



Xingxing LNG Plant, China

# PRICO<sup>®</sup> LNG Technology

Delivering Proven Solutions For Over 50 Years



BLACK & VEATCH



# Black & Veatch LNG Expertise Delivers Value

## Experts in LNG

For safe, efficient and economical solutions in LNG production, we bring it all together. In the early 1960s, Black & Veatch was an industry pioneer, involved in one of the world's first LNG facilities in Algeria. Since then, we have helped design and build numerous base load, peak shaver and LNG storage facilities.

With Black & Veatch, you tap into global LNG project experience that ranges from 4 million standard cubic feet per day (MMSCFD) to over 1.5 MTPA per train. Our PRICO® LNG process is ideal for producing LNG for peak shaving, vehicle and industrial fueling, baseload export and offshore applications.

### Black & Veatch At a Glance

- Global workforce of approximately 11,000+
- More than 110 global offices

### Full Suite Of Services

- Conceptual studies
- Feasibility studies
- Process design packages
- Total EPC solutions

### Black & Veatch Advantages

- Proven track record
- Seamless LNG-to-market solutions
- Single-point lump sum responsibility
- Full complement of EPC services
- Global sourcing for lowest cost
- Fast-track execution
- Rapid startup to full production
- Unsurpassed training
- Guaranteed performance

Our PRICO® LNG process is ideal for producing LNG for peak shaving, vehicle and industrial fueling, baseload export and offshore applications.



FLNG Hilli Episeyo  
Project, Offshore

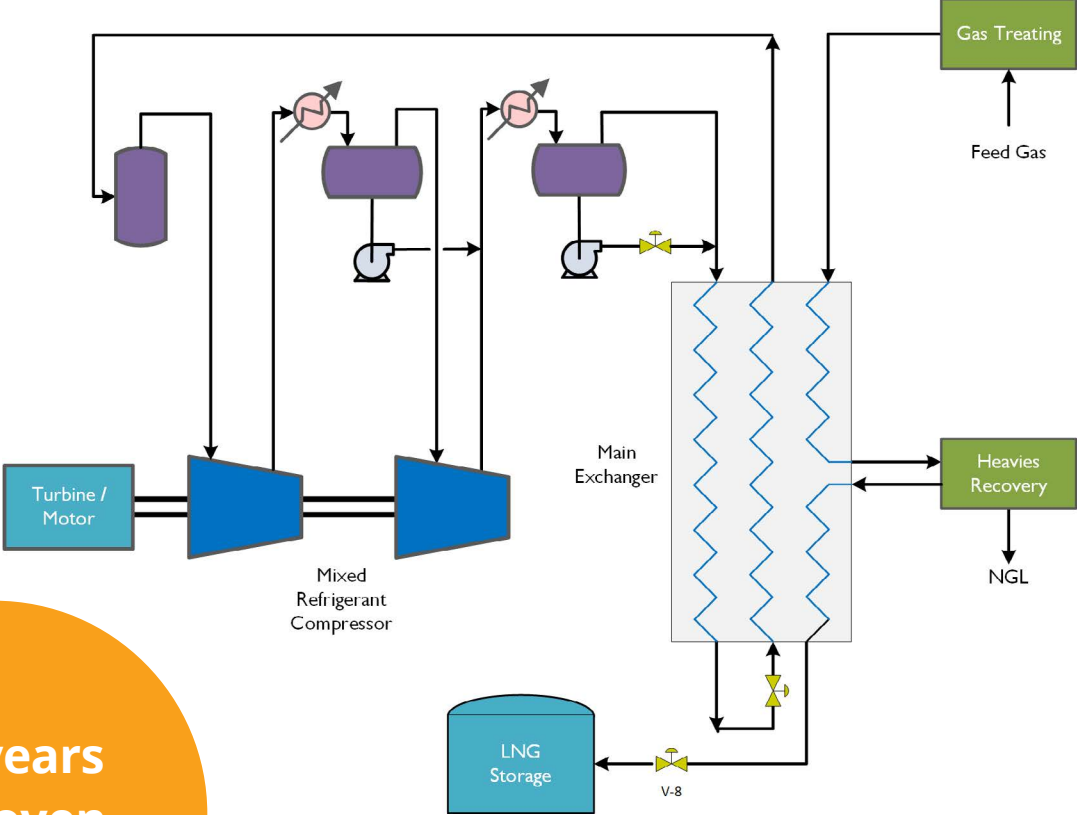


Jordan Cove LNG Project,  
Coos Bay, Oregon



Guang'an LNG Plant, China

# PRICO® LNG Technology



50+ years  
of Proven  
Performance

## Key Advantages

- Simplified operation
- Minimal refrigerant inventory
- Reduced equipment count
- Maximum flexibility
- High reliability
- Low capital cost
- Reduced operating cost
- Rapid startup

