



Jordan Cove LNG Project Optimization through Technology and Execution Strategy

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Project Overview



Jordan Cove LNG – Strategic Rationale

- Price competitive with all North American options for Asian demand
 - <\$8/MMBtu delivered to Asia – long-term
 - Credible pricing based on executed binding LSTK contract with KBJ
- Western Canada and Rockies provide access to some of the most prolific gas regions in North America
 - Connected via two existing, expandable 42” pipelines
 - AECO basis to HH – substantial and lasting
- Significant shipping advantage
 - No Panama Canal fee/congestion risk
 - No hurricane risk
 - 9 days shipping to Tokyo

Jordan Cove LNG – Strategic Rationale (cont'd)



- Jordan Cove LNG is owned by Pembina Pipeline Corporation, one of the largest energy infrastructure companies in Canada
 - Proven track record of successfully constructing and operating major projects
 - Experienced team with significant LNG expertise
 - Robust balance sheet and low cost of capital supports project financing
- Advanced regulatory status
 - Enhanced design
 - Reduced cost
 - Reduced environmental impact



TSX: PPL; NYSE: PBA

Project Overview – EPC Contractor

- LNG terminal will be built by a team of world class contractors
- KBJ consortium won competitive dual FEED – awarded LSTK EPC contract



Experienced in project execution and construction on multiple LNG projects:

- Cove Point LNG export terminal
- Canaport LNG import terminal
- Wheatstone LNG
- Elba Island LNG Expansion



Leading global engineering, consulting, and construction company

Active in LNG projects since the early 1950's

PRICO process currently used in over 30 liquefaction units around the world



JGC is responsible for 30% of the world's LNG projects to date – 31 trains & yearly output of 90.7 million tons of LNG

