

## **State Controls on Local Sources are Required to Improve Ozone Air Quality**

**Prepared by the Midwest Ozone Group**

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A copy of this paper may be found at

<http://www.midwestozonegroup.com/files/StateControlsonLocalSourcesareRequired.pdf>

When an area is measuring nonattainment of a national ambient air quality standard (NAAQS), the Clean Air Act (CAA) requires that the effects and benefits of local controls be considered first, prior to pursuing regional or national controls. CAA §107(a) states that “[e]ach State shall have the primary responsibility for assuring air quality within the entire geographic area comprising such State.” In addition, CAA §110(a)(1) requires that a state SIP “provides for implementation, maintenance, and enforcement” of the NAAQS “in each air quality control region . . . within such State.” Moreover, by operation of law, additional planning and control requirements are applicable to areas that are designated to be in nonattainment.

This issue is important to all states, but particularly to upwind states which must determine whether they must commit to additional emissions reductions as they prepare to submit approvable Good Neighbor State Implementation Plans to address the 2015 ozone NAAQS to EPA by the October 2018 deadline. EPA’s current interstate transport modeling platforms fail to incorporate emission reductions programs that are likely to improve ambient ozone concentration in 2023 which will be discussed in more detail later in this document. Only through a full assessment of these local emissions reductions can EPA determine whether there are any bases for the imposition of additional emissions controls in upwind states. This is because additional control requirements in upwind states can only be legally imposed if there is a continuing nonattainment area.<sup>1</sup>

### **Quantified local controls may be all that is needed to demonstrate attainment**

As shown by the Midwest Ozone Group’s (MOG) latest modeling and analyses (Outlook For Future Ozone Transport Program Design at <http://midwestozonegroup.com/index.html>), when EPA’s current emission inventory is modeled using a 4 km grid in critical portions of the East, all monitors in the East would achieve attainment of the 2015 ozone NAAQS by 2023 with the sole exception of the Harford Maryland monitor – which has a modeled ozone concentration of 71.1 ppb, only 0.2 ppb above achievement of the 2015 ozone NAAQS. EPA’s emission inventory, however, does not include a significant number of legally mandated on-the-books and on-the-way local controls that are likely to further reduce the emission of ozone precursors and could easily bring all monitors in the East into attainment with the 2015 ozone NAAQS. Moreover, EPA’s current emission inventory does not take into consideration unit shutdowns and modifications that have been announced since that inventory was last updated.

MOG’s analyses also documents that surrounding states and Maryland themselves have options to reduce their own NO<sub>x</sub> and VOC contributions to the Harford monitor.<sup>2</sup>

### **Maryland itself recognizes the importance of local controls**

Maryland has already recognized the need to adopt and implement programs to control emissions from local sources in Maryland and the Northeast. For example, as recently as December 2017<sup>3</sup>, the Maryland Department

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<sup>1</sup> *EME Homer et.al. v EPA*, 134 S. Ct. at 1608.

<sup>2</sup> Alpine Geophysics “Relative Impact of State and Source Category NO<sub>x</sub> Emissions on Downwind Monitors Identified Using the 2017 Cross State Air Pollution Rule Modeling Platform”, Alpine Geophysics, LLC, January, 2016.

<http://www.midwestozonegroup.com/files/RelativeImpactofStateandSourceCategoryNOxEmissionsonDownwindMonitorsIdentifiedUsingthe2017CrossStateAirPollutionRuleModelingPlatform.pdf>.

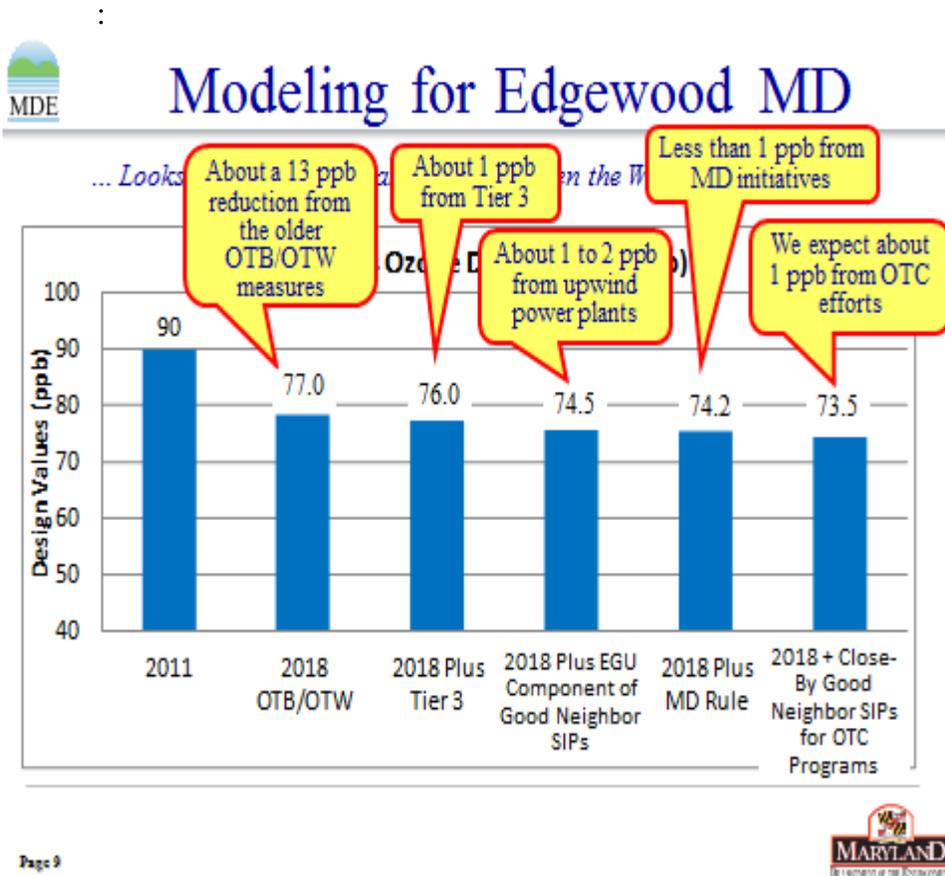
<sup>3</sup> See: “A Path Forward for Reducing Ozone in Maryland and the Mid-Atlantic States, Driving With Science“, Tad Aburn, Air Director, MDE, December 11, 2017 (slides 60 and 61).

