The Case for Canadian LNG

April 2025

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Summary of the Case for Canadian LNG

Canada in a Global Context

- Liquefied natural gas (LNG) is natural gas that has been converted into liquid form for ease of storage and transport, as LNG occupies roughly 1/600th the volume of natural gas. Most global LNG is exported from countries with large natural gas reserves (US, Australia, Qatar, Malaysia, etc.) to countries with limited domestic resources (China, Japan, South Korea, India, etc.).
- In 2010, the National Energy Board (now Canada Energy Regulator) started receiving applications for long-term licenses to export Canadian natural gas as LNG to non-US markets. 15 years later, LNG Canada Phase 1 is poised for commercial operation in mid-2025 and will export 1.8 Bcf/d. The start-up will mark Canada's entrance into the global LNG market, the project is the largest private investment in Canadian history.[(1)] Over this same period, Canada's largest trade partner and energy sector competitor, the US, has grown its LNG export capacity from nil to over 14 Bcf/d.

Canada's Competitive Advantage

- Canadian LNG shipped out of coastal BC destined for Asia has significantly shorter shipping distances than American supply from the US Gulf Coast. In addition to shorter relative shipping distances, Canadian LNG has no chokepoints en route to key markets in Asia, where US Gulf Coast supply must transit the Panama Canal.
- Based on estimates from the Canada Energy Regulator, there is 1,105 Tcf[(2)] of remaining marketable natural gas resources in the Western Canadian Sedimentary Basin (WCSB). Using an average annual WCSB natural gas production of ~18 Bcf/d in 2023, this is equivalent to over 160 years of supply.[(2)]
- Based on 2024 data from Rystad Energy, Canadian LNG projects are expected to be among the most cost-competitive for delivery to Asia. Compared to competing sources, Canadian LNG benefits from lower liquefaction costs due to relatively lower ambient temperatures in BC and lower shipping costs due to shorter distances.
- A 2020 study from The Conference Board of Canada[(3)] found that an investment scenario in which Canadian LNG export capacity increased to 56 Mtpa (7.4 Bcf/d) would yield a $11 billion increase in GDP per year, ~100,000 more jobs, and over $2 billion per year of additional taxes and royalties.

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(1) Government of Canada - Government of Canada confirms support for largest private investment in Canadian history
(2) Canada Energy Regulator – Canada's Energy Future Data Appendices
(3) The Conference Board of Canada – A Rising Tide: The Economic Impact of BC's Liquified Natural Gas Industry

Summary of the Case for Canadian LNG (cont'd)

Global LNG Trade – Where Will Canada Fit in the Mix?

- According to the International Group of Liquefied Natural Gas Importers (GIIGNL) 2024 Annual Report, global LNG trade hit a record-high of 52.8 Bcf/d (401 Mtpa) in 2023, up over 80% relative to 2010 levels. Since 2010, the annual average growth rate has been roughly 5%.
- Despite ranking as the world's 5th largest natural gas producer in 2023(1), Canada remains on the sidelines in the global LNG trade. With vast natural gas reserves and direct tidewater access from BC, Canada is ideally suited to supply LNG to growing Asian markets.
- When Canada becomes an LNG exporter in 2025-2028, it will immediately become a major player in the global LNG trade but will still be exceeded by the US, Australia, Qatar, Russia, and Malaysia.

Indigenous Partnerships

- Indigenous communities are leading the way in LNG development in Canada, making a significant impact through strategic partnerships, ownership stakes, and business agreements.
- For Indigenous communities, Canadian LNG creates jobs, supports Indigenous-owned businesses, and generates own-source revenues that can be used for clean drinking water, housing, and economic development.

Technological Advancements

- In Canada, Woodfibre LNG, Cedar LNG, and Ksi Lisims LNG (proposed) will electrify their compression turbines using hydroelectricity. These will be some of the first LNG export facilities in the world with this design. Similarly, LNG Canada will rely on hydroelectricity to power many of its operations but will use efficient natural gas turbines for compression.

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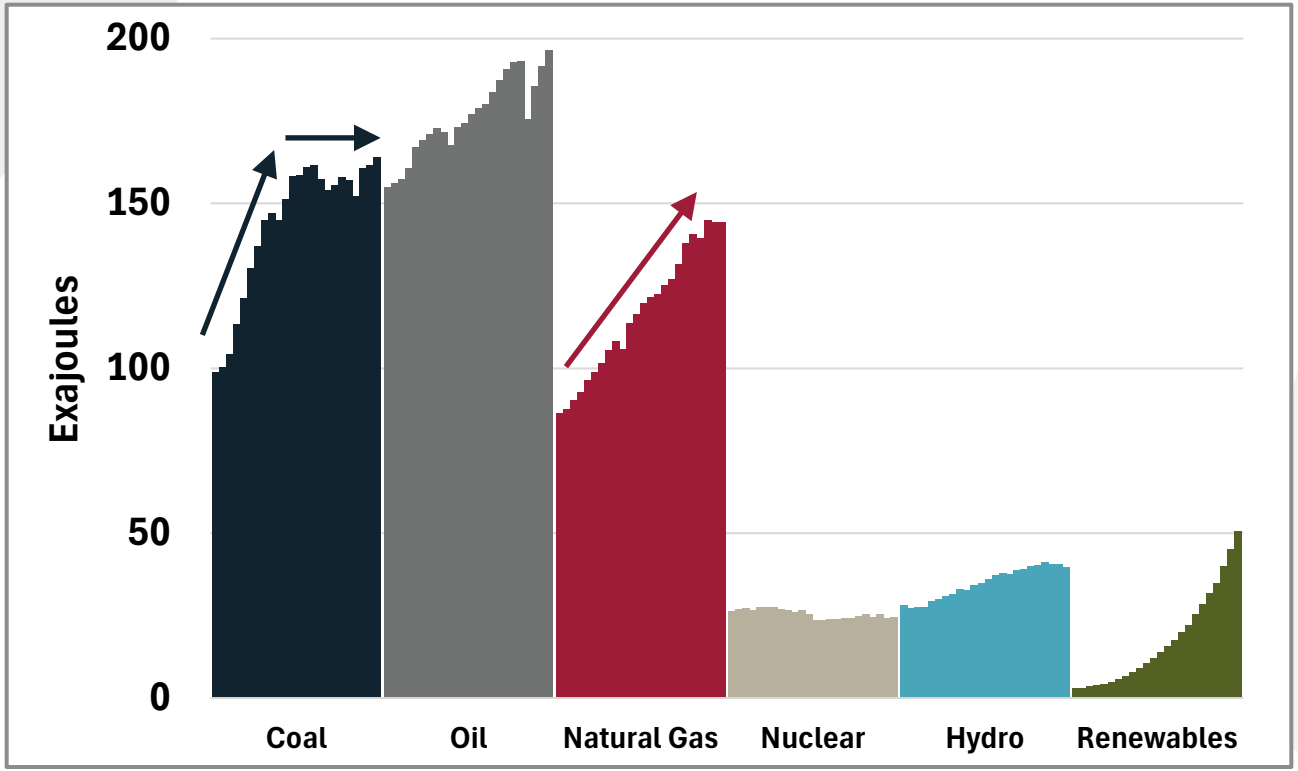
(1) Energy Institute - 2024 Statistical Review of World Energy

Global Primary Energy Consumption | By Source | 2000 to 2023



- Despite worldwide efforts to reduce use, coal consumption reached an all-time high in 2023 and remains a dominant fixture in the global energy mix, accounting for over 25% of global primary energy demand in 2023.
- Meanwhile, global natural gas consumption is up roughly 70% relative to 2000 levels, accounting for 23% of global primary energy demand in 2023.

Source: Energy Institute Statistical Review of World Energy (2024)

(1) Thunder Said Energy - Coal versus gas: explaining the CO2 intensity?

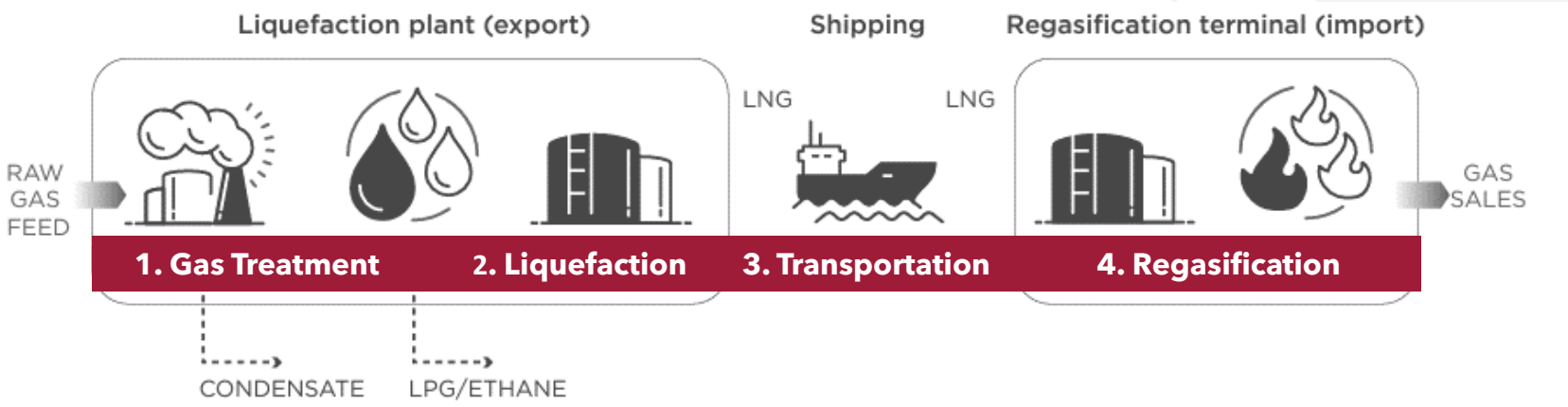
Canadian LNG 101

LNG Process Overview

Liquefied natural gas (LNG) is natural gas that has been converted into liquid form for ease of storage and transport, as LNG occupies roughly 1/600th the volume of natural gas. The vast majority of global LNG is exported from countries with large natural gas reserves (US, Australia, Qatar, Malaysia, etc.) to countries with limited domestic resources.

As of February 2024, there is approximately 63 Bcf/d (483 Mtpa) of global liquefaction capacity and an additional ~29 Bcf/d (217 Mtpa) of liquefaction capacity under construction or approved for development – roughly a 50% increase from current levels. Additionally, there is ~138 Bcf/d (1,046 Mtpa) of proposed capacity at the pre-final investment decision (FID) stage.

