GenOn Power Midwest, LP
Cheswick Power Station
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August 16, 2019

Ozone Transport Commission
800 Maine St., SW, Suite 200
Washington, DC 20024
Via Electronic Mail: ozone@otcair.org

Re: Comments on Proposal to Develop Additional Control Measures for Pennsylvania EGUs

Dear Ozone Transport Commission:

GenOn Power Midwest, L.P. (GenOn) appreciates the opportunity to provide comments on the Maryland Department of the Environment's (MDE) Clean Air Act Section 184(c) petition (Petition) submitted to the Ozone Transport Commission (OTC) on May 30, 2019.

The petition seeks new, additional, NOx emissions limits on coal-fired Electricity Generating Units (EGUs) in Pennsylvania. GenOn owns and operates the coal-fired Cheswick Power Station in Pennsylvania which was included in the Petition.

The OTC must reject MDE's Petition to develop and transmit to US EPA additional control measures for the reasons provided below.

1. **The PA RACT II Rule has Already Achieved Large NOx Reductions on PA EGUs**

The RACT II rule implemented by the Pennsylvania Department of Environmental Protection (PADEP) on January 1, 2017 has already accomplished significant reductions in NOx emissions. Comparing RACT to RACT 2 (2015 to 2018) Ozone Season emissions of the 21 units selected by MDE as a group (Figure 1), the NOx mass emitted in 2015-16 averaged 25,500 tons at a rate of 0.23 lb/MMBtu. After the RACT 2 Rule went into effect, the NOx mass emissions in 2017-18 averaged 9,300 tons at a rate of 0.10 lb/MMBtu. NOx tons have been reduced by over 60% and the NOx rate has dropped over 55%. The NOx reductions sought by MDE are just marginally lower than what these 21 units are achieving presently under existing state regulations. The proposed additional restrictions are unlikely to yield significant further NOx reductions – they simply add to the administrative burden and amount to a "feel good" proposition. MDE does not present a compelling argument for another layer of emissions restrictions on units presently subject to RACT 2 and EPA's Cross-State Air Pollution Rule (CSAPR) Program.

2. EPA Has Previously Determined That Additional Controls on PA EGUs Are Not Warranted

The Section 184(c) Petition is not unlike Section 126 Petitions that have been submitted by Maryland and Delaware along with New York and Connecticut. EPA has extensively studied these proposals and rejected the premise that additional emissions controls are required on out-of-state EGUs.

> *[EPA's]*
> *independent analysis indicates that the identified sources in Delaware's and Maryland's petitions do not currently emit and are not expected to emit pollution in violation of the good neighbor provision for either the 2008 or 2015 ozone NAAQS.*

(See Federal Register / Vol. 83, No. 194 / Friday, October 5, 2018 / Notices P 50444)
(See also, Federal Register / Vol. 83, No. 72 / Friday, April 13, 2018 / Notices P 16064 and Federal Register /Vol. 84, No. 97 /Monday, May 20, 2019 / Proposed Rules P 22787)

3. SCR Performance is Highly Unit-Specific

GenOn's Cheswick Station has an installed Selective Catalytic Reduction (SCR) system, which is operated, as designed, continually throughout the ozone season to comply with RACT 2. Figure 2 illustrates the performance of the SCR across the unit load range during the 2017 and 2018 Ozone Seasons. While the SCR is very effective at higher unit output, flue gas temperatures below 600 degrees F (corresponds to approximately 300 MW load at Cheswick) are not within control system permissives. The PA RACT 2 regulation recognizes this limitation. Ammonia cannot be injected at these lower loads and the SCR is not reducing NOx under these conditions.

When retrofitting an SCR onto an existing unit, there are always unit-specific considerations that effect the performance of the SCR. Boiler, air preheater, and ductwork layout, catalyst design, composition and normal degradation, as well as forced draft and induced draft fan capacity all constrain the SCR design, resulting in unique operating characteristics. One size does not fit all. Cheswick's SCR constraints have a substantial impact on its NOx emissions rate. If the unit is dispatched to minimum load, the lowest achievable NOx emissions rate is substantially higher albeit at a mass emission rate commensurate with low load operations. Achieving a daily NOx lb/MMBtu limit -- such as the one proposed by MDE -- would not be attainable on days when the unit is dispatched at low loads for any appreciable length of time.

4. PA EGUS are Not Subject to BACT or Case-by-Case RACT for NOx

The SCR was retrofit to Cheswick's boiler to take advantage of market-based emissions trading programs that began with the NOx Budget Program in 2003. Followed by CAIR and CASPR transport rules allowance programs, the emissions controls were not installed to meet Best Available Control Technology (BACT) emissions levels that are required of new or modified units subject to New Source Review (NSR) requirements. Any limitations in the design of the retrofit equipment on these types of units were within the discretion of the owners making the

commitment to install controls based on the state of economic drivers and regulatory programs in place at the time.

MDE asserts that PA EGUs should be subject to restrictions categorized as "*manufacturers' specifications and past best practices.*" As the term "*past best practices"* is not defined in the Clean Air Act, we interpret this as an attempt to force BACT controls on units that are not subject to this requirement.

Moreover, in Attachment 5 to the Petition, MDE provides unit-specific proposed daily and 30-day rolling limitations for the PA coal-fired EGUs. This proposal seemingly attempts to impose MDE's version of case-by-case RACT on units for which PA has determined that presumptive, source category specific RACT is appropriate. This regulatory overreach is not contemplated by the delegation of authority in the Clean Air Act and implementing regulations.

5. MDE Petitions for Daily Emissions Limits but Supports That Proposal with Incompatible Data

MDE submitted that their primary ask is that PA include a daily emissions limit equivalent to the RACT 2 30-day average for SCR-Equipped EGUs. However, MDE presents data showing reductions and infers benefits based on their analyses using the best rates ever achieved by the subject units.

