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May 29, 2015

Mr. Joseph Constance  
Chairman  
New Jersey Clean Air Council  
P. O. Box 420  
Trenton, NJ 08625

Re: April 14, 2015 Public Hearing

Dear Mr. Constance:

I very much appreciate the opportunity that was provided to testify on behalf of the Midwest Ozone Group<sup>1</sup> at the Council's public hearing on April 14, 2015 in Trenton on the topic "Air Pollution Knows No Bounds: Reducing Smog Regionally." The presentations and testimony offered at the hearing were very insightful and enlightening.

I have given some thought to the implications of several of the statements offered. Knowing that the Council itself will be reviewing much of the same material to prepare its recommendations to Commissioner Bob Martin of the New Jersey Department of Environmental Protection, I wish to share with you in this letter several conclusions and observations regarding the current ozone attainment status of New Jersey and the Northeast and the sources that may be causing or contributing to any residual non-attainment with the current ozone standard.

**1. There is widespread attainment of the 75 ppb ozone NAAQS in the Northeast.**

The presentation and testimony of USEPA Region 2 at the hearing offers a chart and data (Figure 1) from which the agency concludes that there are 11 nonattainment receptors in the East. Figure 1. USEPA, slide 10, New Jersey Clean Air Council Hearing, April 14, 2015.

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<sup>1</sup> The Midwest Ozone Group is an affiliation of companies, trade organizations, and associations which have drawn upon their collective resources to advance the objective of seeking solutions to the development of legally and technically sound national ambient air quality programs. MOG members operate 85,000 MW of fossil-fuel fired generation in more than ten states.



**2009 – 2013 and 2018 Average and Max DVs (ppb)  
at Nonattainment Receptors in the East**

State	County	Site ID	2009 - 2013 Avg DVs	2009 - 2013 Max DVs	2018 Avg DVs	2018 Max DVs
Connecticut	Fairfield	90013007	84.3	89.0	76.7	81.0
Connecticut	Fairfield	90019003	83.7	87.0	77.6	80.6
Maryland	Harford	240251001	90.0	93.0	79.3	82.1
New York	Suffolk	361030002	83.3	85.0	73.2	79.8
Texas	Brazoria	480391004	88.0	89.0	80.5	81.4
Texas	Denton	481210034	84.3	87.0	77.0	79.5
Texas	Harris	482010024	80.3	83.0	76.4	79.0
Texas	Harris	482011034	81.0	82.0	76.6	77.6
Texas	Harris	482011039	82.0	84.0	77.7	79.6
Texas	Tarrant	484392003	87.3	90.0	79.7	82.2
Texas	Tarrant	484393009	85.0	86.0	78.3	78.3

As can be seen from Figure 1, seven of the identified receptors are in Texas and are not affected by the same group of states that are part of the inquiry related to the four sites in the Northeast. Because there appears to be almost no air quality connection between these two regions, the transport issues in the Northeast must necessarily be separated from the transport issues affecting Texas. Accordingly, the remainder of these comments will address the following monitors in the Northeast and the sources that influence them:

<u>State</u>	<u>County</u>	<u>Site ID</u>
Connecticut	Fairfield	90013007
Connecticut	Fairfield	90019003
Maryland	Harford	240251001
New York	Suffolk	361030002

What is notably missing from the USEPA data is any mention of the most recent air quality measurements for these monitors.

As was illustrated by the data included in my presentation at the hearing (Figure 2), the 2014 Design Values (DV) for the Harford, Maryland and Suffolk, New York monitors show both to have achieved levels below the 75.9 ppb level needed to show attainment. Harford Maryland has a 2014 DV of 75 ppb and Suffolk, New York has a 2014 DV of 72 ppb.

Figure 2. Ozone Design Values for the Worst Case Monitors in Ten Northeast States; Midwest Ozone Group, slide 9, New Jersey Clean Air Council Hearing, April 14, 2015.

Monitor	County	4th Highest MDA8 (ppb)				3yr Design Value (ppb)			
		2011	2012	2013	2014*	2011	2012	2013	2014*
240251001	Harford, Maryland	98	86	72	67	92	93	85	75
361030002	Suffolk, New York	89	83	72	61	84	85	87	72
90019003	Fairfield, Connecticut	87	89	86	61	79	85	87	79
421010024	Philadelphia, Pennsylvania	89	85	68	66	83	87	80	73
340150002	Gloucester, New Jersey	92	87	73	66	82	87	84	75
250070001	Dukes, Massachusetts	78	82	65	58	76	80	75	68
440090007	Washington, Rhode Island	74	82	79	60	73	78	78	74
100031007	New Castle, Delaware	78	82	62	71	75	80	74	72
330074001	Coos, New Hampshire	68	71	69	65	69	70	87	68
500030004	Bennington, Vermont	59	67	62	50	65	64	62	60

\* As of 30 Sept 2014

Indeed, USEPA issued a Federal Register notice on March 18, 2015 proposing to make a determination that the Baltimore Maryland Moderate Area (which includes the Harford site) has now attained the 75 ppb ozone NAAQS. 80 Fed. Reg. 14041 (March 18, 2015).

