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November 10, 2016

Ms. Gina McCarthy
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Dear Administrator McCarthy:

By this letter, the State of Delaware hereby petitions the Administrator of the Environmental Protection Agency (EPA) under §126(b) of the Clean Air Act (CAA) to find that the Homer City Generating Station's electric generating units (EGUs), located in Indiana County, Pennsylvania, are emitting air pollutants in violation of the provisions of Section 110(a)(2)(D)(i) of the CAA with respect to the 2008 0.075 ppm ozone NAAQS and the 2015 8-hour 0.070 ppm ozone NAAQS.

Section 110(a)(2)(D)(i) prohibits any source or other type of emissions activity within a State, "from emitting any air pollutant in amounts which will contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard." Section 126(b) of the CAA provides that, "[a]ny State or political subdivision may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the prohibition of Section 110(a)(2)(D)(ii) or this section."

I am aware of EPA efforts that are underway to address transported emissions, to include the recent finalization of the update to the Cross State Air Pollution Rule (CSAPR), planned future efforts beyond the CSAPR Update Rule that will be necessary to fully address interstate transport for the 2008 ozone NAAQS and for the recent 2015 ozone NAAQS, and federal Tier 3 vehicle emissions and fuel standards measures to reduce NOx emissions. While helpful these efforts are not adequate to mitigate the impacts of upwind emissions on Delaware's air quality

and are tangent to the CAA Section 126 process. EPA has effectively closed the door to CAA tools designed to bring clean air to Delaware by establishing nonattainment area boundaries that effectively penalize areas like Delaware rather than apply the CAA to the emissions that cause our unhealthy air, by failing to act on a CAA 176 petition in the timing mandated by the CAA, by extending CAA attainment timeframes rather than bumping up areas and promulgating required federal implementation plans. From a downwind perspective EPA has lost sight of the CAA mandate that requires attainment "as expeditiously as practicable and no later than...."

CAA Section 126(b) requires that within 60 days after receipt of any petition and after public hearing, the Administrator shall make such a finding or deny the petition. We look forward to working with you and your staff during this period in which you make your finding regarding this petition and take the required actions to protect the health and welfare of Delaware's citizens. Please do not hesitate to contact me if you have any questions or need additional information regarding this petition.

Sincerely,

David S. Small
Secretary

CC: Jack Markell, Governor,
State of Delaware

Ali Mirzakhalili, Director
Department of Natural Resources and Environmental Control

Administrator Shawn M. Garvin
US EPA Region III Office

Krishnan Ramamurthy, Director
Pennsylvania Department of Environmental Protection

Attachment 1

Delaware CAA 126 Petition

Homer City Generating Station

The State of Delaware submits this petition for a finding under §126(b) of the Clean Air Act that the Homer City Generating Station's electric generating units (EGUs), located in Indiana County, Pennsylvania, significantly contribute to Delaware's non-attainment of the 2008 8-hour ozone national ambient air quality standard (NAAQS) of 0.075 ppm and the latest 8-hour ozone NAAQS of 0.070 ppm adopted by the United States Environmental Protection Agency (EPA) on October 26, 2015. *(1)*

Delaware has complied with the requirements of §110(a)(2)(D)(i)(I) of the CAA by adopting in-state control measures for the prevention of emissions that would significantly contribute to non-attainment, or interfere with maintenance, of the ozone National Ambient Air Quality Standard (NAAQS) in a downwind area. *(2)* However, Delaware's ability to achieve and maintain health-based air quality standards for its own residents is severely impacted by sources outside of the state of Delaware. This is due to the fact that more than 94% of the ozone levels in Delaware are created by the transport of air pollutants from upwind areas. Attainment and maintenance of the 2008 and 2015 8-hour ozone NAAQSs in Delaware is possible only through additional emission reductions in the upwind states that significantly contribute to non-attainment and maintenance in Delaware.

Section 126(b) of the CAA provides that, "[a]ny State or political subdivision may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the prohibition of Section 110(a)(2)(D)(i) or this section." In accordance with §126(b) of the Clean Air Act, the state of Delaware petitions the Administrator of the EPA to establish a timely schedule for the above-referenced Homer City Generating Station electric generating facility and the state of Pennsylvania to put those entities in compliance with §110(a)(2)(D)(i) of the Clean Air Act with respect to the 2008 8-hour 0.075 ppm ozone NAAQS and 2015 8-hour 0.070 ppm ozone NAAQS. *(3)*

Background

The EPA began to address air quality issues related to ambient ozone through establishment of a related National Ambient Air Quality Standard in 1971. In 1997 the EPA first established the 8-hour ozone NAAQS to protect human health and welfare at a level of 0.08 ppm. The EPA

subsequently lowered the 8-hour ozone NAAQS to 0.075 ppm in 2008. After further evaluation, the EPA further lowered the 8-hour ozone standard to 0.070 ppm on October 26, 2015. *(1)*

The establishment of the short term ozone standard (8-hour NAAQS) was necessary to address the potential health impact of short term exposure to high levels of ozone. Short term exposure to ozone can cause rapid, shallow breathing and related airway irritation, coughing, wheezing, shortness of breath, and exacerbation of asthma, particularly in sensitive individuals and asthmatic children. Short term exposure also suppresses the immune system, decreasing the effectiveness of bodily defenses against bacterial infections. Research studies indicate that markers of cell damage increase with ozone exposure. Some studies suggest that there is a link between ozone exposure and premature death of adults and infant death. Other studies indicate a link between ozone and premature birth and adverse birth outcome, cardiovascular defects, and adverse changes in lung structure development in children. Children, the elderly, those with chronic lung disease, and asthmatics are especially susceptible to the pulmonary effects of ozone exposure. Additionally, studies have shown that ozone can adversely affects trees and vegetation, can cause reduced crop yields, and can contribute to nitrification of bodies of water.

Atmospheric ground level ozone that is harmful to human health and welfare is formed primarily by the chemical reaction of nitrogen oxides (NOx) with volatile organic compounds (VOC's) in the presence of heat and sunlight. Dry, hot, sunny days are most conducive to the formation of ozone. Because ground level ozone concentrations are highest when sunlight is the most intense, in the eastern United States the warm summer months (May 1 through September 30) are referred to as the ozone season. Weather also affects ozone concentrations and how quickly it is transported and dispersed. Periods of light winds allow ozone and ozone precursor pollutants to build up in any particular area leading to greater concentrations. However, the wind can also be responsible for transporting the ozone and ozone precursors over long distances downwind. This downwind pollutant transport can then combine with more local emissions to contribute to exceeding the ozone NAAQS in any particular location.

