

February 1, 2016

Gina McCarthy, Administrator
United States Environmental Protection Agency
EPA Docket Center
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OAR-2015-0500

Re: *Proposed Rule - Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS*

Dear Administrator McCarthy:

The Department of Energy and Environmental Protection (Department) is taking this opportunity to provide comment on the United States Environmental Protection Agency's (EPA) proposed Cross-State Air Pollution Rule Update for the 2008 Ozone National Ambient Air Quality Standard (NAAQS) (Federal Register Vol. 80 No.232, Page 75706, December 3, 2015).

The Department appreciates EPA's efforts to update the Cross-State Air Pollution Rule for the 2008 ozone NAAQS. For over forty years, air quality in Connecticut has failed to meet EPA's national health-based standards for ground-level ozone, which has subjected generations of our citizens to unhealthy air and negative health impacts. While air quality in Connecticut has improved substantially over this period, the ultimate success of providing clean air to our citizens is predominately dependent upon obtaining emissions reductions from sources in upwind states. This proposal is a step forward but as EPA's technical analysis demonstrates, it fails to fully address upwind states' significant contributions that prevent Connecticut from attaining the 2008 ozone NAAQS.

Section 110(a)(2)(D) of the Clean Air Act (CAA) requires every state to adopt in its state implementation plan (SIP) adequate provisions to prohibit sources within the state from emitting at levels which will contribute significantly to non-attainment in, or interfere with maintenance by, any other state. For the 2008 ozone NAAQS, the CAA required states submit these "Good Neighbor" SIPs addressing interstate transport by March 2011. Nearly five years later, emission reductions and Good Neighbor SIPs necessary to address transport from upwind states remain inadequate and, as a result, Connecticut continues to monitor ozone levels exceeding the 2008 ozone NAAQS. Furthermore, EPA's modeling projects continued non-attainment in the southwest counties of Connecticut into 2017, even after accounting for upwind emission reductions from EPA's proposed rule.¹

While EPA characterizes the reductions in this proposal as "a down payment towards the full transport remedy mandated by the CAA," the timeframe and actual reductions fall woefully short of a full remedy. Although

¹ EPA, November 2015. Technical Support Document (TSD) for the Cross-State Air Pollution Rule for the 2008 Ozone NAAQS.

Connecticut agrees that this down payment should be finalized as soon as possible, additional upwind reductions are crucial for the NY-NJ-CT area to attain the ozone NAAQS. Resultantly, EPA must move forward immediately to propose and expeditiously implement an additional FIP that requires cost-effective control strategies for non-EGUs and uncontrolled EGUs. Waiting to couple the final remedy for the 2008 NAAQS with actions for the 2015 NAAQS will lead to unnecessary additional delays and prolonged negative health impacts.

While Connecticut agrees that EPA must move forward with the Cross-State Air Pollution Rule Update as quickly as possible, we question the legal adequacy of the rule itself in that it fails to set state-specific NOx reduction requirements that fully address significant contributions to Connecticut's ozone problem. This is increasingly frustrating to Connecticut as this is not the first (or even second) time EPA has proposed an inadequate regional interstate transport rule at odds with the statutory language of the CAA.

Since 1998, EPA has developed four regional rules to address cross-state air pollution transport under CAA section 110(a)(2)(D). Beginning in 1998, the successive rules were the NOx SIP Call, the Clean Air Interstate Rule, the Cross-State Air Pollution Rule, and now the Cross-State Air Pollution Rule Update. During the same period EPA was developing these transport rules, the ozone NAAQS became progressively more stringent to better protect public health and welfare consistent with the best available science.

With each of EPA's transport rules and ozone NAAQS revisions, litigation followed. Over the years, the transport rules have been stayed and remanded, in whole or in part, and the strengthening ozone NAAQS revisions have been legally challenged. The reality, therefore, is that this is now EPA's fourth effort at promulgating a transport rule as the ozone NAAQS has changed in the face of legal uncertainty created through litigation.

