



LNG in British Columbia: An Update

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The BC LNG Opportunity

- To date **18 LNG export facilities** have been proposed in British Columbia
- Research shows if 5 LNG plants were to be built (\$175 billion investment) this would result in:
 - Upwards of \$1 trillion to GDP
 - 100,000 new jobs – 58,700 construction jobs (direct and indirect), 23,800 operating jobs (direct and indirect) and thousands of induced jobs

Successful Steps in 2014

- Substantial progress in 2014 to create cost certainty and a competitive investment climate:
 - LNG Income Tax legislation passed
 - Royalty incentives
 - World-leading GHG emissions benchmark established
 - Progress on First Nations initiatives
 - Progress on municipal tax matters
 - BC Skills for Jobs Blueprint rolled out

Projects Making Progress

LNG projects that have **received a provincial Environmental Assessment Certificate**:

- Pipeline:
 - Coastal GasLink Pipeline (for LNG Canada)
 - Pacific Trail Pipelines (for Kitimat LNG)
 - Prince Rupert Gas Transmission Pipeline (for Pacific Northwest LNG)
 - Westcoast Connector Gas Transmission Pipeline (for Prince Rupert LNG)
- Facility:
 - Kitimat LNG
 - Pacific NorthWest LNG

LNG projects currently **undergoing an environmental assessment**:

- Pipelines:
 - Eagle Mountain – Woodfibre Gas Pipeline (for Woodfibre LNG)
 - Pacific Northern Gas Looping Project
- Facilities:
 - Aurora LNG (Digby Island site)
 - Grassy Point LNG
 - LNG Canada
 - Prince Rupert LNG
 - WCC LNG
 - Woodfibre LNG

In addition to the list above, other LNG projects – BC Douglas Channel LNG, Tilbury LNG – are proposed or being built without the need for an environmental assessment as they do not trigger the requirements under the BC Environmental Assessment Act.

