OZONE TRANSPORT COMMISSION

Memorandum of Understanding Among the States of the Ozone Transport Commission Concerning the Incorporation of High Electrical Demand Day Emission Reduction Strategies into Ozone Attainment State Implementation Planning

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Whereas the Ozone Transport Commission (OTC) was established under Sections 176A and 184 of the federal Clean Air Act (CAA) to ensure the development and implementation of regional strategies to reduce ground-level ozone to healthful levels; and

Whereas the adverse health effects of ground-level ozone are well documented, and in spite of significant reductions of ozone precursor emissions achieved to date as a result of our NOx MOU of 1994, the US Environmental Protection Agency (EPA) NOx SIP call effective in 2003, and expected reductions to be further achieved by federal and state programs over the next decade, a significant portion of the ozone problem continues to be caused by nitrogen oxides (NO_X) transported into and generated within our region by electrical generating units (EGUs); and

Whereas, high electrical demand day (HEDD) operation of EGUs generally have not been addressed under existing air quality control requirements, and these units are called into services on the very hot days of summer when air pollution levels are highest, and

Whereas, HEDD unit operations are a significant contributor to NOx emissions on high ozone days; and

Whereas, the NOx cap and trade program, although effective generally has, by its very nature, had limited success in reducing emissions from HEDD units on HEDDs; and

Whereas, OTC staff, state environmental and utility regulators, EPA staff, EGU owners and operators and the independent regional systems operators have been meeting to assess emissions associated with HEDD during the ozone season and to address excess NOx emissions on HEDDs, and

Whereas, OTC is guided by its precepts to seek reductions in the most comprehensive, cost effective manner possible in order to maximize public health, environmental and econornic benefits while ensuring an adequate electrical capacity and reliability for the region; and

Whereas, our investigations have found that NOx emissions are much higher on a high electrical demand day than on a typical summer day and there is the potential to reduce HEDD emissions by approximately 25% in the short term through the application of known control technologies to HEDD combustion turbine, coal and residual oil burning units; and

Whereas, installing typically used NOx control technologies may not be available to, or be the most cost effective method of, controlling HEDD NOx emissions from specific units; and

Whereas, energy efficiency is the most cost effective method to reduce HEDD NOx emissions, but cannot alone, nor in the short term, achieve sufficient emission reductions to achieve attainment of the ozone standard in many areas; and

Whereas, demand response programs can be a very cost effective mechanism to reduce emissions if they result in clean behind the meter generation and are supported by appropriate market devices, including but not limited to dynamic pricing; and

Whereas, any strategy to address HEDD emissions must recognize and address the issue of high emitting behind the meter units; and

Whereas, EPA and State workgroups estimate that using a cap and trade mechanism alone to provide sufficient financial incentives to cause the clean up of HEDD units would need an 18:1 retirement ratio and such a strategy would consume 74% of all available CAIR allowances for 12 HEDD days;

Therefore, be it **RESOLVED** that

The OTC States identified in the following table commit to pursue the following reductions in NOx emissions associated with HEDD units on high electrical demand days during the ozone season; such reductions to be achieved beginning with the 2009 ozone season or as soon as feasible thereafter, but no later than 2012:

State	NOx (tons per day)	Percent Reduction from HEDD Units
CT	11.7	25%
DE	7.3	20%
MD	23.5	32%
NJ	19.8	28%
NY	50.8	27%
PA	21.8	32%
Total	134.9	

Furthermore, that such reduction commitment will be included in each of the several states' 8-hour ozone attainment State Implementation Plan submissions to EPA due in June 2007; and

Furthermore, that each state shall select the strategy or combination of strategies that provides both maximum certainty and appropriate flexibility for that state and its electric generators. Such mechanisms for achieving the reductions may include but are not limited to:

- regulatory caps for emissions from HEDD units on HEDDs;
- performance standards;
- State/generator HEDD partnership agreements;
- energy efficiency programs;
- demand response programs, provided that such programs reduce and/or preclude the installation or use of distributed generation with unacceptably high emissions;
- regulatory standards or controls for behind-the-meter generators;
- effective adjustment of the NOx retirement ratio to provide reductions on HEDDs; and

Furthermore, the undersigned states for whom no state-specific target emission reduction is specified above sign this MOU in support and appreciation of the listed states making this commitment, will continue to evaluate the HEDD issue in their state and, as necessary and appropriate, may choose to pursue additional emission reductions from the HEDD sector in their state.

Be it **FURTHER RESOLVED** that the OTC states will continue their work to establish long-term standards and programs to address emissions on HEDDs, such programs and standards to include:

- continued work with state energy and utility regulators as well as the regional transmission operators regarding energy efficiency, dynamic pricing and other market oriented incentives toward significant demand reduction and clean new or repowered supply

- development of long-term performance standards that will ensure reliable, clean future generation.
- development of emissions portfolio standards applicable to load serving entities, distribution companies, "aggregators" and generators, according to the structure of the energy supply market

Executed by the undersigned States this 2nd day of March, 2007:

Connecticut

Delaware

District of Columbia

Maine

Maryland

Massachusetts

New Hampshire

New Jersey

New York

Pennsylvania

Rhode Island

Vermont

Virginia