

Chowchilla #2 Power Station

BACKGROUND

Material Integrity Solutions (MIS) provided complete design and engineering for a 49 MW peaking power station in Chowchilla, California. MIS provided the following services to design and permit the plant for operation:

- Surveying, grading plans and soil analysis.
- Civil/Architectural/Structural design and engineering.
- Mechanical design and engineering.
- Electrical design and engineering.
- Acoustic analysis and design.
- Field engineering support.

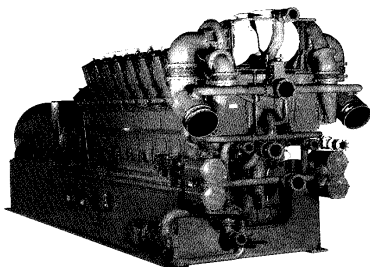
DISCUSSION

To meet the forecasted demand of California’s energy crisis the plant had to be designed, built and online within 26 weeks. MIS assembled a multi-disciplinary team to provide expedited engineering services for this fast-track project which enabled the plant to become operational 4 weeks ahead of schedule.

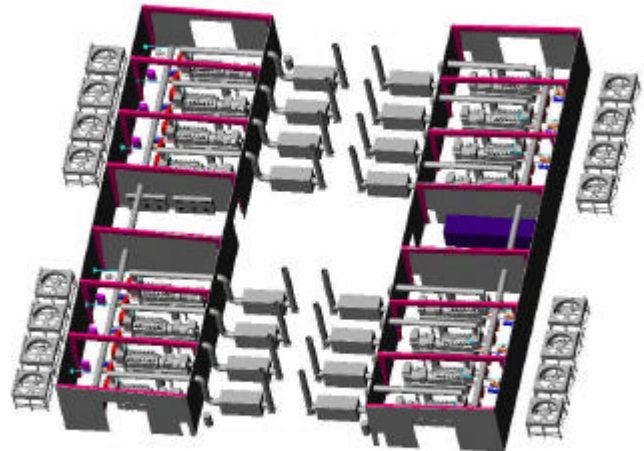
Chow #2 Power Station is a 49 MW peaking plant incorporating 16 natural-gas-fueled engine-generator sets with SCR’s. The plant is designed to be operated remotely and to be quickly brought on line to meet peak load requirements. The physical structure of the plant consists of two buildings, each housing eight Deutz TBG 632 V16 engine-generator sets and associated auxiliary and control equipment.

Each of the 16 gensets produces a gross electric output of approximately 3,125 kW. Approximately 48.1 MW net electricity is supplied to the grid with all gensets at full load. The facility design allows peaking power to be supplied in small increments as needed to balance demand.

Other than the challenge presented by the expedited schedule, MIS had to overcome engineering challenges as well, including the small amount of real estate onto which the plant was to be constructed, climate induced effects on



Deutz TBG 632 Genset.



3D Model of the Power Plant

plant air supply and cooling, noise abatement, and high temperature issues at the SCR inlet. Through a dedicated and creative engineering effort these issues were resolved.



View Between Engine Buildings

CONCLUSION

Using innovative design and engineering strategies, MIS met the client’s expedited schedule, enabling the client to rush the Chow #2 Power Station into operation and begin delivering electricity to California consumers to help alleviate the power crisis.