New York Ozone Over Reach Against Indiana

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Environmental Compliance Conference
Indianapolis, Indiana
October 9, 2019

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Overview

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New York 126 Petition History

- Filed March 12, 2018
- Targets some 123 electric generating units (EGUs), 166 “non-electric generating units” and 59 oil and gas sector facilities located in the states of Illinois, Indiana, Kentucky, Maryland, Michigan, Ohio, Pennsylvania, Virginia, and West Virginia
- Targeted Indiana EGUs are: Rockport, Gibson, Clifty Creek, Petersburg, R M Schafer Generating Station, Cayuga, Wabash River, Merom, Bailly Generating Station, A B Brown Generating Station, Alcoa Allowance Management Inc, Michigan City Generating Station, Edwardsport, F B Culley Generating Station, R Gallagher, IP&L Harding Street Station, and Eagle Valley Station

New York 126 Petition History

- Filed March 12, 2018
- Targeted Indiana non-EGUs are: ALCOA WARRICK POWER PLT, ArcelorMittal Burns Harbor Inc., US STEEL GARY WORKS, LEHIGH CEMENT COMPANY LLC, LONE STAR INDUSTRIES, INC, BP PRODUCTS NORTH AMERICA INC, WHITING, Essroc Cement Corp (2 plants), SABIC INNOVATIVE PLASTICS MT. VERNON LLC, Carmeuse Lime Inc, ARCELORMITTAL INDIANA HARBOR LLC, Citizens Thermal, COVANTA INDIANAPOLIS, INC., INDIANA HARBOR COKE COMPANY, Ardagh Glass Inc, TATE & LYLE SAGAMORE OPERATION, ELI LILLY & COMPANY CLINTON LABS, TATE & LYLE, LAFAYETTE SOUTH, SDI Steel Dynamics Incorporated, PURDUE UNIVERSITY -WADE UTILITY PLANT, UNIVERSITY OF NOTRE DAME DU LAC, and Wabash River Combined Cycle Plant

New York 126 Petition History

- May 20, 2019: EPA provided notice of proposal to deny New York 126 petition because New York has not met statutory burden to demonstrate, and EPA has not independently found, that the group of identified sources emits or would emit in violation of the good neighbor provision for the 2008 or 2015 ozone NAAQS in Chautauqua County and the New York Metropolitan Area (NYMA)

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New York 126 Petition Legal Deficiencies

- CAA 126(b) and 110(a)(2)(D)(ii) require New York to first demonstrate that it has an ozone nonattainment or maintenance problem in 2023, after which it can assert a claim against an upwind source.
- CAA §126(b) provides, "Any State . . .may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the prohibition of section 110(a)(2)(D)(i)"
- CAA §126(b) also addresses process for review: "Within 60 days after receipt of any petition under this subsection and after public hearing, the Administrator shall make a finding or deny the petition."
  - CAA § 307 governing administrative proceedings authorizes EPA to extend the section 126(b) 60-day deadline for action pursuant to its authority and EPA did so with respect to New York petition

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New York 126 Petition Legal Deficiencies

- CAA 110(a)(2)(D)(ii) requires that each NAAQS implementation plan submitted by a state shall "contain adequate provisions . . . prohibiting . . .any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any [NAAQS]."
- EPA implementation of CAA 110(a)(2)(D)(ii) involves a four step process

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New York 126 Petition Legal Deficiencies

EPA implementation of CAA 110(a)(2)(D)(ii) involves a four step process:

1. Identify downwind receptors expected to have problems attaining or maintaining the NAAQS. ...
2. Determine which upwind states are linked to identified downwind air quality problems and warrant further analysis to see whether emissions violate the good neighbor provision. . .
3. For states linked to downwind air quality problems, identify upwind emissions, on a statewide basis, that will significantly contribute to nonattainment or interfere with maintenance of a standard at a receptor in another state. . .
4. For sources in upwind states that will significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind, implement necessary emissions reductions within the state. . .