The process of producing and delivering LNG can be broken down into four key stages:



Source: International Group of Liquefied Natural Gas Importers (LNG Information Paper #2), IGU 2024 World LNG Report

LNG Process Overview (Continued)

1. Gas Treatment

Before liquefaction, the feed gas undergoes a stripping process to remove contaminants such as carbon dioxide, hydrogen sulfide, and water. Failure to remove impurities can lead to damaged equipment during the liquefaction process. The LNG process aims to achieve pipeline-quality natural gas, typically 85% to 99% methane. During this stage, hydrocarbons heavier than methane (i.e., butane, propane) are also separated and sold as raw materials.

2. Liquefaction

After the feed gas has been treated to remove contaminants, it is liquified to increase its density to efficiently transport it by ship or truck. Refrigeration technology cools the natural gas to a liquid state at approximately -162°C (-259°F). A single unit of LNG is equivalent to approximately 600 units of natural gas at standard temperature (15.6°C / 60°F) and atmospheric pressure.

3. Transportation

After liquefaction, the LNG is transported to the consumer via sea or truck. Specialized LNG carriers transport the LNG over long distances by sea. The LNG carriers are double-hulled ships designed to maintain the LNG at or near atmospheric pressure and at a cryogenic temperature of approximately -162°C (-259°F). The vessel is insulated to reduce the amount of LNG that boils off or evaporates during transportation. LNG carriers must adhere to stringent international regulations related to construction and operation. The LNG is transported to a regasification terminal that converts the liquified gas back into a gaseous state for end use.

4. Regasification

Carriers offload the LNG at regasification terminals, this is the final stage of the LNG process and involves using a vaporizer to warm and regasify the LNG. As of February 2024, there is approximately 135 Bcf/d (1,030 Mtpa) of global regasification capacity across 51 importing markets.

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Source: International Group of Liquefied Natural Gas Importers (LNG Information Paper #2), IGU 2024 World LNG Report

Canadian LNG Facility and Pipeline Infrastructure Map

Ksi Lisims LNG:
Export capacity: 12 Mtpa (1.58 Bcf/d)
Estimated commercial operation: Awaiting FID*

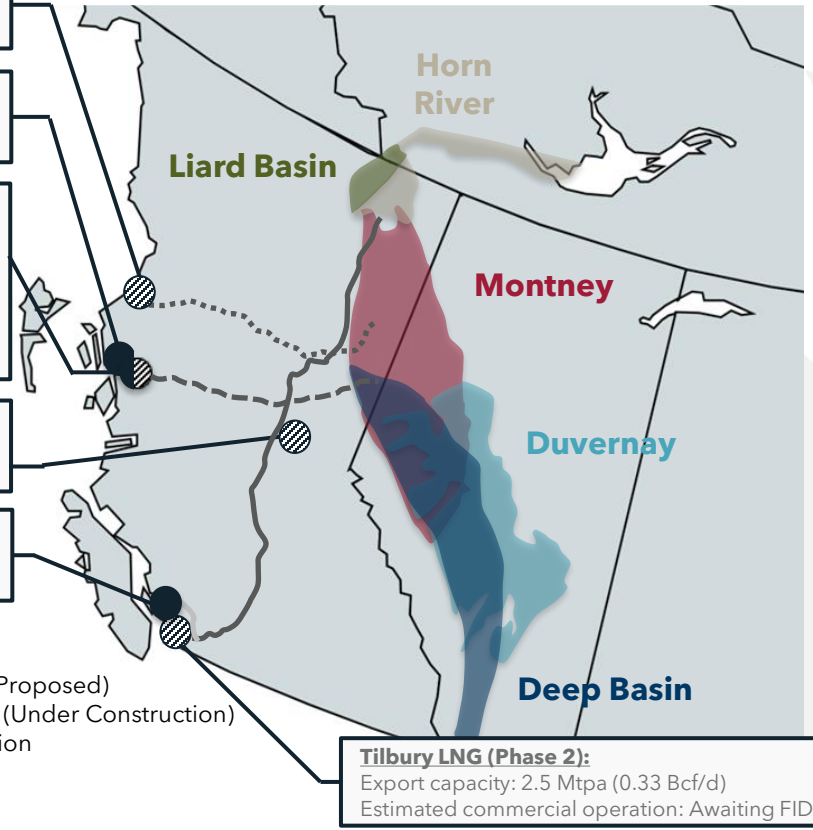
Cedar LNG:
Export capacity: 3.3 Mtpa (0.39 Bcf/d)
Estimated commercial operation: 2028

LNG Canada (Phase 1):
Export capacity: 14 Mtpa (1.84 Bcf/d)
Estimated commercial operation: 2025

LNG Canada (Phase 2):
Export capacity: 14 Mtpa (1.84 Bcf/d)
Estimated commercial operation: Awaiting FID*

Summit Lake PG LNG:
Export capacity: 2.7 Mtpa (0.36 Bcf/d)
Estimated commercial operation: Awaiting FID*

Woodfibre LNG:
Export capacity: 2.1 Mtpa (0.28 Bcf/d)
Estimated commercial operation: 2027



- Coastal GasLink Pipeline
- BC Pipeline
- Prince Rupert Gas Transmission Pipeline (Proposed)
- Eagle Mountain – Woodfibre Gas Pipeline (Under Construction)
- LNG Facility – Approved/Under Construction
- LNG Facility – Proposed/Awaiting FID*

Tilbury LNG (Phase 2):
Export capacity: 2.5 Mtpa (0.33 Bcf/d)
Estimated commercial operation: Awaiting FID*

- In 2010, the NEB (now CER) started receiving applications for long-term licenses to export natural gas as LNG to non-US markets. 15 years later, LNG Canada Phase 1 is poised for commercial operation in mid-2025, marking Canada's entrance into the global LNG market.
- Two other projects are under construction – Woodfibre LNG and Cedar LNG – with anticipated commercial operation dates in 2027 and 2028, respectively. These projects will bring Canada's total operational LNG export capacity to ~19 Mtpa (~2.5 Bcf/d).
- Four prospective projects – LNG Canada Phase 2, Ksi Lisims LNG, Tilbury LNG, and Summit Lake PG LNG – are also advancing with a combined export capacity of ~31 Mtpa (~4 Bcf/d).

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*FID: Final Investment Decision
Source: British Columbia Energy Regulator, Company Reports

LNG Canada Overview

Location: Kitimat, BC

Joint Venture Participants: Shell (40%), PETRONAS (25%), PetroChina (15%), Mitsubishi Corporation (15%), Korean Gas Corporation (5%)

Final Investment Decision: October 2018 (Phase 1)

Estimated Commercial Operation Date: 2025 (Phase 1)

Export License: 40 years

Export Capacity: Phase 1 – 14 Mtpa (1.84 Bcf/d) - Under Construction
Phase 2 – 14 Mtpa (1.84 Bcf/d) - Awaiting FID

Project Facts

- LNG Canada will represent Canada's first major LNG export facility and the largest private investment in Canadian history.
- The facility can increase its export capacity by an additional 14 Mtpa through Phase 2, which is subject to a final investment decision.
- The facility is built on the traditional territory of the Haisla people, with the support and involvement of the Haisla and other Indigenous communities.
- LNG Canada has invested more than $4.7 billion in contracts and procurement to businesses in BC, including more than $3.8 billion awarded to Indigenous-owned and local area businesses.
- LNG Canada has provided over $4 million in funding for several workforce development-related initiatives to support BC in meeting the industry's skilled trades requirements.

Source: LNG Canada, Government of Canada

Woodfibre LNG Overview

Location: Howe Sound, BC

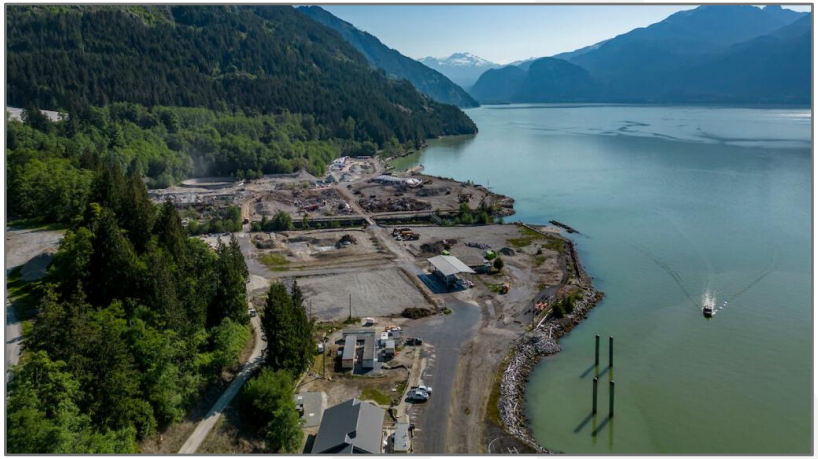
Joint Venture Participants: Woodfibre Management Ltd. (Pacific Energy Corporation 70% / Enbridge Inc. 30%)

Final Investment Decision: Fall 2023

Estimated Commercial Operation Date: 2027-2028

Export License: 40 years

Export Capacity: 2.1 Mtpa (0.28 Bcf/d)



Project Facts

- Woodfibre LNG will utilize electricity via BC Hydro and electric compressors in its liquefaction process.
- Upon completion, Woodfibre LNG will be one of the largest employers in the Squamish region, creating 100 new, well-paying careers for local workers.
- The first-of-its-kind consent-based Squamish Nation Environmental Assessment Agreement was signed in 2015 to establish the Nation as a formal environmental regulator. As a result, the Squamish Nation has provided meaningful feedback and imposed conditions on the development of the project.

Source: Woodfibre LNG, Government of Canada

Cedar LNG Overview

Location: Kitimat, BC

Joint Venture Participants: The Haisla Nation (50.1%) and Pembina Pipeline Corporation (49.9%)

Final Investment Decision: Summer 2024

Estimated Commercial Operation Date: 2028

Export License: 25 years

Export Capacity: 3.3 Mtpa (0.39 Bcf/d)

Project Facts

- Cedar LNG will be a floating LNG facility (FLNG), which is a ship or barge constructed to function in the same capacity as an onshore LNG facility. FLNG facilities offer a smaller environmental footprint compared to conventional facilities, and often lower capital costs.
- The project is Indigenous-owned and led by the Haisla Nation, with strong support from neighboring Indigenous Nations and communities.
- With its location in Kitimat, the Cedar LNG project is leveraging existing infrastructure, such as the CoastalGas Link pipeline, a deep-water port, and roads.
- Up to 500 people will be working at Cedar LNG during the peak of construction. Approximately 100 people will be working at the facility full-time during operation.
- Cedar LNG has secured 20-year take-or-pay liquefaction tolling services agreements with ARC Resources Ltd. and Pembina for 1.5 Mtpa each.

