

CASE STUDIES · CREDENTIALS

POWER PLANT ENGINEERING

Power Plant · Transmission and Distribution · Oil & Gas · Water Treatment · Special Purpose Machines

**ENGINEERING
DESIGN**

Power Plant Engineering

Detailed Engineering across Thermal, Gas and Renewable Generation

POWER GENERATION

- Gas fired Simple Cycle & Combined Cycle Plants
- Coal fired Subcritical and Supercritical Plants
- Solar and Hybrid Power Plants

SYSTEMS WE DESIGN

- Gas and Steam Turbine Generator Island, accessories and BOP designs
- Plant Fuel handling and Water Systems
- Plant Electrical, Power Evacuation, Control and Instrumentation systems
- Supercritical and Subcritical Steam, Coal and Ash Handling Systems
- Overall Project Management



3D Plant Engineering

Clash checks, drawing extractions, Walkthroughs



Basic Studies

Configuration, Techno economic feasibility including ROI studies



FEED

Basic and preliminary Designs for detailing



Spec and Tender Evals

Tender Preparation, Bid evaluation and Purchase recommendation



Detail Engineering

Detailed Design, RFC drawings and fabrication drawings



Construction Support

Review and Approval of Vendor Drawings

4 × 200 MW Gas Power Plant

Detail design & engineering of a gas-fired power project – USA , Client : Confidential

SCOPE

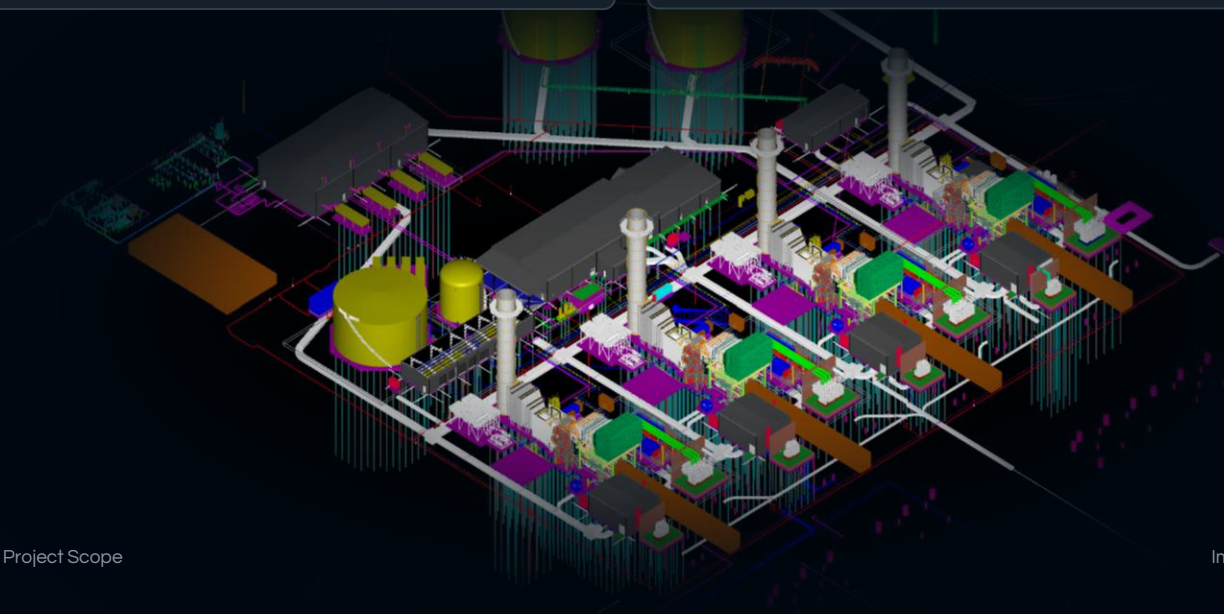
Detail Engineering Services in Civil and Structural design for Gas Turbine foundations, Plant buildings & foundations and complete Piping System Design – Fuel gas, Fuel oil, Demin Water, Compressed air, Closed cooling water system Service and Potable Water Systems ,Wastewater Systems.

CIVIL & STRUCTURAL

- i. Static & Dynamic Analysis of GT Foundations
- ii. Design Analysis and Associated Steel structure BOM
- iii. Procurement Support & Vendor Document Review

PIPING

- i. Underground and Aboveground Piping and Equipment layout(3D Modelling, Piping layout-GA/Elevations)
- ii. Piping BOM
- iii. Procurement Support & Vendor Document Review



4 × 200 MW Gas Power Plant

Detail design & engineering of a gas-fired power project – USA, Client : Confidential

WHAT WE DID DIFFERENTLY

CHALLENGES

- Native subgrade was weak, compressible coal/ash fill with low bearing capacity — unsuitable for direct support of turbine and heavy-equipment foundations
- -20 °F design temperature compounded the problem with frost-susceptibility and ground-movement risk in the upper strata.

SOLUTIONS

- 5 ft soil improvement replacing coal/ash substrate with an optimized H-pile arrangement and increased pile-head fixity.



Let's engineer your next project together.

Power Plant · Transmission and Distribution · Oil & Gas · Water Treatment · Special Purpose Machines

BARAK AND BRAZOS ENGINEERING PVT LTD

Breaking Barriers in Engineering Design

Multidisciplinary Detail Design · EPC & OEM Support

VISIT US