Accordingly, the only two monitors in the Northeast which have current Design Values that place them in nonattainment are the two monitors identified in Figure 1 that are located at Fairfield Connecticut.

Equally significant is that the modeling data presented by the Maryland Department of the Environment at the hearing shows that these two remaining Connecticut monitors will be below the 75.9 ozone NAAQS attainment level in 2018 without giving consideration to anything more than emission reductions that are anticipated with regulatory programs already on-the-

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books. See Maryland presentation, slide 29, New Jersey Clean Air Council Hearing, April 14, 2015.

Accordingly, all sites in the Northeast are already in attainment with the current 75 ppb ozone NAAQS or, by 2018, will be in attainment with the 75 ppb ozone NAAQS as the result of emission reductions that will occur through implementation of existing regulatory programs.

## 2. Significant additional emission reductions will further reduce ozone concentrations.

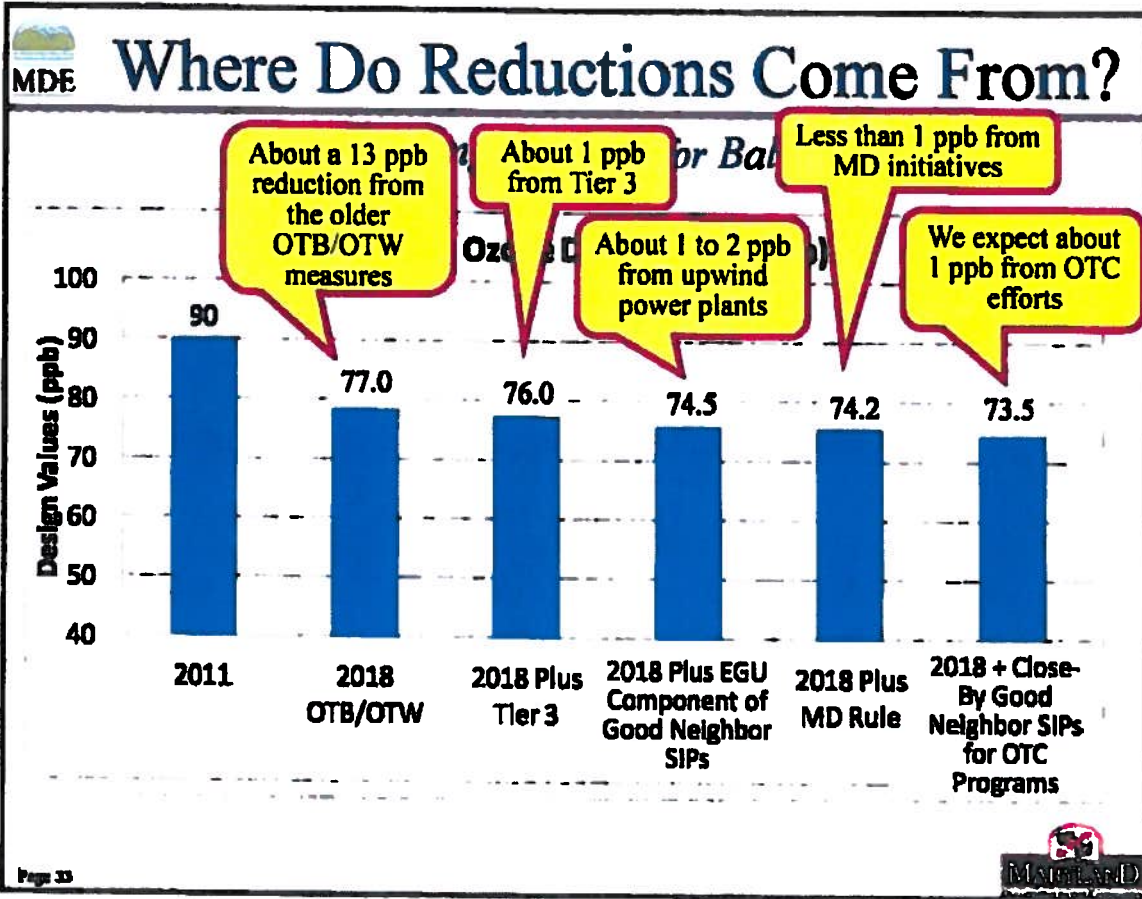
Even though the 2014 Design Values for the four Northeast monitors are demonstrating impressive reductions in ozone concentrations, additional emission reductions are expected from on-the-books controls between now and 2018. USEPA predicts significant additional NOx emission reductions will occur between 2011 and 2018, holding the promise of continuing improvement in ozone levels. In addition, a comparison of actual EGU NOx emissions in 2012 to USEPA's projections for the same year (Figure 3) show that actual emissions are already well below those projected by USEPA.

Figure 3. Midwest Ozone Group, slide 8, New Jersey Clean Air Council Hearing, April 14, 2015.