With this most recent effort, EPA is asserting "unique circumstances" as it provides an apparent disclaimer similar to past transport rule proposals - that this latest proposed rule only provides a partial step to addressing a given state's significant contribution to downwind air pollution impacts.² This disclaimer has grown stale.

In light of the long history EPA has in promulgating transport rules, EPA's citation of "unique circumstances" as a basis for a partial, insufficient transport rule rings hollow. The trials and tribulations of each transport rule and NAAQS revision are reasonably foreseeable in the context of past rulemakings. Fundamentally, Congress did not give EPA the discretion to absolve states from fully addressing their significant contribution responsibilities within the statutory timeline set by the CAA. By extension, EPA is compelled to issue FIPs that fully address the states' significant contributions.

The Department's technical comments on the proposed Cross-State Air Pollution Rule Update are set forth in Attachment A hereto.

Sincerely,



Michael J. Sullivan
Deputy Commissioner

² 80 Fed. Reg. at 75715.

Attachment A

Connecticut Department of Energy and Environmental Protection's Detailed Comments on the Proposed CSAPR Update (Docket ID No. EPA-HQ-OAR-2015-0500)

Background

On December 3, 2015, the Environmental Protection Agency (EPA) published a proposal¹ to update the Cross-State Air Pollution Rule (CSAPR) to address interstate air quality impacts with respect to the 2008 ozone (O₃) National Ambient Air Quality Standards (NAAQS). The current version of CSAPR, promulgated on July 6, 2011, addresses interstate O₃ pollution under the 1997 O₃ NAAQS and fine particulate matter (PM_{2.5}) under the 1997 and 2006 PM_{2.5} NAAQS. EPA's proposal follows the general framework of the original CSAPR, finding that ozone-season nitrogen oxides (NO_x) emissions in 23 eastern states affect the ability of downwind states to attain and maintain the 2008 NAAQS. EPA proposes to issue Federal Implementation Plans (FIPs) to update the existing CSAPR NO_x ozone-season budgets for electric generating units (EGUs) and implement the budgets via the CSAPR NO_x ozone-season allowance trading program. The EPA plans to finalize the FIP for any state that does not have an approved SIP addressing its contribution by the date this proposal is finalized. Implementation of the final rule would commence in the 2017 ozone season. EPA also indicates in the preamble² that this proposed rule is a "partial remedy", representing "immediately available and cost-effective emission reductions that are achievable by the 2017 ozone season." EPA also acknowledges that the proposed requirements "may not be sufficient to fully address these states' good neighbor obligations" for the 2008 NAAQS.

The Connecticut Department of Energy and Environmental Protection (the Department) appreciates the opportunity to comment on the proposed CSAPR update, as cross state air pollution is responsible for an overwhelming portion of Connecticut's ozone problem. EPA's most recent transport modeling³ used for this proposal indicates that emissions from outside Connecticut are responsible for 94% of high ozone levels at the Westport monitor, which is located along Connecticut's southwest coastline and has a 2015 design value of 84 parts per billion (ppb), the highest in the eastern US. Connecticut's geographic location and predominant meteorological patterns during ozone events place the state downwind of emissions from large urban areas, EGUs and other industrial sources in upwind states that contribute to these levels of overwhelming transport. Figure 1 summarizes the findings of EPA's transport modeling for the Westport monitor, illustrating the magnitude of contributions from areas upwind of Connecticut and the importance of achieving a full solution to transport as soon as possible for the 2008 NAAQS.