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New York 126 Petition Legal Deficiencies

- Because EPA interprets ‘‘contribute significantly to nonattainment’’ and ‘‘interfere with maintenance’’ to mean the same thing under both sections 110(a)(2)(D)(i) and 126(b), EPA’s decision whether to grant or deny a CAA 126(b) petition regarding both the 2008 and 2015 ozone NAAQS depends on application of the analysis used to address CAA section 110(a)(2)(D).

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New York 126 Petition Legal Deficiencies

- EPA assesses whether there is a downwind air quality problem in the petitioning state (i.e., step 1 of the four step interstate transport framework); whether the upwind state where the source subject to the petition is located is linked to the downwind air quality problem (i.e., step 2); and, if such a linkage exists, whether there are cost effective emissions reductions available from sources in the upwind state to support a conclusion that the sources in the state significantly contribute to nonattainment or interfere with maintenance of the NAAQS (i.e., step 3)

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New York 126 Petition Legal Deficiencies

- EPA did not reach Step 4 in its analysis of the New York petition because the petition fails at step 1

New York 126 Petition Technical Deficiencies

- EPA's October 27, 2017, Good Neighbor SIP guidance on the 2008 ozone NAAQ stated that EPA's updated modeling indicates that there are no monitoring sites, outside of California, that are projected to have nonattainment or maintenance problems with respect to the 2008 ozone NAAQS of 75 ppb in 2023.

- In addition, state-of-the science 12km air quality modeling performed by both EPA and MOG demonstrates that in 2023 all monitors located in New York will show attainment with the 2008 (75 ppb) ozone NAAQS.

New York 126 Petition Technical Deficiencies

Data taken from the EPA 12km grid modeling results:

Monitor	State	County	DVb (2011)	DVf (2023) Ave	DVf (2023) Max
360010012	New York	Albany	68.0	55.4	57.0
360050133	New York	Bronx	74.0	68.0	69.9
360150003	New York	Chemung	66.5	54.9	55.3
360270007	New York	Dutchess	72.0	58.6	60.2
360530006	New York	Madison	67.0	55.0	55.0
360610135	New York	New York	73.3	65.3	67.8
360671015	New York	Onondaga	69.3	57.8	60.1
360715001	New York	Orange	67.0	55.3	56.9
360750003	New York	Oswego	68.0	55.7	57.3
360790005	New York	Putnam	70.0	58.4	59.2
360810124	New York	Queens	78.0	70.1	71.9
360850067	New York	Richmond	81.3	71.9	73.4
360870005	New York	Rockland	75.0	62.0	62.8
361030002	New York	Suffolk	83.3	72.5	74.0
361030004	New York	Suffolk	78.0	66.3	68.0
361030009	New York	Suffolk	78.7	68.5	69.7
361111005	New York	Ulster	69.0	57.4	57.4
361192004	New York	Westchester	75.3	68.1	68.8

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New York 126 Petition Technical Deficiencies

State-of- the-science 4km air quality modeling performed by MOG demonstrates that in 2023 all monitors located in New York will also be in attainment with the 2015 (70 ppb) ozone NAAQS

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New York 126 Petition Technical Deficiencies

EPA's air quality modeling platform run by Alpine Geophysics with a 4km grid (rather than a 12km grid) predicted ozone concentration at all monitors in New York are in attainment with respect to both the 2008 ozone NAAQS as well as the more stringent 2015 ozone NAAQS.