Partnered with other EPC firms on complex modular LNG facilities

Engineering centers in Yokohama and Houston

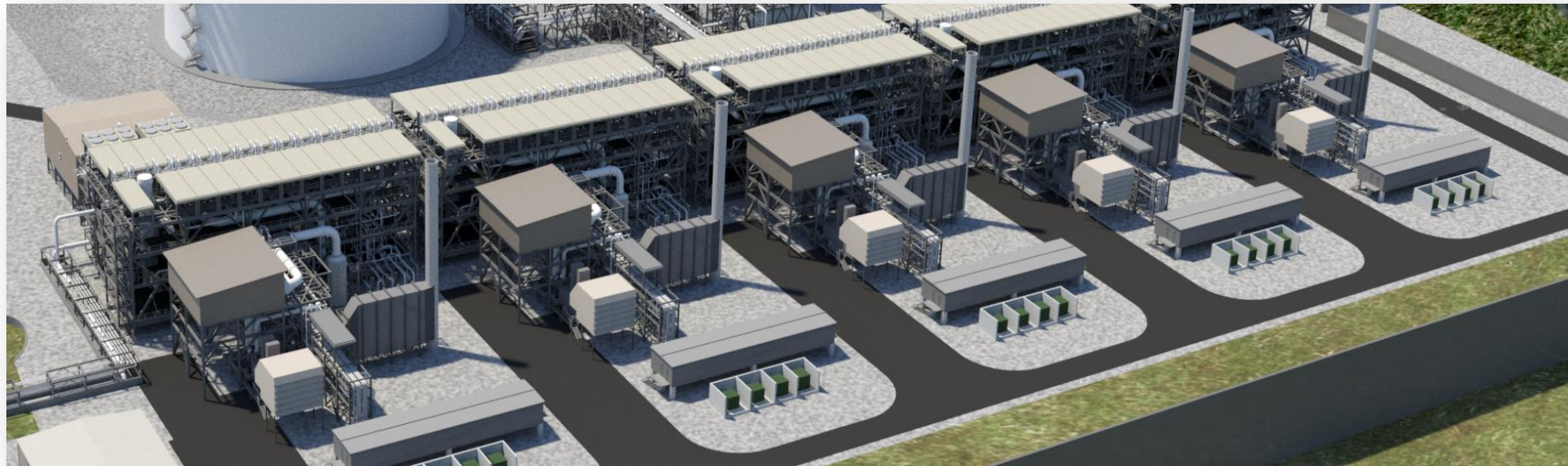
Worldwide procurement capabilities

Mid-Scale Approach

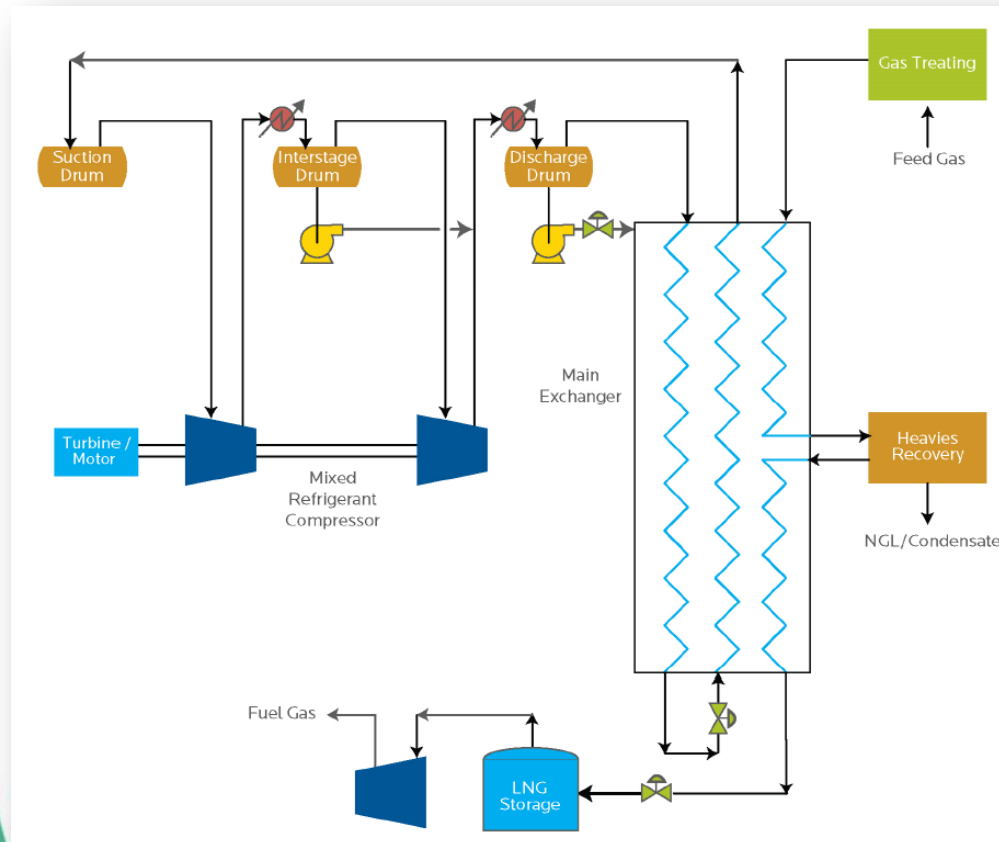
- Recently, the industry has shifted more focus toward mid-scale technologies and smaller, simpler, parallel trains as a cheaper and faster way to get LNG to market
- Advantages:
 - Increased Revenue - LNG produced as soon as first train comes online
 - Reliability and Availability - easier startup, reduced delays, and independent trains = 1% higher on-stream time
 - Flexibility - operate any number of individual trains according to offtake needs and to maximize overall plant efficiency
 - Greater duplication of operational and maintenance activities

Mid-Scale Approach

- Advantages (cont'd.):
 - Predictability in ramp-up, each refrigerant system operates completely independent of other trains. Minimal escalation of process upsets
 - Aeroderivative gas turbine drivers - 20 percent lower fuel consumption to produce the same shaft power of industrial frame machines in simple cycle



PRICO® Process Technology



- PRICO® SMR Characteristics / Advantages
 - Simple, Fully Automated operation
 - No complex cold box
 - Applied over a broad range of capacities and gas compositions
 - Heavies removal integrated
 - Low cost (reduced equipment count)
 - Compact Layout (highest production “density”)

Use of liquid expanders and turbine inlet air chilling increase production with no layout penalty

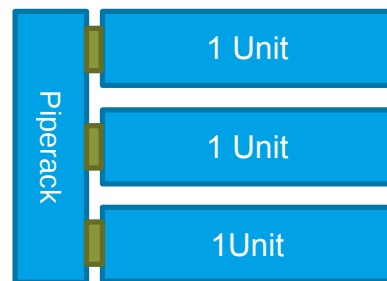
Scale-Up and Technology Readiness

- Scalability of the PRICO® process was a chief focus of the FEED
- Technology Readiness Level (TRL) assessment of the proposed equipment was conducted to lower the risk of performance and reliability issues
- Refrigerant compressors and drivers, main cryogenic heat exchanger, and all other ancillary components have proven operating history at this size
- The modular nature of BAHX allows paralleling of cores to match capacity so that each component operates as it has in more than 30 PRICO® plants



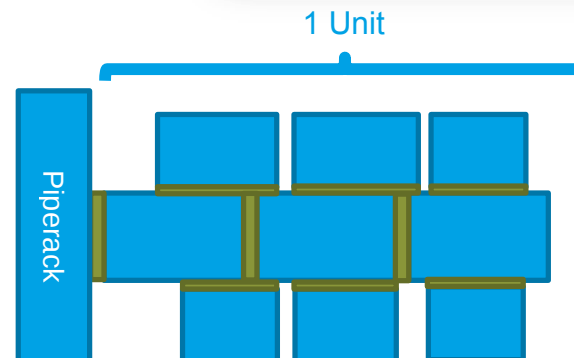
Modularization

- De-risks site labor, fits availability of trades in Pacific NW and local community size
- Pre-commissioning works at yard possible



PRICO®
"One Module, One Train"

VS.