Department Comments

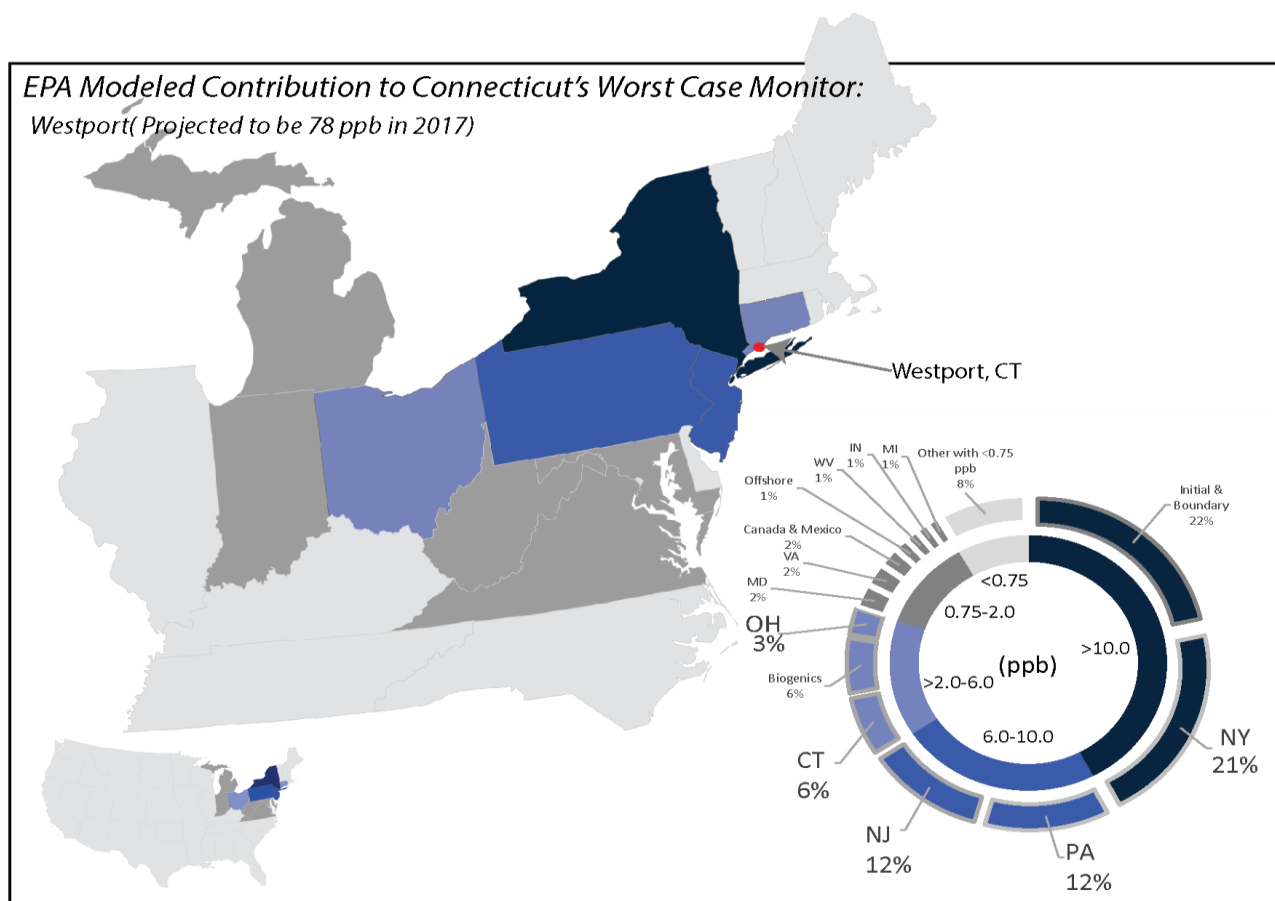
Given the crucial role that transport plays in causing Connecticut's ozone problem, the Department urges EPA to move forward as quickly as possible to finalize this proposal and to both propose and finalize the remainder of the necessary remedy for the 2008 NAAQS as expeditiously as possible.