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New York 126 Petition Technical Deficiencies

EPA's air quality modeling platform run by Alpine Geophysics with a 4km grid (rather than a 12km grid)

Monitor	State	County	DVb (2011)	DVf (2023) Ave	DVf (2023) Max
360010012	New York	Albany	68.0	56.8	58.4
360050133	New York	Bronx	74.0	63.8	65.6
360150003	New York	Chemung	66.5	55.3	55.7
360270007	New York	Dutchess	72.0	57.0	58.6
360530006	New York	Madison	67.0	54.4	54.4
360610135	New York	New York	73.3	62.9	65.2
360671015	New York	Onondaga	69.3	57.7	59.9
360715001	New York	Orange	67.0	54.2	55.8
360750003	New York	Oswego	68.0	55.9	57.6
360790005	New York	Putnam	70.0	56.7	57.5
360810124	New York	Queens	78.0	68.5	70.2
360850067	New York	Richmond	81.3	69.6	71.0
360870005	New York	Rockland	75.0	63.7	64.5
361030002	New York	Suffolk	83.3	70.6	72.0
361030004	New York	Suffolk	78.0	63.8	65.4
361030009	New York	Suffolk	78.7	66.5	67.5
361111005	New York	Ulster	69.0	56.3	56.3
361192004	New York	Westchester	75.3	64.6	65.2

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New York 126 Petition Technical Deficiencies

Application of EPA's alternative maintenance monitor methodology demonstrates there will not be any maintenance monitors located in New York in 2023

a. Utilization of alternative base period design values results in a projection of clean data for the candidate maintenance monitors in question

b. Meteorological conditions of the candidate maintenance monitors were conducive to ozone formation

c. Ozone concentrations are trending downward

d. Emissions of ozone precursors have been trending downward since 2011 and are expected to continue to decline out to the attainment date of the receptor

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New York 126 Petition Technical Deficiencies

EPA established a four step interstate transport framework to address requirements of good neighbor provision for regional pollutants such as ozone:

1. Identify downwind receptors expected to have problems attaining or maintaining the NAAQS. ...

2. Determine which upwind states are linked to identified downwind air quality problems and warrant further analysis to see whether emissions violate the good neighbor provision. . .

3. For states linked to downwind air quality problems, identify upwind emissions, on a statewide basis, that will significantly contribute to nonattainment or interfere with maintenance of a standard at a receptor in another state. . .

4. For sources in upwind states that will significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind, implement necessary emissions reductions within the state. . .

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New York 126 Petition Technical Deficiencies

Because there will be no nonattainment or maintenance monitors located in New York in 2023 with respect to either the 2008 or 2015 ozone NAAQS, the New York 126 petition can be rejected at Step 1 without evaluating Steps 2, 3, and 4

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New York 126 Petition Technical Deficiencies

- 2023 is the appropriate year for assessing Good Neighbor SIP requirements related to the 2008 and 2015 ozone NAAQS
- Attainment dates for both 2008 and 2015 ozone NAAQS were considered when evaluating the appropriate analytic year.
- 2008 NAAQS attainment dates are 2021 for serious nonattainment areas, and July 2027 for severe nonattainment areas. EPA considered and either implemented or rejected additional short-term controls to meet these attainment dates in the CSAPR Update. Based on EPA's modeling for data for the 2023 analytical year, EPA determined that the Good Neighbor SIP obligations would be addressed by the CSAPR Update.

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New York 126 Petition Technical Deficiencies

- 2023 is the appropriate year for assessing Good Neighbor SIP requirements related to the 2008 and 2015 ozone NAAQS
- Regarding the 2015 ozone NAAQS, EPA appropriately selected 2023 as the future analytic year "because it aligns with the anticipated attainment year for the Moderate ozone nonattainment areas."
- 2023 aligns with the last full ozone season before the attainment year for Moderate ozone nonattainment areas.