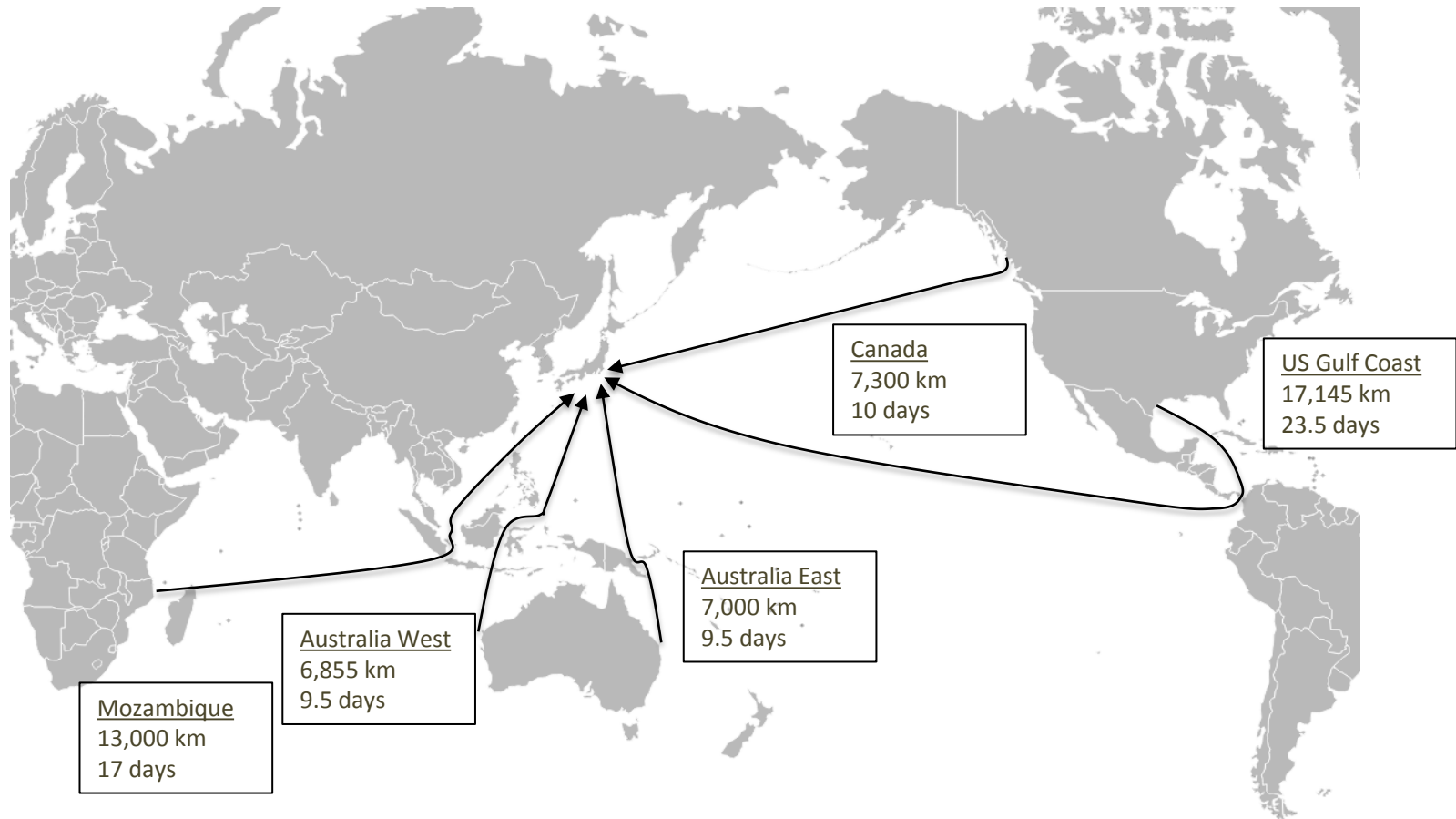
Current LNG Investment

- Significant investments have been made as projects move towards making a Final Investment Decision (FID)
 - Estimated \$2 B upstream investment to prepare for facility/pipeline construction
 - Over \$7 B sector-wide to acquire natural gas reserves to support LNG export
 - In 2014, 663 new natural gas wells drilled in B.C. – 16% increase over last year
- Many new jobs already created across the province

B.C.'s Competitive Advantages

- Short transport times to Asian markets
- Lower Operating Costs for Liquefaction (low ambient temperature)
- Vast Resources
- Stable Jurisdiction
- Labour Supply to Support LNG
- Strong Regulatory Regime
- First Nations participation
- Competitive Fiscal Regime