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Source: Cedar LNG, Government of Canada

(1) Cedar LNG

Proposed Projects Awaiting a Final Investment Decision (FID)

Since 2010, over 30 applications for long-term LNG export licenses have been submitted to the National Energy Board/Canada Energy Regulator.(1) However, due to an uncertain regulatory process, development has been slow-moving, with many proposed projects now canceled. Beyond the three current projects under construction, four additional proposed projects are progressing and are awaiting a final investment decision (FID).

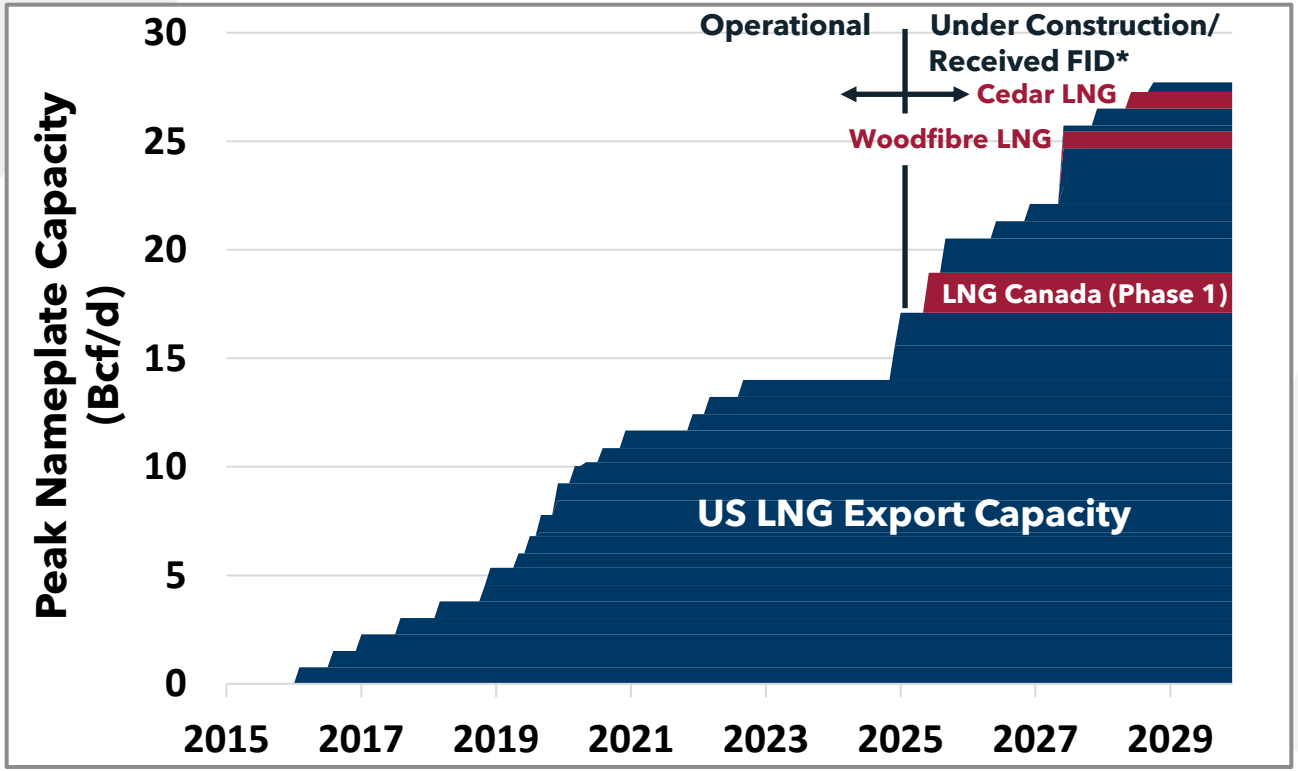
- **LNG Canada Phase 2 Expansion** would double the existing facility's export capacity to 28 Mtpa (3.6 Bcf/d). A final investment decision is expected to be made in 2025.
- **Ksi Lisims LNG** is a proposed floating LNG facility (FLNG) with an export capacity of 12 Mtpa (1.6 Bcf/d) located on a site owned by the Nisga'a Nation near the community of Gingolx on the northwest coast of BC. The project proponents include the Nisga'a Nation, Rockies LNG Partners (a consortium of Canadian natural gas producers(2)), and Western LNG. In March 2024, Western LNG and the Nisga'a Nation announced a binding agreement with TC Energy to purchase the permitted Prince Rupert Gas Transmission pipeline project (PRGT), a proposed ~900 km pipeline that would transport natural gas from northeast BC to the project site. Ksi Lisims LNG is currently in the Environmental Assessment process with the BC government.
- **Tilbury LNG Phase 2 Expansion** is a proposed expansion of the existing FortisBC-owned Tilbury LNG facility in Delta, BC. It will consist of a new storage tank, liquefaction facilities, and supporting infrastructure, with a capacity of 2.5 Mtpa (0.33 Bcf/d), to produce LNG for marine fueling or overseas export. The existing Tilbury facility has been operational since 1971 as a liquefaction terminal using LNG to meet peak winter heating needs and a source of bunkering fuel for LNG-powered marine vessels.
- **Summit Lake PG LNG** is a proposed LNG facility by JX LNG Canada Ltd. located 30 km north of Prince George, in inland BC. The facility would differ from others as the produced LNG must be transported by rail to the coast. It would produce up to 2.7 Mtpa (0.36 Bcf/d) in two phases and require a new 2 km pipeline to connect to existing natural gas pipeline infrastructure. Additionally, 10 km of new rail track would need to be built to connect to existing rail infrastructure to accommodate the transportation of LNG to coastal BC for overseas shipment.

Source: LNG Canada, Ksi Lisims LNG, Government of British Columbia, FortisBC

(1) The Canada Energy Regulator - Market Snapshot: Update on Canadian LNG export facilities and licenses

(2) Rockies LNG partners includes: Advantage Energy, Birchcliff Energy, Canadian Natural Resources Limited, Murphy Oil, NuVista Energy, Ovintiv Inc., Paramount Resources, Peyto Exploration & Development Corp., Tourmaline Oil Corp., Veren Inc., Whitecap Resources, and Woodside Energy International (Canada) Limited

North American LNG Export Capacity | Operational and Under Construction/Received FID*



- In 2010, the NEB (now CER) started receiving applications for long-term licenses to export natural gas as LNG to non-US markets.
- Fifteen years later, in 2025, Canada will welcome its inaugural major LNG export facility, LNG Canada (Phase 1), with roughly 1.9 Bcf/d of export capacity.
- Over the same period, Canada's largest trade partner and energy sector competitor, the US, has grown its LNG export capacity from nil to over 15 Bcf/d.
- While Canada has been slow to act, the US has seen massive investment, jobs, and economic benefits from LNG.

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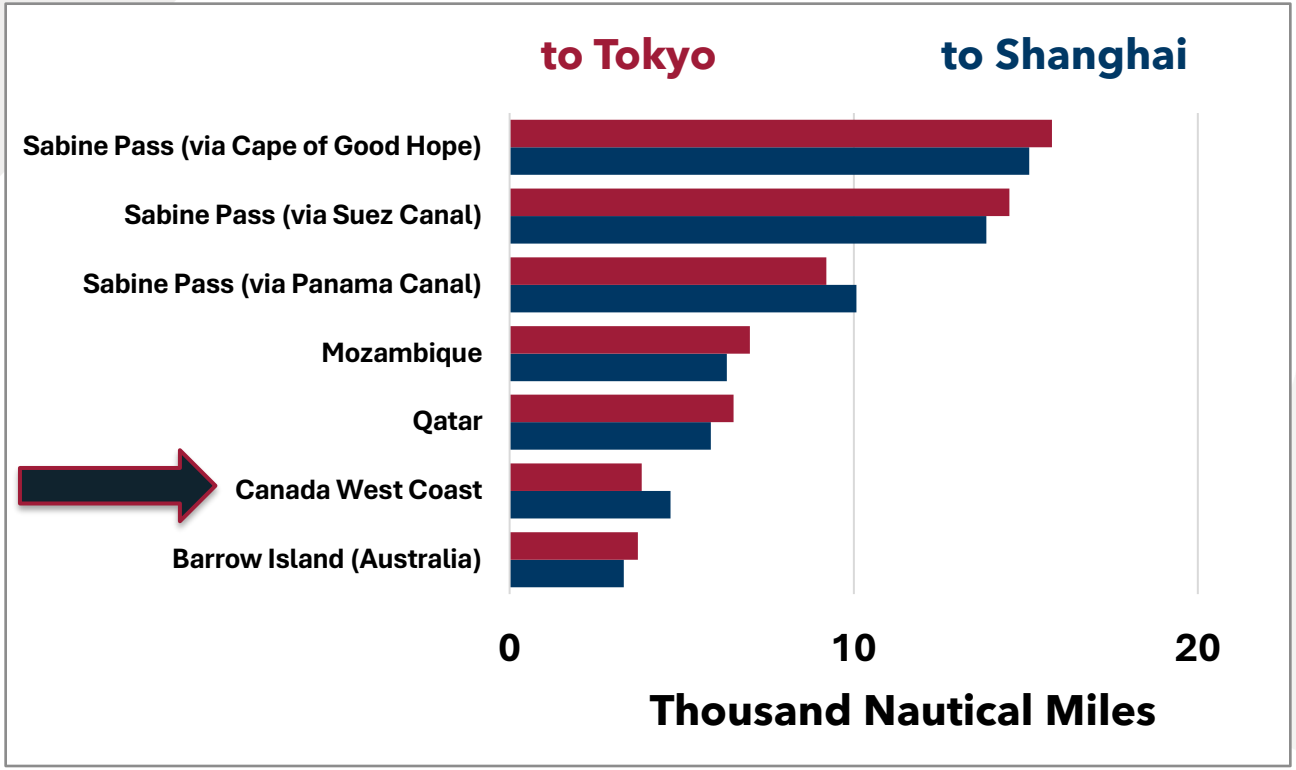
Source: US Energy Information Administration, Canada Energy Regulator, Company Reports
*FID: Final Investment Decision

