Cross-State Air Pollution Rule (CSAPR) Update Rule – Missouri’s Perspective

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Air Program Advisory Forum
September 29, 2016
Overview

- What is CSAPR?
- What is the CSAPR Update Rule?
- CSAPR Update Rule – Missouri specifics
- Missouri original CSAPR state implementation plans (SIPs)
- Missouri SIP options – CSAPR Update Rule
What is CSAPR?

- The Cross-State Air Pollution Rule (CSAPR) is a federal emissions cap and trade program that controls NO$_x$ and SO$_2$ emissions from electric generating units in 27 states.

- It addresses the Clean Air Act’s “Good Neighbor Provision” for various PM$_{2.5}$ and ozone standards.

- Original CSAPR had four trading programs – Annual SO$_2$ Group 1, Annual SO$_2$ Group 2, Annual NO$_x$, and Ozone Season NO$_x$. 
What is the CSAPR Update Rule?

• CSAPR infrastructure remains largely the same (cap and trade, variability limits, and assurance provisions)

• No change to annual NO\textsubscript{x} and annual SO\textsubscript{2} trading programs

• **Revises federal NO\textsubscript{x} ozone season trading program** to address the 2008 ozone standard
  – Partially addresses 2008 ozone standard Good Neighbor Provision

• **Starting in 2017** - Lowers NO\textsubscript{x} ozone season emission budgets for 22 states

• Creates two NO\textsubscript{x} ozone season trading programs
  – Group 1 (Georgia)
  – Group 2 (22 states including Missouri)

• Adds KS and removes FL, NC, and SC
States Covered Under CSAPR

- SO₂ Group 1, Ozone Season NO₂ Group 2, and Annual NO₅ (15 States)
- SO₂ Group 1 and Annual NO₅ (1 State)
- SO₂ Group 2, Ozone Season NO₂ Group 2, and Annual NO₅ (3 States)
- SO₂ Group 2 and Annual NO₅ (3 States)
- SO₂ Group 2, Ozone Season NO₂ Group 1, and Annual NO₅ (1 State)
- Ozone Season NO₂ Group 2 only (4 States)
- Not covered by CSAPR
CSAPR Update Rule States

CSAPR Ozone Season NO\textsubscript{x} Group 2 States (22 States)

They can opt into Group 2 (requires a lower emission budget)

CSAPR Ozone Season NO\textsubscript{x} Group 1 States (Georgia only)
Missouri Downwind Contributions

Sheboygan County, WI
Allegan County, MI
Hamilton County, OH
Harris County, TX (2 monitors)
Brazoria County, TX
Missouri’s New Emissions Budget

<table>
<thead>
<tr>
<th>MO 2017 Statewide Budget</th>
<th>MO Variability Limit</th>
<th>Level</th>
<th>MO 2015 NO$_x$ Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,780</td>
<td>3,314</td>
<td>19,094</td>
<td>18,855</td>
</tr>
</tbody>
</table>

All figures are displayed in tons NO$_x$/control period (May-September)

- Missouri Affected Sources: 126 Units at 41 Facilities
- Missouri’s 2017 NO$_x$ ozone season budget in the original CSAPR was 21,099 tons. This represents a 25% reduction to Missouri’s emission budget.
Missouri’s New Unit Set-Aside (NUSA)

<table>
<thead>
<tr>
<th>Missouri Total Statewide Budget</th>
<th>Missouri NUSA Budget</th>
<th>Missouri Existing Unit Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,780</td>
<td>324</td>
<td>15,456</td>
</tr>
</tbody>
</table>

All figures are displayed in tons NO\textsubscript{x}/control period (May-September)

- New units for the CSAPR NO\textsubscript{x} Ozone Season trading program - commenced operation after January 1, 2015
  - John Twitty Unit 2 and Iatan Unit 2 are now existing units under this program (Does not apply to annual NO\textsubscript{x} or annual SO\textsubscript{2} programs)
Rule History
September 7, 2016 – Final Cross-State Air Pollution Rule Update
The EPA finalized Federal Implementation Plans (FIPs) in the CSAPR Update to address air quality impacts of the interstate transport of ozone air pollution in the eastern United States.

