



# How and Why: A Pulp & Paper Sector Project – Industry Perspective

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# Overview

- Origins of industry's ideas
- Sector concept – still evolving
- Incentives for industry participation
- Preliminary findings
- Key aspects to develop concept
- Challenges
- Questions



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# Origins of Pulp & Paper Air Sector Program

- Frustrated with New Source Review
  - Focus on results, not process changes
- Multi-pollutant legislation (Clear Skies) and regulation (CAIR) for utilities
  - Like cap and trade concept – cost effective
  - Focused on a few key pollutants - certainty
  - Emission reductions *in exchange* for regulatory certainty
  - Designed opt-in program for manufacturing
- Status
  - Legislation stalled in Congress
  - CAIR finalized in 2005 but no regulatory certainty for opt-in sources



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# EPA Sector Programs

Convergence of **three** initiatives:

1. EPA's Sector Strategies Program
  - Eliminating barriers to environmental improvements to find “win-wins”
  - AF&PA joined in 2004, started concept
2. NAS Air Quality Management report (2005)
  - recommended another look at emissions from pulp and paper industry especially boilers
  - Industry blind-sided; already heavily regulated
3. EPA/OAQPS 2006 reorganization
  - focus on sectors and voluntary programs
  - leadership changes bringing new perspectives

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# Sector Concept

- Goal: Regulatory relief/reconciliation and environmental improvement
- Collaborative process between industry and government
  - ultimately other stakeholders as well
- Voluntary program
  - mill by mill
  - binding commitment if sign-up
- Robust emission trading and mill emission caps central organizing concepts



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# Sector Concept – con't

- Incentives to participate – regulatory certainty and relief
- Mill impacts on air quality vary widely
  - Location, location, location
- Accommodate any industry transformations
  - biomass gasification & biorefinery
- Still evolving as we go – breaking new ground




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# Incentives for Industry to Participate

What does industry want to achieve?

- Regulatory relief and certainty
  - NAAQS compliance – PM and ozone SIPs (RACT, RACM)
  - Make NSR obsolete
  - BART and regional haze SIPs for visibility
  - Boiler MACT – time running out with 10/07
  - Future NAAQS revisions/SIPs
- ❖ 10-15 year timeframe for program



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# Incentives – con't

## Permitting improvements

- Start construction before permit approval
- Extend permit cycles – 10 years?
- Allow energy efficient projects or net environmental improvements to proceed
- Improve industry energy systems
  - Avoid energy-intensive controls – RTOs
  - Ability to fuel switch as prices fluctuate
  - Encourage/reward co-generation
- All requirements in one place
  - Avoid “death by a thousand cuts”




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# “Out-of-the-Box” Ideas

- Reductions from other sources may be environmentally superior
  - Fund reductions elsewhere
    - Diesel school bus retrofits
    - Truck fleet efficiency programs
- Use part of the compliance cost savings (i.e., suspending incinerator controls) to fund targeted improvements
  - Win-win: less NOx and CO2 & offsite reductions where you want them most! Less \$\$'s



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# What does EPA Want?

- More protection – “beyond compliance”
- Address industry issues once
- Focusing on priority pollutants with multi-pollutant planning
- Consider co-benefits of control strategies