Delaware has experienced a number of exceedances of the health based 8-hr ozone NAAQS. *(4)* The following table identifies the number of 8-hour ozone NAAQS exceedances experienced in Delaware during the ozone seasons for the years 2000 through 2016:

Table 1
Actual Delaware Ozone Exceedances – 8-Hour NAAQS

	New Castle County - No. of Days of Exceedance	Kent County - No. of Days of Exceedance	Sussex County - No. of Days of Exceedance	Total No. of Days of Exceedance
2016 Ozone Season *#	10	2	3	11
2015 Ozone Season **	2	0	0	2
2014 Ozone Season **	3	0	0	3
2013 Ozone Season **	1	0	1	2
2012 Ozone Season **	13	14	12	19
2011 Ozone Season **	11	3	6	15
2010 Ozone Season **	14	5	9	18
2009 Ozone Season **	3	0	0	3
2008 Ozone Season **	9	8	8	14
2007 Ozone Season ***	5	0	0	5
2006 Ozone Season ***	2	4	3	6
2005 Ozone Season ***	8	2	8	16
2004 Ozone Season ***	3	0	2	5

*= 0.070 ppm Standard **= 0.075 ppm Standard ***= 0.08 ppm Standard
= Preliminary Data

On October 1, 2015, the EPA strengthened the 8-hour ozone NAAQS to 70 ppb based upon scientific evidence of ground level ozone's negative effect on public health and welfare. Relative to the 2008 8-hour ozone standard, the updated 8-hour ozone NAAQS is expected to further improve public health protection, particularly for at-risk groups, and also improve the health of trees, plants, and ecosystem. If the 2015 8-hour ozone standard of 70 ppb had been in effect for the past several years, based upon monitoring data, it is estimated that Delaware would have experienced a higher number of 8-hour ozone exceedances compared to the actual exceedances of the 2008 8-hour ozone standard of 75 ppb. The following table provides a comparison of the actual 8-hour ozone NAAQS exceedances and the estimated exceedance that would have occurred if the 70 ppb standard had been in effect:

Table 2
Comparison of Actual vs Estimated Days of Ozone Exceedance
2008 8-hour Ozone NAAQS vs 2015 8-hour Ozone NAAQS

Ozone Season	Actual Number of Days of 75 ppb Ozone Standard Exceedance	Actual Number of Monitor-Days of 75 ppb Ozone Standard Exceedance	Estimated Number of Days of Ozone Standard Exceedance Assuming 70 ppb Standard	Estimated Number of Monitor-Days of Ozone Standard Exceedance Assuming 70 ppb Standard
2010	18	28	36	91
2011	15	20	25	73
2012	19	39	28	107
2013	2	2	6	7
2014	3	3	8	17
2015	2	2	10	16
2016	6	17	11*	34*

*2015 8-hour ozone NAAQS limit of 70ppb in effect, actual exceedances shown (preliminary date)

It can be seen in the above table that if the more stringent 2015 8-hour ozone NAAQS of 70 ppb were in effect during the 2010 through 2015 ozone seasons that Delaware would have exceeded that standard at a much higher rate than it experienced under the 2008 8-hour ozone NAAQS of 75 ppb. As shown in the above table, for the 2010 through 2015 ozone season, the number of 8-hour ozone NAAQS exceedance day would increase from 59 days under the 2008 NAAQS to 113 days under the 2015 NAAQS. It can also be seen in the above table that Delaware continued to experience exceedances of the 2008 8-hour ozone NAAQS, as well as exceedances of the 2015 8-hour ozone NAAQS, during the 2016 ozone season.

As discussed earlier, NOx is a precursor pollutant to the formation of atmospheric ozone. NO_X is a generic term for a group of reactive gasses that are composed of nitrogen and various amounts of oxygen (including nitrogen oxide and nitrogen dioxide). NO_X is formed in the combustion process as a result of high temperature chemical reactions of the nitrogen contained in the fuel and the nitrogen contained in the ambient combustion air along with oxygen in the combustion air. Fossil fuel-fired electric generating units are some of the largest emitters of NOx, with EGUs powered by coal-fired steam generators without NOx emissions controls exhibiting some of the highest NOx emission rates (in terms of lb/MMBTU).

Uncontrolled, higher nitrogen content fuels, such as coal and residual fuel oil, tend to result in higher NO_X emissions than lower nitrogen content fuels (such as natural gas). Various combustion configurations tend to result in varying NOx emission rates (in terms of pounds of NOx emitted per million BTU of fuel heat input (lb/MMBTU)) due to amounts of excess air required for combustion, rate of fuel combustion, combustor geometry, peak combustion temperatures, and duration of combustion gasses at peak temperatures, etc. Combustion

controls, such as low NOx burners and overfire air, are commercially available NOx reduction technologies adaptable and applicable to most EGU combustion systems. Post combustion NOx controls, such as selective non-catalytic reduction (SNCR) and selective catalytic reduction (SCR), are commercially available highly effective NOx reduction technologies that are applicable to most EGU exhaust gas streams. These NOx controls are generally available for both new EGU installations and for retrofit on existing EGUs. Utilization of combustion controls and post combustion controls, singly or layered together for a single EGU, can result in significant reductions in the EGUs NOx emissions rate, greater than 90% reduction from uncontrolled levels for some EGUs.

To address the NOx emissions from EGU sources located in the state of Delaware, Delaware has promulgated a number of rules and regulations that effectively control the NOx emissions from these EGUs which also fulfils Delaware's obligation under §110(a)(2)(D)(i)(I) of the Clean Air Act. These rules and regulations have been previously submitted to the EPA in Delaware's June 2007 and subsequent state implementation plan (SIP) revisions, including the June 2012 revision. *(5)* The referenced rules and regulations include the following:

- 7 DE Admin Code 1112, Control of Nitrogen Oxide Emissions, which set RACT-based NOx emission rate standards for major stationary sources, including EGUs. *(6)*

- 7 DE Admin Code 1146, Electric Generating Unit (EGU) Multi-Pollutant Regulation, which included short term NOx emission rate limits (lb/MMBTU on rolling 24-hour average) and annual NOx mass emissions caps for coal-fired and residual oil-fired EGUs. *(7)*

- 7 DE Admin Code 1148. Control of Stationary Combustion Turbine Electric Generating Unit Emissions, which set NOx emission rate limits or approved NOx control technology requirements (such as water injection) for combustion turbines with a nameplate rating of 1 MW or greater that had not previously controlled their NOx emissions rate in accordance with the NOx RACT requirements of 7 DE Admin Code 1112. *(8)*

In addition to the NOx control regulations noted above, Delaware has participated in regional and federal initiatives, where applicable, that were designed to limit the NOx emissions from EGU sources whose NOx emissions may impact compliance with ozone standards in downwind states. These regional and federal initiatives include the following:

- The Ozone Transport Commission (OTC) NOx Budget Program. *(9)* In 1990, the OTC was created by amendments to the Clean Air Act. The OTC consisted of northeast and mid-Atlantic states with persistent summertime ozone problems. These OTC states include Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and portions of Virginia. The OTC was tasked with advising the EPA on ozone transport issues and for

helping to develop and implement regional solutions to ozone problem experienced by the member states. Recognizing that the interstate transport of pollutants to downwind states contributed to summertime ozone problems in those downwind states, the OTC created and implemented its NOx Budget Program. The NOx Budget Program was a cap-and-trade program to limit the total regional emission of NOx from fossil-fueled electric generating units and large boilers located in OTC states, and became effective in 1999. Cap and trade programs effectively reduce the total amount of emissions, usually for a geographic area, by placing a cap on the total emissions occurring in that geographic area without setting unit by unit limits. For the OTC NOx Budget Program, affected states were allocated a NOx emissions cap for the subject NOx emitting sources in the respective state, and the subject units were required to hold and surrender a NOx allowance for each ton of NOx emitted in order to comply with program requirements. This program did not include any unit specific NOx emissions rate requirements. The OTC NOx Budget Program effectively ended when the EPA began administering the EPA's NOx Budget Trading Program.