Canada's Competitive Advantage

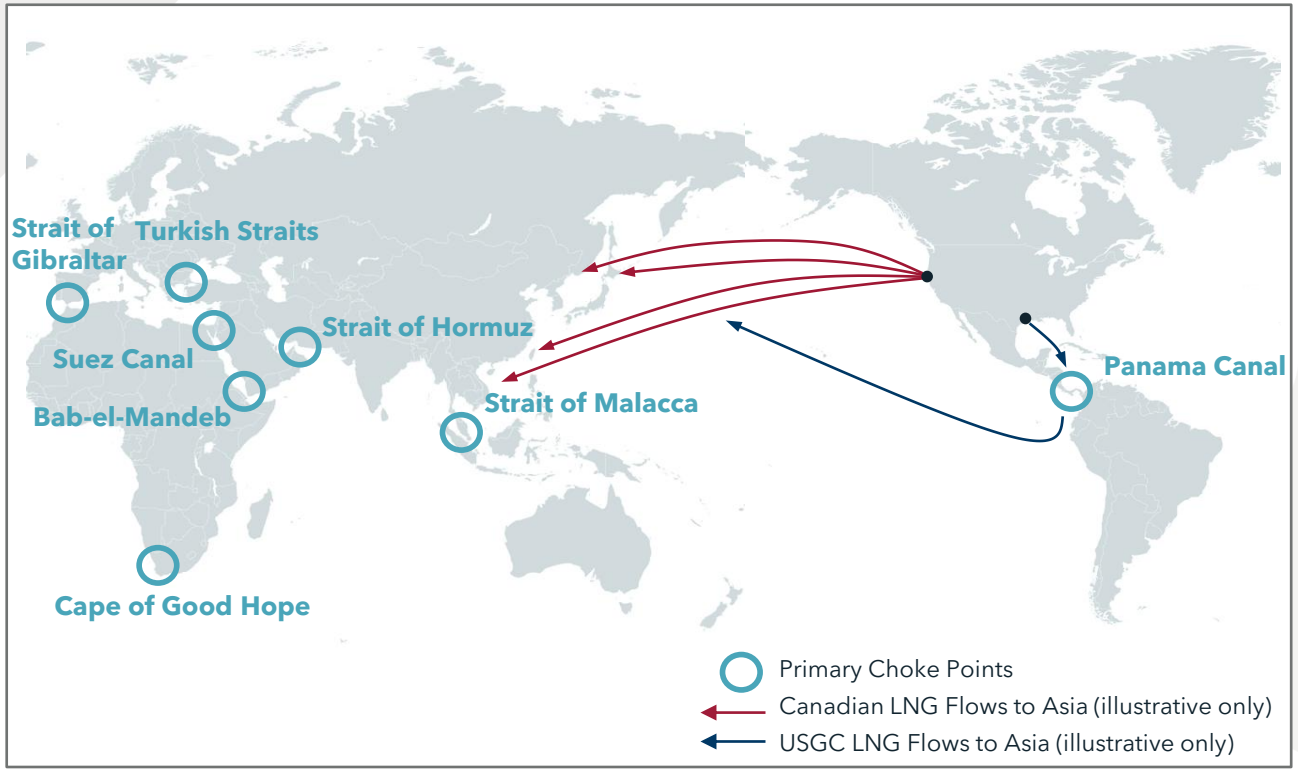
Canadian Shipping Distance Advantage | LNG Shipping Distances to Asia



- Canadian LNG shipped out of coastal BC destined for Asia will benefit from significantly shorter distances compared to competing sources, specifically in the US Gulf Coast.
- According to a report from the Oxford Institute for Energy Studies, the shipping distance to Tokyo from the west coast of Canada is estimated at approximately 3,800 nautical miles, compared to approximately 9,200 nautical miles for LNG shipped out of Sabine Pass in the US Gulf Coast via the Panama Canal.
- The shorter shipping distance translates to roughly half the time (~10 days vs. ~20 days).

Source: The Oxford Institute for Energy Studies

Global Maritime Choke Points

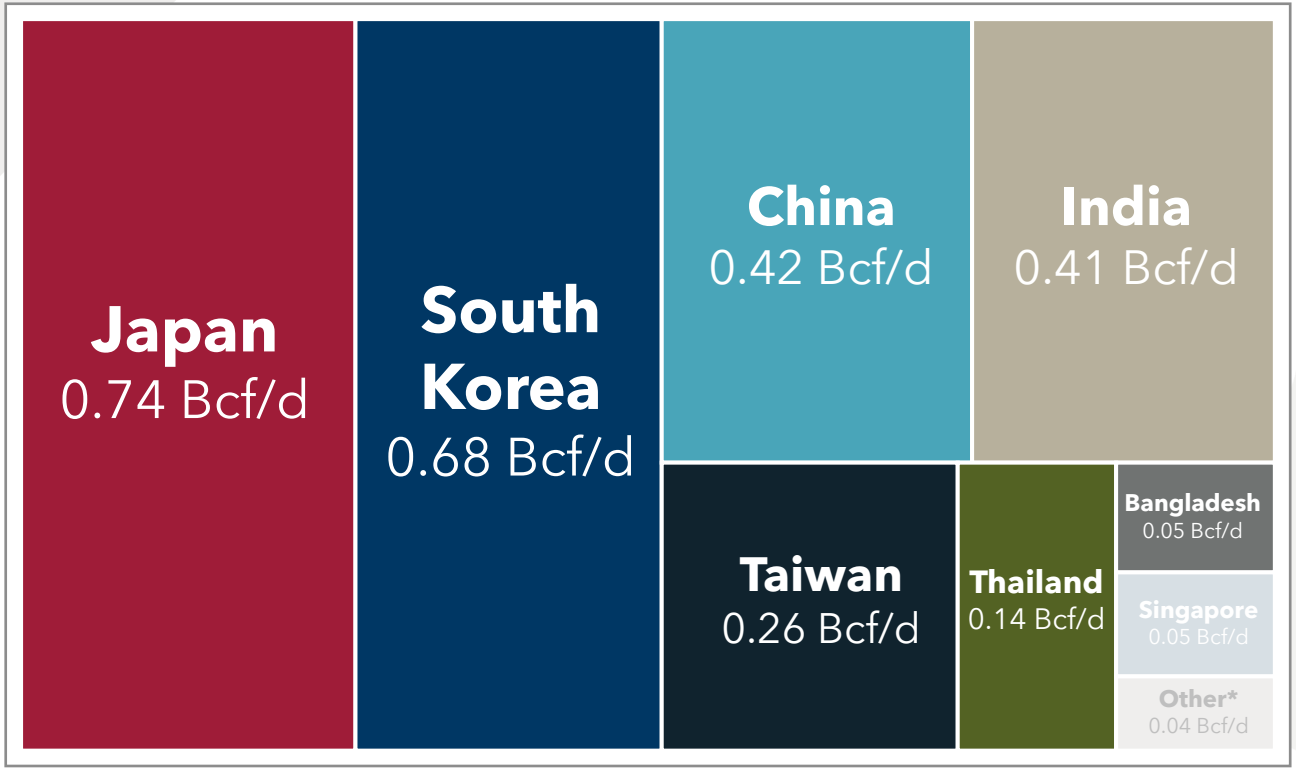


- In addition to shorter relative shipping distances, Canadian LNG out of coastal BC will also be unimpeded by potential chokepoints (i.e., Panama Canal, Suez Canal, Strait of Hormuz, etc.) en route to key markets in Asia.
- Drought-related disruptions led to a ~66% decline in LNG shipments via the Panama Canal between Aug 2023 and Jan 2024, while geopolitical conflicts have led to a halt in LNG shipments via the Suez Canal.(1)
- As a result, LNG cargoes are being re-routed, leading to greater shipping times and costs, resulting in less LNG that can be delivered by each vessel over a given period.

Source: Visual Capitalist

(1) The Oxford Institute for Energy Studies - LNG Shipping Chokepoints: The Impact of Red Sea and Panama Canal Disruption

Destination of US LNG Exports to Asia | 2023



- The US exported approximately 2.8 Bcf/d (21 Mtpa) of LNG to various markets in Asia in 2023, representing ~25% of total US LNG exports.
- Conversely, in 2023, the US made up 8% of all Asia LNG imports, which totaled 34 Bcf/d (261 Mtpa) from 20 different markets.
- Supply from Canada and the US is preferred, as many countries seek to reduce dependence on Russian gas. For context, Asia imported 2.2 Bcf/d (17 Mtpa) of Russian LNG in 2023.
- Canadian exports of LNG to Asia would also strengthen Canada's Indo-Pacific investment and trade strategy.

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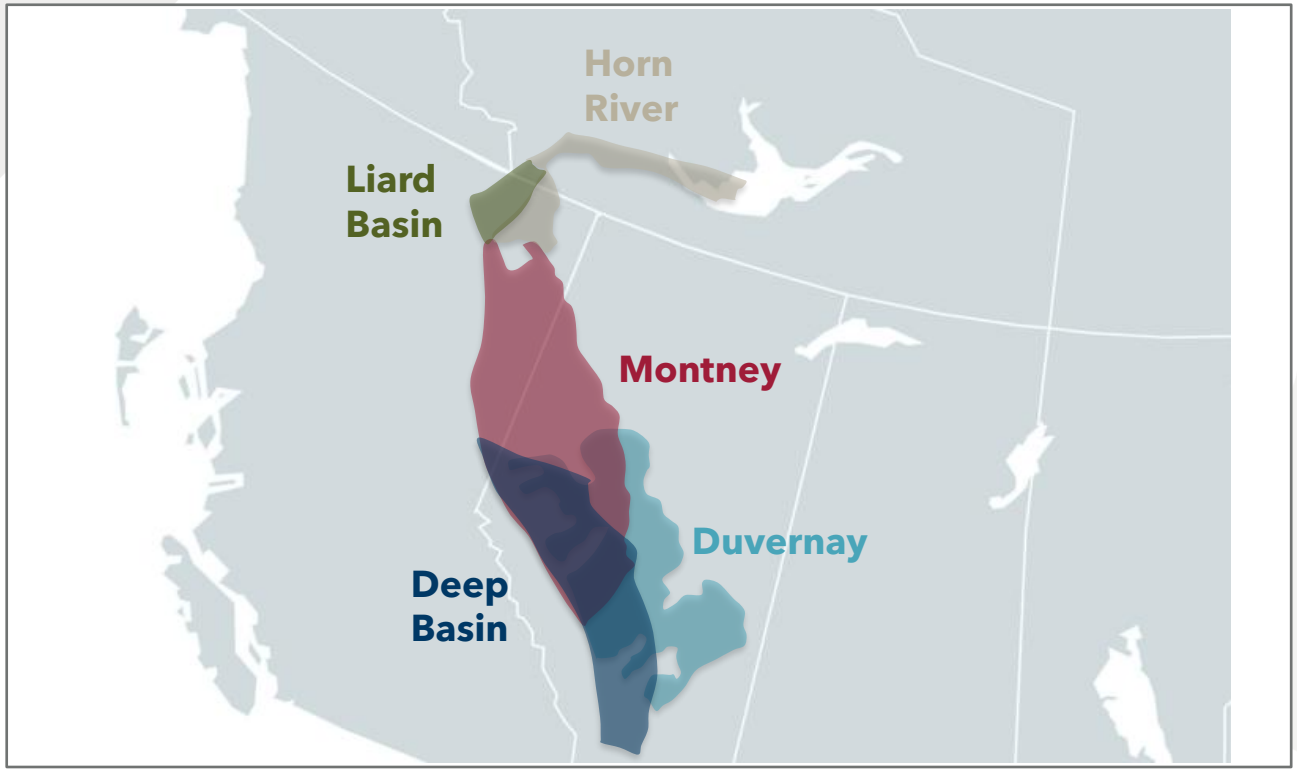
Source: International Group of Liquefied Natural Gas Importers
*Other includes Indonesia and Philippines

