CASE STUDY

OPTIMIRA Energy

Miller Brewing

Trenton, Ohio

8.5 MW Condensing Extraction Turbine Generator

Problem

Miller Brewing wanted to increase their in-plant generation from its existing 13 MWs to 15 MWs primarily by increasing the capacity of their existing GE turbine generator. Miller Brewing also sought to become self sufficient electrically. The Trenton plant is the highest volume beer production plant in North America.

Resolution

Optimira built a completely new 8.5 MW condensing extraction turbine generator set. The unit made the Miller plant electrically self-sufficient, improved the plant's electric reliability and had an appropriate payback. The 8.5 MW unit was placed in parallel with the existing 13.0 MW GE turbine generator.

Project Description

The project involved the installation of a new turbine generator set as well as the civil works associated with the turbine generators, the condenser package and cooling towers. Other installations included a turbine generator control panel, a protective relay panel mounted in the existing switchgear room, the baseplate, reduction gear, a lubricating oil system, an electric TEWAC generator, a voltage regulation system, an Amvasso 70,000 lb/hr condenser with accessories, (1) 3 cell Marley Cooling Tower with duplex pump sets, mechanical and electrical interconnections, other mechanical equipment, and the installation and insulation of piping (steam headers @ 850 psig, extraction @ 150 psig and 30" turbine discharge to condenser piping).

Additionally, the principals of Optimira were involved with site preparation, equipment delivery and startup, project management along with the general engineering mechanics associated with the project.

End Result

Optimira's engineers delivered to Miller an 8.5 MW unit expansion, with a favorable economic payback, and with increased electric reliability for the project.