- Final Cross-State Air Pollution Rule Update
- Fact Sheet
- Key Changes and Improvements Fact Sheet
- Press Release
- More Information – Benefits and Maps
- Regulatory Impact Analysis
- Power Sector Modeling

Technical Support Documents (TSDs)

- Air Quality Modeling TSD for the Final Cross-State Air Pollution Rule Update
  - 8-Hour Ozone Model Performance Statistics by Monitoring Site for the 2011 Base Year CAMx Model Simulation for the Final CSAPR Update
  - Data File with Ozone Design Values and Ozone Contributions
- EGU NOX Mitigation Strategies Final Rule TSD
- Status of 110(a)(2)(D)(i)(I) SIPs for the 2008 Ozone NAAQS
- Ozone Transport Policy Analysis Final Rule TSD
  - Appendix E: Budget Calculations
- Assessment of Non-EGU NOx Emission Controls, Cost of Controls, and Time for Compliance Final TSD
- CSAPR Allowance Allocations Final Rule TSD
  - Unit-Level Allocations and Underlying Data for the CSAPR Update for the 2008 Ozone NAAQS

https://www.epa.gov/airmarkets/final-cross-state-air-pollution-rule-update
What About Banked Allowances?

- The CSAPR Update Rule provides a one-time conversion of 2015/2016 banked allowances to be used in 2017 and beyond

- Conversion factor ensures a carryover of 99,700 allowances for use in 2017 and beyond
  - Depends on the number of banked allowances after 2016

- EPA estimates the conversion factor at approximately:
  \[
  \text{3.5 banked allowances} = 1 \text{ allowance for 2017 and beyond}
  \]

- Conversion to take place after March 1, 2017, but before March 1, 2018
Missouri’s Original CSAPR SIPs

- Missouri State Rules 10 CSR 10-6.372 and 6.376 (CSAPR NO$_x$ Annual and CSAPR SO$_2$ Group 1)
  - Approved into the SIP
  - State allocations are submitted to and recorded by EPA each year

- Missouri State Rule 10 CSR 10-6.374 (CSAPR NO$_x$ Ozone Season)
  - Not approved into SIP because is based on original CSAPR budget
  - EPA will not record state submitted allocations based on this rule
  - CSAPR Update Rule took state rule’s allocation method into account and allocates 1 allowance to Chillicothe and Higginsville
### Missouri SIP Options – CSAPR Update Rule

<table>
<thead>
<tr>
<th>Control Period</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>2017</td>
<td>All states included in the Update Rule are subject to a FIP, <strong>No option to replace the FIP through a SIP</strong></td>
</tr>
<tr>
<td>2018 *</td>
<td>A state can replace FIP allocations to existing units through a streamlined SIP (submitted by April 1, 2017). No state rule required. New unit allocations are still made via the FIP</td>
</tr>
</tbody>
</table>
| 2019 and 2020  | • CSAPR SIPS (must allocate full budget)  
- Full SIP: Trading Program requirements and allocations (can add units to program)  
- Abbreviated SIP: Allocations only  
• Alternative Good Neighbor SIP  
- Can remove the state from the trading program (Subject to EPA approval)  
  | State rule required  
  Deadline to Submit:  
  Dec. 1, 2017 |
| 2021 and 2022  | Same options as 2019 and 2020 control periods, but the submittal date is Dec. 1, 2018 |

* If a state wants to submit a SIP to allocate existing unit allowances for 2018, a letter of intent must be submitted by December 15, 2016.
## Timing – Allocation Recordation

<table>
<thead>
<tr>
<th>Control Period</th>
<th>Under FIP</th>
<th>Under SIP</th>
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<tbody>
<tr>
<td></td>
<td>Existing Units</td>
<td>New Unit Set-Aside</td>
</tr>
<tr>
<td>2017</td>
<td>Jan. 3, 2017</td>
<td>Aug. 1, 2017 &amp; Feb. 15, 2018</td>
</tr>
<tr>
<td>2019 and 2020</td>
<td>July 1, 2018</td>
<td>Aug. 1 (current year) &amp; Feb. 15, (following year)</td>
</tr>
<tr>
<td>2021 and 2022</td>
<td>July 1, 2019</td>
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* The state cannot submit a SIP to replace any FIP allocations for 2017 or the New unit set-aside allocations under the FIP for 2018
Open Discussion

Questions?

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