Implications of Pending CSAPR Update Remand

Council of Industrial Boiler Owners September 21, 2020 Webinar

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Overview

- Midwest Ozone Group
- 2. Good Neighbor Requirements
- CSAPR Update (partial remedy)
- 4. Remand of CSAPR Update (full remedy)
- 5. EPA Path Forward
- 6. The State Implementation Plan (SIP) alternative

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EGUs - American Electric Power, Ameren, Appalachian Region Independent Power Producers Association (ARIPPA), Associated Electric Cooperative, Big Rivers Electric Corp., Citizens Energy Group, Duke Energy, East Kentucky Power Cooperative, FirstEnergy, Indiana Energy Association, Indiana Utility Group, LGE / KU, Ohio Utility Group, Olympus Power, and City Water, Light and Power (Springfield IL)

Non-EGUs - American Forest & Paper Association, American Wood Council, Alcoa, ArcelorMittal, Cleveland Cliffs, Council of Industrial Boiler Owners (CIBO), ExxonMobil, Marathon Petroleum, National Lime Association

Midwest Ozone Group

CSAPR Update: independent air quality modeling, comments on proposed rule in 2015, intervention in *Wisconsin* litigation, preparing to conduct independent assessment of EPA's 2021 air quality data and to comment on proposed CSAPR remand rule

Maryland and NY 126 petitions: independent modeling, comments on proposed denials; led briefing effort in support of EPA denial of the NY petition

Other matters: comments on international transport guidance, Cleaner Truck Initiative, regional haze, ozone NAAQS retention, other

Good Neighbor Requirements

Good Neighbor Obligations

States are obligated to submit SIPs (including Good Neighbor requirements) within 3 years after NAAQS promulgation

If SIP is determined to be inadequate, EPA must issue FIP within 2 years

Alternatives:

- 1. Transport rules provide an alternative mechanism (NOx SIP Call, CAIR, CSAPR, CSAPR Update)
 - 2. 126 petitions

Good Neighbor Obligation*

Upwind states are obligated "to eliminate all and only emissions meeting both of these criteria"

- (1) upwind state pollution produced 1% or more of NAAQS in at least one downwind state; and
- (2) could be eliminated cost effectively as determined by EPA (through EPA's "control analysis")

^{*} EPA v. Homer City, U.S. Supreme Ct.; 572 U.S. 489 (2014)

CONTROL ANALYSIS*

EPA's "control analysis" calls for EPA to:

- (1) calculate quantity of emission eliminated at several cost thresholds
- (2) model combined effect of upwind reductions for each cost threshold on downwind air quality
- (3) identify "significant cost" threshold points where "noticeable change occurred in downwind air quality, such as . . . where large upwind emission reductions become available because a certain type of emission control-strategy becomes cost effective"

CSAPR Update (partial remedy)

CSAPR Update*

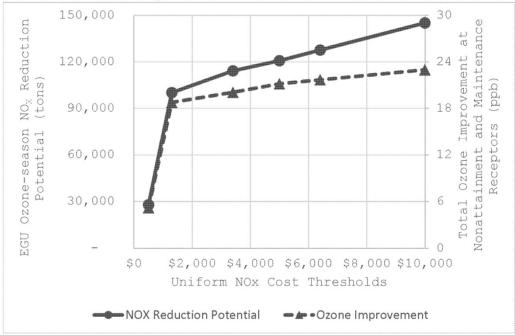
2016:

- Because of time limits EPA developed CSAPR Update a partial plan assessing only short-term SCR controls on EGUs with respect to the 2008 ozone NAAQS
- Concluded that \$1,400/ton represented the point at which upwind "NOx reduction potential and corresponding downwind ozone air quality improvements are maximized with respect to marginal cost"
- . . . the point at which EPA would get "the biggest bang for its buck"

^{*}Wisconsin v. EPA, D.C. Circuit; 938 F.3d 303 (2019)



Figure VI.1. EGU Ozone season $NO_{\rm X}$ Reduction Potential in 24 linked states and Corresponding Total Reduction in Downwind Ozone Concentrations at Nonattainment and Maintenance Receptors for each Uniform $NO_{\rm X}$ Cost Evaluated



CSAPR Close-out

2018

- EPA modeling of <u>2023</u> showed no downwind nonattainment with 2008 ozone NAAQS. See: http://www.midwestozonegroup.com/files/FINAL_2
 008 O3 NAAQS Transport Memo 10-27-17b.pdf
- Therefore no need to pursue additional controls on EGUs or non-EGUs or be concerned about partial nature of CSAPR Update

Remand of CSAPR Update (full remedy)

Wisconsin Decision*

- upheld EPA's assessment of short-term controls - "Selective Catalytic Reduction" (SCR) controls and adoption of ozone season NOx trading program
- rejected EPA's conclusion that nothing more needed from an air quality perspective to address the partial nature of CSAPR Update - because EPA looked at 2023 data and should have looked at 2021 data
- the remand of CSAPR Update directed EPA to address "non-EGUs" so that there would be a "full-remedy"

*Wisconsin v. EPA, D.C. Circuit; 938 F.3d 303 (2019) https://www.courthousenews.com/wp-content/uploads/2020/07/ny-epa-cadc.pdf

Related Court Actions

Wisconsin CSAPR Update (9/13/19)

- EGU controls upheld
- non-EGU controls remanded

Maryland 126 (5/19/20) https://www.courthousenews.com/wp-content/uploads/2020/05/md-epa.pdf