¹ [80 FR 75706](#)

² [80 FR 75714](#)

³ See: <http://www.epa.gov/airmarkets/proposed-cross-state-air-pollution-update-rule>

Figure 1. EPA Modeled Contributions to Connecticut's Worst Case Monitor³



Comment 1: Finalize the Proposal and Then Expeditiously Promulgate a Full Transport Remedy

Promulgation of a good neighbor FIP is long overdue for several reasons. March 12, 2011 remains the legally applicable deadline⁴ for good neighbor SIPs for the 2008 NAAQS given that the United States Supreme Court overturned the DC Circuit opinion on CSAPR. In addition, EPA notes in the proposed CSAPR update that a court order requires final action on certain state’s good neighbor SIPs by January 29 and June 7, 2016 and that the proposed FIP must be finalized by June 2, 2016 because the Clean Air Act’s (CAA) 2-year FIP clock was triggered by the June 2, 2014 Supreme Court’s judgment in *EPA v. EME Homer City*.⁵ Furthermore, the partial remedy proposed by EPA focuses on emission reductions that can be implemented in time for 2017, the required attainment year for moderate nonattainment areas. For all these reasons, the Department urges EPA to finalize the proposal as soon as possible to ensure that the partial remedy can be implemented by 2017.

The Department also points out that the EPA’s CAA FIP requirement and the mandates of the court orders mentioned above will not be fully satisfied until all states have implemented emission reductions that fully satisfy the CAA Sec. 110(a)(2)(D) good neighbor requirements for the 2008 NAAQS.

⁴ 80 FR 39964.

⁵ 80 FR 75720.

Therefore, EPA should expeditiously act to propose and finalize a supplemental FIP to provide the full remedy. That proposal should examine all source categories⁶ (e.g., EGUs without SCR or SNCR, non-EGU point, area and mobile sources) and not be subject to lead-time restrictions, such as the 2017 implementation restriction used for the partial remedy which resulted in cost-effective control measures not being considered. EPA should also not delay action on the full remedy in an effort to assess how well the partial remedy plays out in 2017. Doing so will further delay necessary reductions and attainment of the 2008 NAAQS. Likewise, EPA should not pair the full remedy for the 2008 NAAQS with anticipated FIP actions for the 2015 NAAQS, which cannot occur until after the October 2018 deadline for state good neighbor SIPs for the 2015 NAAQS.

Comment 2: Cost Threshold and Allowance Trading Must be Equitable

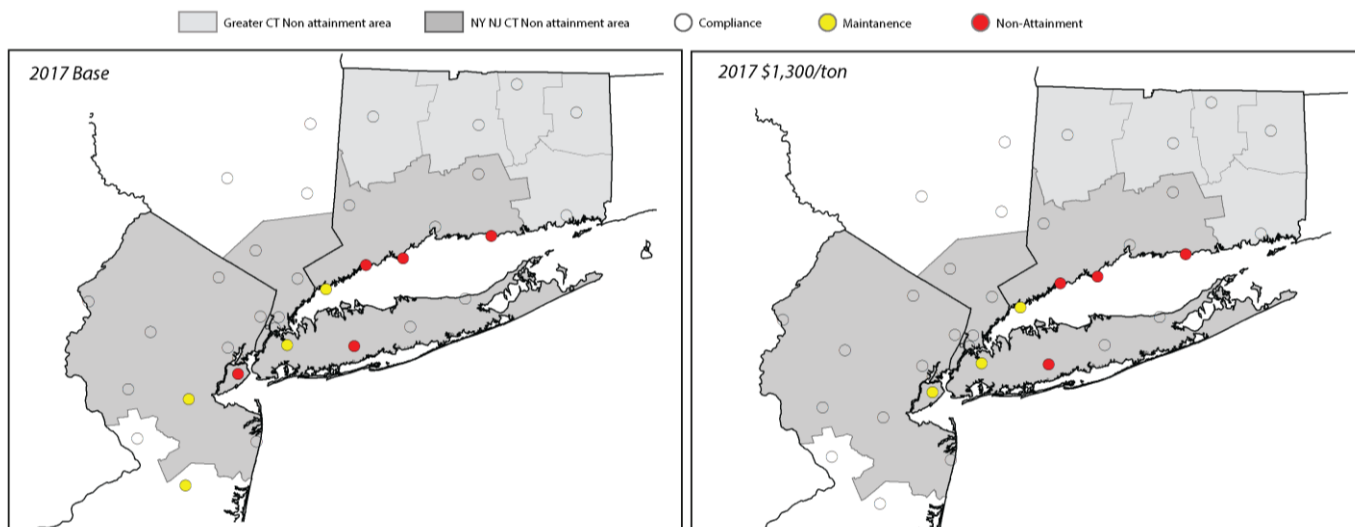
EPA's proposed CSAPR update is based on an EGU cost threshold of \$1,300/ton. EPA evaluated EGU NO_x costs ranging from \$500/ton to \$10,000/ton, but limited candidate measures to those that could be implemented by the 2017 ozone season. Therefore, new SCR and SNCR controls on uncontrolled EGUs were not considered because projected installation timelines extended beyond 2017. Based on an analysis of potential emission reductions and corresponding air quality improvements, EPA concluded that cost thresholds above \$1,300/ton would not produce significant additional reductions that would justify the higher costs. In the proposal, EPA requested comments on alternate cost thresholds of \$3,400/ton and \$500/ton.

