

Sutter Power Plant Project



This is the first power plant approved by CEC since deregulation in 1996.

Bechtel provided engineering, procurement, and construction services for balance of plant and erection of the power island equipment for a 540 MW (ISO), 2 x 2 x 1 configuration, air-cooled, zero-discharge combined cycle facility. The project began construction in June 1999 and was completed in 2001. The site is a 12-acre green field parcel on Calpine's Greenwood property, approximately 7 miles southwest of Yuba City, California.

PLANT CONFIGURATION

The power island equipment, furnished by Calpine, consists of two 180 MW Siemens Westinghouse 501F combustion turbines with inlet air coolers (foggers) and power augmentation; two three-pressure, fired, Vogt HRSGs with selective catalytic reduction (SCR), CO catalyst, and stack dampers; and one Siemens Westinghouse 188 MW reheat, dual-admission, axial exhaust steam turbine generator.

EMISSIONS CONTROL

The gas turbines are furnished with dry low NO_x combustors for NO_x control. The HRSG is provided with an SCR system using anhydrous ammonia to reduce NO_x emissions to 2.5 ppmvd at 15 percent O₂ and a CO catalytic converter to reduce CO emissions to 4 ppmvd at 15 percent O₂.



Location:
California

Customer:
Calpine Sutter, LLC

Scope of Services:
Project Management
Engineering
Procurement
Construction

Project Completion:
2001

Units and Megawatts:

- 2 x 2 x 1
- 540 MW combustion turbine and combined cycle



**Significant Features/
Accomplishments:**

- First new major power plant licensed by the California Energy Commission following deregulation of the state's power industry in 1996
- Combustion turbines have advanced pollution-control technologies