

BACKGROUND INFORMATION FOR THE
DRAFT CAAPP PERMIT FOR
Ameren Energy Generating Company - Grand Tower Power Plant

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

Grand Tower power station is located at 1820 Power Plant Road, Grand Tower in Jackson County. The source operates two natural gas fired combustion turbines/heat recovery steam generators with duct burners (CT/HRSG systems) to generate electrical power. The systems are fired with natural gas only. These systems were installed to replace three coal-fired boilers previously operated at the site (CT-01 replaced two boilers and CT-02 replaced the third boiler, which was larger.) The plant has nominal capacity to generate up to about 600 MW of electricity.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Emission Control Equipment
CT-01	Natural gas fired turbine (2,050 mmBtu/hr nominal heat input)	Low NO _x combustors, SCR, good combustion practices
HRSG-01	Heat Recovery Steam Generator with duct burners (297 mmBtu/hr nominal heat input)	
CT-02	Natural gas fired turbine (2,050 mmBtu/hr nominal heat input)	Low NO _x combustors, SCR, good combustion practices
HRSG-02	Heat Recovery Steam Generator with duct burners (333 mmBtu/hr nominal heat input)	

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

Pollutant	Tons/Year
Volatile Organic Material (VOM)	126.1
Sulfur Dioxide (SO ₂)	17.6
Particulate Matter (PM)	105.9
Nitrogen Oxides (NO _x)	1911.5
HAP, not included in VOM or PM	-
TOTAL	2161.1

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

This source will be an affected source subject to the NO_x Trading Program. This is a new interstate market-based program designed to reduce NO_x emissions from electric power plants and other large NO_x sources beginning in 2004. One of the administrative requirements of this permit for an affected source is to hold a "budget permit", which sets forth the various requirements of the NO_x Trading Program that would apply to the affected source. The Illinois EPA is proposing to include this budget permit in Section 6.0 of this CAAPP.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of

Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

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.