Statement of Olympus Power, LLC

OTC and MANE VU Spring Meeting

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Good afternoon, my name is Vince Brisini and I am the Director of Environmental Affairs for Olympus Power. Some of you may remember me from my time with Pennsylvania DEP. I am here today to offer some additional perspective on NOx emissions from electric generating units both nationally and within the Ozone Transport Region. The source of the facilities and emissions data is the EPA's Clean Air Markets Division's, Air Markets Program database. At Olympus Power we believe that it is important to determine the appropriate courses of action based upon the most current information and an objective assessment of those data.

Spreadsheet 1 that I am providing includes annual sulfur dioxide, annual nitrogen oxides, ozone season nitrogen oxides and non-ozone season nitrogen oxides for 2002, 2011, 2014, 2015 and 2016. I have selected those years as they reflect the years in the draft MANE-VU draft regional haze trajectory report and also because they show the rapidity at which emission reductions are occurring. Using those data, I have calculated the emissions reductions that have occurred by state and by total electric generating unit source category. In the lower 48 states, between 2002 and 2016, electric generating unit sulfur dioxide emissions have been reduced by 85.4%; annual nitrogen oxide emissions by 72.8%; ozone season nitrogen oxides emissions by 70.2%; and non-ozone season nitrogen oxides emissions by 74.7%. And in the case of Pennsylvania, these reductions are prior to the implementation of Pennsylvania Reasonably Available Control Technology II (PA RACT II), and in the case of CSAPR affected states, prior to the reduced ozone season nitrogen oxides emissions budget contained in the final CSAPR Update. Both of which limit nitrogen oxides emissions in 2017. Consequently, in Pennsylvania there will be considerable additional nitrogen oxides emissions reductions in 2017 and beyond during both the ozone season and on an annual basis, including the non-ozone season. It is worth noting that there has already been considerable reductions in the emissions of these pollutants from electric generating units prior to 2002.

I am also providing a copy of the final CSAPR Update state budgets, variability limits and assurance levels contained in the final CSAPR Update. I have used this information in the development of Spreadsheet 2 which sets forth 2016 electric generating unit ozone season heat input, actual nitrogen oxides emissions and corresponding statewide emission rate necessary to meet the state budget as well as the assurance levels for Connecticut, Delaware, Maryland, New Jersey, New York, Virginia and Pennsylvania . What is important to note in this spreadsheet is that the state average corresponding nitrogen oxides emission rates to meet the state ozone

season NOx budgets are higher for both Maryland and Virginia than the corresponding emission rate for Pennsylvania. A somewhat different way to assess the impact and outcome of the CSAPR Update state budgets on the electric generating units in different states.

Because neither Delaware nor Connecticut are CSAPR affected states, I have compiled Spreadsheet 3 for Delaware and Spreadsheet 4 for Connecticut which show the 2014, 2015 and 2016 ozone season electric generating facilities heat inputs and nitrogen oxides emissions. For ease of review, I have color coded the emissions for facilities that have emissions rates greater than or equal to 0.066 pounds of nitrogen dioxide per million Btu heat input (that is the corresponding emission rate for Pennsylvania) but less than 0.12 pounds of nitrogen dioxide per million Btu heat (that is the Pennsylvania RACT II limit for coal fired units when in market); emission rates greater than or equal to 0.12 pounds of nitrogen oxides per million Btu heat input but less than 1.0 pounds of nitrogen oxides; and, in the case of Connecticut, emission rates greater than or equal to 1.0 pounds of nitrogen dioxide per million Btu heat input. From the total ozone season mass emissions for the facilities, it is obvious that many of these facilities are primarily "peaking" facilities. However, these are the units that are brought into service on high electric demand days (HEDDs) and consequently have disproportionate impact upon the formation of the highest local ozone concentrations.

To show the impact of these "peaking" facilities being brought into service and the correlation to high ozone concentrations, I am providing Graphs 1 and 2 that show the variability in the nitrogen oxides emission rates in some states on these high electric demand days. I am also providing Graphs 3 and 4 that shows far less variability in state average emission rates for other states. So while the overall mass emissions from peaking units is actually small, their impact upon local concentrations of ozone on the high electric demand days which are typically the most conducive for the formation of ozone can be quite large. I must mention that these graphs were prepared for the Midwest Ozone Group and that Olympus Power is a member of the Midwest Ozone Group.

Finally, to demonstrate the significance of local sources upon ozone concentrations, I am providing Graph 5, another graph prepared for the Midwest Ozone Group. This graph demonstrates that when considering the appropriateness of ozone controls the metric cannot simply be a dollar per ton removed analysis. It must also include an ozone control effectiveness component. Otherwise emission controls could be required which provide little or no benefit to the measured ozone concentrations in some areas.

I would like to thank the Ozone Transport Commission and MANE-VU for providing the opportunity to provide this information.