The Department does not agree that the \$1,300/ton level is appropriate. Although the \$1,300/ton threshold does provide minimal improvement to the NY-NJ-CT area (see Figure 2), multiple monitors remain in nonattainment in 2017. Since EPA's proposal is only a partial remedy for the 2008 NAAQS, it should provide as much relief as possible by 2017, while downwind areas wait for EPA to follow through with a more comprehensive FIP that examines and implements measures that cannot be implemented until after 2017. At a minimum, EPA should establish budgets consistent with the \$3,400/ton cost threshold.⁷ As summarized in Table VI.C-1 of the proposed rule preamble, the \$3,400 threshold would include widespread availability of restarting idled SNCRs by 2017 (in addition to full operation of previously operating post-combustion controls, restarting of idled SCRs and state-of-the art post-combustion controls, all of which occur at lower cost levels). The \$3,400/ton level is also comparable to the adopted NO_x SIP Call ozone season cost-effective threshold (adjusted to 2014 dollars). Therefore, there is no reason that already installed but idled/underutilized SCR and SNCR controls that can be fully implemented at the \$3,400 cost-effective level by 2017 should be excluded from the partial remedy FIP.

⁶For example, the CSAPR Update docket includes an analysis of non-EGU point sources ("[Assessment of Non-EGU NO_x Emission Controls, Cost of Controls, and Time for Compliance](#)"), where EPA identified cost-effective ozone season NO_x reductions of up to 90,000 tons, comparable to the 85,000 ton reduction estimated to be achieved by the CSAPR update proposal. EPA should re-assess those non-EGU reductions based on current RACT in the Northeast, and promulgate a supplemental FIP including cost-effective measures for non-EGUs and all other sectors (e.g., uncontrolled EGUs, aftermarket catalysts, etc).

⁷ It is also important to note that there are two sites that receive a critical air quality benefit at higher cost/ton thresholds in this proposal, removing them from the "maintenance" concern in 2017: Philadelphia, Pennsylvania (PA) at \$3,400/ton and Harris, Texas at \$10,000/ton.

Figure 2. NY-NJ-CT Non-Attainment Area Projected DVs at Various CSAPR Update Proposals



As discussed earlier, EPA must move quickly to promulgate a supplemental FIP to provide a full transport remedy for the 2008 NAAQS. When doing so, EPA should evaluate all control measures well beyond the \$3,400/ton level, as they are routinely considered by the Northeast states when determining RACT and RACM. Delaware has estimated cost effectiveness threshold up to \$12,300 for NO_x RACT.⁸ New York Department of Environmental Conservation defines economically feasible thresholds for NO_x controls equivalent to \$5,000/ton in 2012 dollars.⁹ The New Jersey Department of Environmental Protection adopted RACT rules in 2009 that determined reasonable cost effective thresholds up to \$44,000/ton for controls units that are high electric demand day units on high electric demand days (this cost is annualized to \$4,400) and up to \$18,000/ton for boilers.¹⁰ EPA should also expand the source categories considered to include uncontrolled EGUs, non-EGUs, area, and mobile sources, as mentioned earlier.