Western Canadian Sedimentary Basin Natural Gas Play Overview

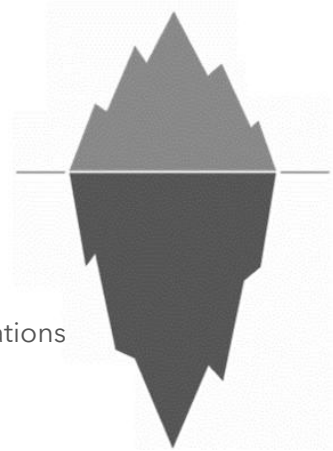


- Major natural gas plays in the WCSB include the Montney, Deep Basin, Duvernay, Liard Basin, and Horn River, among others. The Montney spans roughly 130,000 km^2 across Alberta and BC and is roughly the size of New Brunswick and Nova Scotia combined.
- Based on estimates from the Canada Energy Regulator, there is 1,105 Tcf[(1)] of remaining marketable natural gas resources in the Western Canadian Sedimentary Basin (WCSB). Using average annual WCSB natural gas production of ~18 Bcf/d in 2023, this is equivalent to over 160 years of supply.
- A more recent study conducted by McDaniel & Associates Consultants Ltd. found that the total natural gas resource in Alberta between the Montney, Duvernay, and Deep Basin exceeds 1,360 Tcf. Of this, 130 Tcf is estimated to be proved and recoverable natural gas reserves.[(2)]
- Given its resource potential and proximity to coastal BC, the Montney will be the primary source of supply for western Canadian LNG projects.

Source: Canada Energy Regulator

(1) Canada Energy Regulator – Canada's Energy Future Data Appendices
(2) Government of Alberta - New gas reserves take Canada into global top 10

Montney Resource Potential



Resources

What is there:
- Potentially recoverable
- Undiscovered accumulations
- Unknown certainty

Reserves

What we can get:
- Known accumulations
- Recoverable
- Established technology
- Economic

Resources are the total quantity of oil and natural gas estimated to be contained in subsurface accumulations

Reserves are quantities of oil and natural gas that are commercially recoverable with development projects from a given date under defined conditions.

** Historically, remaining reserves in the Montney have increased significantly year-over-year and are expected to increase further in the years ahead with continued development of the play and technological advancements.*

- A 2013 joint study by the BC and Alberta governments estimated the Montney contained an ultimate unconventional resource potential of 449 Tcf of marketable gas (271 Tcf BC/178 Tcf Alberta).(1)
- More recently, a 2019 evaluation by McDaniel & Associates Consultants Ltd. found that the BC Montney resource potential based on a long-term AECO gas price of C$3.00/MMBtu was ~399.6 Tcf, with sub- C$2.50/MMBtu break-even supply costs for many areas within the Montney.(2) Using 2019 average Montney production, this implies over 170 years of Montney supply.
- In comparison, based on the latest reserve estimates, there are approximately 81.5 Tcf(3) and 8.4 Tcf(4) of remaining raw natural gas Montney reserves* in BC and Alberta, respectively.

(1) Canada Energy Regulator - The Ultimate Potential for Unconventional Petroleum from the Montney Formation of British Columbia and Alberta
(2) McDaniel & Associates Consultants Ltd - British Columbia Montney Supply Study and Type Curve Analysis
(3) BC Energy Regulator – 2022 Oil and Gas Reserves and Production Report
(4) Alberta Energy Regulator – Low Permeability and Shale Area Assessment – Montney Formation

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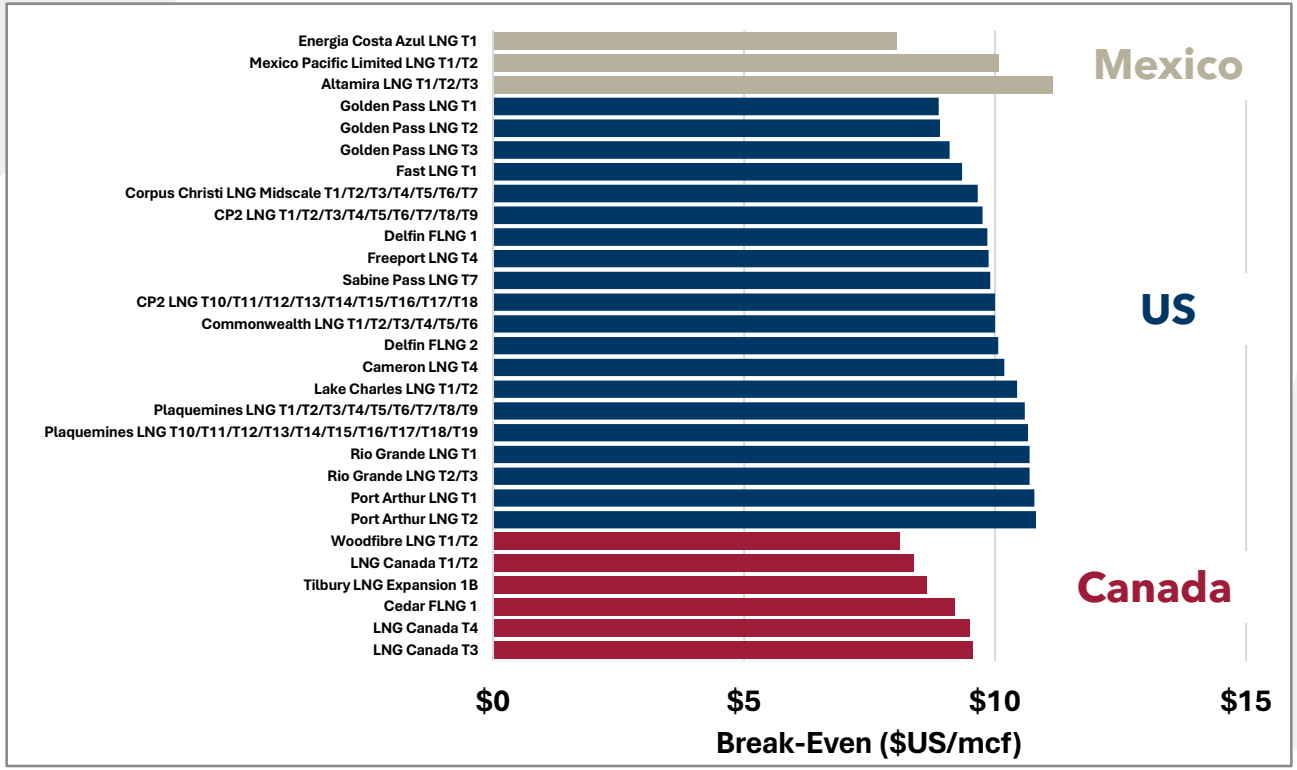
North American LNG Asset Break-Even Price for Delivery to Asia



- According to 2024 data derived from Rystad Energy, Canadian LNG projects are expected to be among the most cost-competitive for delivery to Asia.
- The analysis shows that the total costs* for Canadian LNG into Asia could range from US$8.10/mcf to US$9.56/mcf.(1)
- Compared to competing sources, Canadian LNG will benefit from lower liquefaction costs due to relatively lower ambient temperatures in BC, lower shipping costs due to shorter distances, and a lower cost of natural gas supplies in western Canada. These competitive advantages help offset typically higher capital costs in Canada related to remote locations.

Source: Canadian Energy Centre (derived from Rystad Energy, Gas and LNG Markets Solution)

*Total costs include free-on-board cost break-even (upstream & midstream), transportation costs, and a regasification tariff

(1) Canadian Energy Centre - North American LNG Project Cost Competitiveness

Potential Economic Impact of Canadian LNG

Canada stands to benefit from growing its LNG industry through increased investment, jobs, tax revenue, and balancing its trade deficit. A 2020 study from The Conference Board of Canada[1] assumes the development of 56 Mtpa (~7.4 Bcf/d) of total LNG export capacity in Canada would provide:

- **Economic Boost:** The BC LNG industry could increase Canada's GDP by over $11 billion annually, with BC alone seeing an $8 billion annual increase, boosting the province's GDP by over 3%.
- **Job Creation:** The LNG industry could create over 96,000 jobs across Canada annually, with 71,000 of those in BC, representing a 3% increase in the province's total employment.
- **Investment Potential:** Over the period from 2020 to 2064, the LNG industry could attract more than $500 billion in total investment, with $11 billion spent annually.
- **Government Revenue Boost:** The industry could generate over $90 billion in revenue for Canadian provinces and territories by 2064, with BC alone receiving over $78 billion.