Short transport times to Asian markets



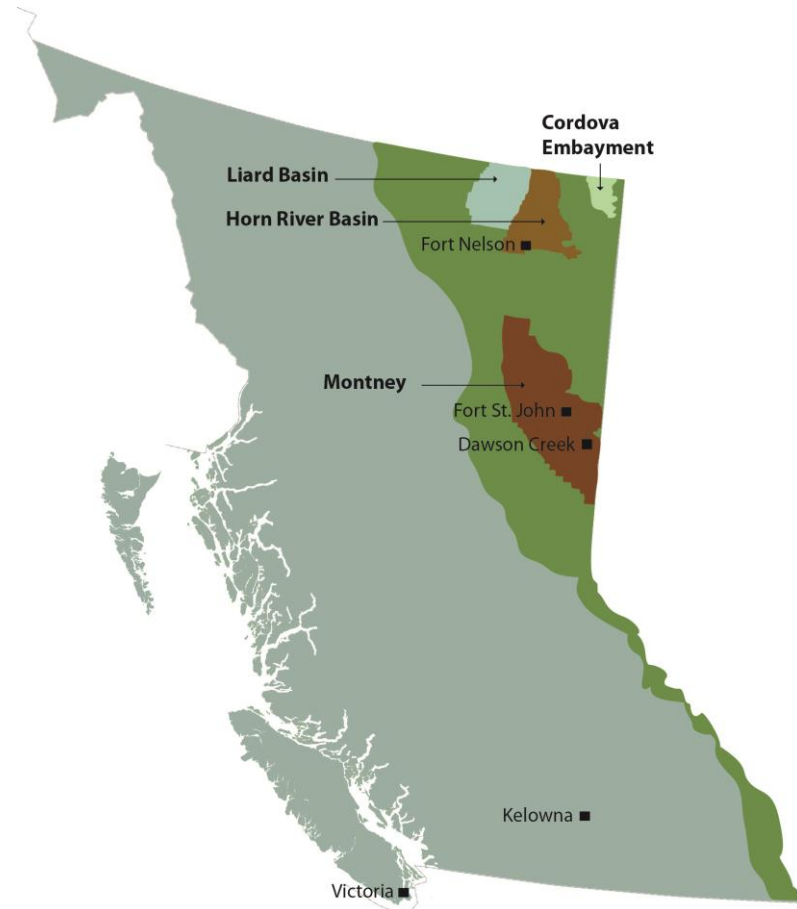
Source: IHS CERA

Lower Operating Costs for Liquefaction

- B.C. Gas has a cooler ambient temperature than most competitors
- As ambient temperature decreases by 1 degree centigrade; energy efficiency for power consumption increases by 1.7%
- Located in northern B.C., Prince Rupert and Kitimat average temperature is 7 degrees Celsius which provides a competitive advantage over other jurisdictions:
 - Australia: 27c = approx 34% B.C. energy efficiency advantage
 - Qatar: 26c* = approx 32.3% B.C. advantage
 - Mozambique: 23c* = approx 27.2% B.C. advantage
 - Louisiana: 22c* = approx 25.5% B.C. advantage

*degrees from National Oceanic and Atmospheric Administration (NOAA)

Vast Resources and Upstream Development



- Over **2,900 trillion cubic feet (tcf)** of natural gas from tight and shale
 - Montney has 1,965 tcf of gas in place
 - Horn River has 448 tcf of gas in place
- B.C.'s 2014 natural gas and petroleum rights sales totalled \$383 million; an increase of \$158 million – or 70% – over 2013.
- In 2014, 663 new natural gas wells drilled in B.C. – 16% increase over last year.
- The most active companies over the past two years have included Progress Energy, Shell and Nexen.

Stable Jurisdiction

- Direct line of sight from senior elected officials to all regulatory agencies.
- Strategies and plans in place to ensure B.C. is a competitive and reliable exporter of LNG.
- B.C. has clear government commitments to maximize the LNG development opportunity.
- B.C. is open for business, establishing a one stop Task Force focusing on the LNG sector.



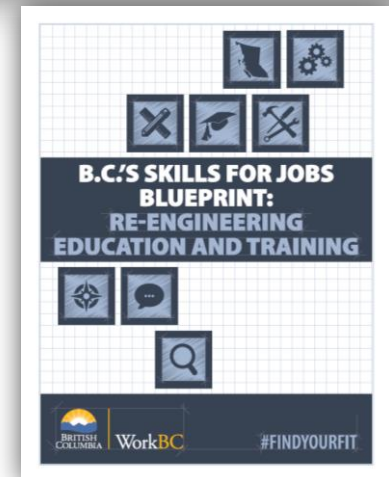
Labour Supply to Support LNG

B.C.'s Highly Skilled Workforce

- 2.5 million workers – largest workforce in western Canada
- Canada has the highest rate of post-secondary education in the world
- World-class education and training system

Plan to Support LNG Workforce

- Launched the B.C.'s Skills for Jobs Blueprint to help meet LNG workforce challenges and ensure that apprenticeships, education and training are more in line with labour market demands
- B.C. is investing \$6.8-million to add more training seats in public post-secondary institutions in critical trade seats
- Premier's LNG Working Group established to facilitate collaboration between industry, labour and government



Strong Regulatory Regime

- Modernized *Oil and Gas Activities Act*
- Effective single window regulator: B.C. Oil and Gas Commission
- Commitment to streamlined and efficient processes (i.e. Environmental Assessment Process and permitting) with defined timelines
- Canada and B.C. regulatory alignment and common priority in the development of the LNG sector

First Nations

Growing engagement and support among First Nations:

Upstream

- Economic benefit agreements and gas consultation agreements signed
- New G2G agreements and benefit negotiations advancing

Midstream

- First Nations Limited Partnership –Pacific Trails
- New pipeline benefit agreements being negotiated with several already signed (i.e. Wet'suwet'en First Nation, Nisga'a)

Downstream

- First Nations partnering in multiple projects (Cedar LNG – Haisla, Steelhead LNG – Huu-ay-aht)
- Provincial benefit negotiations occurring with multiple First Nations on the coast
- LNG “Environmental Stewardship Initiative” commenced with First Nations

Industry Negotiations – impact benefit agreements being negotiated along entire value chain

Consultation and Accommodation – occurring with First Nations on projects throughout provincial regulatory processes



Competitive Fiscal Regime

- B.C. is committed to providing certainty on tax
- Designed to keep B.C. competitive with other jurisdictions
- Ensure proponents get capital out early
- Based on four core principles for fair and balanced approach:

