Serving the Asia Pacific LNG Market through Jordan Cove LNG

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Veresen Inc.: A strong, diversified portfolio of energy infrastructure assets

Publically traded (TSX: VSN), with a market cap of $7 billion and earnings and cash flow reflecting the reliable, consistent performance of an energy infrastructure business model.

**Pipelines**
- 6,000+ km of regulated gas transmission
- 1,300+ km of NGL transportation

**Midstream**
- 900 km of gathering systems
- 670 mmcf/d of processing
- 100,000 HP of compression
- 100,000+ bbls/d of fractionation

**Power**
- 13 plants
- 830 MW of generation
- 17 years average PPA
Globally, natural gas is becoming the dominant energy for power generation, industry, and residential use.

LNG is outpacing global gas industry growth and justifying new, large scale capital expenditures LNG liquefaction facilities.

**Source:** Actuals: BP Statistical Review of World Energy 2014
Asia Pacific LNG markets are growing rapidly and competing for new long-term supply sources

Growing LNG Market Demand
- existing & proposed import facilities

Asia Pacific LNG imports (2000 to 2025)

- China
- India
- Japan
- Taiwan
- Singapore
- Philippines
- Thailand
- Vietnam
- Indonesia
- Burma
- Bangladesh

Source: Variety of public sources
New LNG supply sources are entering the global LNG marketplace to meet expected demand growth

Significant LNG export plans are proposed to export natural gas supplies from Canada and the United States.
**LNG buyers are assessing project risks associated with new and existing LNG suppliers**

Long-term issues such as geopolitical, judicial, and price transparency are also highly important considerations.

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<th>Long-term Diversity of Supply</th>
<th>Labor</th>
<th>Permitting/Regulatory</th>
<th>Geopolitical Environment</th>
<th>Existing Infrastructure</th>
<th>New Infrastructure Cost</th>
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Note: Risk evaluations based on evaluative discussions.
Global LNG buyers seeking new, price competitive, reliable LNG sources from North America

Plentiful amounts of natural gas, sourced from all regions of North America

Source: Geological base map by PacWest Consulting
Multiple LNG facilities proposed within North America....

Development optimism has driven a significant number of proposed facilities

TOTAL Proposed in Canada: 53.7 Bcf/d (320 Mtpa)

TOTAL Proposed in U.S.: 42 Bcf/d (254 Mtpa) (including Alaska)

Source: FERC website and B.C. Government website
... with only a few likely in-service between 2016 – 2021

Regulatory timelines, economic viability, and community acceptance will limit the number of facilities actually constructed

LNG export capacity from Canada and U.S. in 2021: **10 – 12 Bcf/d**

Source: FERC website and B.C. Government website
Supply diversity and direct access to North American gas commodity prices via AECO and OPAL Hubs

Gas supplies to Jordan Cove are primarily transported by existing pipeline infrastructure

- Complete access to the Western Canada Sedimentary Basin and US Rockies, each with multiple major producing basins
- Proven natural gas resources capable of lasting hundreds of years
- Flexibility in gas purchases through marketing entities, contract purchases, and or JV for gas purchases in the ground.

Source: Veresen map files
International Port of Coos Bay, Oregon
U.S. west coast export location with strong community and political support

- Federally maintained channel
- Mild climate
- Established community
Southwest Oregon welcomes Jordan Cove!

Coos Bay, Oregon, is an ideal port for exports of high-value LNG to Asia Pacific markets

- Jordan Cove has an established 10-year history in Oregon
- Local land use permits for terminal and pipeline are in hand
- Development is supported by elected federal and state political representatives, community and business leaders
- Project Labor Agreements in place
- Grassroots community support – visit: www.boostsouthwestoregon.com

“I urged DOE to consider this application without delay, and I am pleased the department decided that Jordan Cove deserves to move forward.”
Senator Wyden – Oregon (Mar 2014)

Senator Ron Wyden
Town Hall in Coos Bay, Oregon
November 2013
Terminal and pipeline facilities filed for construction with FERC

**Terminal: Jordan Cove LNG**
- 6 mtpa facility (phase 1) expandable to 9 mtpa (later date)
- 400+ acre site includes:
  - marine facility;
  - two 160,000 m³ LNG tanks;
  - four – 1.5 mtpa liquefaction trains;
  - two gas treating facilities; and,
  - 420 MW power plant.
- Ownership: 100% Veresen

**Pipeline: Pacific Connector**
- Design capacity of ~1 Bcf/d for 6 mtpa LNG terminal requirements expandable to 1.5 Bcf/d (later date)
- 232-mile, 36-inch diameter pipeline (1,440 psig MAOP)
- Ownership: 50% Veresen; 50% Williams

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**Image Description**
- **Liquefaction**
- **Power Plant**
- **Pacific Connector Pipeline**
- **Oregon**
- **California**
Asia Pacific Buyers are attracted to the characteristics and price of U.S. tolling models

Jordan Cove LNG customers will procure their own gas supply and pipeline transportation

- Tolling arrangements lock in the cost of infrastructure:
  - About 60% of overall costs are locked-in, with only gas commodity costs floating
  - Traditional JCC and/or LNG Sales Agreements have 100% of infrastructure and commodity costs floating with oil prices
- Provides a direct connection to North American gas prices
Shipping distance and logistics from the U.S. west coast is a competitive advantage over the U.S. Gulf Coast.

~9 shipping days to Asia

~9 shipping days to Europe

~22 shipping days to Asia (9200 nmi) plus Panama Canal Costs

Source: Terminal websites, DOE; Japan as comparative market
Key work streams to reach a Final Investment Decision

- **Regulatory**
  - FERC Notice to Proceed; all state and federal permits

- **EPC Contract**
  - Final EPC contract in place

- **Commercial Off-take Agreements**
  - Customers for 100% of capacity

- **Project Financing**
  - Debt / equity financing
The Jordan Cove LNG advantage

- Competitive with U.S. Gulf Coast brownfield LNG facilities and other global LNG options into Asia
- 9 days shipping from Coos Bay, Oregon to Tokyo
  - No Panama Canal risk, no hurricane risk
- Gas supply from two large distinct gas basins
  - Western Canada and U.S. Rockies
  - Limited local competition for natural gas supply
- Strong local and political support
- Advanced permitting/regulatory status
- Building strong project management team to take Jordan Cove and Pacific Gas pipeline through to FID and to in-service
Thank you!