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New York 126 Petition Technical Deficiencies

A technically conservative element in EPA's decision to deny the New York petition is that air quality modeling in 2023 does not account for legally mandated controls on local sources

a. Many portions of New York are subject to additional nonattainment area controls

b. Need for additional control on certain older simple cycle combustion turbines

c. Mobile sources have the largest impact on New York's monitored air quality

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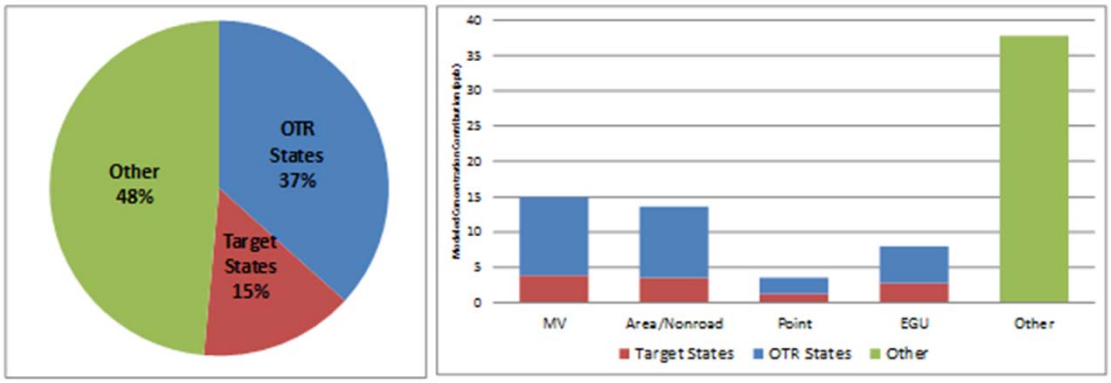
New York 126 Petition Technical Deficiencies
Source: 2017 EPA CSAPR platform

360850067 - Susan Wagner HS - 2017 OSAT Results



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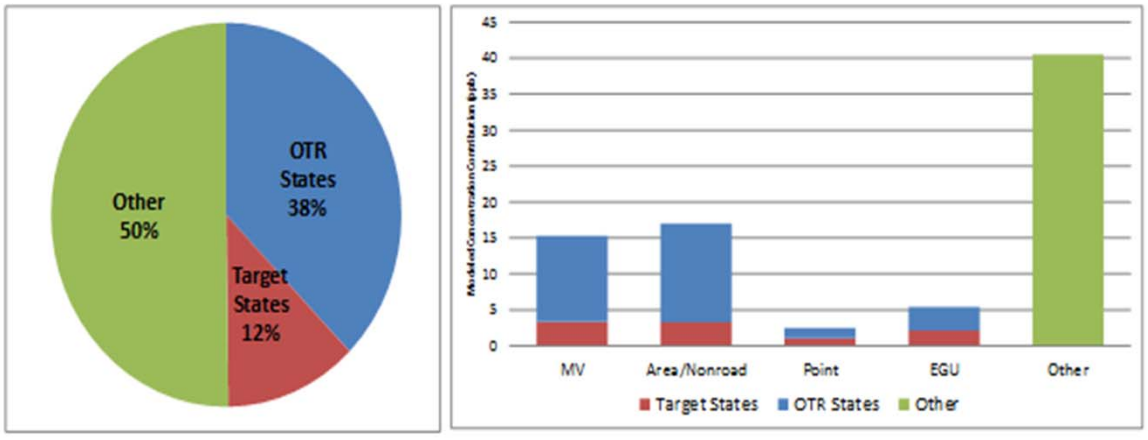
New York 126 Petition Technical Deficiencies
Source: 2017 EPA CSAPR platform