- The EPA NOx State Implementation Plan (SIP) Rule. *(10)* In 2003 the EPA implemented its NOx State Implementation Plan (SIP) Rule utilizing the NOx Budget Trading Program, a NOx emissions cap and trade program similar to that used for the OTC NOx Budget Program. Relative to the OTC NOx Budget Program, the EPA's NOx Budget Trading Program was expanded to include additional states (for a total of 20 states and also the District of Columbia) and established more stringent NOx emissions allowance allocations. The EPA's NOx State Implementation Plan (SIP) Rule was intended to reduce the regional transport of ozone and ozone-forming pollutants in the Eastern United States. The NOx State Implementation Plan (SIP) Rule was in place until 2009, when it was replaced by the EPA's Clean Air Interstate Rule (CAIR).

- The EPA Clean Air Interstate Rule (CAIR). *(11)* In 2005, the EPA promulgated its CAIR program that required states to reduce the emissions of SO2 and NOx to help meet health based air quality standards for fine particulate matter and ozone. The EPA indicated in the proposal for the CAIR that NOx and SO2 emissions in 23 states and the District of Columbia contributed to unhealthy levels of fine particulate matter in downwind states, and that the NOx emissions from 25 states and the District of Columbia contributed to unhealthy levels of 8-hour ozone in downwind states. EPA indicated that the reduction of SO2 and NOx emissions from EGUs would serve to reduce the interstate transport of pollutants related to these emissions. CAIR established a cap-and-trade program covering EGUs to limit the emissions of SO2 and NOx from these sources as an option for compliance with the reduction requirements. (All states subject to the CAIR selected this compliance option.) SO2 and NOx emissions mass caps were established for individual states and allowances were issued by the EPA to cover those allowable emissions from subject sources. The cap-and-trade program was intended by the EPA to provide subject sources

flexibility in meeting the mass emissions limitations through the installation of controls, fuel switching, or trading/purchase of excess allowances from other subject sources. The NOx emissions limitations of CAIR became effective in 2009, and the SO2 emissions limitation of CAIR became effective in 2010. The EPA made a number of changes to the CAIR subsequent to its original proposal, the most notable was the establishment of a process to provide for EPA to establish CAIR Federal Implementation Plans (FIPS) for states that failed to timely establish state plans for the implementation of CAIR. This ensured that the controls of the cap-and-trade program were uniformly established in all subject states on a timely basis.

- The EPA Cross-State Air Pollution Rule (CSAPR). *(12)* Subsequent to the promulgation of CAIR, legal actions lead the US Court of Appeals for the DC Circuit to make the decision in 2008 to remand the CAIR back to the EPA to make the rule more consistent with the requirements of the Clean Air Act. However, the courts left the requirements of CAIR in place until the EPA finalized a replacement rule. In response, the EPA promulgated its Cross-State Air Pollution Rule (CSAPR) in 2011. Additionally, in conjunction with the rule the EPA established federal implementation plans (FIPS) for each state subject to the CSAPR in order to implement the rule as rapidly as possible. In the rulemaking process the EPA identified for subject states what portions of each state's emissions significantly contributed to ozone or PM2.5 pollution in downwind states. The CSAPR established mass emissions limitations of SO2 and NOx from power plants in subject states to eliminate the portion of those emissions that are significant contributions to non-attainment or maintenance of fine particulate matter and ozone air quality standards in downwind states. The CSAPR established annual mass emissions limitations for SO2 and NOx and additional ozone season NOx mass emissions limitations for NOx. Between the original CSAPR and subsequent actions, there were 26 states subject to the ozone season NOx mass emissions limitations to address the 1997 Ozone NAAQS, 18 states were subject to annual SO2 and NOx mass emissions limitations of the rule to address the 1997 Annual PM2.5 NAAQS, and 21 states were subject to annual SO2 and NOx mass emissions limitations to address the 2006 24-hr PM2.5 NAAQS (a combined total of 23 states for addressing the two PM2.5 NAAQS). Relative to previous mass-based emissions rules, the CSAPR significantly restricted the trading of allowances that could be utilized for compliance purposes by establishing state variability limits that ensure that a state's actual mass emissions would fulfill its Clean Air Act "good neighbor" obligations. The EPA determined that Delaware was not required to participate in CSAPR.

- In 2012 the CSAPR was challenged in court, and the US Court of Appeals for the DC Circuit vacated the CSAPR and the implementing FIPs. The Court remanded the rule to the EPA to address the Courts findings, and directed the EPA to continue administering CAIR

pending the promulgation of a valid rule to replace CAIR. As of this ruling, CAIR cap-and-trade programs for annual SO2, annual NOx, and ozone season NOx remained in place. *(12)*

- In April of 2014 the US Supreme Court reversed the DC Circuit court's opinion vacating CSAPR. In June of 2014 the EPA filed a motion with the U.S. Court of Appeals for the DC Circuit to lift the stay of the CSAPR, and in October of 2014 the Court of Appeals for the DC Circuit granted the EPA's motion. In November of 2014 the EPA issued a ministerial rule that aligned the dates in the CSAPR rule text with the revised court-ordered schedule, including 2015 Phase 1 CSAPR implementation and 2017 Phase 2 CSAPR implementation. *(12)*

- In November of 2015 the EPA proposed an update to the CSAPR by issuing the proposed CSAPR Update Rule. *(13)* Starting in 2017, this proposal would reduce summertime nitrogen oxides (NO_X) emissions from power plants in 23 eastern states, by establishing NOx mass emission caps, in order to reduce the impact of those power plant emissions on downwind states. In its proposal, the EPA requested comments regarding the potential application of short term NOx emission limits on these same power plants. The EPA determined that Delaware was not required to participate in the CSAPR Update.

- On September 7 of 2016 the EPA finalized the update to the CSAPR by issuing the Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, Final Rule. *(14)* The CSAPR Update Rule addresses the ozone season (May – September) transport of ozone pollution in the eastern United States that crosses state lines to help downwind states and communities meet and maintain the 2008 ozone national ambient air quality standard (NAAQS). Starting in May 2017, this final rule puts in place NOx emissions caps that will provide additional reductions of ozone season NOx emissions from power plants in 22 states in the eastern United States.