Connecticut is also concerned with EPA's cost-effective threshold used to justify controls. While EPA's proposal details the consideration of cost in determining if there is "over-control" in a state, it lacks consideration if states will "under-control". While EPA has a legal obligation to avoid over-control, it also has a legal obligation to avoid "under-control". Connecticut believes EPA is not maximizing attainment at the proposed cost threshold, thereby allowing "under-control" in upwind states that contribute significantly to Connecticut's non-attainment.

Regardless of the cost threshold, Connecticut does not support trading of nitrogen oxides (NO_x) allowances between groups of states whose NO_x budgets were set for different ozone NAAQS using different NO_x reduction cost thresholds. Specifically, Connecticut does not support trading of NO_x allowances between states only subject to the older Cross-State Air Pollution Rule for the 1997 ozone NAAQS (cost threshold of \$500/ton) with states covered under the Cross-State Air Pollution Rule Update for the 2008 ozone NAAQS whose budgets are determined at a different cost threshold. If EPA is determining that some state groups do not significantly contribute to downwind

⁸ [Delaware Register of Regulations, Vol. 16, Issue 1 at 140, Table 3-4.](#)

⁹ NY, DEC. 2013. [DAR-20 Economic and Technical Analysis for Reasonably Available Control Technology \(RACT\).](#)

¹⁰ NJ, DEP. 2009. [Air Pollution Control and Prohibition of Air Pollution by Volatile Organic Compounds and Oxides of Nitrogen](#)

nonattainment and maintenance areas for a different ozone NAAQS, then there is no physical nexus between NO_x allowances traded across those state groups and the downwind ozone nonattainment or maintenance problem the different state groups' NO_x reductions must address. Creating allowance surrender ratios cannot resolve this lack of nexus.

Similarly, Connecticut does not support NO_x allowance trading between state groups covered by the Cross-State Air Pollution Rule Update if their budgets were determined in the final rule using different cost thresholds (e.g., \$1,300/ton and \$3,400/ton). If the degree of downwind contribution justifies a higher cost threshold in some states than others, then those NO_x reductions are needed in those states, and cannot be shifted to lower cost sources out-of-state. As EPA notes, this is similar to the existing sulfur dioxide allowance trading separation between Group 1 and Group 2 states under the Cross-State Air Pollution Rule.

Comment 3: Specific Unit Corrections to IPM Projections

The Department's review of parsed files from the proposal identified several Connecticut EGUs that were projected by IPM to retire or be inactive in 2017, but are actually expected to operate based on commitments made through the ISO-NE Forward Capacity Market (FCM) in 2017 and beyond (see Table 1). The units projected by IPM to retire represent 1,271 MW of generation capacity and those projected to be inactive represent 1,215 MW of generation capacity. The total of 2,486 MW is approximately 30% of total Connecticut EGU capacity committed in the FCM for the summer of 2017.¹¹ These discrepancies between IPM predictions and FCM commitments continue to in 2019 (with the exception of PSEG Bridgeport Harbor Unit 4 which is a static de-list in the FCM beginning in the summer of 2018).¹² It should be noted that, in EPA's previous Transport Rule Proposal IPM projected that many of these units would not operate in 2012.^{13,14} The units projected as not operating have actually continued to operate since 2012 and remain contractually obligated to operate through 2019.