361030002 - Babylon - 2017 OSAT Results



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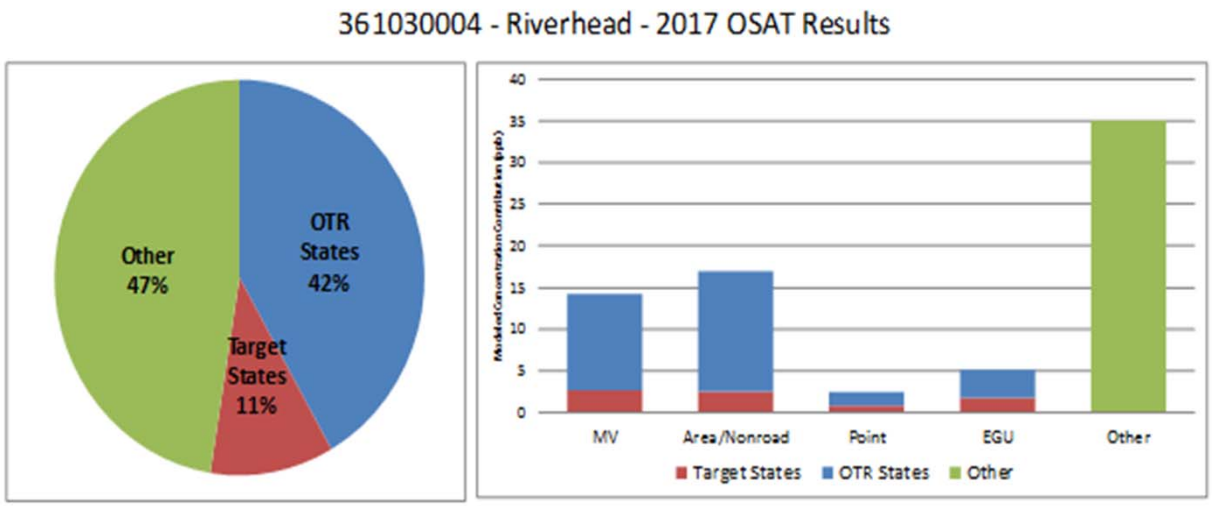
New York 126 Petition Technical Deficiencies
Source: 2017 EPA CSAPR platform



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New York 126 Petition Technical Deficiencies

- EPA's analysis confirms that any remaining ozone problems in New York are more related to local sources than to sources in upwind states
- New York's petition incorrectly characterizes the emissions of targeted states and sources

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New York 126 Petition Technical Deficiencies

Comparison of data used by New York to characterize 2017 EGU emissions with actual EGU NOx emissions in 2017 as reported to EPA's CAMD office

	2017 Ozone Season NOx Tons from All EGUs			
State / Region	Modeled CSAPR Base; IPM 5.14	Actual as Reported to CAMD/CEM	CSAPR-CEM Delta	Delta from CSAPR (%)
IL	15,706	14,531	1,175	-7%
IN	43,842	22,419	21,423	-49%
KY	38,968	20,053	18,915	-49%
MD	4,348	2,939	1,409	-32%
MI	32,167	16,958	15,209	-47%
OH	29,599	21,005	8,595	-29%
PA	50,870	14,435	36,435	-72%
VA/DC	10,438	8,069	2,369	-23%
WV	25,582	18,463	7,119	-28%
Sec 126 Subtotal	**251,521**	**138,872**	**112,649**	**-45%**
CT	493	430	63	-13%
DE	362	459	(97)	27%
NJ	4,001	1,684	2,317	-58%
NY	7,396	5,614	1,782	-24%
North East	2,730	1,611	1,119	-41%
WI	8,690	8,103	586	-7%
NC	21,929	16,474	5,456	-25%
TN	6,383	10,135	(3,752)	59%
South	80,999	54,262	26,737	-33%
AR	11,888	12,811	(923)	8%
MO	20,572	15,400	5,172	-25%
OK	24,329	11,043	13,286	-55%
TX	66,585	54,375	12,210	-18%
West	180,994	148,488	32,506	-18%
US Total	**688,872**	**479,761**	**209,111**	**-30%**

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New York 126 Petition Technical Deficiencies

- Emission trends for states targeted by the petition have been decreasing for many years and will continue to do so for the foreseeable future
- The 2008 and 2015 "Good Neighbor" SIPs resolve the issues raised by the New York petition

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New York 126 Petition Technical Deficiencies

New York's request to have emission control limits set on a daily basis has been previously considered and rejected by EPA and should also be rejected here

Consideration of Exceptional Events that occurred in 2016 would bring all New York monitors into attainment with the 2008 Ozone NAAQS. Failure by New York to invoke EPA's exceptional events rule or otherwise to exclude certain Canadian wildfire events from 2016 ambient monitoring data provides an additional basis for denial of the petition