These State and regional NOx reduction efforts have resulted in significant NOx emissions reductions from EGUs located in the state of Delaware. These reductions have occurred both in terms of ozone season NOx mass emissions (tons) and also in average ozone season NOx emissions rates (lb/MMBTU). The following table was assembled with data extracted from the United States Environmental Protection Agency's Air Markets Program Data (EPA's AMPD). *(15)* The table shows the ozone season NOx mass emissions (tons) and average NOx emissions rate (lb/MMBTU) for the EGU fleet located in the state of Delaware:

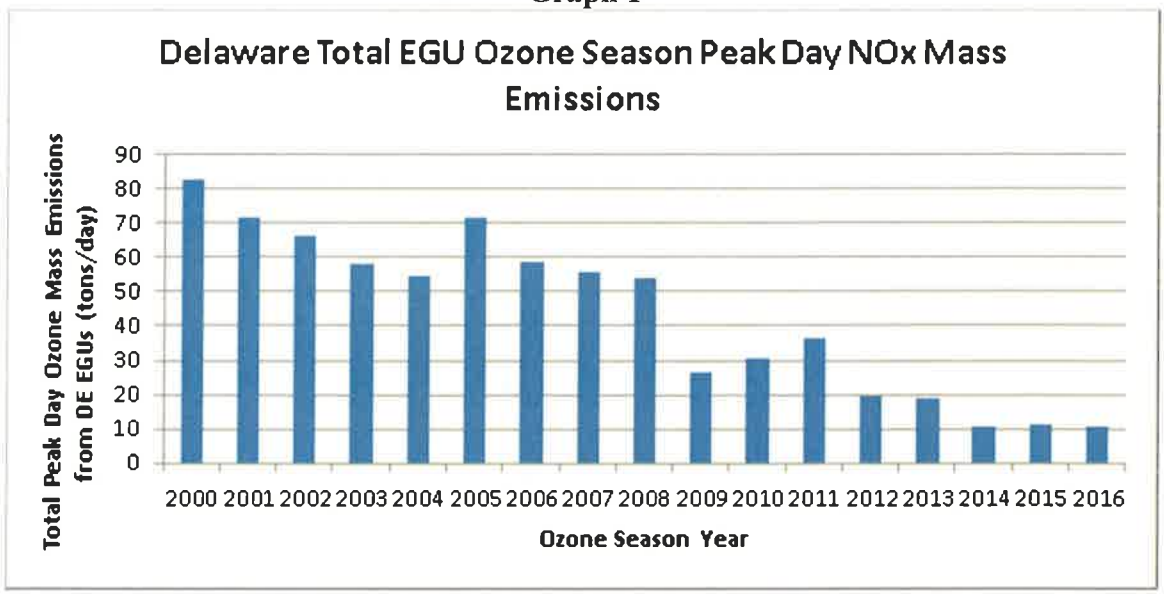
Table 3
2000 – 2016 Ozone Seasons
State of Delaware
Total EGU NOx Mass Emissions and Average NOx Emission Rate

Ozone Season Year	Total EGU OS NOx (tons)	Change in NOx Mass Emissions from 2000 (%)	Avereage NOx Emissions Rate (lb/MMBTU)	Change in Average NOx Emission Rate (%)
2000	4137	0.0	0.2784	0.0
2001	4777	15.5	0.2806	0.8
2002	4609	11.4	0.2415	-13.3
2003	3850	-6.9	0.2374	-14.7
2004	3659	-11.6	0.2449	-12.0
2005	5175	25.1	0.2818	1.2
2006	3567	-13.8	0.2582	-7.3
2007	4179	1.0	0.2398	-13.9
2008	3190	-22.9	0.2277	-18.2
2009	1280	-69.1	0.1695	-39.1
2010	2265	-45.3	0.1484	-46.7
2011	1879	-54.6	0.1250	-55.1
2012	1054	-74.5	0.0585	-79.0
2013	879	-78.7	0.0589	-78.9
2014	668	-83.9	0.0483	-82.7
2015	635	-84.6	0.0480	-82.8
2016*	613	-85.2	0.0396	-85.8

* Preliminary AMPD Data

However, relatively long term NOx mass emission caps (such as annual or seasonal caps) have limited impact on the short term NOx emissions (such a 24-hour period) from EGUs that have a more direct impact on compliance with short term air quality standards, such as the 8-hour ozone NAAQS. To address this issue, Delaware's air quality regulations have included short term NOx emission rate limits (with 24-hour averaging periods) that are protective of the short term ozone NAAQS. These short term NOx emission rate limits have helped Delaware achieve significant reductions in ozone season peak daily NOx mass emissions from Delaware's EGUs.

Graph 1



It can be seen in the above Graph 1 that between the 2000 and 2016 ozone seasons, the Delaware's EGUs have achieved a NOx mass emissions reduction (for ozone season peak NOx mass emissions days) in excess of 80% reduction. This reduction in peak ozone season day NOx mass emissions provides benefit in attaining compliance with the 8-hour ozone NAAQS for both Delaware's citizens and downwind populations.

Even though Delaware has significantly reduced the NOx emissions from EGUs located in Delaware, as discussed above, Delaware continues to experience exceedances of the 8-hour ozone NAAQS. Pollutants transported from facilities in upwind states are significant contributors to Delaware's continuing issues in meeting the 8-hour ozone NAAQS.

Modeling Identifies Impact of Upwind NOx Emissions Impacting Delaware's 8-hour Ozone NAAQS Compliance

The US EPA performed modeling as part of the development of its Cross-State Air Pollution Rule in order to help determine the impact of transported pollutants on downwind states and those states' ability to attain and maintain the then current 2008 ozone NAAQS of 75ppb. Some results of the modeling that identify state contributions to ozone at individual monitoring locations can be found on the spreadsheet titled "Contributions of 8-hour ozone, annual PM2.5, and 24-hour PM2.5 from each state to each monitoring site" located in the "Technical Information and Support Documents" section of the US EPS's Cross-State Air Pollution Rule (CSAPR) website. *(16)*

The US EPA's modeling identified 13 individual states (in addition to Delaware itself) whose NOx emissions significantly impact the ability of Delaware to attain and maintain the then current 8-hr ozone standard of 75 ppb. *(17)* (A state significantly impacts another state if it impacts that state's air quality by 1% or more of the applicable air quality standard. For the then current 8-hr ozone standard of 75 ppb, a significant contribution was 0.75 ppb or greater.) The states identified by the US EPA as significantly impacting Delaware's air quality, and the modeling results quantifying each state's impact, are shown in the following table:

Table 4
States Significantly Impacting Compliance with the 8-hour Ozone Standard in Delaware and the Magnitude of that Impact

State	Maximum Contribution (ppb)
CT	1.008
DE	6.256
IL	1.445
IN	1.737
KY	3.208
MD	23.951
MI	2.207
NJ	13.034
NY	9.092
OH	3.987
PA	13.344
TN	1.932
VA	6.039
WV	3.142

The EPA's modeling results, summarized in the above table, indicate that four states (Maryland, New Jersey, New York, and Pennsylvania) have greater impact on compliance of the 8-hour ozone standard in Delaware than the impact of Delaware itself. The EPA's modeling results summarized in the above table also indicate that three states (Kentucky, Ohio, and West Virginia) individually have an impact on compliance of the 8-hour ozone standard in Delaware of 50% of the impact that Delaware impacts itself. These modeling results tend to confirm that pollutant transport is a significant issue for the state of Delaware, and they also help explain Delaware's ongoing difficulties with the 8-hour ozone standard despite the significant actions Delaware has implemented to reduce NOx and VOC emissions in Delaware.

