

## Werner, Christopher

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**From:** Arra, Sarah  
**Sent:** Wednesday, November 07, 2018 4:41 PM  
**To:** Werner, Christopher  
**Subject:** FW: EPA Comments on Michigan 2015 Ozone Transport SIP

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**From:** Aburano, Douglas  
**Sent:** Thursday, November 01, 2018 5:18 PM  
**To:** Robert Irvine <irviner@michigan.gov>  
**Cc:** Arra, Sarah <Arra.Sarah@epa.gov>; Wolf, Erica (DEQ) <wolfe1@michigan.gov>  
**Subject:** EPA Comments on Michigan 2015 Ozone Transport SIP

Dear Mr. Irvine,

Good evening, Bob. Thank you for notifying us of the public comment period. Below are comments on the Michigan 2015 Ozone Transport SIP with public comment period closing November 2<sup>nd</sup>.

1. Michigan states that LADCO ERTAC use is preferred over EPA EGU projections. The state could clarify whether this claimed advantage refers to EPA use of IPM or EPA use of engineering analytics (or both). Moreover, it might be useful to support their trends and air quality assumptions if the state more concretely documented a unit-by-unit comparison of their own EGU assumptions relative to ERTAC and EPA's engineering analytics. This could provide more support for the state's stated notion that one is more consistent with their own outlook and thus a better tool for air quality projections in the case of their particular state. For example, Michigan's table 9 in the draft SIP shows Karn 1-2 retiring in 2023, but it appears ERTAC 2.7 has these units operating in 2023. An accounting and explanation of EGU outlooks, and how they mesh with the state's own outlook, could be useful in validating the "future reductions" section of the draft SIP.
2. Michigan's submittal indicates at page 18 that the EPA's March 2018 memo "identifies flexibilities that can be considered when determining what emission reductions are necessary," and in subsequent paragraphs indicates certain flexibilities the state has employed in its SIP that the March 2018 memo "allows." EPA first notes that the March 2018 memo identified potential flexibilities for SIP development for the purposes of seeking stakeholder feedback as to whether the flexibilities would be appropriate to apply in the development of transport SIPs for the 2015 ozone NAAQS. The memo explicitly indicated that the EPA was not making any determinations at that time regarding the appropriateness of those potential flexibilities under the Clean Air Act or recommending any particular flexibilities. Rather, the memo indicated the need to ensure that any flexibilities the states chooses to employ in developing its SIP should be consistent with the Clean Air Act and technically justified. Accordingly, the EPA recommends that Michigan modify its SIP to more accurately characterize the March 2018 memo and ensure that the flexibilities cited in the draft SIP include adequate legal and technical justification.
3. EPA encourages Michigan to explain how its approach to identifying and addressing the state's potential impact on maintenance receptors is consistent with the court's holding in *North Carolina v. EPA* to consider variability in ozone concentrations due to meteorology. 531 F.3d 896, 910-911 (D.C. Circuit 2008). The draft SIP suggests that maintenance receptors should be treated differently than nonattainment receptors under the good neighbor provision with respect to the emission reduction obligation of a linked upwind state, and specifically advocates that states could be relieved of the obligation to make any emission reductions to address such monitors. However, the *North Carolina* court was specifically concerned that an interpretation of the good neighbor provision that did not give independent significance to the "interfere with maintenance" would provide "no protection for downwind

areas that, despite EPA's predictions, still find themselves struggling to meet NAAQS due to upwind interference . . . .” *Id.* Thus, EPA encourages Michigan to explain how its approach to identifying upwind state obligations as to maintenance receptors provides appropriate protection to downwind states. As to the identification of maintenance receptors in the first instance, EPA recommends that Michigan review the October 19, 2018, memorandum entitled “Considerations for Identifying Maintenance Receptors for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards,” available at: [https://www.epa.gov/sites/production/files/2018-10/documents/maintenance\\_receptors\\_flexibility\\_memo.pdf](https://www.epa.gov/sites/production/files/2018-10/documents/maintenance_receptors_flexibility_memo.pdf)