- EGU SCR controls upheld
- EGU non-SCR remanded
- 2021 attainment year for 2008 and 2015 NAAQS

New York 126 (7/14/20) https://www.courthousenews.com/wp-content/uploads/2020/07/ny-epa-cadc.pdf

- EGU short term controls upheld
- EGU long term and non-EGU controls remanded

EPA Path Forward

New Jersey v EPA (FIP)

U.S. District Court in Southern District of New York

Issue: Deadline for EPA to FIP 20 states re 2008 ozone NAAQS Good Neighbor requirements – but not Kentucky which has an approved GNS for 2008 ozone NAAQS

New Jersey v EPA (FIP)

Idsal Declaration (June 5, 2020)* (¶ 159)

Rulemaking #1 (short term reductions)

Proposed action: 10/1/20

Comment period: 45 days

Final action: 3/15/21

Rulemaking #2 (longer term reductions)

Proposed action: 6/21/21

Comment period: 2 months

Final action: 3/15/22 - 12/15/22

Court order (7/28/20) – Final Action: March 15, 2021

^{*}http://midwestozonegroup.com/files/Declaration of Anne Idsal .pdf

New Jersey v EPA (FIP)

EPA July 31, 2020 filing in New York 126 case:

"While the government is continuing to review the *New Jersey* decision and <u>has not decided whether to appeal it</u>, EPA already had a pre-existing intention to complete a rulemaking addressing any necessary, available emission reductions by the 2021 ozone season."

"As set out in a declaration filed June 5, 2020, in *State of New Jersey v. Wheeler*, EPA had already stated the agency could complete a rule by March 15, 2021 that will address any necessary emission reductions that can actually be achieved prior to the 2021 attainment date to address good neighbor obligations for the 2008 ozone NAAQS."

September 8, 2020: mandate issued in *New Jersey v EPA*September 8, 2020: Scott Mathias stated that EPA was quickly preparing a remand proposal "to meet court order" to be issued this fall

Short Term Reduction Strategies

- Object: "Some additional level of emissions control in time for 2021 attainment date" (¶121)
- IPM evaluate emission impacts of levels of uniform NOx control stringency (¶122)
- Cost Threshold Runs: \$800, \$1,400, \$3,400, \$5,000 and \$6,400 per ton of ozone season NOx for each state (¶123)
- Control Requirements: determine "near term" emission reductions and emission budgets for each Cost Threshold Run (¶124)

Longer Term Reduction Strategies

- Evaluate strategies implemented further in the future, i.e., new post-combustion controls
 - Final EGU Rule: March 15, 2022 (¶126)
- Final non EGU Rule: December 15, 2022 (¶126)

Non EGU Sectors (¶127)

Industrial boilers

Internal combustion engines

Cement kilns

Glass furnaces

Process heaters

Petroleum refining

Chemical manufacturing

Oil and gas extraction

Pipeline transportation

Non EGU Data Needs*

- Baseline emissions from which reductions are calculated (¶129)
- Nature of current controls; type of device; control device efficiency (¶134)
 - 81,000 non-EGU facilities (¶135)
- Potential control devices could be installed (¶137)

^{*}for application to CoST (which models emission reductions and controls costs)See: https://beta.regulations.gov/document/EPA-HQ-OAR-2015-0500-0508

Air Quality Impact of Control Strategies

- Evaluate air quality change for each control level (¶151)
- Air Quality Assessment Tool (AQAT) (¶152)
- Evaluates over and under control (¶153)
- Applied to 2021 modeling (¶154)
- Trading is likely for EGUs (¶157)
- Uncertain about trading program for non EGUs (¶158)

Determination of Significant Contribution

- Assess
 - 1. Cost
 - 2. Available emission reductions
 - 3. Downwind air quality impacts
- Determine appropriate "stopping point" ¶155

The SIP Alternative

Kentucky 2008 GNS

- 83 Fed. Reg. 33730
- Used EPA and Alpine/MOG 2023 modeling data
- Step 1: Maximum contribution
 - nonattainment none
 - maintenance none
- Step 2: not addressed
- Step 3: not addressed

No Appeal

West Virginia 2015 GNS

- Used MOG 2023 modeling
- Step 1: Maximum contribution
 - − nonattainment 2.52 ppb Harford, MD
 - maintenance 1.63 ppb (Gloucester, NJ); did not consider October 2018 flexibility
- Step 2: applied 1%; did not consider August 2018 flexibility
- Step 3:
 - Independently assessed EGU controls
 - Assessed non-EGUs using EPA CoST data (cement, coke, boilers, gas turbines, thermal dryers)
 - No additional highly cost-effective reductions are available

http://www.midwestozonegroup.com/files/WV_2015_O3_Transport_SIP_Final_with_response_to_comments.pdf

Concluding Observations

- 1. The *Wisconsin* decision sets 2021 as the analytical date for the 2008 ozone NAAQS –forcing need to address cost effectiveness for all source categories.
- 2. The *Maryland* decision sets 2021 as the analytical date for the 2015 ozone NAAQS marginal areas and 2023 for the moderate areas.
- 4. Even though *Wisconsin* and *Maryland* found that CSAPR Update properly addressed EGU's with SCR controls, EPA seems headed towards a review those sources first to see if additional short-term reductions are justified.
- 5. Not clear what approach EPA will take with respect to non-EGUs.

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