> *"The high end estimate was based upon the best (lowest) rate for an entire ozone season calculated from CAMD data for each coal-fired EGU in Pennsylvania. If the best rate for any individual day were to be used, estimated reductions would be even larger. The low end estimate was based upon the highest (least restrictive) 30-day rolling average rate using CAMD data for each coal-fired EGU in Pennsylvania in the year that had the best (lowest) full ozone season rate."*

In calculating a "*Desired Rate*", MDE also ignores the operating limitations of the units and construct of the PA RACT 2 regulation. MDE's approach wrongfully assumes that SCRs can be in operation at low or minimum loads. The subject units are regularly dispatched to low or minimum loads during off-peak periods. Using an average emission rate that includes low load operations exaggerates the actual emissions reductions potential as the heat input profile would need to be higher to accommodate 100% operation using SCR with ammonia injection.

The benefits for the requested daily restrictions are overstated by the supporting data in the Petition.

6. The Modeling Sensitivity Analysis Supporting the Petition Provides an Outdated, Statistically Improbable Scenario

As GenOn understands the inputs to the modeling from the summary in Attachment 6 to the Petition, MDE and the University of Maryland took MDE's overstated assessment of maximum possible reductions and modeled these overstated reductions during a worst case meteorological period from a 6-week period in the 2011. The modeling input also assumes that all of the PA EGUs would be operating simultaneously on the worst-case days. This improbable scenario drastically overstates the benefit of the proposed additional emissions restrictions and does not

reflect the likely reality that further reductions in operations and retirements of PA Coal-fired EGUs is likely by the simulated 2023 compliance year.

7. Market Forces are Reducing Coal-Unit Operations

Changes in the electricity market have resulted in significantly reduced operation for coal-fired generating units. The emergence of inexpensive domestic natural gas in the past decade has shifted the economic dispatch order for EGUs away from coal and strongly toward gas-fired units. As a group, the 21 coal-fired units in MDE's analysis operated 20-25% less in 2018 than they did in 2015. GenOn responded to this market trend by converting two coal-fired plants in Pennsylvania to gas. The Shawville and New Castle stations, converted from coal to gas firing capability in 2016, would have been retired if they had remained as coal-only units.

* * * * *

Given the reasons above and the fact that PA coal units comprise an ever dwindling fraction of the total NOx emissions inventory, GenOn believes that further NOx controls on the Pennsylvania coal-fired EGUs does not provide the commensurate benefit that MDE claims and the OTC must reject MDE's Petition.

If there are any questions on this submittal, please contact Keith Schmidt at Keith.Schmidt@genon.com / 814-242-8447 or David Cramer at david.cramer@genon.com / 202-359-5361.

Sincerely,

Keith A. Schmidt
Environmental Director
GenOn

Figure 1

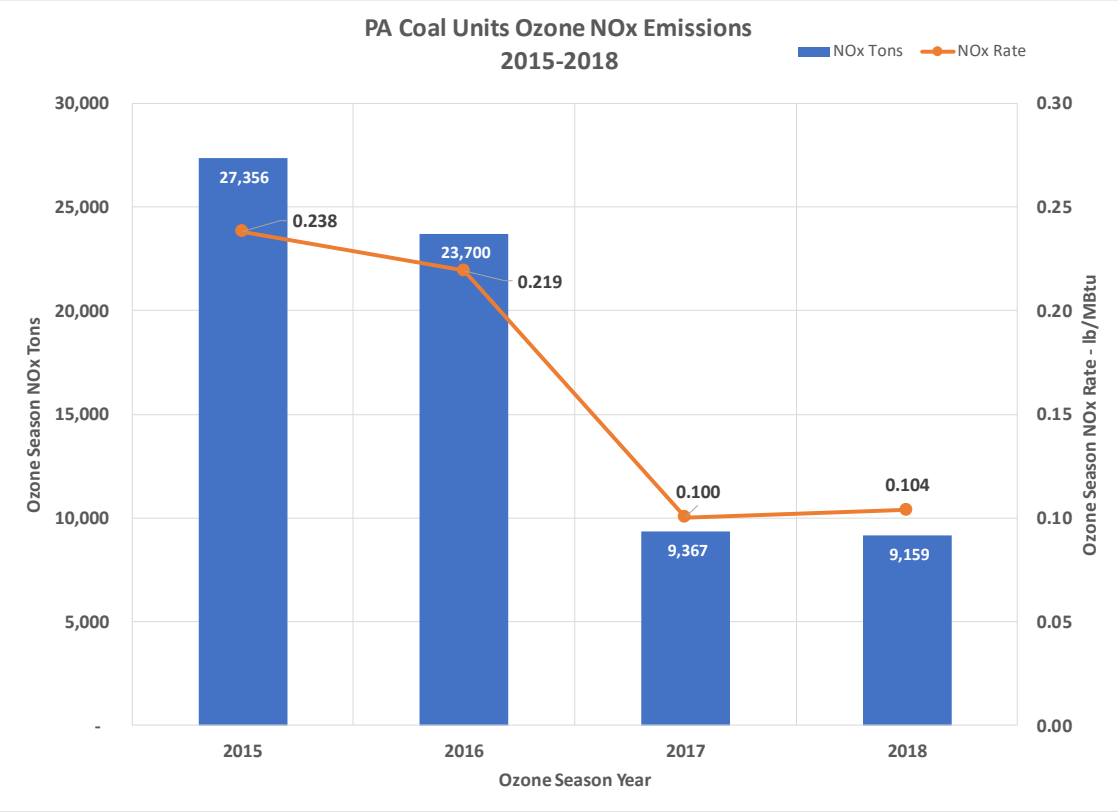

Figure 2