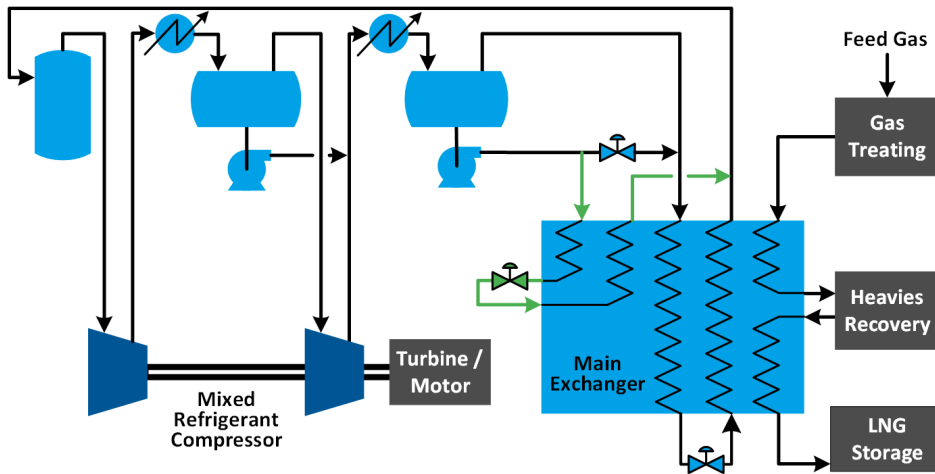
## SMR Technology

- Applied across a broad range of plants
- 33 liquefaction plants in operation
- 50+ years of LNG production
- >185 million tonnes of LNG produced
- 13 plants in development
- Covered by nine U.S./international patents

## Guaranteed Performance

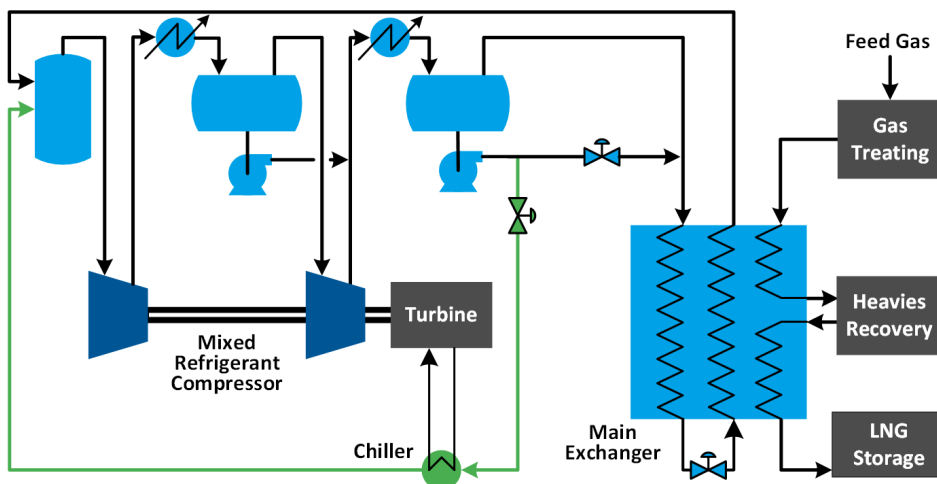
- LNG production
- Product purity
- Utility consumption

Continuous  
Improvement Offers  
Competitive Process  
Efficiencies



## PRICO-PLUS®

- The PRICO-Plus enhancement closes the gap between single and dual loop refrigerant processes.
- Only one compressor is needed, but configuration produces similar benefits as two refrigerant loops for a tighter temperature approach at the top of the main exchanger.
- Operationally, the simplicity and high reliability of the PRICO process are preserved while increasing efficiency by up to 2.5%.
- U.S. Patent 9,574,822



## PRICO-Boost™

- Increase available turbine power and consequently, LNG production by chilling the turbine inlet air.
- PRICO-Boost takes minimal footprint, cost and operating expense compared to non-integrated options.
- Eliminate the need for a separate compression and condenser package.
- Depending on site conditions, annual production increases of 3 - 5% are achievable. An upward of 6-8% production increase is possible during peak summer temperatures, helping smooth out the seasonal capacity swings.
- U.S. Patent 10,443,927

No Size  
Limits

Jingbian Xingyuan LNG Plant, China



PRICO® LNG FACILITIES: Small, Mid, and Large-scale production

Project	Location	MTPA (Trains)	Status	Start Up Year
Nine (9) Peak Shavers	Various USA	0.03 - 0.11 (x1)	Operating	1973-2019
Sonatrach Units 40, 5 & 6	Skikda, Algeria	3.9 (1.3 x3)	Operating	1974-1976
Seventeen (17) Small-Scale	China, Brazil, Scotland, USA	0.08 - 0.27 (x1)	Operating	2006-2017
Three (3) Multi-Train	Various China	0.25 - 0.50 (x2)	Operating	2008-2013
Shaanxi Jingbian Xingyuan	Xingyuan, China	0.39 (x1)	Operating	2013
Hongji Yitai	Erdos, China	0.46 (x1)	Operating	2015
Exmar Tango FLNG	Floating, Argentina	0.56 (x1)	Operating	2016/2019
Golar Hilli Episeyo	Floating, Cameroon	2.8 (0.7 x4)	Operating	2018
Golar Gimi	Floating, Africa	2.8 (0.7 x4)	In Construction	2022
Confidential Client	USA	2.2 (1.1 x2)	In Construction	2023
Delfin FLNG	Floating, USA	3.5 (1.75 x2)	FEED	2024
Annova LNG	Brownsville, TX	6.5 (1.1 x6)	Awaiting FID	2025
Jordan Cove LNG	Coos Bay, OR	7.5 (1.5 x5)	Awaiting FID	2025

Let's get started. [bv.com/contact-us](https://bv.com/contact-us)

To discuss project opportunities or LNG technology, please contact:

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