Average Annual Economic Impacts of Canadian LNG[1]

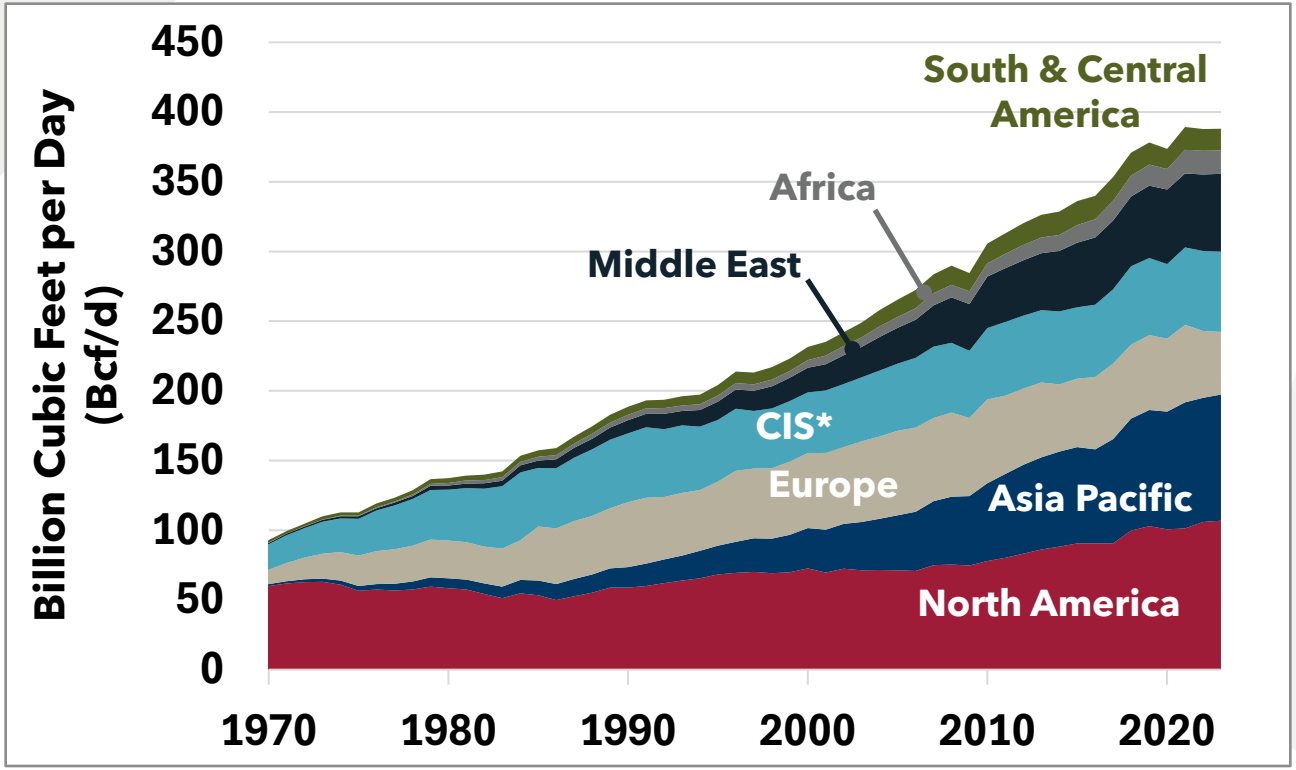
		Upstream	Transmission	Midstream	Power Lines	LNG Terminal (Build)	LNG Terminal (Operational)	Total
Annual investment spending	(2020 $ millions)	$8,116	$308	$206	$27	$1,438	$1,151	**$11,246**
Canada								
GDP at market prices	(2020 $ millions)	$8,533	$266	$194	$25	$1,141	$993	**$11,153**
Employment	(000s)	71.8	2.6	1.9	0.2	12.5	7.6	**96.6**
Wages	(2020 $ millions)	$4,805	$164	$123	$13	$724	$472	**$6,302**
BC								
GDP at market prices	(2020 $ millions)	$6,138	$188	$137	$20	$817	$788	**$8,089**
Employment	(000s)	52.5	1.9	1.4	0.2	9.3	5.8	**71.1**
Wages	(2020 $ millions)	$3,474	$119	$90	$11	$531	$364	**$4,589**

Source: The Conference Board of Canada

(1) The Conference Board of Canada – A Rising Tide: The Economic Impact of BC's Liquified Natural Gas Industry

Global LNG Trade

Annual Global Natural Gas Demand | By Region | 1970 to 2023

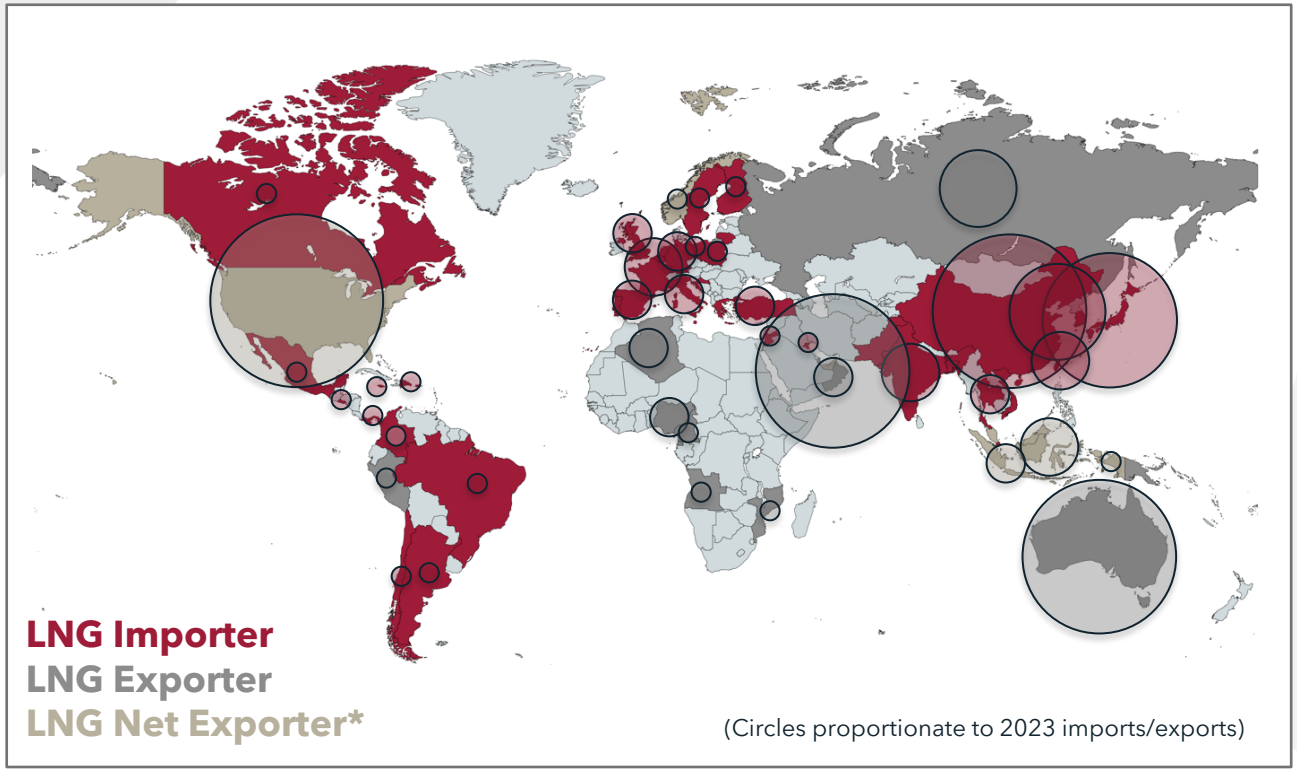


- Global natural gas consumption has increased steadily since 1970, growing by roughly 5-6 Bcf/d per year, an average of 3% per year.
- The US remains the largest consumer of natural gas, accounting for approximately 22% of global demand in 2023.
- Demand growth in the Asia Pacific region began to accelerate in the early 2000s. Since 2000, Asia Pacific demand is up over 60 Bcf/d, representing an annual growth rate of over 5% per year. In 2023, the region accounted for 23% of global natural gas demand, led by China, Japan, India, and South Korea.
- Asian markets are ideally suited destinations for Canadian LNG given their lack of domestic supplies, reliance on LNG, and close proximity to Canada.

CAPP

Source: Energy Institute Statistical Review of World Energy (2024)
*CIS: Commonwealth of Independent States, includes Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Uzbekistan

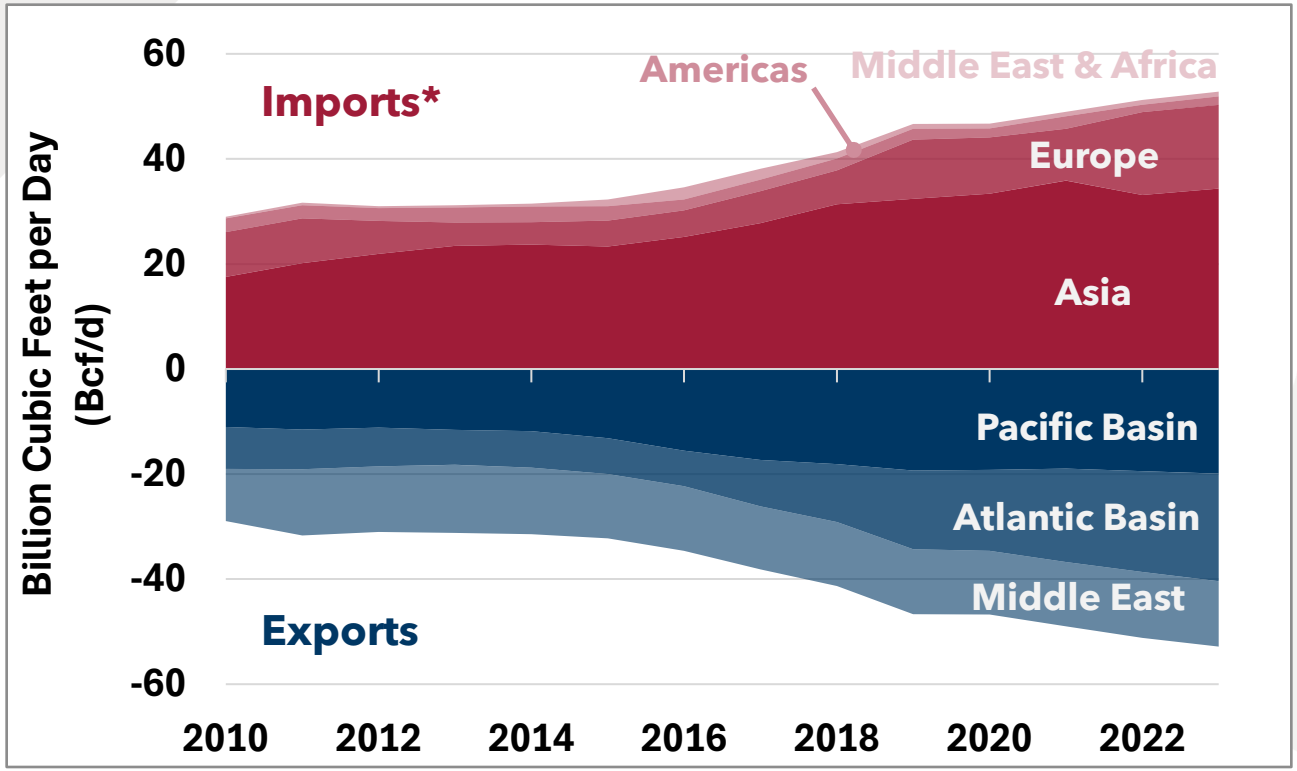
Overview of LNG Exporting and Importing Countries | 2023



- Despite ranking as the world's 5th largest natural gas producer in 2023, Canada remains on the sidelines in the global LNG trade.
- Global LNG trade remained relatively concentrated in the Asia Pacific region in 2023.
- In 2023, Canada was an LNG importer as it had no major operational LNG export facilities and imported a small amount of LNG in eastern Canada via the Saint John LNG regasification terminal.
- With vast natural gas reserves and direct tidewater access in coastal BC, Canada is ideally suited to supply LNG to markets in Asia where demand continues to grow.