LNG TAXATION FRAMEWORK DESIGN PRINCIPLES

- ⇒ **1** Fair Return for British Columbians
- ⇒ **2** Competitive Jurisdiction
- ⇒ **3** Predictability for Proponents
- ⇒ **4** Consistent Treatment of Proponents

LNG Facility Lifecycle and LNG Income Tax



Construction

- Operating losses and capital investment costs are accumulated during construction of the LNG Facility

LNG Facility Start-up

- 1.5% tax takes effect
- Operating losses and capital investment costs are drawn down

After Investment Deducted

- 3.5% tax takes effect
- Operating losses and capital investment costs have been fully deducted
- Credit for 1.5% tax

LNG Income Tax and Corporate Income Tax Natural Gas Credit

LNG Income Tax Highlights

Feature	Description
Effective Dates	Effective for taxation years starting on or after January 1, 2017: 3.5% initial rate, 5% rate effective January 2037.
1.5% Minimum Tax	1.5% of Net Operating Income (revenue less expenses). Minimum tax is payable while operating losses and capital investment costs are being recovered.
Net Operating Loss and Capital Investment Accounts	Costs incurred before start-up and cost of construction of the LNG Facility.
Higher Tax Rate	Applies to Net Income (after net operating losses and capital investment accounts have been recovered).
Credit for 1.5% Minimum Tax	Credit for 1.5% tax pool is deductible from the 3.5% tax.

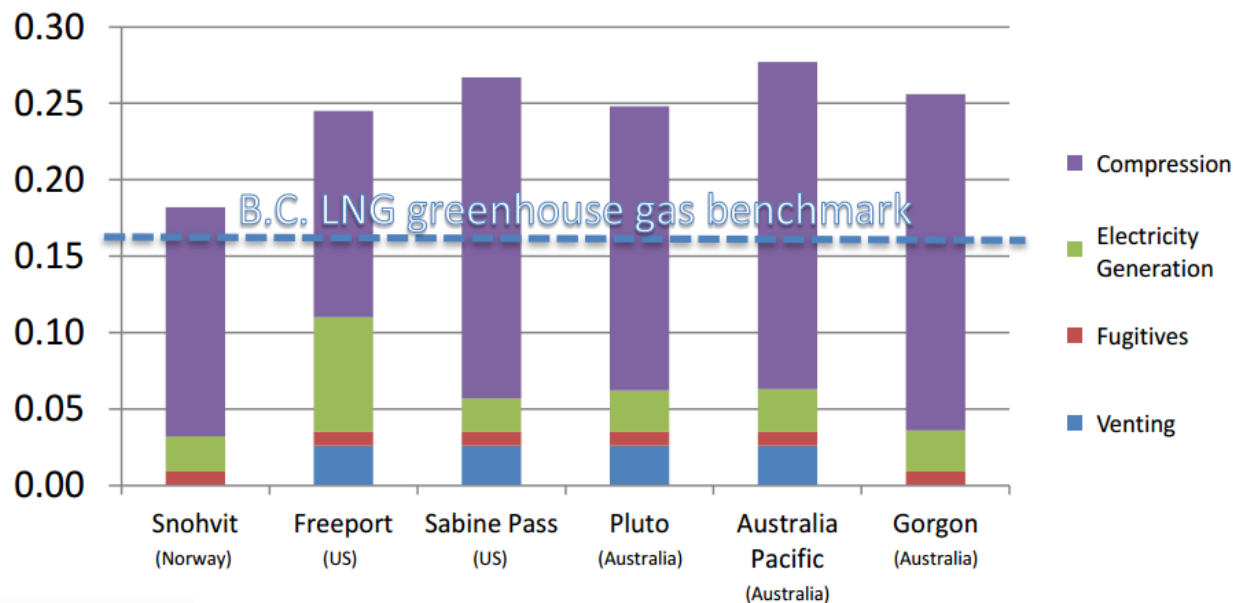
New B.C. Corporate Income Tax Natural Gas Credit

Feature	Description
Natural Gas Credit for Corporate Income Tax	Available to LNG taxpayers that have a permanent establishment in British Columbia.
Tax Credit Amount	Tax credit is equal to 0.5% of the cost of natural gas owned by the LNG taxpayer at the LNG facility inlet.
Maximum Tax Credit	Tax credit may reduce the effective BC Corporate Income Tax rate to a minimum 8% (from current 11% rate).
Tax Credit Carry Forward	Unused tax credits may be carried forward into future years.

