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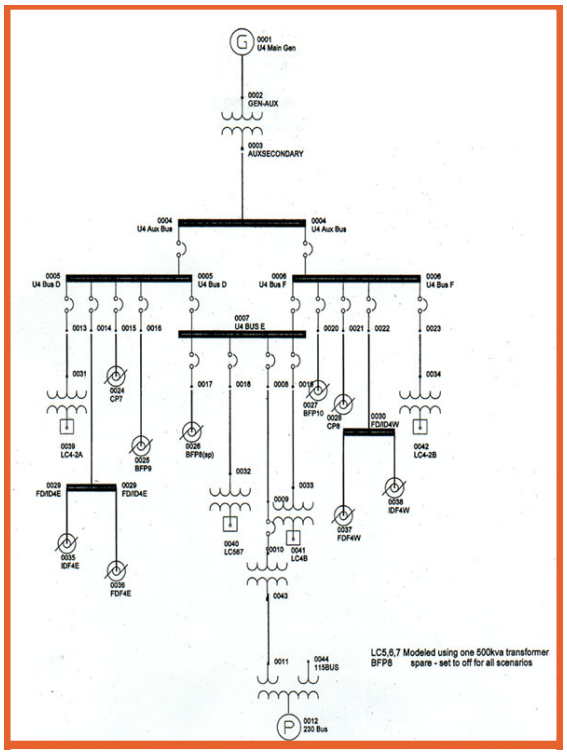
P.O. Box 3151
San Luis Obispo, CA 93403
[t] 805.595.9900
[f] 805.595.9121
www.sourcecalifornia.com

Auxiliary Power System Load Study
Mirant, L.L.C.



LOCATION:

Pittsburg, California

PROJECTS & SERVICES:

- Managerial & Technical Consulting
- Electrical Engineering
- Electrical Design
- Planning

PROJECT OVERVIEW:

A load flow study of Pittsburg Power Plant (PPP) was performed to determine and evaluate possible loading scenarios of the 2.4 kV startup buses between PPP Unit Nos. 1 through 6. Various load flow scenarios were analyzed to determine if upgrades were required to the existing power plant units to provide additional power to operate another unit's auxiliary equipment. There were two primary purposes for performing these load flow studies. First, each plant condition was optimized to determine excess capacity available to support another unit's minimum requirements. Second, to study the options to minimize the use of the external power supplied by the electric utility to a non-operating power plant.

Thirteen case studies were run. Each case study incorporated a load flow and a short circuit analysis. The load flow model simulated two modes of plant operation—full-load operation and startup. Data was obtained from interviewing plant operations personnel, plant data manuals and equipment walkdowns. The software used to model the electrical system and assist in performing the load flow calculations was a power system analysis software package called EDSA. The short circuit margins were also reviewed based on the new loads and proposed additional loading.