

Red Bluff #1 Power Station

BACKGROUND

MIS provided complete design and engineering for a 44 MW peaking power station in Red Bluff, 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

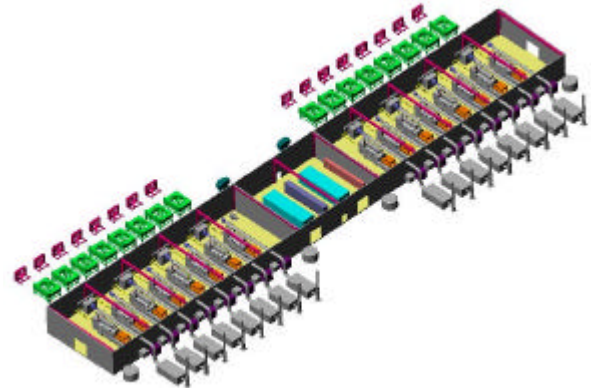
To meet the forecasted demand of California’s energy crisis the plant had to be online by within 26 weeks. MIS assembled a multi-disciplinary team to provide expedited engineering services for this fast-track project which enabled the plant to become operational 3 weeks ahead of schedule.

Red Bluff #1 Power Station is a 44 MW peaking plant incorporating 16 natural-gas-fueled engine-generator sets and 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 primarily of a single building separated into 2 engine rooms, each housing eight Wartsila 18V220SG engine-generator sets with associated auxiliary and control equipment.

Each of the 16 gensets produces a gross electric output of approximately 2,800 kW. Approximately 42.8 net MW of electricity is supplied to the grid with all gensets at full load. The facility design allows peaking power to be supplied in



Wartsila 18V220SG Genset.



3D Model of Power Plant

small increments as needed to balance demand.

Red Bluff #1 Power Station was designed such that each generator lineup was an exact copy of the other. This technique reduced engineering time and simplified construction. Incorporating innovative engineering techniques helped expedite the project without sacrificing design integrity.



Generator Building Showing Radiators

CONCLUSION

Using innovative design and engineering strategies, MIS met the client’s expedited schedule, enabling the client to rush the Red Bluff #1 Power Station into operation and begin delivering electricity to California consumers to help alleviate the power crisis.