

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary
For an Application
From Dynegy Kendall Energy, LLC
For a Revised Construction Permit
For Combined Cycle Power Plant at
1401 County Line Road, Minooka, Kendall County

Site Identification No.: 093808AAD

Application No.: 98110017

Date Received: October 20, 2006

Schedule

Public Comment Period Begins: June 07, 2007

Public Comment Period Closes: July 07, 2007

Illinois EPA Contacts

Permit Analyst: Manish Patel

Community Relations Coordinator: Brad Frost

I. INTRODUCTION

Dynegy Kendall Energy, LLC (Kendall Energy) has requested a revision to the construction permit for its natural gas fired electric generation facility. The facility has four “combined cycle” combustion turbines (CT) equipped with heat recovery steam generators (HRSG). The Kendall Energy was issued a PSD Construction Permit for the facility.

II. PROJECT DESCRIPTION

Kendall Energy has requested changes to the provisions of the permit to allow periodic tuning of the CT/HRSGs, including changes to the provisions that establish Best Available Control Technology (BACT) to address periodic tuning. Periodic tuning is a separate operating mode of CT/HRSG during which emissions performance is evaluated and adjustments are made to established settings for various operating parameters to improve performance of the units.

Kendall Energy also has requested to clarify that operation of a CT/HRSG with the duct burners or the duct burners with steam augmentation are considered separate modes of operation, with associated startups and shutdowns.

The generating units utilize natural gas as their only fuel including duct burners (supplemental firing) to generate additional heat in the HRSG’s.

III. FACILITY EMISSIONS

The permitted annual emissions from the facility as listed below are not being affected by this revision. Actual emissions have been substantially lower since the facility operates significantly fewer hours than it is permitted for.

Pollutant	Permitted Emissions (Tons/year)	Actual Emissions (Tons/year)	
		Year 2005	Year 2006
CO	2400.5	85.7	76.6
NO _x	637.1	112.2	104.4
PM/PM ₁₀	800.0	61.5	55.5
VOM	618.9	4.9	2.9
SO ₂	273.8	2.9	2.8

IV. APPLICABLE EMISSIONS STANDARDS

Unchanged

V. PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

Periodic tuning is a separate operating mode of CT/HRSG during which emissions performance is evaluated and adjustments are made to established settings for various operating parameters to improve performance of the units.

Periodic tuning, during which normal emission rates may not be met, assures that compliance is maintained and NO_x emissions are minimized during normal operations of the systems. During periodic tuning, the short term NO_x limits (lb/mmBtu and lb/hr) may also not be met. Periodic tuning is a planned activity that is supervised by expert staff of the Permittee or outside personnel, which is generally conducted when units are not being relied upon for power output.

The Illinois EPA has determined that the requested changes to the permit would still comply with the federal Prevention of Significant Deterioration of Air Quality Regulations (PSD), 40 CFR 52.21.

VI. REVISED PERMIT

The conditions of the draft permit continue to contain limitations and requirements on the existing plant. The permit continues to identify the measures that must be used as BACT to control NO_x, and CO emissions from the emission units. The permit also continues to establish appropriate compliance procedures, including inspection practices, recordkeeping requirements and reporting requirements.

VII. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that the proposed permit meets all applicable state and federal air pollution control requirements. The Illinois EPA is therefore proposing to issue a revised construction permit for the facility.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 166.