World's Cleanest LNG Facilities

- Government committed to having the cleanest LNG facilities in the world.

Comparing LNG Facilities



- On October 20, 2014 the *Greenhouse Gas Industrial Reporting and Control Act* put in place the GHG benchmark for facilities.
- Benchmark will be a part of what establishes B.C. facilities as the cleanest in the world.

B.C.'s LNG Proposals

18

Proposed LNG Export
Facilities

10

NEB Export Licences

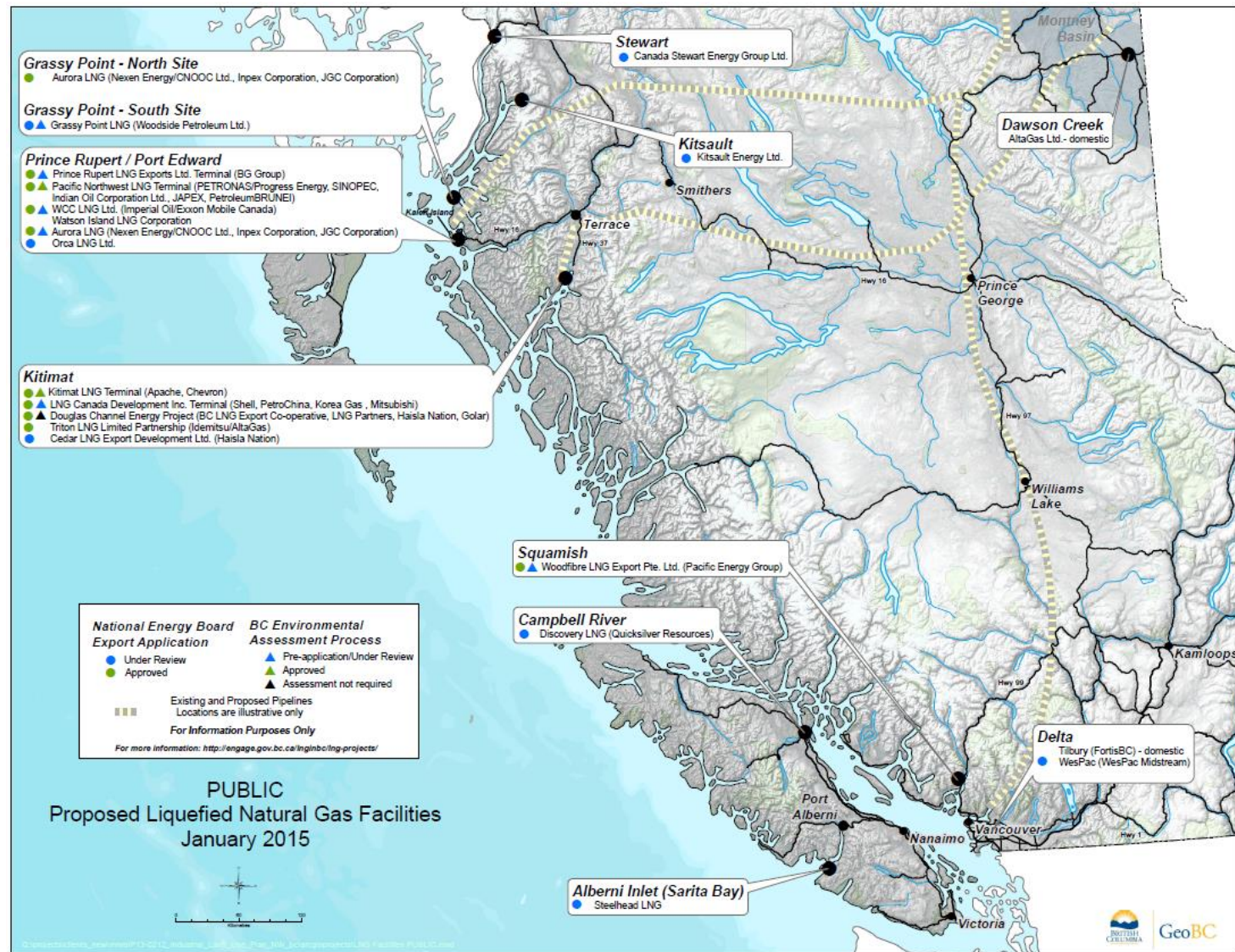
32

Project Partners

LNG proposals in B.C. as of February 10, 2015

Proposed LNG Export Facilities

1. Pacific NorthWest
2. Woodfibre LNG
3. Prince Rupert LNG
4. Kitimat LNG
5. LNG Canada
6. Douglas Channel
7. WCC LNG
8. Triton LNG
9. Aurora LNG
10. Grassy Point LNG
11. Discovery LNG
12. Canada Stewart Energy
13. Kitsault Energy
14. Steelhead LNG
15. WesPac
16. Cedar LNG Export
17. Orca LNG
18. Watson Island LNG