Pennsylvania's Homer City Generating Station's Impact on Delaware's 8-hour Ozone NAAQS Compliance

As noted in Table 4 above, the EPA's modeling indicated that the state of Pennsylvania significantly impacts Delaware's compliance with the 8-hour ozone NAAQS. Because of the magnitude of Pennsylvania's impact on Delaware's compliance with the 8-hour ozone standard, and the potential contribution to this impact by EGUs located in Pennsylvania, further modeling was performed to determine if individual Pennsylvania EGU facilities individually have a significant impact on Delaware's compliance with the 8-hour ozone standard.

In order to help Delaware assess the impact of upwind EGU facility NOx emissions on Delaware's 8-hour average ozone exceedances in 2011, Sonoma Technologies Inc. (STI) conducted air quality modeling using the Comprehensive Air Quality Model with extensions (CAMx) Ozone Source Apportionment Technology (OSAT) *(18)*. The 2011 ozone season modeling was performed to determine 8-hour average ozone apportionments from individual upwind EGU facilities and upwind groups of EGU facilities. The modeling identified that a number of EGU facilities located in the state of Pennsylvania individually had significantly impacted Delaware's compliance with the 8-hour ozone NAAQS during the 2011 ozone season. The identified EGU facilities significantly impacting Delaware's ambient air quality included Pennsylvania's Homer City Generating Station.

Because of the magnitude of its impact on Delaware's ambient ozone, the Homer City Generating Station is being individually addressed in this petition for a finding under §126(b) of the Clean Air Act.

The STI modeling results indicated that the Homer City Generating Station, located in Indiana County, Pennsylvania, emitted NOx during the 2011 ozone season at levels to individually have a significant impact on Delaware's ambient air quality on July 18, 2011. The following table shows the STI modeling estimated impact of Homer City Generating Station's NOx emissions on Delaware's ambient ozone on July 18, 2011:

Table 5
Homer City Generating Station
STI Modeling Estimated Impact on Delaware Air Monitors
July 18, 2011

Delaware Air Monitoring Location	STI Modeling Estimated Impact (ppb)
Brandywine	0.94
Bellefonte	0.82
MLK	0.82

As shown in the above Table 5, the STI modeling estimated that on July 18, 2011 the Homer City Generation Station NOx emissions had a significant impact on Delaware's ambient ozone relative to both the 2008 8-hour ozone NAAQS of 0.075 ppm and the 2015 8-hour ozone NAAQS of 0.070 ppm. As shown in the table, the highest STI modeling ambient ozone impact was 0.94 ppb.

A review of the Homer City Generating Station's emissions data in the AMPD indicates that on July 18, 2011, the Homer City Generating Station emitted 38.153 tons of NOx. The review of the AMPD data indicates that over the past few years that the Homer City Generating Station's ozone season daily NOx mass emissions have frequently exceeded the 38.153 ton/day value. The following table indicates the number of ozone season days that Homer City Generating Station exceeded the 38.153 ton/day value.

Table 6
Homer City Generating Station
Ozone Season Days With NOx Mass Emissions Greater Than 38.153 tons/day

Ozone Season Year	Ozone Season Days with NOx Mass Emissions Greater Than 38.153 tons/day
2011	17
2012	25
2013	124
2014	126
2015	101
2016*	48

*AMPD Preliminary Data

It can be seen in Table 6 that during recent ozone seasons there have been a number of days where the Homer City Generating Station has emitted NOx mass in excess of 38.153 tons/day, the value that was shown by the STI modeling to have had significant impact on Delaware's ambient ozone on July 18, 2011. While weather patterns impact the frequency and magnitude that the Homer City Generating Station's NOx emissions affect Delaware's air quality, the data provides an indication that the NOx emissions from the Homer City Generating Station have historically been at levels sufficient to have a significant impact.

Homer City Generating Station

The Homer City Generating Station is located in Indiana County, Pennsylvania. The Energy Information Administration (EIA) database indicates that the Homer Generating Station includes three coal fired steam electric generating units. *(19)* The following table provides some technical information regarding the Homer City Generating Station's coal-fired electric generating units:

:

Table 7
Homer City Generating Station's Electric Generating Units

	EIA Nameplate Rating (MW)	EIA Comercial Operation Year	EIA Primary Fuel	AMPD Heat Input Rating (MMBTU/hr)	AMPD Listed NOx Controls
Unit 1	660	1969	Bit Coal	6792	LNB OFA SCR
Unit 2	660	1969	Bit Coal	6792	LNB OFA SCR
Unit 3	692	1977	Bit Coal	7260	LNB OFA SCR

The Homer City Generating Station Units 1 and 2 incorporate supercritical Foster Wheeler steam generators, and Unit 3 incorporates a Babcock & Wilcox subcritical steam generator. All three steam generators fire bituminous coal as their primary fuel, with EIA information indicating that the bituminous coal fuel has historically come from Pennsylvania sources.

The Homer City Generating Station is contractually operated, maintained, and managed by NRG Energy. The Homer City Generating Station operates as an independent power producer and provides capacity, energy, and energy related services to the PJM regional transmission organization (RTO). The Homer City Generating Station also has the ability to sell energy into the NYISO RTO under certain restrictions.

Homer City Generating Station NOx Emissions Limitations and Performance

As noted in Table 7 above, the Homer City Generating Station Units 1, 2, and 3 are currently equipped with low NOx burners (LNBs), overfire air (OFA), and selective catalytic reduction systems (SCR) for control of NOx emissions. The LNBs and OFA NOx combustion controls were installed on the Homer City Generating Station EGUs in the mid-1990s for compliance with the state of Pennsylvania's NOx RACT requirements. In accordance with Pennsylvania's previous NOx RACT requirements (see discussion of Pennsylvania's 2016 revision to its NOx RACT regulation requirement below), the Homer City Generating Station EGU's were subject to NOx emission rate limits of 0.50 lb/MMBTU, on a 30-day rolling average. AMPD data indicates that the Homer City Generating Station EGUs have consistently been in compliance with these NOx RACT limits.

Also as indicated in Table 7 above, Homer City Generating Station Units 1, 2, and 3 are all equipped with SCR for NOx emissions control. AMPD data indicates that the SCRs for Unit 1 and Unit 3 were installed in 2001, and the SCR for Unit 2 was installed in 2000. The SCRs were installed to assist in compliance with the seasonal NOx emissions limitations and requirements of the Ozone Transport Commission's (OTC) NOx Budget Program and the subsequent EPA NOx State Implementation Plan (SIP) Rule and its associated NOx Budget Trading Program.

Pennsylvania has recently finalized a revision to its NOx RACT regulation, *Title 25. Environmental Protection/ Part I. Department of Environmental Protection/ Subpart C. Protection of Natural Resources, Article III Air Resources/ Chapter 129. Standards for Sources, Additional RACT Requirements for Major Sources of NOx and VOCs. (20)* The revisions to Pennsylvania's NOx RACT regulation become effective in 2017. The revision to Pennsylvania's NOx RACT regulation revises the NOx RACT provisions that are applicable to the Homer City Generating Station Units 1, 2, and 3.