[http://midwestozonegroup.com/files/Final\\_Path\\_Forward\\_2017\\_AQCAC\\_121117.pptx](http://midwestozonegroup.com/files/Final_Path_Forward_2017_AQCAC_121117.pptx)

of the Environment identified a series of local controls that it believed would further reduce ozone concentration in the Northeast, including:

- New rules by New York on small generators;
- New Ozone Transport Commission initiatives involving idle reduction;
- After market catalysts on mobile sources;
- Electric and other zero emission vehicles;
- Maryland rules on municipal waste combustors; and
- Maryland’s Idle Free Initiative.

The Maryland Department of the Environment reached a similar conclusion<sup>4</sup> with respect to the 2008 ozone NAAQS when it identified local emission reduction programs that had been addressed by EPA at that time and quantified how those local control programs would improve ozone air quality at the Harford Monitor (referred to in the following slide as the “Edgewood Monitor.” This is illustrated by the following graphic taken from Maryland’s presentation to MOG on May 7, 2015



**Connecticut has also recognized the need for local controls**

<sup>4</sup> “Maryland Analyses of Good Neighbor SIPs, Who Might Owe What ... and ...Will It Work?”, Tad Aburn, Air Director, MDE, MOG Meeting – Cincinnati, Ohio – May 7, 2015. [http://midwestozonegroup.com/files/MOG\\_May\\_7\\_Final\\_050515.pptx](http://midwestozonegroup.com/files/MOG_May_7_Final_050515.pptx)

In addition, it is significant that the Connecticut Department of Energy and Environmental Protection, Bureau of Air Management has reached the conclusion<sup>5</sup> that attainment in the Northeast cannot be achieved without local controls as is illustrated by the following statement:

To reach attainment in the NY-NJ-CT nonattainment area, HEDD emissions need to be addressed in all three state portions of the area.

...

In sum, to address Connecticut's ozone nonattainment, and Connecticut's good neighbor obligations to downwind states, peak day emissions must be reduced. Thus, "beyond RACT" measures may be warranted for HEDD units on HEDD to meet the state obligation of attainment of the ozone NAAQS as expeditiously as possible.

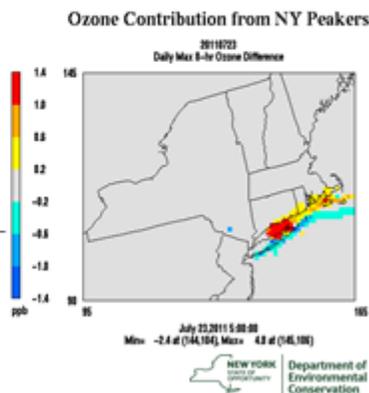
### **New York has recognized the significance of controlling emissions from small generators**

While Connecticut has called for beyond RACT controls on HEDD units and Maryland has cited New York's rule addressing small generators, the New York State Department of Environmental Conservation has actually conducted an air quality assessment of that rule in which it has concluded<sup>6</sup>, as seen in the following graphic, that ozone concentrations could be reduced by as much as 4.8 ppb – an extremely significant improvement in ozone air quality (for perspective, 0.7 ppb represents a significant contribution relative to the 2015 ozone NAAQS) in a portion of the East that has historically had high ozone concentrations.

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### **Peaker Modeling Analysis - Ozone**

- Peaking units were identified in EGU and peaking EGU modeling files.
- On a high ozone day shows a 4.8ppb contribution, which is estimated by the difference daily 8-hour max ozone between base case and zero-out peaking units case.



### **Conclusion**

It is imperative that newly announced unit shutdowns and modifications as well as all emission control programs that will be or are required to be adopted and implemented prior to 2023 be considered and the resultant emissions reductions quantified for use in the good neighbor SIP modeling required by October 2018. Failure to consider the effects of those programs and unit shutdowns destines any such modeling to over-predict ozone concentrations and risk the unlawful imposition of emission control requirements on sources in upwind states. Further, it is highly likely that the inclusion of these emissions reduction will result in all areas demonstrating attainment of the 2015 ozone NAAQS without the need for further additional regional or national emissions reductions programs.

<sup>5</sup> "Reasonably Available Control Technology Analysis under the 2008 8-Hour Ozone National Ambient Air Quality Standard", dated July 17, 2014, [http://www.ct.gov/deep/lib/deep/air/ozzone/ozzoneplanningefforts/ract\\_2008\\_naaqs/2014-07-17\\_-\\_ct\\_final\\_ract\\_sip\\_revision.pdf](http://www.ct.gov/deep/lib/deep/air/ozzone/ozzoneplanningefforts/ract_2008_naaqs/2014-07-17_-_ct_final_ract_sip_revision.pdf)

<sup>6</sup> "Background, High Electric Demand Day (HEDD) Initiative", New York Department of Environmental Conservation, undated but presumed to be in 2017. [http://midwestozongroup.com/files/New\\_York\\_Peakers.pptx](http://midwestozongroup.com/files/New_York_Peakers.pptx)