Summary of Export Projects

Project	NEB Export Approval	Environmental Assessment		Notes
		Provincial	Federal	
<u>Kitimat LNG (Apache/Chevron)</u>	✓	✓	✓	Woodside agreed to purchase Apache portion
<u>Pacific NorthWest LNG (PETRONAS)</u>	✓	✓	Under Review	Provincial EA Certificate granted November 2014
<u>LNG Canada (Shell)</u>	✓	Under Review		Coastal <u>GasLink</u> granted EA Certificate
<u>Woodfibre LNG (Pacific Oil & Gas)</u>	✓	Under Review		Applied for EA Certificate December 2014
<u>Prince Rupert LNG (BG)</u>	✓	Pre-Application		<u>WestCoast</u> Connector granted EA Certificate
<u>Aurora LNG (CNOOC)</u>	✓	Pre-Application		Project description submitted June 2014
<u>WCC LNG (Imperial Oil/ExxonMobil)</u>	✓	Pre-Application		Project description submitted December 2014
<u>Douglas Channel Energy Project</u>	✓	n/a		New ownership announced
<u>Triton LNG (Idemitsu/AltaGas)</u>	✓	Not Submitted		Export license issued April 2014
<u>Grassy Point LNG (Woodside)</u>	✓	Pre-Application		Export license issued January 2015
<u>Canada Stewart Energy Group</u>	Under Consideration	Not Submitted		Seeking partners
<u>Kitsault Energy Ltd</u>	Under Consideration	Not Submitted		Seeking partners
<u>Discovery LNG (Quicksilver)</u>	Under Consideration	Not Submitted		Export application submitted July 28, 2014
<u>WesPac (WesPac LLC)</u>	Under Consideration	Not Submitted		Export application submitted June 20, 2014
<u>Steelhead LNG (Kern Partners)</u>	Under Consideration	Not Submitted		Export applications submitted July 8, 2014
<u>Cedar LNG Export (Haisla)</u>	Under Consideration	Not Submitted		Export applications submitted August 28, 2014
<u>Orca LNG (Orca LNG Ltd.)</u>	Under Consideration	Not Submitted		Export application submitted September 4, 2014
<u>Watson Island LNG (WILNG)</u>	Not Submitted	Not Submitted		Project announced July 16, 2014

Summary of Proposed Pipelines

Project	Related Facility	Environmental Assessment	Notes
Pacific Trail Pipelines (Apache/Chevron)	<u>Kitimat</u> LNG	✓	Amendment #4 currently under consideration
<u>Westcoast Connector Gas Transmission</u> (Spectra)	Prince Rupert LNG	✓	Granted EA Certificate November 2014
<u>Coastal GasLink</u> (TransCanada)	LNG Canada	✓	Granted EA Certificate October 2014
Prince Rupert Gas Transmission (TransCanada)	<u>Pacific North West</u> LNG	✓	Granted EA Certificate November 2014
<u>Eagle Mountain – Woodfibre Gas Pipeline</u> (FortisBC)	<u>Woodfibre</u> LNG	Under Review	Application for EA Certificate submitted January 12, 2015
Pacific Northern Gas Looping Project (Pacific Northern Gas)	Douglas Channel	Pre-Application	Looping of current pipeline system

Save the date:

***2015 INTERNATIONAL
LNG IN B.C. CONFERENCE***

OCTOBER 14-16, 2015

VANCOUVER CONVENTION CENTER



Thank You!

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LNG Links

LNG in BC

<http://engage.gov.bc.ca/Inginbc>

LNG Income Tax

<http://www2.gov.bc.ca/gov/topic.page?id=75BD4BF2B6B5493FB8A36DB05EBA764D>

LNG Environmental Policies

<http://engage.gov.bc.ca/Inginbc/files/2014/03/Cleanest-LNG-Facilities.pdf>