Impact of New Regulatory and Technological Developments on Obtaining Air Pollution Construction Permits for New Combustion Turbines for Electric Power Generation and Strategies for Dealing with These Developments

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ABSTRACT

Several recent technological and regulatory developments will impact the approach for obtaining air pollution construction permits for new combustion turbines (CTs). For each of these developments, we examine their impacts on the approach for obtaining the construction permits and, as applicable, discuss strategies for dealing with these developments.

Six of these developments are:

1. Selective Catalytic Reduction (SCR) control technology's growing technological feasibility for simple cycle CTs.

2. U.S. EPA new draft guidance for BACT analyses pertaining to the collateral environmental impacts of using SCR on combined cycle CTs equipped with dry low NOx burners.

3. U.S. EPA emission factors for hazardous air pollutants from oil and gas fired CTs.

4. U.S. EPA's revisions to the Guideline on Air Quality Models with AERMOD becoming the principal new recommended model for determining impacts within 50 kilometers.

5. New requirements and analytical tools for conducting PSD Class I impact evaluations, including: a) U.S. EPA's revisions to the Guideline on Air Quality Models, with CALPUFF becoming the new recommended model for long range transport modeling of concentrations beyond 50 kilometers and visibility impacts in PSD Class I areas, b) U. S. EPA's Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Summary Report and Recommendations for Modeling Long Range Transport Impacts and c) Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Draft Phase I Report for addressing the impact on air quality and air quality related values of sources located near Class I areas.

6. Expected promulgation by U.S. EPA of Maximum Achievable Control Technology (MACT) standards for new CTs.