Source: International Group of Liquefied Natural Gas Importers, Energy Institute Statistical Review of World Energy (2024)
*LNG net exporters include the US, Norway, Malaysia, Indonesia, and the UAE

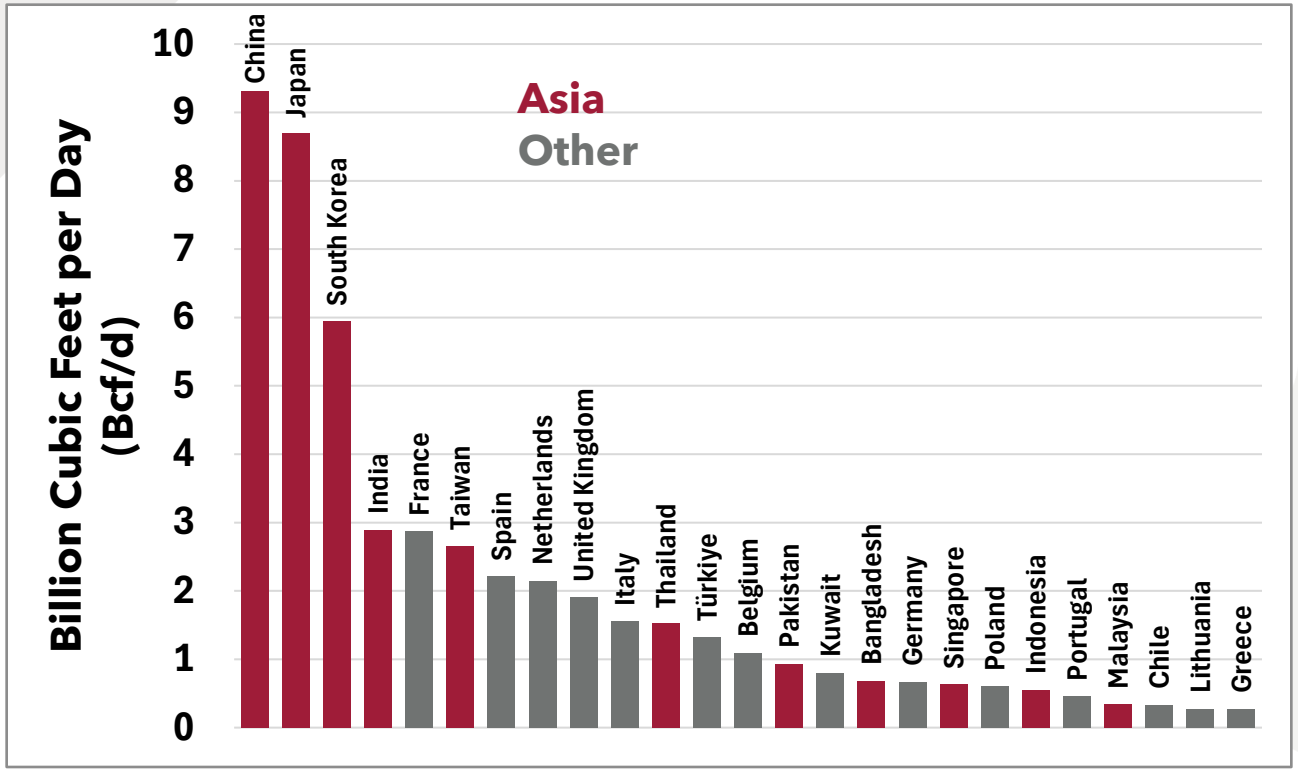
Annual Global LNG Exports/Imports | By Region | 2010 to 2023



- Global LNG trade hit a record-high of 52.8 Bcf/d (401 Mtpa) in 2023, up over 80% relative to 2010 levels and equivalent to ~14% of global gas demand in 2023. Since 2010, the annual average growth rate in LNG trade has been roughly 5%.
- In 2023, 51 importing markets were connected via 20 exporting markets.
- From a regional perspective, Asia and Europe are the largest importers of LNG, accounting for roughly 65% and 30% of global LNG imports in 2023, respectively.
- Comparatively, global LNG exports are less concentrated on a regional basis. In 2023, the Pacific Basin, the Atlantic Basin, and the Middle East accounted for 39%, 38%, and 24% of global LNG exports, respectively.

Source: International Group of Liquefied Natural Gas Importers, Energy Institute Statistical Review of World Energy (2024)
*Net of re-exports

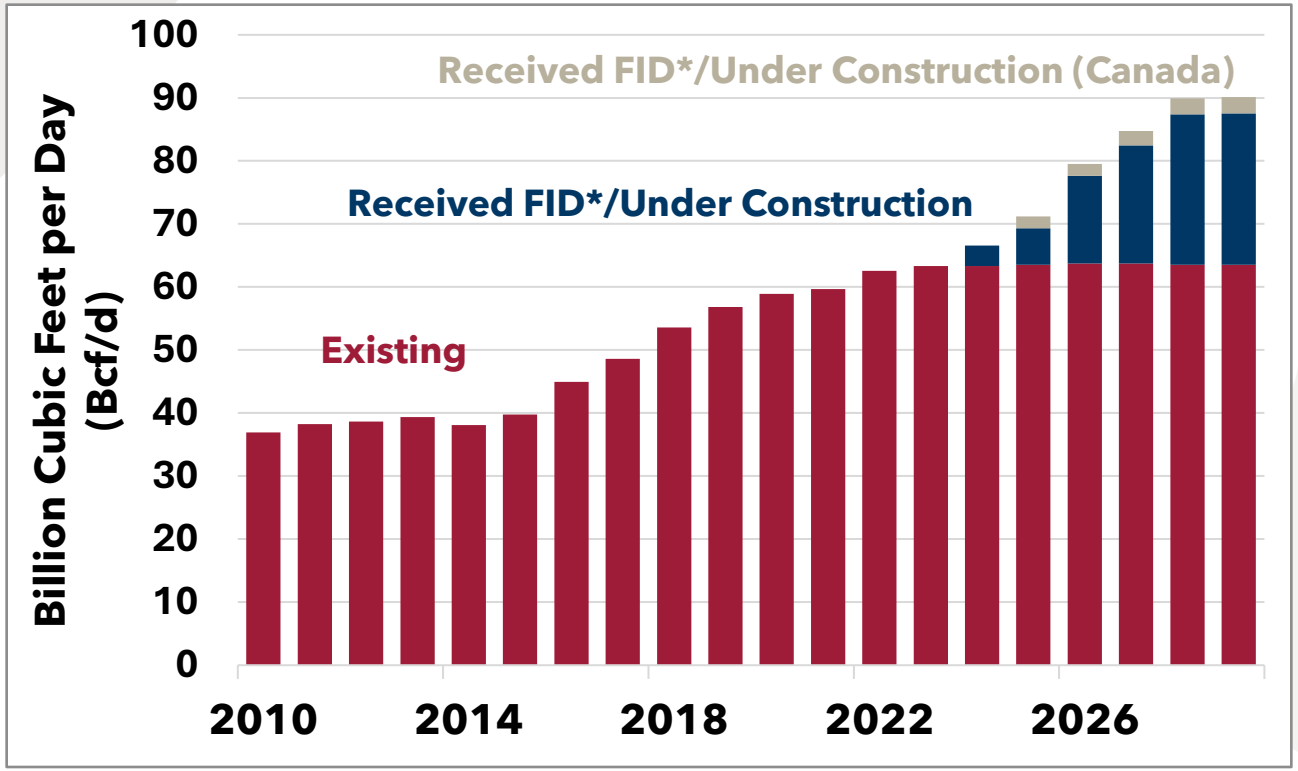
LNG Imports* by Country | Top 25 | 2023



- From an import perspective, Asian countries were the largest importers of LNG in 2023, representing 65% of total LNG imports. Eleven Asian countries ranked in the top 25 in 2023.
- In the years ahead, developing Asian economies are expected to increase their demand for LNG.
- Compared to other exporters like the US, Canada is advantaged in serving the Asian market due to its close proximity and lower shipping costs.

Source: International Group of Liquefied Natural Gas Importers
*Net of re-exports

Global Liquefaction Capacity Development | 2010 to 2029



- In 2023, global liquefaction capacity reached ~64 Bcf/d (483 Mtpa), with an average weighted utilization rate of ~89%.(1)
- From 2010 to 2023, global liquefaction capacity has increased by over 70% and based on projects that have currently received an FID*, is poised to grow by an additional ~27 Bcf/d (~200 Mtpa) by 2029 (+40% relative to 2023).
- For context, once LNG Canada Phase 1, Woodfibre LNG, and Cedar LNG are collectively operational by 2029, their cumulative export capacity of ~2.5 Bcf/d (19 Mtpa) will represent ~3% of global liquefaction capacity, including existing and projects that have received FID.