¹¹ Forward Capacity Auction 2017-2018 Obligations (<http://www.iso-ne.com/markets-operations/markets/forward-capacity-market/>)

¹² Forward Capacity Auction 2018-2019 Obligations (<http://www.iso-ne.com/markets-operations/markets/forward-capacity-market/>)

¹³ Docket ID: EPA-HQ-OAR-2009-0491

¹⁴ The Department's comments for this proposal can be found at: <http://www.ct.gov/deep/lib/deep/air/ozone/ozoneplanningefforts/att-a.pdf>

Table 1. Units with Discrepancies between IPM Projections for Proposal and ISO-NE 2017-2018 & 2018-2019 FCM

Facility and Unit	ORIS Number	ISO-NE 2017-2018 FCM Status ¹¹	ISO-NE 2018-2019 FCM Status ¹²	IPM Proposed Projection Status ¹⁵
Bridgeport Harbor Unit 3	568	Committed	Committed	Retired
Bridgeport Harbor Unit 4	568	Committed	Static Delist	Inactive; not listed
Branford Unit 10	540	Committed	Committed	No emissions
COS COB Units 10-14	542	Committed	Committed	No emissions
Devon Unit 10	544	Committed	Committed	No emissions
Montville Units 5 & 6	546	Committed	Committed	Retired
Montville 10 & 11	546	Committed	Committed	No emissions
Franklin Dr Unit 10	561	Committed	Committed	No emissions
Waterside Units 4, 5 & 7	56189	Committed	Committed	No emissions
Middletown Unit 4	562	Committed	Committed	Retired
Middletown Unit 10	562	Committed	Committed	No emissions
John Street Unit 1	56256	Retired 2011	Retired 2011	Active but no emissions
John Street Unit 3,4,5	56256	Retired 2013	Retired 2013	Active but no emissions
So. Meadow Station Units 11-14	563	Committed	Committed	No emissions
Torrington Terminal	565	Committed	Committed	No emissions
Norden Units 1-3	57689	Committed	Committed	No emissions
New Haven Harbor Unit 1	6156	Committed	Committed	No emissions

The Department emphasizes its support for finalizing the partial remedy provided by this proposed FIP as soon as possible. If the corrections described above cannot be included in the final rule, EPA should incorporate them into the final remedy FIP. The Department also continues to encourage EPA to consider more realistic tools to base its power sector modeling on, such as Eastern Regional Technical Advisory Committee Electric Generation Unit Forecasting Tool (ERTAC EGU tool).

Comment 4: Use of Banked Allowances Should Be Limited During Program Transition

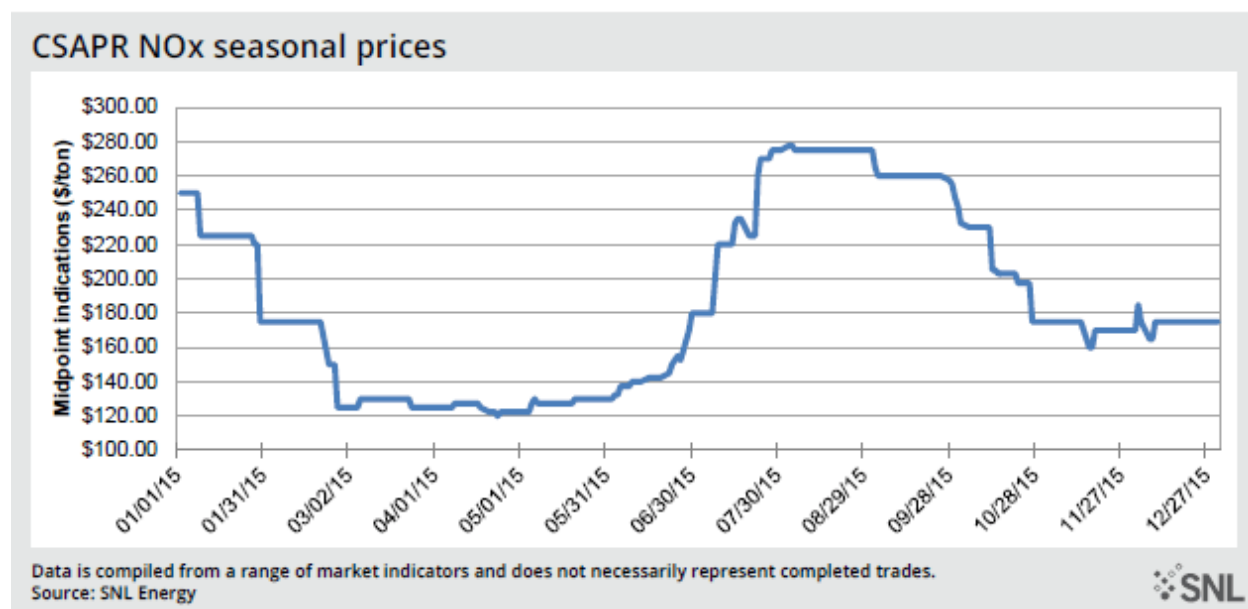
The Department is concerned that the expected large bank of low cost NO_x allowances has the potential to result in actual EGU NO_x emissions well above the proposed budget levels in 2017 and subsequent early years of the updated CSAPR program. EPA notes that ozone season banked allowances from the current CSAPR program may total more than 210,000 tons by the start of the 2017 ozone season, more than double the emission reductions EPA expects to occur due to the proposed FIP at the \$1,300/ton cost threshold. When considered together with the low cost of banked allowances, which ranged from about \$120/ton to \$280/ton during 2015 (see Figure 3) with current values of about \$190/ton, there is a strong