State	All Source NOx Emissions (Tons/Yr)*			EGU NOx Emissions (Tons/Yr)		
	2011	2018	% Difference	2012 Base (IPM)**	2012 CAMD	Difference
Connecticut	77,962	48,486	-37.81%	2,603	1,332	-1,271
Delaware	32,612	19,944	-38.84%	2,639	2,266	-373
District of Columbia	9,622	5,567	-42.14%		96	96
Maine	62,495	47,421	-24.12%	4,864	511	-4,353
Maryland	166,810	104,240	-37.51%	16,706	18,334	1,628
Massachusetts	143,234	93,008	-35.07%	4,954	3,238	-1,716
New Hampshire	35,307	21,641	-38.71%	4,068	2,480	-1,588
New Jersey	162,066	108,018	-33.35%	7,534	2,480	-5,054
New York	425,226	289,897	-31.83%	20,909	24,954	4,045
Pennsylvania	569,151	423,861	-25.53%	130,738	132,094	1,356
Rhode Island	21,309	15,019	-29.52%	449	633	184
Vermont	19,221	12,794	-33.44%	379	125	-254
<b>OTR State Total</b>	<b>1,725,015</b>	<b>1,189,897</b>	<b>-31.02%</b>	<b>195,842</b>	<b>188,543</b>	<b>-7,299</b>
Illinois	502,859	332,640	-33.85%	52,481	57,684	5,203
Indiana	421,153	300,250	-28.71%	120,593	105,713	-14,880
Kentucky	313,165	221,063	-29.41%	88,195	80,299	-7,896
Michigan	459,131	329,249	-28.29%	63,266	66,804	3,539
North Carolina	391,963	256,255	-34.62%	54,463	51,057	-3,405
Ohio	579,106	359,585	-37.91%	103,192	84,280	-18,912
Tennessee	295,719	188,104	-36.39%	37,694	26,182	-11,511
Virginia	321,181	211,007	-34.30%	38,820	26,219	-12,601
West Virginia	176,127	160,232	-9.02%	62,434	52,771	-9,663
<b>Target State Total</b>	<b>3,460,404</b>	<b>2,358,384</b>	<b>-31.85%</b>	<b>621,136</b>	<b>551,009</b>	<b>-70,127</b>

In addition to the emission reductions already identified by USEPA, there are several new emission reduction programs being actively considered in the Northeast. See Maryland presentation, slides 35, 37, and 38, New Jersey Clean Air Council Hearing, April 14, 2015. The emission reductions related to the new OTC controls have been estimated by Maryland (Figure 4) to improve ozone air quality measurements by an additional 1 ppb.

Figure 4. Maryland presentation, slide 29, New Jersey Clean Air Council Hearing, April 14, 2015.



Even though the new Maryland and OTC controls are still being developed, the prospect of these emission reductions add to the weight of evidence supporting the conclusion that the Fairfield Connecticut monitors will attain the 75 ppb ozone NAAQS by the applicable attainment date.

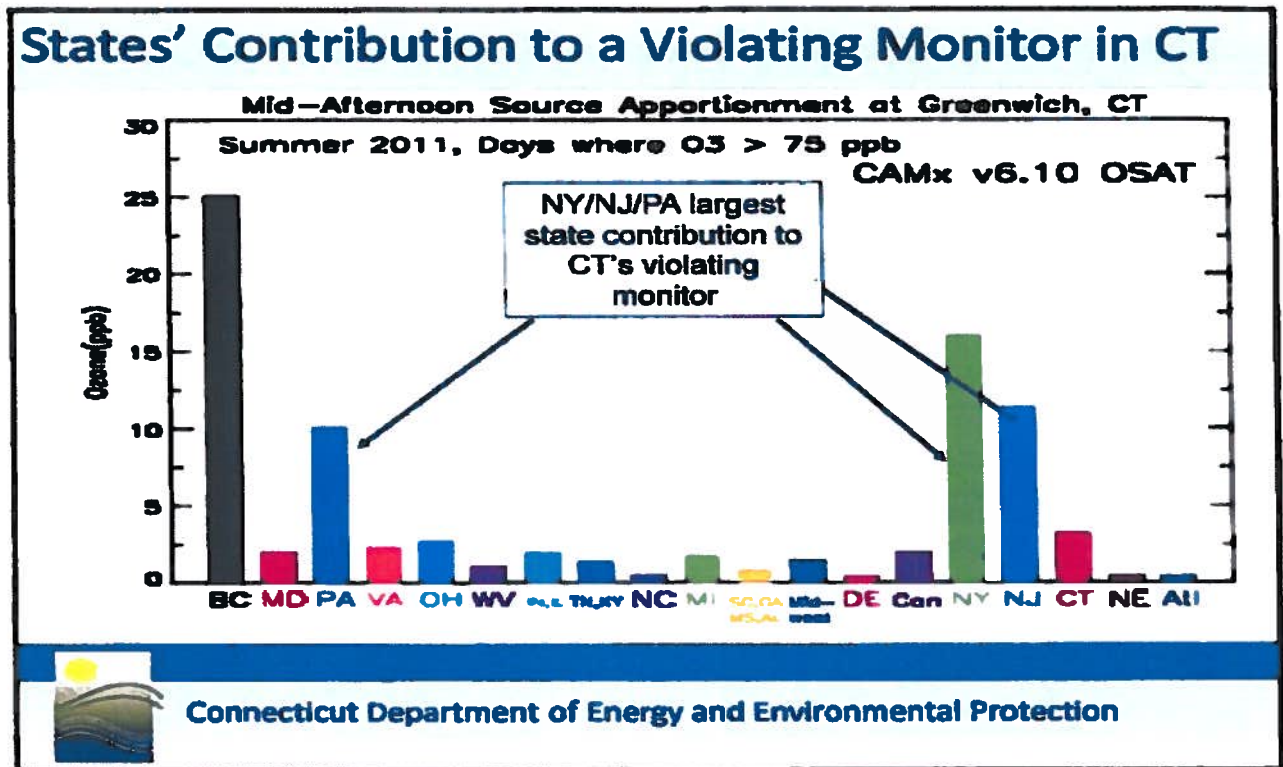
**3. The interstate transport concerns of greatest significance relate to local - not regional - transport.**