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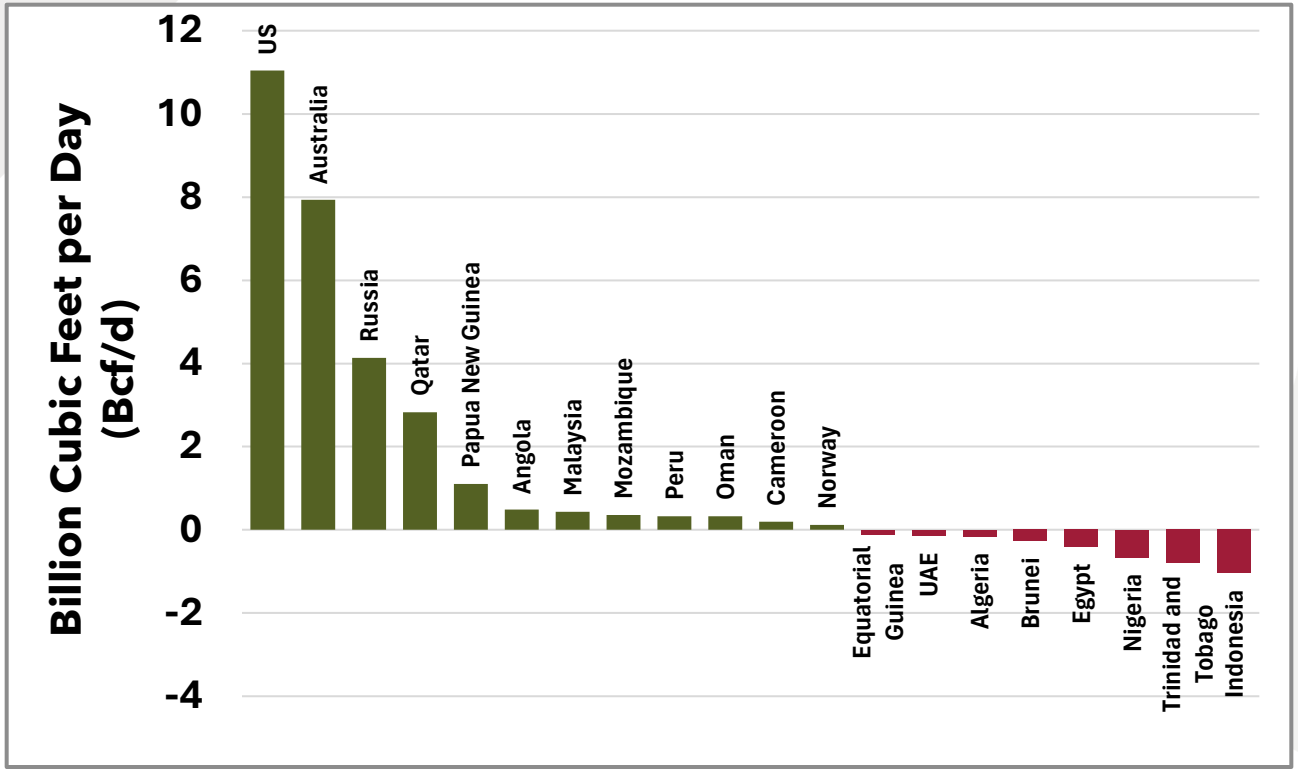
Source: IGU 2024 World LNG Report, Rystad Energy
*FID: Final Investment Decision

(1) Utilization rate calculated on a pro-rated basis, depending on when plants are commissioned and/or offline due to outages.

Change in LNG Exports by Country | 2023 vs. 2010

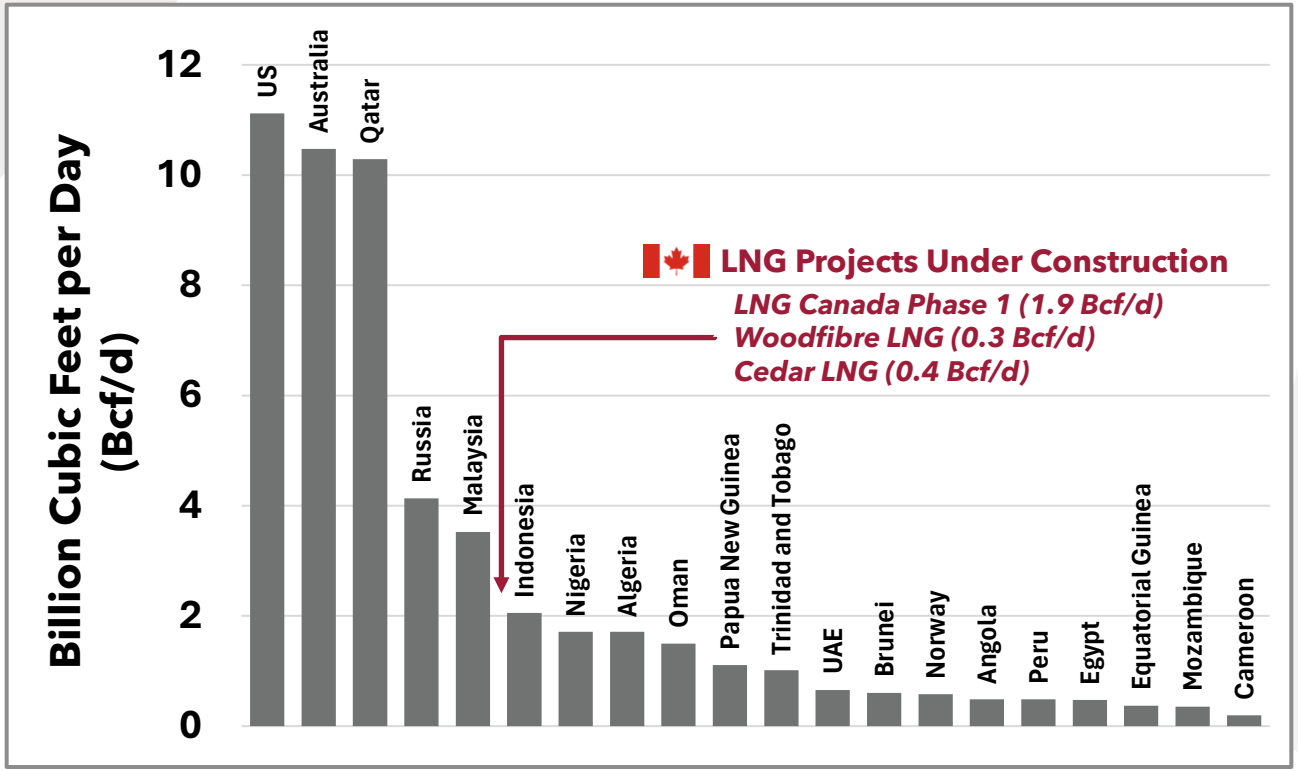


- The global LNG landscape has changed drastically since 2010. Many countries have expanded their LNG industry while Canada's has remained dormant.
- From an economic perspective, Canada has missed significant financial opportunities from the delayed development of LNG. This has resulted in lost market share to other countries, including the US, and forfeiting billions in investment, jobs, taxes, and royalties.
- A 2020 study from The Conference Board of Canada[1] found that an investment scenario where Canadian LNG export capacity increased to 56 Mtpa (7.4 Bcf/d) would yield a $11 billion increase in GDP per year, an increase in jobs by ~100,000, and over $2 billion per year in taxes & royalties.

Source: International Group of Liquefied Natural Gas Importers

(1) The Conference Board of Canada – A Rising Tide: The Economic Impact of BC's Liquified Natural Gas Industry

LNG Exports by Country | 2023



- In 2023, there were 20 countries that exported LNG across the globe.
- Of these, the US, Australia, and Qatar are the market leaders, collectively accounting for over 60% of global LNG exports in 2023.
- Once Canada joins the fold in 2025-2028, it will immediately become one of the top global LNG exporters but will still be exceeded by the US, Australia, Qatar, Russia, and Malaysia.
- Canada's specific ranking in 2025-2028 is uncertain since many countries have projects currently under development and will also grow their exports over that timeframe.

Source: International Group of Liquefied Natural Gas Importers

Indigenous Partnerships

Indigenous Partnerships in Canadian LNG Development

Indigenous communities are leading the way in LNG development in Canada, making a significant impact through strategic partnerships, ownership stakes, and business agreements.

For Indigenous communities, the impact of Canadian LNG development is significant: it creates jobs, supports Indigenous-owned businesses, and generates own-source revenues for clean drinking water, housing, and economic development. Notable Indigenous partnerships in Canadian LNG development include:(1)

- **Woodfibre LNG** – the first company in Canada to recognize a First Nations government as a regulator on a proposed industrial project and to receive environmental approval from Indigenous People without a treaty.
- **Cedar LNG** – the world's first Indigenous majority-owned LNG project, it has strong support from neighboring Indigenous Nations and communities.
- **Ksi Lisims LNG** – the Nisga'a Nation is advancing the proposed Ksi Lisims LNG project in its territory, with meaningful input into project development, management, and operations, ensuring it is designed and operated in a manner consistent with the Nisga'a Nation's commitment to stewardship of the land and its people.
- **Coastal GasLink Pipeline** – CGL First Nations Limited Partnership and the FN CGL Pipeline Limited Partnership, two entities that together represent 17 nations across the project corridor, purchased a 10% equity interest in TC Energy's Coastal GasLink Pipeline(1), a critical piece of pipeline infrastructure connecting natural gas from northeastern BC to LNG facilities in Kitimat, BC.

The BC government requires five conditions for LNG project proposals:

I. Include guarantees of jobs and training opportunities for British Columbians
II. Provide a fair return for the resource
III. Respect and partner with First Nations
IV. Protect our air, land, and water, including living up to the province's climate commitments
V. Must benefit communities

Source: First Nations LNG Alliance, Woodfibre LNG, Cedar LNG, Ksi Lisims LNG, TC Energy, Government of British Columbia

(1) Toronto Star - Choosing Canadian LNG is Choosing Indigenous LNG

Acronyms and Abbreviations

Bcf – Billion Cubic Feet

BOE – Barrel of Oil Equivalent

CCUS – Carbon Capture, Utilization and Sequestration

CER – Canada Energy Regulator

FID – Final Investment Decision

FLNG – Floating LNG Facility

GHG – Greenhouse Gas

GIIGNL – International Group of Liquefied Natural Gas Importers

IEA – International Energy Agency

LNG – Liquefied Natural Gas

MMBtu – Million British Thermal Units

Mtpa – Million Tonnes Per Annum

NEB – National Energy Board

t – Tonne

Tcf – Trillion Cubic Feet

USGC – US Gulf Coast

WCSB – Western Canadian Sedimentary Basin