The steam generators associated with Homer City Generating Station Units 1, 2, and 3 are all coal-fueled, wall-fired combustion units with heat input ratings of greater than 250 MMBTU/hr and are all equipped with SCR NOx emission controls. In accordance with the requirements of §129.97 of the revised Pennsylvania NOx RACT regulation, the presumptive NOx RACT emission rate limitation for Homer City Generating Station's coal-fired EGUs, with a SCR system flue gas inlet temperature equal to or greater than 600°F, is 0.12 lb/MMBTU, and compliance with this limit is also required in the event of SCR system by-pass, as follows:

> *§129.97(g)(viii) For a coal-fired combustion unit with a selective catalytic reduction system operating with an inlet temperature equal to or greater than 600°F, 0.12 lb NO_x/million Btu heat input. Compliance with this emission limit is also required when by-passing the selective catalytic reduction system.*

Additionally, under §129.98 of the revised Pennsylvania NOx RACT regulation, the owner or operator of a major NOx emitting facility subject to the regulation with at least one air contamination source subject to a NOx RACT emission limitation in §129.97 of the regulation that can not meet the applicable limitation may elect to meet the limitation by averaging NOx emissions on either a facility-wide or system wide basis using a 30-day rolling average. The regulation requires that system-wide averaging must be among sources under the common control of the same owner or operator within the same ozone non-attainment area of Pennsylvania.

> *§129.98(a) The owner or operator of a major NO_x emitting facility subject to § 129.96 (relating to applicability) that includes at least one air contamination source subject to a NO_x RACT emission limitation in § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) that cannot meet the applicable NO_x RACT emission limitation may elect to meet the applicable NO_x RACT emission limitation in § 129.97 by averaging NO_x emissions on either a facility-wide or system-wide basis using a 30-day rolling average. System-wide emissions averaging must be among sources under common control of the same owner or operator within the same ozone nonattainment area in this Commonwealth.*

Compliance with the averaging provisions of the revised Pennsylvania NOx RACT regulation is determined as follows:

§129.98(e) The owner or operator shall calculate the alternative facility-wide or system-wide NO_x RACT emissions limitation using a 30-day rolling average for the air contamination sources included in the application for the operating permit modification or plan approval, if otherwise required, submitted under subsection (b) by using the following equation to sum the emissions for all of the sources included in the NO_x emissions averaging plan:

$$\left[\sum_{i=1}^{n} Ei_{actual}\right] \leq \left[\sum_{i=1}^{n} Ei_{allowable}\right]$$

Where:

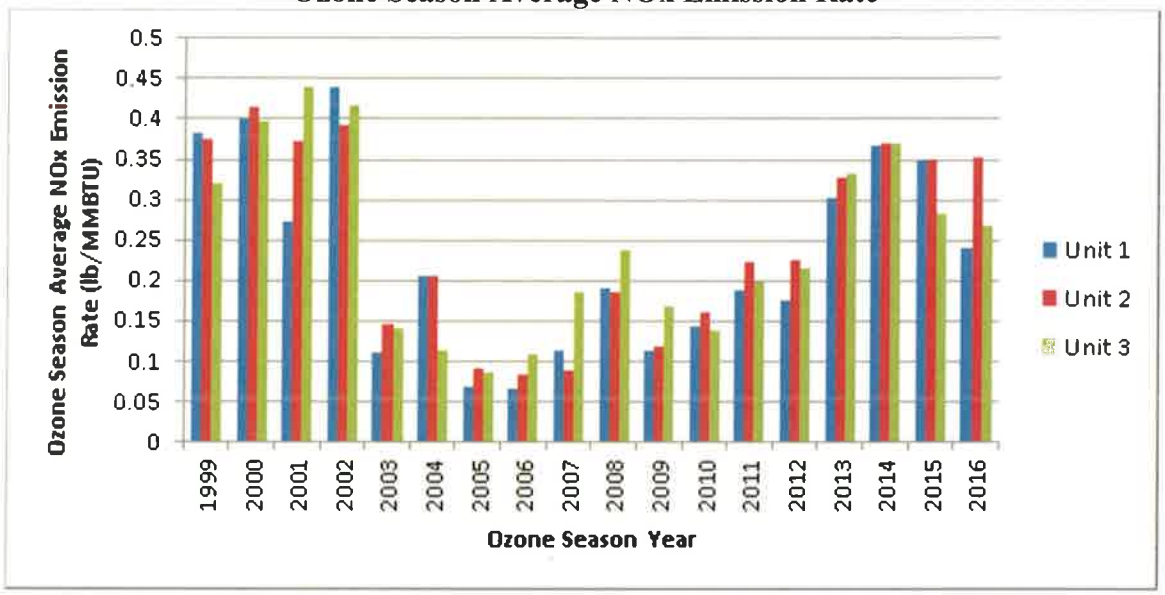
Ei_{actual} = The actual NO_x mass emissions, including emissions during start-ups, shutdowns and malfunctions, for air contamination source i on a 30-day rolling basis.

$Ei_{allowable}$ = The allowable NO_x mass emissions computed using the allowable emission rate limitations for air contamination source i on a 30-day rolling basis specified in § 129.97. If an air contamination source included in an averaging plan is subject to a numerical emission rate limit that is more stringent than the applicable allowable emission rate limitation in § 129.97, then the numerical emission rate limit shall be used for the calculation of the allowable NO_x mass emissions.

n = The number of air contamination sources included in the NO_x emissions averaging plan.

Even though all three of the Homer City Generating Station coal-fired EGUs have been equipped with SCR NOx controls for a number of years, the units have been operated during recent ozone seasons with NOx emission rates reflective of coal-fired EGUs that do not incorporate SCR NOx controls. However, all three of the Homer City coal-fired EGUs have historically demonstrated the ability to operate with ozone season average NOx rates below 0.12 lb/MMBTU. The following graph shows the 2000 through 2015 ozone season average NOx emission rate values for the Homer City Generating Station coal-fired EGUs.

Graph 2
Homer City Generating Station Units 1, 2 and 3
Ozone Season Average NOx Emission Rate



As shown in the above graph, all three Homer City coal-fired EGUs demonstrated the ability to operate with ozone season NOx emission rate values under 0.12 lb/MMBTU. The lowest ozone season average NOx emission rate for Unit 1 of 0.0695 lb/MMBTU was recorded in 2006. The lowest ozone season average NOx emission rate for Unit 2 of 0.0826 was also recorded in 2006. The lowest ozone season average NOx emission rate for Unit 3 of 0.0872 was recorded in 2005. All of these low ozone season NOx rates were recorded several ozone seasons after the initial installation of the respective SCRs, and during the period when the units were subject to the EPA's NOx State Implementation Plan (SIP) Rule and the related NOx Budget Trading Program.