In his remarks at the hearing, Commissioner Martin stated that New Jersey was meeting all ambient air quality standards except ozone. He also stated that the ozone standard could be met if it were not for transported air pollutants from upwind states. In support of this statement,

the Commissioner cited concerns about the operation of two specific facilities in nearby Pennsylvania. He also stated his concern that northern New Jersey is being drawn into ozone non-attainment because it is part of the metropolitan area which includes New York and Connecticut.

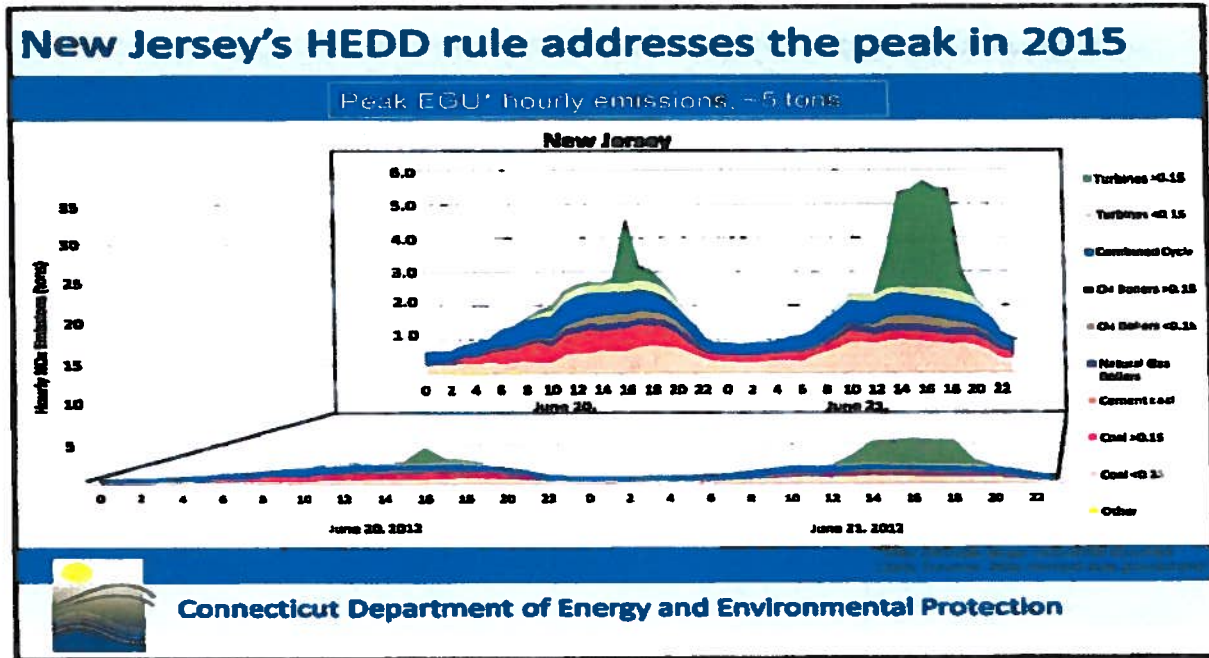
The presentation by the Connecticut Department of Energy and Environmental Protection expressed similar concerns over the interstate transport of air pollutants and focused on the impacts of local transport from states within the NEOTR. Specifically, as can be seen in Figure 5, Connecticut has identified New York, New Jersey, and Pennsylvania as the “largest state contributors to CT’s violating monitor.”

Figure 5. Connecticut presentation slide 8, New Jersey Clean Air Council Hearing, April 14, 2015



In addition, the Connecticut presentation cites concern about High Electric Demand Day emissions and concludes that reductions of these emissions “are a key to attaining the ozone NAAQS.” See Connecticut presentation, slide 10, New Jersey Clean Air Council Hearing, April 14, 2015. Indeed, Connecticut specifically highlights the emission reductions expected from New Jersey’s HEDD rule (Figure 6).