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# Making it Work

## Taking concept to reality

1. Technical elements
2. Policy challenges
3. Implementation mechanisms



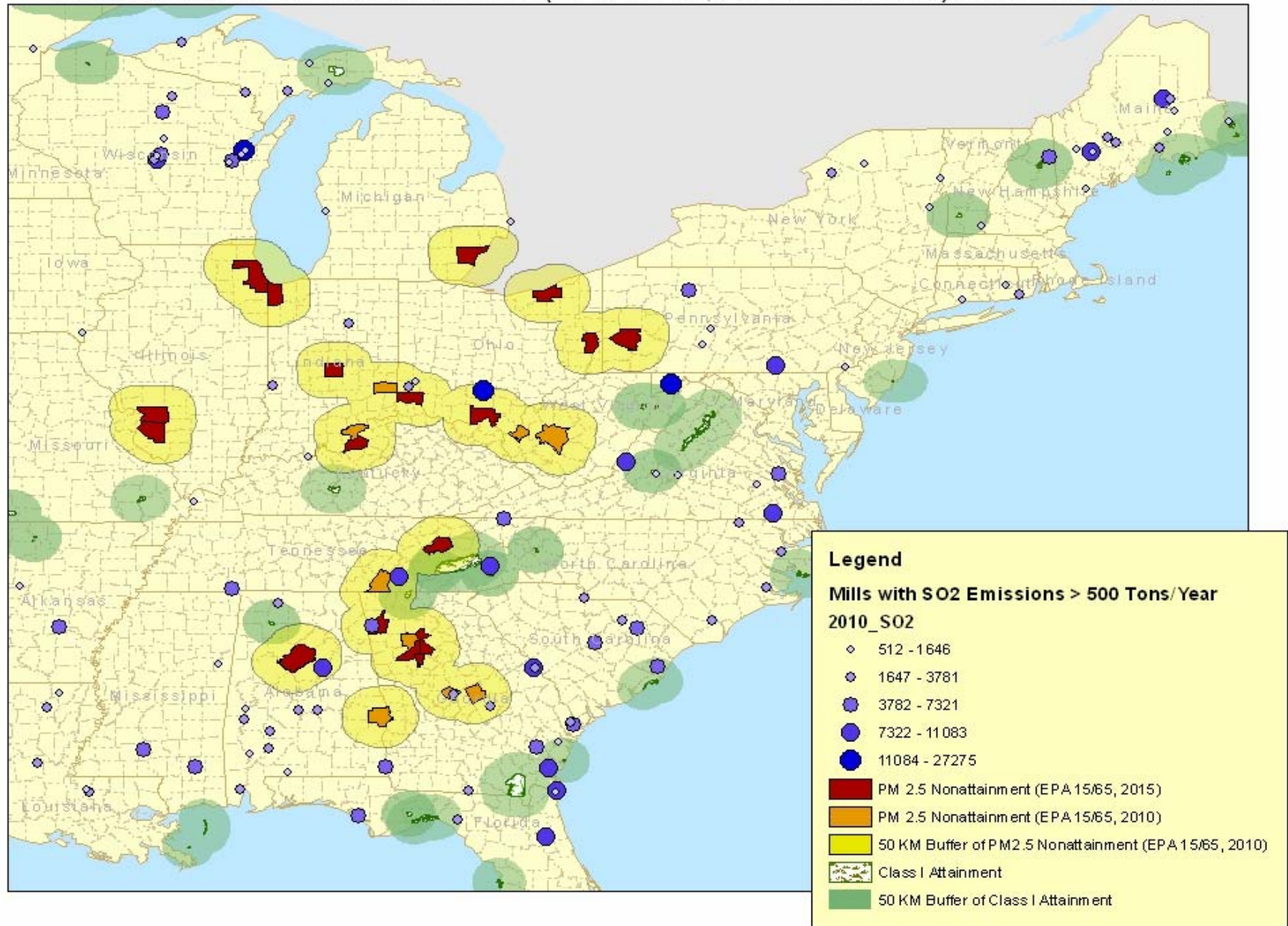
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# Technical Evaluations

- Focus is on key pollutants to prioritize efforts (SO<sub>2</sub>, NO<sub>x</sub> and PM)
- Develop understanding of emissions of key pollutants and their geographic distribution relative to PM fine and ozone non-attainment and Class I areas (see map)
- Examine short term control options, costs and any co-benefit pollution reductions
- Assess long-term emission reduction strategies that support an alternative model for industry in the future
  - value-added processes such as biorefinery and biomass gasification concepts from Agenda 2020

# Mills with SO2 Emissions Greater Than 500 Tons Per Year Relative to PM2.5 Nonattainment (EPA 15/65, 2010 and 2015) and Class I Areas



# Preliminary Findings

- Largest improvements in  $PM_{2.5}$  and visibility from  $SO_2$  reductions are in the Southeast where larger industry presence
- Limited Hazardous Air Pollutant (HAP) concern from risk modeling
  - Vast majority (>90%) of mills below ten in a million ( $10^{-5}$ ) using conservative modeling and emissions
  - “Residual Risk” not big issue
  - Examining exposure/risk from  $H_2S$




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# Policy Investigations

- Identify potential emission reduction targets for various classes of sources
- Develop near and long term (10-15 years) reduction strategies to account for “break-through” technologies
- Incorporate “out of the box” ideas?
- Focus reductions on key PM and ozone non-attainment areas –
  - geographic orientation
  - not across the board controls – been there, done that
- Educate/involve other stakeholders - Sector Agreements replace SIP for sources that opt-in



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# Implementation Mechanisms

- Identify authorities within the Clean Air Act that can be used to support policy objectives
  - existing CAIR opt-in and PALs
- Support case that opt-in sources meet BART, RACT (for both PM fine and ozone), and BACT for the next 10-15 years.
- Draft “rule” that embodies policy principles




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# Challenges

- “End goals” not clearly defined
  - Pilot project – guinea pigs
  - Developing issue papers on key aspects
  - Second date but not talking about marriage
- Clock ticking
  - SIP process – due in late '07 and '08
  - Delays from EPA & AF&PA re-org and technical analysis
- Involving states and ENGOs
  - demonstrate that program can produce reductions
- Legal mechanisms – pushing the envelope without statutory changes



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# Challenges (cont'd)

- Changing regulatory landscape reduces certainty - NAAQS
- Diverse industry – make everyone a “winner”
- If not successful, back to business as usual
- If successful, expand to other industrial sectors



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# Questions

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