under CAIR increases by roughly 8%

# Coal Production and Pollution Controls

## Coal Production for Electricity Generation in 2000 and Projected Production in 2020

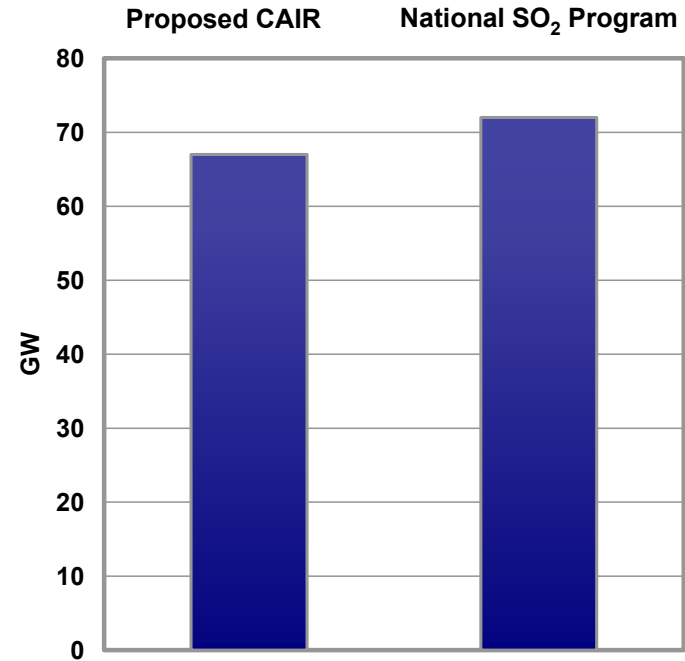


### Coal Production for the Power Sector



Scale: Appalachia 2000 = 299 million tons

## Pollution Controls (FGD, 2015)



# Nested WRAP Caps

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***Sensitivities were modeled to reflect the 2018 WRAP SO<sub>2</sub> caps. The caps were applied to runs that incorporated a national SO<sub>2</sub> program. For purposes of this modeling, EPA used WRAP data where available and estimated cap levels where none are currently specified by the WRAP. The determination of WRAP cap levels are EPA's best judgment only.***

1. 5 WRAP trading States - Although a cap has not been finalized for EGUs, EPA modeled a cap of 179k tons based on WRAP data, for which the marginal cost is just over \$200 per ton in 2020.
2. 9 WRAP trading States - A cap of 267k tons for these States results in a marginal cost of roughly \$260.
3. 13 WRAP Annex States - Because North Dakota and South Dakota achieve such significant reductions under a national SO<sub>2</sub> program, a 13 State cap of 373k tons is not binding for these 13 States.