4. EPA encourages Michigan to include a comprehensive analysis of the existing controls on sources, NO<sub>x</sub> reduction potential, and cost of controls for sources, including EGU and non-EGU sources or facilities. An assessment of factors that influence EGU emissions (such as but not limited to allowance prices, fuel prices, and enforceable limits) in the future is recommended. In addition, EPA’s records indicate there may be approximately 20 non-EGU facilities with more than 300 tons per year of NO<sub>x</sub> emissions in Michigan. EPA encourages Michigan to include a comprehensive assessment of all of the NO<sub>x</sub> emitting non-EGU facilities, including their NO<sub>x</sub> emissions sources/units, reduction potential, and cost of any potential control options. Showing that no further cost-effective reductions are available, if that is the case, will bolster the strength/approvability of the submittal.
5. Michigan could strengthen its submittal by providing information about expected market demand projections and dispatch behavior in the wake of the additional retirements (both those included in ERTAC and not included in ERTAC assumptions) it highlights. It would be helpful to show that incremental generation from equal or more emissions-intensive units is not projected to replace retiring emissions-intensive generation to satisfy future market demand, if that is the case. The state helpfully points to AEO projections on generating shifting to broach this subject, but could discuss how these AEO assumptions (e.g., regarding coal generation decline) relate to their own ERTAC-based assumptions that inform their air quality modeling, and clarify that the AEO scenario is a reasonable proxy for generation shifting expected under the state’s own retirement assumptions. Adding certainty to emission projections through these types of considerations is useful for demonstrating no risk of emission reductions being impermanent due to emissions shifting. Moreover, if the state determines there is some risk of emissions shifting in lieu of emissions reductions, they could use the observation as grounds to discuss its approach to ensure reductions through enforceability of the anticipated reductions. See *Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations*. Environmental Protection Agency. July 2017. Pages 116-120. Available at [https://www.epa.gov/sites/production/files/2017-07/documents/ei\\_guidance\\_may\\_2017\\_final\\_rev.pdf](https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf). States can also refer to the latest EIA 860M form or the National Electric Energy Data System (NEEDS) v6 for a comparison of likely retirements prior to 2023.
6. On page 13 of the draft SIP, Michigan states that “Table 1 contains all monitor locations with a projected maximum DV exceeding the NAAQS, otherwise known as projected maintenance receptors, that had some linkage to Michigan according to the USEPA modeling.” EPA notes that Table 1 also appears to contain all monitor locations with a projected *average* DV exceeding the NAAQS, and therefore indicates projected nonattainment receptors as well.
7. Michigan’s draft SIP compares the state’s contribution to the contribution from other states and sources of emissions, and suggest that because Michigan’s contribution is smaller than the contribution from other sources, Michigan’s impact is therefore trivial. Moreover, on pages 21-23 of the draft SIP, Michigan also purports to apportion the contribution to various receptors in terms of ppb from each upwind state and thereby calculate the amount of exceedance Michigan is “accountable for” at various receptors. Michigan uses this analysis to suggest that the state’s proportional contribution is within the uncertainty of the model. The D.C. Circuit’s decision in *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (2012), which held that upwind emission reductions should be allocated in proportion to the size of the upwind states’ contributions, was overturned by the Supreme Court in 2014, 134 S. Ct. 1584 (2014). The Supreme Court held that the good neighbor provision “does not dictate the particular allocation of emissions among contributing States advanced by the D.C. Circuit” and found the EPA’s consideration of costs was “an efficient and equitable solution to the allocation problem.” 134 S. Ct. at 1606-07. Thus, while Michigan’s approach is not necessarily prohibited by the statute, it is also not mandated by the

statute. Michigan proposes to apply a version of this approach to identify Michigan's share of the downwind air quality problems to which the state is linked.

As to both of these points, EPA has long recognized that ozone pollution transport is the result of the collective contribution of numerous sources that may be individually small. This collective contribution is the basis for EPA's air quality threshold used at step 2 of its framework. Moreover, the good neighbor provision only requires states to prohibit emissions that significantly contribute and interfere with maintenance of the NAAQS. The provision does not necessarily require any individual upwind state to resolve each downwind air quality problem. EPA therefore encourages Michigan to further explain why it would be illogical for Michigan to address any of its contribution to the downwind receptors in light of the collective, regional nature of ozone pollution transport.

8. Pages 20-21 of the draft SIP contain a discussion of considerations related to international contributions. Regarding international contributions, we suggest that a conclusion that any monitors will not have attainment or maintenance issues in 2023 will require a more fulsome discussion with respect to the relative contributions of anthropogenic international emissions and upwind domestic anthropogenic emissions, and such discussion should address why it is technically and legally supportable to "subtract 100%" of anthropogenic and non-anthropogenic contributions from Canada and Mexico.
9. The statement on page 22 that EPA's attainment demonstration modeling guidance sets a performance goal for ozone at 15 percent normalized mean bias is incorrect. There are no numerical "bright line" criteria for model performance in that guidance document. In addition, Michigan did not provide information on why model performance, in terms of bias and error, is an indicator of "model noise"

We also reviewed the non-transport portions of your infrastructure submittal and do not have any comments on that portion.

Please let me and/or Sarah Arra know if any of these comments need additional explanation or if you would like to discuss these comments.

Thank you for the opportunity to comment on this submittal.

Doug

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