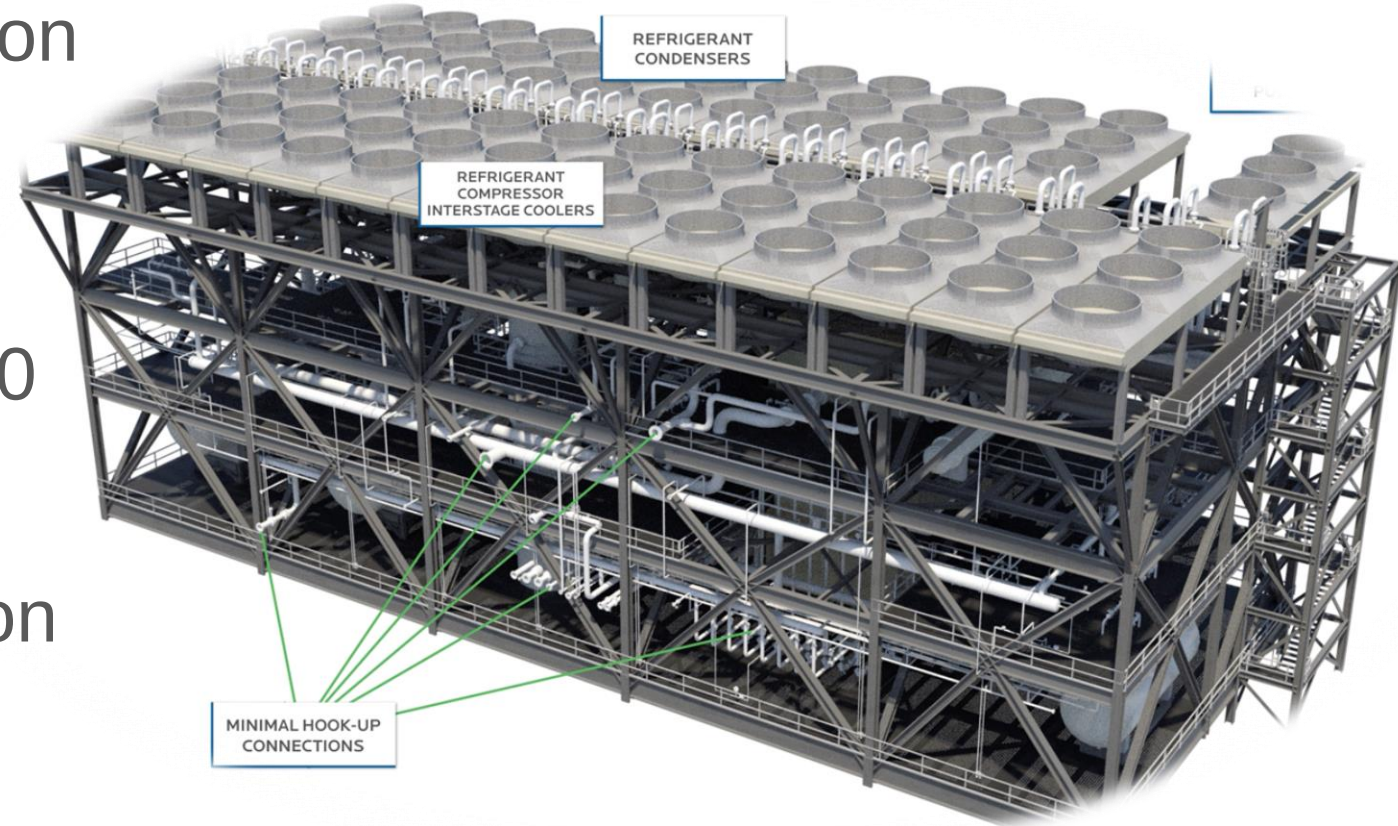


Other Multi-Module Trains

- One Module, One Train concept
- Complete duplication, less interfaces

Modularization

- Each module is complete liquefaction unit minus the compressor/driver
- Approximately 5500 tons, well within heavy haul and ocean transportation experience and availability



Conclusion

- Cost-competitive with all North American options and strategically located
- World class EPC consortium
- Mid-scale PRICO® technology perfect fit for compact site, high efficiency, and modularization

