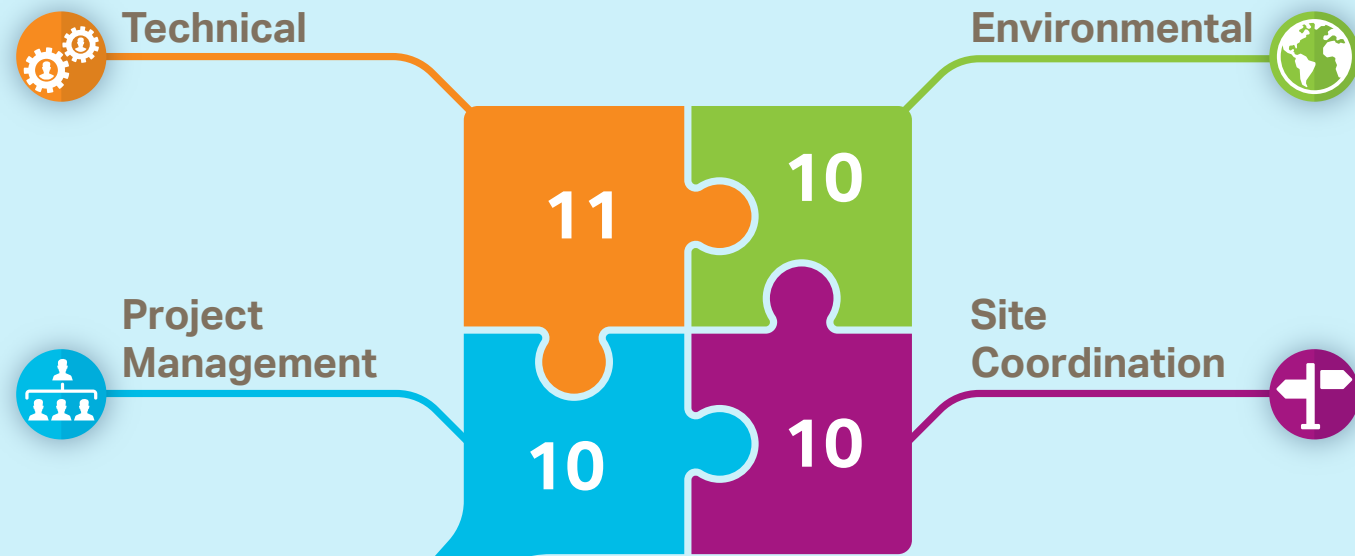


A Comprehensive Offering of Full Owner's Engineering Services for Simple Cycle, Combined Cycle and Conventional Power Plant Facilities



Owner's Engineer

- | | | | |
|---------------------------|--------------------------|----------------------------|------------------------|
| Planning | Feasibility Studies | Permit Applications | EPC Monitoring |
| Scheduling | Technology Selection | Land | Construction Oversight |
| Cost Control & Monitoring | Performance Analysis | PSD/NSR Air Permitting | Health and Safety |
| Procurement & Expediting | Architectural | Water and Wastewater | Startup/Testing |
| Risk Analysis | Civil/Structural | Electrical Interconnection | Turnover Packages |
| Bid Analysis | Mechanical/Piping | Emissions Estimates | As-Built Effort |
| Design Basis | Electrical/I&C | NPDES | Training |
| Client Needs | Technical Specifications | Noise Studies | Closeout/A.I. |
| Contract Administration | Fire Protection/HVAC | Environmental Impacts | Local Presence |
| Monthly Reporting | Conceptual Engineering | Wetlands Evaluation | QA/QC |
| | Geotechnical Support | | |

Representative Experience – Owner's Engineer

Client	Project	Locale	MW	Completion Status
Confidential	Confidential	Massachusetts	330	Ongoing
Confidential	Confidential	California	583	Ongoing
NRG Energy, Inc.	Mandalay Bay	California	573	Ongoing
Taipower	Tongxiao	Taiwan	2,880	2018
TVA	Allen	Tennessee	1,000	2015
TeaM Energy	Pagbilao 3	Philippines	400	2014
Enmax	Shepard	Canada	800	2014
NRG Energy, Inc.	El Segundo I	California	583	2013
Meralco/Aboitiz/TCC	RP Energy Project	Philippines	600	2012
GDF Suez Energy NA	Astoria II	New York	550	2011

Recent Projects



NRG Energy, Canal Generating Plant
Sandwich, Massachusetts, U.S.A.

AECOM performed Owner's Engineer Services for a simple cycle unit in the northeast using GE 7HA combustion turbine technology.

AECOM prepared the following work products in support of permitting activities:

- Heat and mass balances
- Emission estimates for permitting
- Plot Plans and General Arrangements
- P&IDs
- Stormwater and sedimentation control drawings
- Equipment Specifications
- EPC Bid Package for the Power Island and BOP
- Design of a new ultra-low sulfur distillate (ULSD) unloading line



TVA, Allen Combined Cycle Project
Memphis, Tennessee, U.S.A.

AECOM's Owner's Engineer scope of work for the TVA-Allen Combined Cycle Project using GE 7HA combustion turbine technology included:

- Heat and mass balances
- Emissions calculations (full load, partial loads, and ramping)
- Plot plan
- General arrangements
- P&IDs
- Major equipment specifications
- EPC bid package preparation

The project featured the following:

- 2 x 1 Configuration
- Toshiba steam turbine
- Use of grey water from municipal waste treatment plant for cooling tower makeup
- Use of municipal waste treatment plant off-gas for firing the auxiliary boiler