Figure 6. Connecticut, slide 12, New Jersey Clean Air Council Hearing, April 14, 2015.



Other sources specifically identified as needing controls were oil-fired boiler emissions in Connecticut (Figure 7), combustion turbine emissions in New York (Figure 8), and emissions from coal firing in Pennsylvania (Figure 9).

Figure 7. Connecticut, slide 11, New Jersey Clean Air Council Hearing, April 14, 2015.

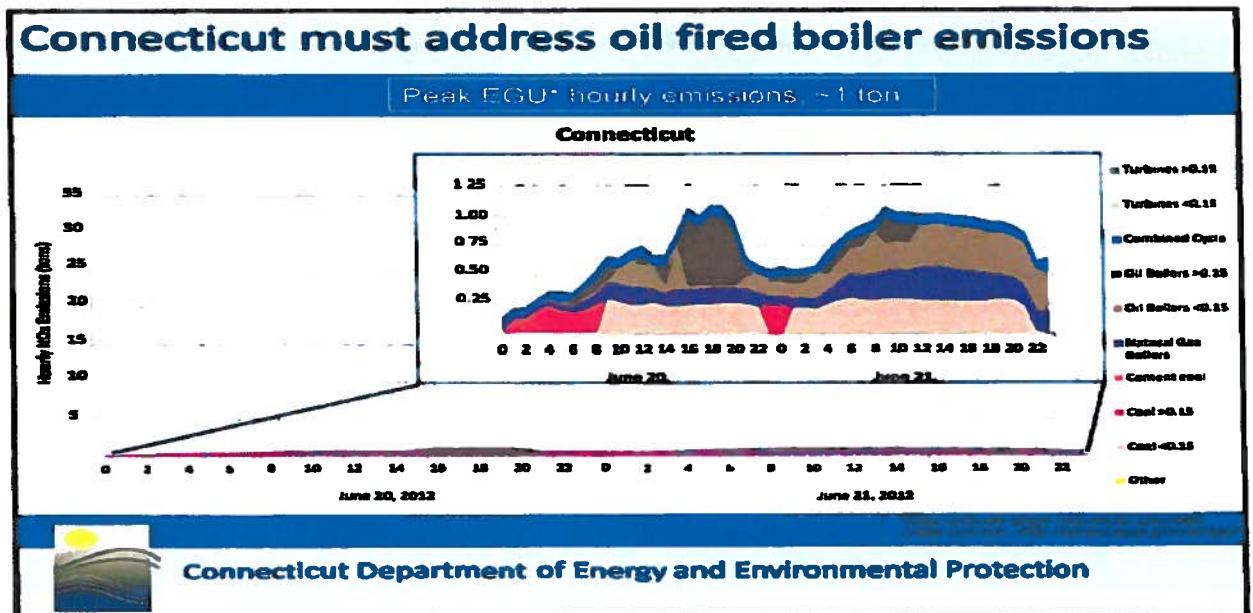


Figure 8. Connecticut, slide 13 New Jersey Clean Air Council Hearing, April 14, 2015.