Potential Impact of the Absence of Short Term NOx Emission Rate Averaging Times

Pennsylvania's revised NOx RACT regulation established a presumptive NOx RACT rate of 0.12 lb/MMBTU for SCR-equipped coal-fired EGUs beginning in 2017. If all three of the Homer City Generating Station coal-fired EGUs (or the Homer City facility NOx emission rate average) met a 0.12 lb/MMBTU limit, and each operated at its maximum rated heat input, the daily NOx mass emissions from the Homer City Generating Station would not meet or exceed the 38.153 tons of NOx per day value (the value shown by STI modeling to have a significant impact on Delaware's ambient ozone on July 18, 2011). However, Pennsylvania's new RACT regulation permits compliance with the 0.12 lb/MMBTU NOx rate limit by averaging NOx emissions among units at a common facility on a 30-day rolling average compliance basis.

When taken in conjunction with Pennsylvania's NOx RACT regulations provisions under §129.98 which allows averaging of unit emissions at a common facility, it is possible that the Homer City Generation Station could emit NOx at rates well above 0.12 lb/MMBTU for one or more days and still maintain compliance with the 0.12 lb/MMBTU, 30-day rolling average. This could allow the Homer City Generating Station to emit NOx mass emissions in excess of 38.153 tons/day (the value shown by STI modeling to have a significant impact on Delaware's ambient ozone on July 18, 2011) and maintain compliance with the 0.12 lb/MMBTU, 30-day rolling average, NOx emission rate limit.

The following is an example of how the Homer City Generating Station could emit NOx at an average rate of 38.153 tons/day (the value shown by STI modeling to have a significant impact on Delaware's ambient ozone on July 18, 2011) for one day during an ozone season and remain in compliance with Pennsylvania's revised RACT regulation. The AMPD 2015 ozone season operating heat input data was selected to form the basis for this example, as it is anticipated that it would be most representative of Homer City Generating Station facility and unit operations in the near future. For the purposes of this example, it is assumed that the Homer City Generating Station owner/operator choses to comply with the Pennsylvania NOx RACT limits using the facility average the provisions of the RACT regulation.

- As indicated in the AMPD for the 2015 ozone season, the highest heat input day was July 19. The AMPD indicated that on that day the Homer City Generating Station combusted 380,847 MMBTU.
- For July 18, 2015, assuming that the Homer City Generating Station emitted 38.153 tons of NOx (the value shown by STI modeling to have a significant impact on Delaware's ambient ozone on July 18, 2011) and combusted 380,847 MMBTU, the average daily NOx emission rate would be estimated to be 0.2004 lb/MMBTU.
- For the 2015 ozone season, the AMPD data indicated that the lowest 30-day total heat input was 6,575,991 MMBTU. The estimated NOx emissions that would have been emitted combusting 6,575,991 MMBTU at an average NOx emission rate of 0.12 lb/MMBTU is 394.6 tons. (This is the allowable NOx mass emissions for the 30-day average in accordance with the provisions of the Pennsylvania NOx RACT for compliance purposes.)
- The required Homer City Generating Station facility average NOx emission rate required to comply with the 0.12 lb/MMBTU 30-day average and accounting for the 38.153 ton/day of NOx mass emissions for one day is estimated to be:

  *((394.6 tons – 38.153 tons) * 2000 lb/ton) / (6,575,991 MMBTU – 380,847 MMBTU) = 0.1148 lb/MMBTU*
- The estimated required average NOx emission rate of 0.1148 lb/MMBTU appears to be within the capabilities of all three of the Homer City Generating Station coal-fired EGUs, as shown by the historic average ozone season NOx emission rate data included in the above Graph 2.

The additional following example illustrates how the averaging provisions may also provide for compliance even when the Homer City Generating Station operated for a day with extraordinarily high NOx mass emissions. For this example it is assumed that a worst NOx mass emissions day would occur with all three Homer City Generating Station coal-fired EGUs operating for 24-hours at their AMPD listed maximum hourly heat input (shown in Table 7) at the highest average facility NOx emission rate that has been observed over the last few ozone seasons.

- The 24-hour heat input for all of the Homer City Generating Station coal-fired EGUs operating at their full heat input capacity is estimated as:
  *(6792MMBTU/hr + 6792MMBTU/hr + 7260MMBTU/hr) * 24hrs/day = 500,256 MMBTU.*
- The highest average facility NOx emission rate for the Homer City facility over the last few seasons is 0.3285 lb/MMBTU, which occurred during the 2015 ozone season.
- Using the estimated maximum heat input and the 2015 ozone season average NOx emission rate, the estimated NOx mass emissions would be:
  *500,256MMBTU/day * 0.3285lb/MMBTU = 82.167 tons/day.*
- The required Homer City Generating Station facility average NOx emission rate required to comply with the 0.12 lb/MMBTU 30-day average and accounting for the 82.167 ton/day of NOx mass emissions for one day is estimated to be:
  *((394.6 tons – 82.167 tons) * 2000 lb/ton) / (6,575,991 MMBTU – 500,256 MMBTU) = 0.1028 lb/MMBTU*
- The estimated required average NOx emission rate of 0.1028 lb/MMBTU appears to be within the capabilities of all three of the Homer City Generating Station coal-fired EGUs, as shown by the historic average ozone season NOx emission rate data included in the above Graph 2.

As discussed earlier in this petition and as shown in Graph 2, all three Homer City Generating Station coal-fired EGUs have historically demonstrated the ability to operate with ozone season average NOx emission rates well below 0.12 lb/MMBTU. These historic Homer City Generating Station ozone season average NOx emission rates demonstrate that the facility has the capability to operate for extended periods at the levels necessary to remain in compliance with the provisions of the Pennsylvania NOx RACT regulation in the event the facility incurred the NOx emission excursions discussed in the above two examples.

While the above two examples are theoretical, they represent realistic scenarios where the Homer City Generating Station could have daily NOx emissions at or above levels that have been shown by STI's modeling to significantly impact Delaware's ambient ozone while the facility remains in compliance with Pennsylvania's new RACT regulation, *Title 25. Environmental Protection/ Part I. Department of Environmental Protection/ Subpart C. Protection of Natural Resources, Article III Air Resources/ Chapter 129. Standards for Sources, Additional RACT Requirements for Major Sources of NOx and VOCs.*

Delaware does not agree that a 30-day averaging period, as provided for in Pennsylvania's revised NOx RACT regulation, is appropriate in conjunction with the 0.12 lb/MMBTU NOx rate limit. It is Delaware's opinion that the use of a 30-day rolling average for an emissions limitation is not protective of short term NAAQS such as the 2008 and 2015 8-hour ozone NAAQS, and can potentially have a negative impact on Delaware's ability to be in compliance with the short term air quality standards of the 2008 and 2015 8-hour ozone NAAQS.

Short Term NOx Emission Limits Are Required To Assist in Reducing the Downwind Impact of Homer City Generating Station NOx Emissions

The information discussed above indicates that currently applicable NOx emission rate limits and applicable EGU cap-and-trade NOx control programs, that were designed to limit annual and seasonal NOx emissions, have not served to limit the Homer City Generating Station's NOx emissions to levels such that those emissions do not significantly contribute to downwind exceedances of short term air quality standards, thereby imperiling the public health and welfare in downwind states. The modeling performed by STI supports this conclusion by quantifying the impact of the Homer City Generating Station's NOx emissions on ozone levels measured at Delaware's monitoring locations.