¹⁵ Parsed File: 5.15 OS NO_x Proposed, 2018: 5.15 OS NO_x Proposed” Docket ID: EPA-HQ-OAR-2015-0500-0163

probability that many sources will continue to purchase allowances rather than run controls. The potential magnitude of banked allowances could result in actual emissions in 2017 and beyond well above budget levels, thus negating the intent of the proposed FIP to provide as much remedy as possible by 2017. EPA's proposal discusses surrender ratios of 2:1 and 4:1 to address these concerns.

The Department strongly encourages EPA to adopt the most stringent approach possible for use of banked allowances, to ensure that the goal of the rule is achieved and real emissions reductions occur. One alternative is to adopt a surrender ratio based on the finalized FIP cost level and the current value of banked allowances. For example, if the final FIP uses a \$1,300/ton cost level, a ratio of 7:1 would result. If EPA finalizes the FIP using the \$3,400/ton level (see Comment 2 above), a ratio of 18:1 would result.

Figure 3. Seasonal NOx Allowance Prices in 2015¹⁶



Comment 5: Short-Term Emissions Should be Addressed

In eastern states, the highest measured ozone days tend to occur on the hottest days of the summer when energy demand is often at its highest. Emissions are often disproportionately higher on these days due to the dispatch of less efficient resources that may also have higher emission rates per unit of energy output. The Department discussed this concern in previous comments on the CSAPR program for the 1997 NAAQS.¹⁷ Recent analyses indicate this remains a relevant concern for the current proposal. Figure 4 displays the emissions by unit type and fuel for EGUs on two poor air quality days in Connecticut and three neighboring states. Note the large temporary increases in emissions, including from base load units (e.g., PA coal units).

Seasonal budget programs are not optimally designed to address the emission spikes that can occur on high electricity demand days (HEDD). Seasonal programs can even lead to unintended consequences, such as sources choosing to limit operation of installed controls during HEDD events to maximize energy output, and payments received, while still fully complying with the seasonal requirements. The Department encourages EPA to adopt daily emission limitations to complement those in seasonal programs. At a minimum, for the current FIP proposal, EPA should require all units with installed SCRs

¹⁶ [January 6, 2016. SNL Financial. Luhavaliija, Amanda.](#)

¹⁷ <http://www.ct.gov/deep/lib/deep/air/ozone/ozoneplanningefforts/att-a.pdf>

and SNCRs to operate the controls at an optimal level at all times, subject to reasonable flexibilities specified to accommodate startup/shutdown limitations. Future FIP updates should include daily caps or performance standards to address HEDD EGU emission spikes that contribute to unhealthy ozone levels in downwind areas.

Figure 4. CAMD Hourly Emissions July 7-8, 2014

Hourly Emissions (lbs)
Note: Axis Magnitudes Vary