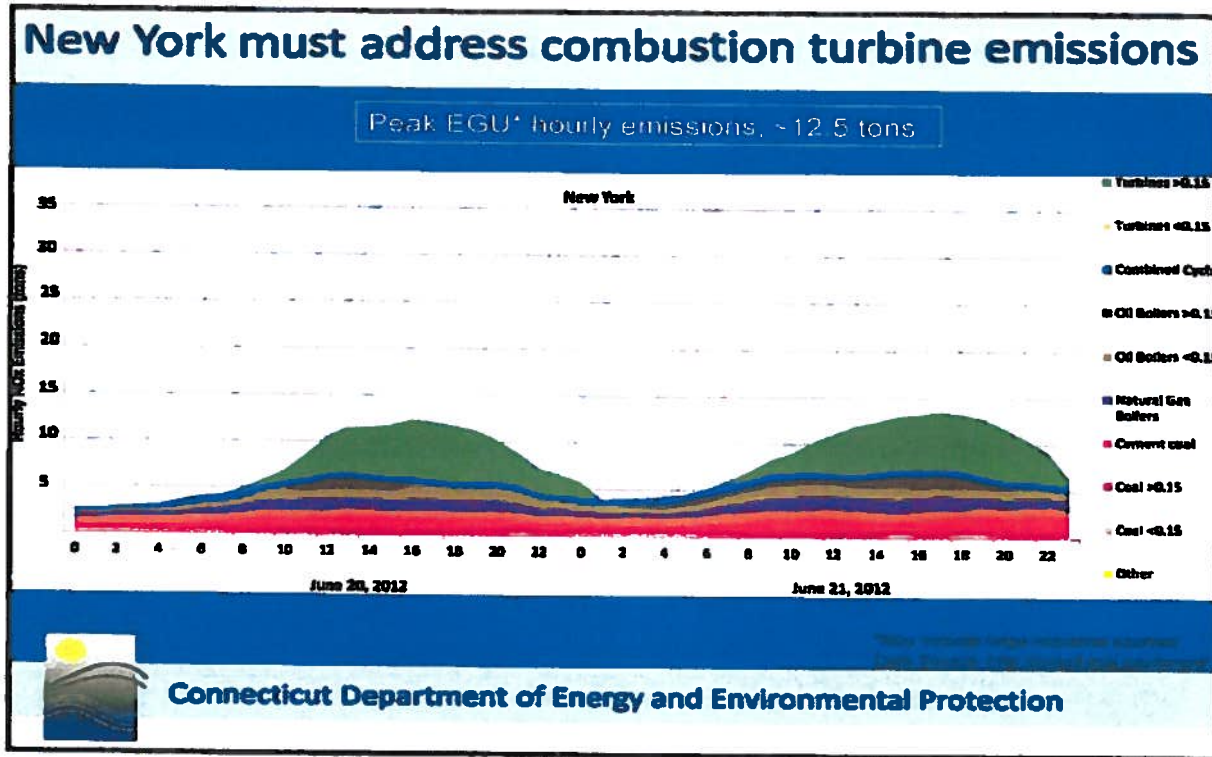
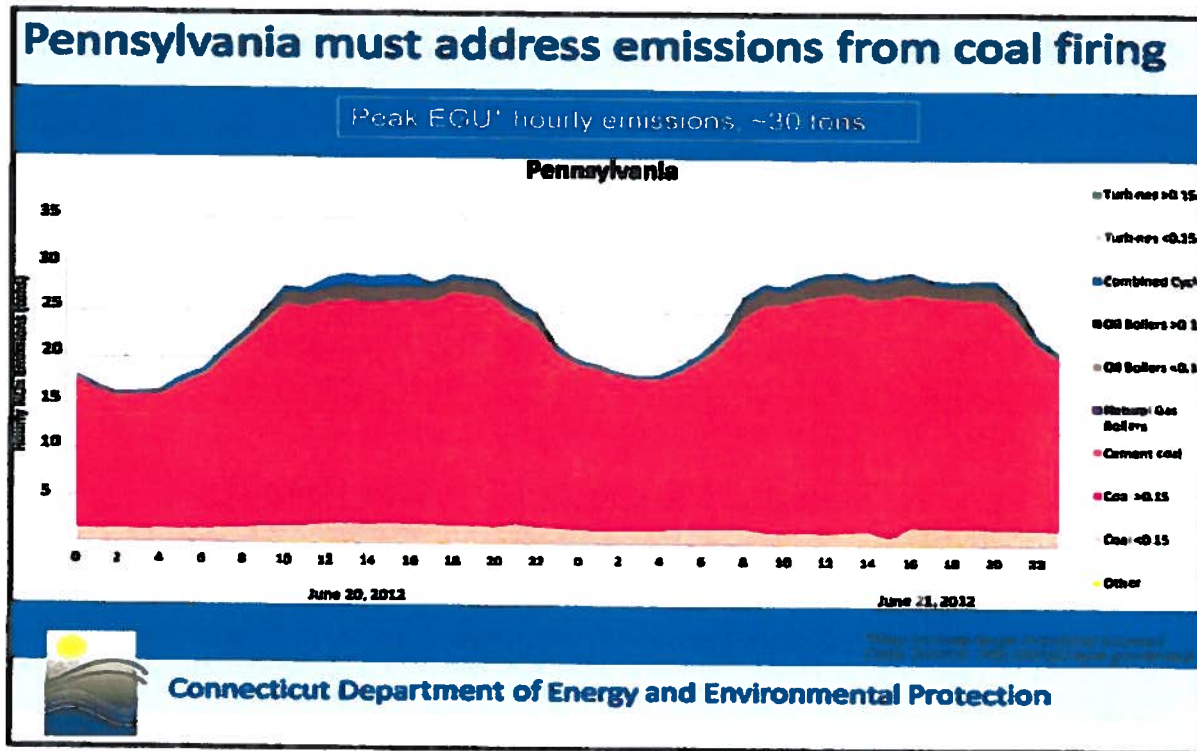


Figure 9, Connecticut, slide 14, New Jersey Clean Air Council Hearing, April 14, 2015.





There can be no question but that local – not regional – transport is the single area of greatest concern to the Fairfield Connecticut monitors. If more needs to be done to reduce ozone concentrations at these monitors local transport must be addressed first.

**4. There is no legal or scientific basis for the imposition of new controls on sources outside the NEOTR.**

While making it clear that local transport needed to be addressed to help with attainment concerns, the Connecticut presentation went on to call for additional controls on sources outside the OTR for the purpose of achieving “a level playing field” (See Connecticut presentation , slide 17, New Jersey Clean Air Council Hearing, April 14, 2015).

Specifically, the Connecticut presentation mentions, among others, the following programs:

- Optimize existing controls;
- Good Neighbor Requirements; and
- Transport Rule.

In addition, we are mindful of the pending petition under Section 176A of the Clean Air Act, seeking an expansion of the NEOTC.