Pennsylvania has recently revised its NOx RACT regulation. In accordance with the provisions of the revised NOx RACT regulation, beginning in 2017, the Homer City Generating Station coal-fired EGUs will be subject to a NOx emission rate limit of 0.12 lb/MMBTU, and in accordance with provisions of the revised NOx RACT regulation may elect to comply with the limit by averaging the emissions of the three coal-fired EGUs at the facility and on a 30-day rolling average basis. However, as discussed earlier, the 30-day averaging provisions of the revised NOx RACT regulation do not ensure that that the Homer City EGU facility will not emit NOx emissions that have been shown by STI modeling to significantly impact Delaware's ambient ozone while still remaining in compliance with applicable NOx emission limitations. Sufficiently stringent NOx emission rate limits based on shorter term averaging periods (such as 24-hour) are needed to help ensure that the Homer City Electric Generating Station does not significantly impact downwind jurisdictions' ability to comply with the 8-hour ozone NAAQS.

It is interesting to note that the NOx emissions rate limitations and EGU cap-and-trade NOx control programs applicable to the Homer City Generating Station resulted in the installation of SCR, the most effective commercially available NOx control technology, on the Homer City Generating Station's coal-fired EGUs. AMPD data indicates that after the installation of the SCRs, the Homer City Generating Station coal-fired EGUs demonstrated ozone season average NOx emission rates reflective of effective SCR operation. However, the AMPD also demonstrates that the Homer City Generating Station did not consistently operate the SCR controls during subsequent ozone seasons to attain similar average ozone season NOx emission

rates. Since the early years of installation of SCRs at the Homer City Generating Station, changing conditions in the power generation industry have resulted in conditions where NOx cap-and-trade compliance allowances are available at prices that make it uneconomic to operate existing NOx controls, such as Homer City Generating Station SCRs, for compliance with cap-and-trade NOx control programs. Additional regulatory incentive is required to ensure that the existing EGU NOx controls are consistently operated in accordance with good pollution control practices.

Delaware is concerned that the NOx mass emission limits associated with the CSAPR Update will be ineffective in properly protecting the public health and welfare in downwind states at all times with regards to the 8-hour ozone NAAQS. It is recognized that the provisions of the CSAPR Update provide for more restrictive annual and seasonal NOx mass emissions than previous rules, and that the CSAPR Update programs also provide significantly more restrictive allowance trading provisions than previous rules. However, the provisions of the CSAPR Update do not provide any limitations on the Homer City Generating Station's NOx mass emissions for any period shorter than seasonal (such as hourly or daily). The lack of sufficiently stringent short term NOx emission rates facilitates the continued operation of the Homer City Generating Station's coal-fired EGUs with inadequate NOx emission control and resulting high NOx emissions over short periods of time. The lack of sufficiently stringent short term emissions limitations will therefore help facilitate the Homer City Generating Station's NOx mass emissions at levels that will continue to support non-compliance with the 8-hour ozone NAAQS in Delaware, and thereby continue to impact the health and welfare of Delaware's citizens.

In order to be protective of short term air quality standards, such as the 8-hour ozone NAAQS, it is Delaware's opinion that it is necessary to establish emissions limits with appropriate magnitudes and averaging periods for the Homer City Generating Station that ensure that the NOx emissions are adequately controlled during any particular time period. It is Delaware's opinion that selection of a short term NOx emission rate limit averaging period of no greater than 24 hours is also appropriate to address the short term aspects of compliance with a short term NAAQS, such as the 8-hour ozone NAAQS.

Requested EPA Action

Even with extensive reduction of NOx emissions from EGU sources located in the state of Delaware, Delaware continues to experience exceedances of the 8-hour ozone NAAQS. Modeling conducted by the EPA indicates that emissions from EGUs in upwind states are major contributors to Delaware's ongoing 8-hour ozone NAAQS compliance issues. Modeling performed for Delaware by Sonoma technologies Inc, (STI) indicates that the

Homer City Generating Station, located in the upwind state of Pennsylvania, itself significantly impacts the level of ozone in Delaware's ambient air.

The Homer City Generating Station's impact on Delaware's 8-hour ozone NAAQS compliance has been shown to occur even though the Homer City Generating Station's coal-fired EGUs are equipped with some of the most effective NOx emission controls (SCR) and have been in compliance with their permit NOx emissions rate limits and applicable cap-and-trade NOx emission control programs. These permit NOx emission rate limits and long term (annual, seasonal) cap-and-trade NOx control programs have not provided the level of short term NOx emission limits necessary to be supportive of the short term, 8-hour ozone NAAQS. Because the CSAPR Update will continue to attempt to control NOx mass emissions on an annual and seasonal basis, these programs are also expected to permit an EGU facility such as the Homer City Generating Station to emit NOx at high levels over any given short term period while the subject EGU facility remains in overall compliance with the annual and seasonal programs.

The historic compliance flexibility provided to the Homer City Generating Station by applicable NOx cap-and-trade programs and relatively high, long term NOx emission rate limitations have permitted the Homer City Generating Station owner/operator to make decisions concerning whether to operate SCR controls or not for any given ozone season or part of an ozone season. The result of this compliance flexibility is evident in Graph 2, where it can be seen that during recent ozone seasons the Homer City Generating Station coal-fired EGUs have operated with average NOx emission rates representative of coal-fired EGUs that did not incorporate functioning SCR NOx controls.

Pennsylvania has recently revised its NOx RACT regulation, *Title 25. Environmental Protection/ Part I. Department of Environmental Protection/ Subpart C. Protection of Natural Resources, Article III Air Resources/ Chapter 129. Standards for Sources, Additional RACT Requirements for Major Sources of NOx and VOCs*. The revision to Pennsylvania's NOx RACT regulation will be effective beginning in 2017, and includes NOx emissions rate limits that will be applicable to the Homer City Generating Station coal-fired EGUs. This includes a NOx emission rate limit of 0.12 lb/MMBTU, provisions to allow averaging among all of the units at the facility, and provisions to have compliance based on a rolling 30-day average basis. As discussed earlier in this petition, the 30-day averaging provisions of the regulation give the Homer City Generating Station the ability to emit NOx at a level estimated by STI modeling to significantly impact Delaware's ambient ozone while remaining in compliance with the provisions of the revised Pennsylvania NOx RACT regulation.

In order to be protective of short term air quality standards, such as the 8-hour ozone NAAQS, it is Delaware's opinion that it will be necessary to establish NOx emissions limits with appropriate magnitudes and averaging periods that ensure that the NOx emissions are adequately controlled during any particular time period. Therefore, Delaware is hereby petitioning the EPA under section 126(b) of the Clean Air Act to find that the Homer City Generating Station, located in

Pennsylvania, emits air pollutants in violation of the prohibition of section 110(a)(2)(D)(i) of the Clean Air Act, and to require the Homer City Generating Station to limit short term NOx emissions to levels that are protective of the 8-hour ozone NAAQS in downwind areas such as Delaware.

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