

Client: Large City Municipality
Application: Power Generation, peak power Plant Project 1
Project Total: \$7,000,000

Description:

This city was faced with increasing utility cost and increased cost for peak power during the spring of 2001. PMSI was contracted to install 16 Caterpillar 3516LE natural gas generators in a facility that the city owned. The project deadline was only 60 days due to peak season coming online. PMSI purchased and readied 8 units for installation, including switchgear, and started the facility in just 31 days. The Caterpillar units were running until late fall when they were taken down for PMSI to perform complete overhauls. The city has now installed additional 8 units to produce a total peak capacity of 12.8 mw and a co-generation heat load that will be utilized in the near future.

PMSI was also challenged with the emissions from the engines per the existing permits of the city. The further developments of PMSI's technology were initiated by the failure of a subcontractor for those emissions controls. This lead PMSI to develop and patent (Patent Pending) new technology and equipment to reduce NO_x and CO emissions. Those units are in the process of starting up on the first facility and the second facility is under final stages of construction with the units already in place.

Controls and special engine panels were designed and constructed by PMSI.

- Testing by field measurement equipment ENERAC Model 3000E
- Test certification by PMSI and outside consultants on 40 Hr run of Caterpillar

Engine-Generator Specifications:

Caterpillar 3516 SITA-90 V-16

Fuel:	Natural Gas
KW rating:	820
Speed:	1200 rpm
Fuel Consumption:	7082 Btu/Bhp
Exhaust Heat	1,242,000 BTU/Hr
Generator:	SR-4, 825kW
NO_x Emissions (Standard)	2.0 G/BHP/HR
NO_x Emissions (Required)	0.3 G/BHP/HR
CO Emissions (Standard)	1.3 G/BHP/HR
CO Emissions (Required)	0.3 G/BHP/HR