As will be indicated below, there is neither legal nor scientific merit for the utilization of these programs to place additional control requirements on sources outside the NEOTR.

As the Maryland modeling results clearly illustrate, the Fairfield Connecticut monitors will achieve attainment in 2018 with implementation of nothing more than on-the-books controls. The additional OTC and Maryland controls modeled by the State of Maryland add an extra 1 ppb of assurance. See Maryland presentation, slide 29.

Moreover, any call for the imposition of controls on sources outside the OTR (or for that matter in any upwind state) to achieve a "level playing field" is without legal authority. Whether the mechanism for consideration of controls on upwind states is through the expansion of the NEOTC under Section 176A of the Clean Air Act or the development of a new transport rule or the imposition of Good Neighbor SIP requirements under Section 110 of the Clean Air Act, the threshold question to be considered is whether the downwind states are attaining the NAAQS. If they are, there is no legal basis for the imposition of controls on upwind states. As the United States Supreme Court stated it:

EPA cannot require a State to reduce its output of pollution by more than is necessary to achieve attainment in every downwind state . . . .

*EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1608 (2014).

In this case, all monitors in the Northeast are already in attainment with the current 75 ppb ozone NAAQS or, by 2018, will be in attainment.

The following are more specific comments on the specific regulatory initiatives currently being considered.

a. Pending 176A Petition

On December 9, 2013, the states of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont filed a petition under 176A of the Clean Air Act seeking to expand the Ozone Transport Region (OTR) by adding the states of Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, Virginia and West Virginia.

By letter dated February 14, 2014, the nine states targeted by the petition urged that the petition be denied citing in part technical data indicating overall improvements in air quality that is occurring in both upwind and downwind states as well as past and future reductions in NOx emissions from power plants resulting from existing programs.

In addition, there are numerous other reasons why the petition should be denied. These include, but are not limited to:

- The 176A Petitioners offer no analysis of air quality measurements in the OTR and instead rely on outdated computer modeling published in 2005 to assert the nonattainment status of the region.
- As stated above, air quality is significantly improving in the OTR making it unnecessary to impose additional emission reduction requirements on upwind states. Indeed, all monitors in the Northeast are either now, or will be, in attainment with the 75 ppb ozone NAAQS with nothing more than on-the-books controls.
- The significant reduction in emissions projected by EPA to occur over the next several years will result in continued improvement in air quality throughout the OTR.
- The 176A Petitioners offer no evidence of significant contribution other than EPA modeling performed in 2005 that was based on what turned out to be an incorrect premise that emissions from EGUs in the target states would be 13% higher than they actually were in the year of the analysis (2012).
- Source apportionment analysis by both the Midwest Ozone Group and the State of Connecticut conclusively establish that any interstate transport is local in nature and that additional controls that might be needed in the Northeast should be applied to sources within the NEOTR.
- The 176A Petitioners seek to impose additional emission reduction obligations on the upwind states that are the subject of their petition which are not authorized under

applicable law. These include the request in the petition that upwind states take the responsibility:

1. to achieve attainment in the downwind states;
2. to assume responsibility for the contribution of other states to downwind states;
3. to reduce emissions beyond that which is needed to achieve attainment in all downwind non-attainment areas;
4. to impose “technology-based” controls not related to “significant contribution” or for that matter air quality; and
5. to reduce emissions for the purpose of achieving a “level economic playing field” .

Accordingly, the 176A petition fails for lack of legal and scientific merit and should be denied by USEPA.

b. Good Neighbor SIPs

Turning next to Good Neighbor SIPs, we note that on January 22, 2015, USEPA issued a memorandum from Stephen D. Page, Director of its Office of Air Quality Planning and Standards which provides information on the interstate transport Good Neighbor provisions of Section 110(a)(2)(D)(i)I of the Clean Air Act as they apply to the 75 ppb ozone NAAQS.

Not surprisingly, the memorandum identifies as the first basic step for addressing transport “identifying downwind air quality problems.” It is only after the downwind problem areas are identified that it is appropriate to turn to the next step of identifying which upwind states contribute enough to those downwind problems to warrant further review. Page Memorandum, page 2.

The data set forth in Figure 1 above, is the same as is set forth in Table 1 in the attachment to the Page Memorandum and, as discussed above, should be viewed in light of the following factors:

1. Seven of the monitors relate to Texas and have no bearing on Good Neighbor SIPs in the Northeast.
2. The Harford Maryland monitor has a 2014 DV of 72 ppb and USEPA has proposed to designate that area as attainment.
3. The Suffolk New York monitor has a 2014 DV of 75 ppb which qualifies it for attainment status.

4. The 2018 modeling data presented by Maryland shows the remaining two monitors in Fairfield Connecticut will be in attainment in 2018 with on-the-books controls.

One the face of the Page Memorandum (attachment, page 2), USEPA states that its modeling is preliminary and was based on an emissions inventory that has since been updated. Even so, its preliminary modeling shows that the only states outside the NEOTR that have any significant impact on the two Fairfield Connecticut monitors are Ohio and West Virginia, and even that conclusion is under review as USEPA updates its projections. Page Memorandum, Attachment, page 10.

