

PT. Lestari Banten Energy
Banten IPP 1x670 MW
Coal-Fired Power Plant



China Export Model

The cost difference between Chinese versus non-Chinese manufactured equipment can make a significant difference in decisions involving the overall budget of an infrastructure project. Any equipment provider must be able to demonstrate experience with Engineering, Procurement, and Construction (EPC) contractor work processes, codes and standards, project execution, and performance expectations. While quality must be a consideration with a Chinese equipped and/or constructed project, Chinese companies can deliver international standard quality equipment when paired with the proper expertise and oversight from the Project Management & Control (PM&C) contractor and the owner.

China Export Model Solution

Defined by Black & Veatch as the exportation of Chinese manufactured major and balance of power plant equipment, the Chinese Export Model (CEM) is most successful with an established system of quality processes and best practices. The model typically includes equipment sized and designed by a Chinese Design Institute, and supplied and managed by a Chinese EPC contractor. Utilizing Black & Veatch's Project Management and Control (PM&C) services provides the technical basis and industry knowledge to drive success and ensure delivery that meets performance and quality expectations.

Why Choose Black & Veatch?

We start with the end in mind

- Extensive work in all aspects of EPC, both in China and around the world.
- Complete staff of project engineers, procurement professionals, and QA/QC professionals utilizing their depth of knowledge, specific to managing Chinese EPC contractors and suppliers.
- Unique understanding of international and Chinese codes and standards, with special attention to application of Chinese contracting methods.
- Fully-developed protocols for evaluating and ranking suppliers based on company capabilities, past performance, and depth of experience.
- Exclusive experience with design review, project management, quality control, and site management.
- Well-developed risk analysis tools to identify potential issues and implement proactive mitigation solutions.
- Expertise in early development of international projects, including financing and proposal advisory services.

Key Capabilities

- EPC Contractor Selection, Ownership and Financing
- Communication
- Equipment Sourcing and Inspection
- Design Review
- EPC Contractor Project Management:
 - Payment Review/Approval
 - Schedule
 - Quality Assurance/Quality Control
 - Health and Safety
 - Construction Supervision
 - Commissioning Management

With over one million man-hours of work in the CEM arena, Black & Veatch has performed key roles with winning results for a wide variety of clients.

CEM Project Highlights Since 2010



Man Hours



Countries



Total MW

Benefits

- **Leverage more than 30 years of direct work with Chinese designers, engineers, contractors, and developers.**
Longstanding, valuable relationships drives deep understanding of Chinese engineering and contracting, both in-country and on a global scale.
- **Utilize technical advisory expertise spanning over 100 CEM projects.** From technology and site assessment to design, and permitting to development cost estimates, our partnership will start at our lessons learned and result in timely and cost effect decisions.
- **Mitigate risk for optimized return on investment.** Hands-on, comprehensive understanding of the CEM process, potential issues, and key milestones allows us to create a risk strategy at project outset.
- **Gain specialized insight from industry-leading consultants.** Long-term and highly-regarded relationships with asset owners, global developers, and financial institutions help to guide financing, create partnerships, and assist with mergers and acquisitions.
- **Partner with an experienced Owner's Engineer.** With successful completion of more than 40 projects outside of China, our OE efforts result in reliable, cost-effective, and technically compliant power generation assets.

Recent Featured Projects

Hassyan Power Plant

Location : United Arab Emirates
Type : 4x660 MW
Ultra Supercritical Coal Fired
B&V Scope : Engineering and PM&C

Sohar

Location : Oman
Type : 1700 MW Combined Cycle
B&V Scope : Owner's Engineer

Ibri

Location : Oman
Type : 1450 MW Combined Cycle
B&V Scope : Owner's Engineer

GNPower Dinginin

Location : Philippines
Type : 2x660 MW
Ultra Supercritical
B&V Scope : Technical Advisor and Owner's Engineer

Banten IPP

Location : Indonesia
Type : 670 MW Supercritical
Coal Fired
B&V Scope : Owner's Engineer

Pampa Sul Power Plant

Location : Brazil
Type : 345 MW CFB Coal Fired
B&V Scope : Owner's Engineer

Key Project Experience

A comprehensive listing of our CEM project experience (more than 100 projects) is available upon request. The following listing features major projects since 2010.

Project	Owner	Location	Capacity	B&V Scope
Hassyan Power Plant	Dewa	UAE	4x660 MW, SC	Engineering and PM&C
Hambantota CCPP and LNG	CMEC	Sri Lanka	400 MW, CCPP	Technical Advisor
Ibri	Acwa & Mitsui	Oman	1450 MW, CC	Owner's Engineer
Sohar	Acwa & Mitsui	Oman	1700 MW, CC	Owner's Engineer
Song Hau 2	Shenergy	Vietnam	2x1000 MW, USC	Technical Advisor
Malta Retrofit	Enemalta Corporation	Malta	Retrofit of Gensets 8x17 MW	Owner's Engineer
GNPower Dinginin	GNPD	Bataan, Luzon, Philippines	2x660 MW, SC	Owner's Engineer
Pampa Sul	Engie	Cadiota, Brazil	1x345 MW, CFB	Owner's Engineer
Jawa 7 IPP	Shenergy	Banten, Jawa, Indonesia	2x1000 MW, USC	Technical Advisor
Salalah 2	Acwa & Mitsui	Oman	447 MW, CC	Owner's Engineer
Dewan Wind Farm	Jhampir Power	Sindh, Pakistan	50 MW	Technical Advisor
Pangkalan Susu	PLNE	North Sumatra, Indonesia	2x200 MW, PC	Owner's Engineer
Bengkulu IPP	Shenergy	Sumatra, Indonesia	2x100 MW	Technical Advisor, Phase I
TTPP Power Plant	GDZ Suez	Tavan Tolgoi, Mongolia	3x150 MW, CFB	Owner's Engineer, Phase I
Yildirim Energy Power Plant	Yilidirim Enerjia	Canakkale, Turkey	2x800 MW, USC	Technical Advisor
Soma Kolin	Soma	Kolin, Turkey	2x255 MW, CFB	Technical Advisor, Phase II
Kauswagon Power Plant	GNPK	Mindanao, Philippines	4x150 MW, PC	Lender's Engineer
Pontianak Parit Baru	PLNE	West Kalimantan Province, Indonesia	2x50 MW, PC	Owner's Engineer
Banten	Genting Energy	Java, Indonesia	1x670 MW, PC	Owner's Engineer
Rabigh	Acwa/KEPCO	Saudi Arabia	2x660 MW Heavy Oil-fired	Owner's Engineer
Salalah	Sembcorp	Oman	400 MW, CC	Owner's Engineer
Banjarsari Power Plant	Pt. Bukit ASAM	Sumatra, Indonesia	2x135 MW, CFB	Owner's Engineer
Paiton Power Plant	PLN	Java, Indonesia	1x660 MW, PC	Owner's Engineer
Guddu Power Plant	CPHCL	Pakistan	700 MW, CC	Engineering & Design Review

Suqing Wang | Vice President, CEM Global Director

3F Tower C/Building, No. 6
Ronsin Technology Center
No. 34 Chuangyuan Road
Chaoyang District
Beijing
100032, P.R. China

P +86 10 5816-5705 | M +86 13911136730

E WangS2@bv.com