New York 126 Petition Technical Deficiencies

- International emissions must be addressed as an integral part of the consideration of this petition.
- New York failed to account for international emissions as required under CAA §179B

New York 126 Petition Technical Deficiencies

- New York relied on the Dunkirk Monitor but that monitor attains both the 2008 and 2015 Ozone NAAQS
- The Dunkirk monitor (360130006) is cited in the petition as a monitor that has "the potential to exceed the NAAQS – particularly, the updated 2015 standards – due to transported ozone pollution."
- But design values at that monitor have been consistently below the 2015 ozone NAAQS and would be even lower if measurements related to 2016 Canadian wildfire exceptional events are excluded

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New York 126 Petition Technical Deficiencies

- New York provided no analysis of air quality or interstate transport for any time period after 2017, even though 2023 is the critical assessment date

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New York 126 Petition Technical Deficiencies

- New York did not apply an EPA approved modeling technique to perform its analysis
  - New York based its modeling on days when the model predicted concentrations as low as 60 ppb – far below an ozone NAAQS.
  - By permitting a maximum impact value to be calculated on modeled low concentration days, New York potentially overstated impact of identified sources on days when nonattainment or maintenance concentrations are observed

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New York 126 Petition Technical Deficiencies

- New York did not apply an EPA approved modeling technique to perform its analysis
  - New York examined only a portion of the ozone season rather than the entire season because of "resource constraints;" however, in performing its analysis on this limited basis, New York failed to determine if other factors could be influencing its monitors during the remainder of the ozone season.

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Current Status

- September 20, 2019: EPA signed final denial of the petition.
- Not yet published in the Federal Register

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Current Status

- Basis for denial:
- New York has not met burden of demonstrating that named sources emit or would emit ozone-forming pollutants at levels that violate Clean Air Act's good neighbor provision for the 2008 and 2015 ozone standards.
- For all but 2015 standards in New York City area, petition did not identify (nor did EPA independently identify) relevant air quality problems.
- Petition did not adequately identify additional available controls that could be cost-effectively applied at the identified sources.

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Current Status

- Stay tuned-
  - EPA Fact Sheet on denial notes that "To address the good neighbor provision for the 2008 ozone standards, EPA issued the Cross-State Air Pollution Rule Update (CSAPR Update Rule) in October 2016. The final rule limited emissions of oxides of nitrogen from power plants during the ozone season in certain states. In the rule, EPA assessed whether there are cost-effective reductions that can be applied to power plants in those states and established corresponding emissions budgets. On December 6, 2018, EPA finalized a determination that the CSAPR Update fully addressed interstate ozone transport obligations for 20 states in the eastern U.S., including those states named in the New York petition, with respect to the 2008 ozone standards.

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Current Status

- Stay tuned-
  - September 13, 2019: DC Circuit Court remanded CSAPR Update Rule to EPA to address Court's concern that rule allows an upwind state with significant contribution to continue that significant contribution beyond the attainment date applicable to downwind states
  - Principal focus of Court's decision is that CSAPR Update did not seek to reconcile attainment deadline of downwind states with date by which upwind states must eliminate significant contribution

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Current Status

- Stay tuned-
- October 1, 2019: DC Circuit vacated the CSAPR Close-Out Rule noting that, by EPA's own admission, the CSAPR Close-Out rule relied on the same statutory interpretation of the Good Neighbor provisions as the Court rejected in the Wisconsin case involving the CSAPR Update Rule. The Court went on to note several alternatives that EPA might be able to pursue; however, the Court notes that none of those have yet been invoked by EPA.
- Recognizing that a petition for rehearing in the CSAPR Update Rule must be filed by October 28, 2019, the Court has set the same date for petitions for rehearing in connection with the CSAPR Close-Out Rule case.

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QUESTIONS

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