However, since there are no “downwind air quality problems”, there is no basis for imposing a Good Neighbor SIP requirement on upwind states.

c. 75 ppb Transport Rule

Like Good Neighbor SIPs, transport rules also find their legal authority in Section 110 of the Clean Air Act. The most recent transport rule is the Cross State Air Pollution Rule (CSAPR) which, of course, was designed to address the 85 ppb ozone NAAQS.

To the extent that USEPA is giving consideration to the development of any new transport rule to address the 75 ppb ozone NAAQS, the agency is bound by the same legal and scientific factors that apply to the development of Good Neighbor SIP i.e., there must be downwind non-attainment areas and there must be upwind states that contribute enough to those downwind non-attainment areas to warrant further review.

As stated above, however, all monitors in the Northeast already have achieved attainment of the 75 ppb ozone NAAQS, other than the two Fairfield Connecticut monitors, which are projected to be in attainment in 2018. There is, therefore, no need for a transport rule.

Even if the data presented in the Page Memorandum were current and correct, (and by USEPA’s own admission, they are not) the only states outside the NEOTR that arguably significantly contribute to the Fairfield monitors are Ohio and West Virginia.

The lack of any downwind non-attainment areas is alone enough to conclude that no new transport rule is needed. Even more significant is the fact, borne out by both Connecticut and MOG data discussed above, that it is local – and not regional – transport that is affecting the Fairfield monitors.

d. Optimization of NOx Controls

Both the Connecticut and Maryland presentations at the hearing called for the optimization of the operation of existing NOx emission control equipment on power plants outside the NEOTR.

The beginning point for any discussion of the operation of these controls must necessarily be that these power plants are operating in conformity and compliance with both state and federal law. The CSAPR program places unit-specific caps on each of the subject power plants. In addition, all units are subject to Title V air permits and many units are subject to state or federal consent orders.

These units are, in fact and in law, being operated appropriately.

The answer to the question of whether more might be done with the units to bring about additional reductions in NO<sub>x</sub>, is complicated. The answer requires not only an evaluation of cost, but also questions about the extent to which optimizing for NO<sub>x</sub> would result in an increase in mercury emissions or even be possible during periods of startup, shutdown or low load conditions.

Ultimately, any discussion of this alternative comes back to identifying the reasons for doing so. If there are no downwind non-attainment areas to be addressed and if upwind sources are not significantly contributing to those non-attainment areas, then there is no legal mandate under the Clean Air Act to consider alternative approaches to operating existing controls. In this case, the proposal fails for both reasons.

Not only will all of the monitors in the Northeast attain the 75 ppb standard by 2018, there is no reason to believe that optimizing NO<sub>x</sub> controls will result in any meaningful improvement in ozone concentration at the Fairfield Connecticut monitors (the only remaining monitors that are not showing ozone attainment based upon current Design Values). Indeed, when LADCO modeled the air quality impact of the operation of NO<sub>x</sub> controls on EGU units throughout the East at a rate of 0.10 lbs NO<sub>x</sub>/MMBtu, it found essentially no change in predicted ozone concentrations at the Fairfield Connecticut monitors. See:

[http://midwestozonegroup.com/files/MidwestOzoneGroupLADCOpresentation\\_Oct242014\\_.pdf](http://midwestozonegroup.com/files/MidwestOzoneGroupLADCOpresentation_Oct242014_.pdf)

**5. The appropriate mechanism for addressing any concerns about residual non-attainment in the Northeast is provided by Section 184 of the Clean Air Act.**

The bottom line for the monitors at Fairfield Connecticut is that they are projected to progress from nonattainment to attainment as the result of emission reductions from regulations already on-the-books. The following is a summary of the nature of that progression from 2011 through 2018:

	Monitor: 090012007 (ppb)	Monitor: 090019003 (ppb)
2011 DV	84.3	83.7
2014 DV	84	85
2018 (on-the-way)	73.0	75.5
2018 (new OTC/MD)	72.0	74.5

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It can be fairly presumed that even these excellent results will be further improved by actions that can and should be undertaken to address the local transport concerns raised in the testimony by Commissioner Martin and the State of Connecticut. Indeed, Section 184(c)(1) of the federal Clean Air Act establishes the following process for addressing such concerns within the Northeast Ozone Transport Region:

Upon petition of any State within a transport region established for ozone ... the Commission may ... develop recommendations for additional control measures ... if ... such measures are necessary to bring any area in such region into attainment ....

We strongly encourage Connecticut, and any other state in the Northeast concerned about local transport, to invoke this process as the primary means for addressing any concerns they may have about the local transport of air pollutants that may be adversely affecting its air quality.

#### Conclusion

Thank you for the opportunity to participate in the hearing on this important and timely topic. Please contact me if you have any questions or comments about any of the observations and conclusions set forth in this letter.

Very truly yours,



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for the Midwest Ozone Group

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