

# Woodfibre LNG: First Nations and Industry Relations in Canada

Lecture by:

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Project Outline

**FOR CLASS PARTICIPANTS ONLY –  
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Economic Context

Conflicting Voices

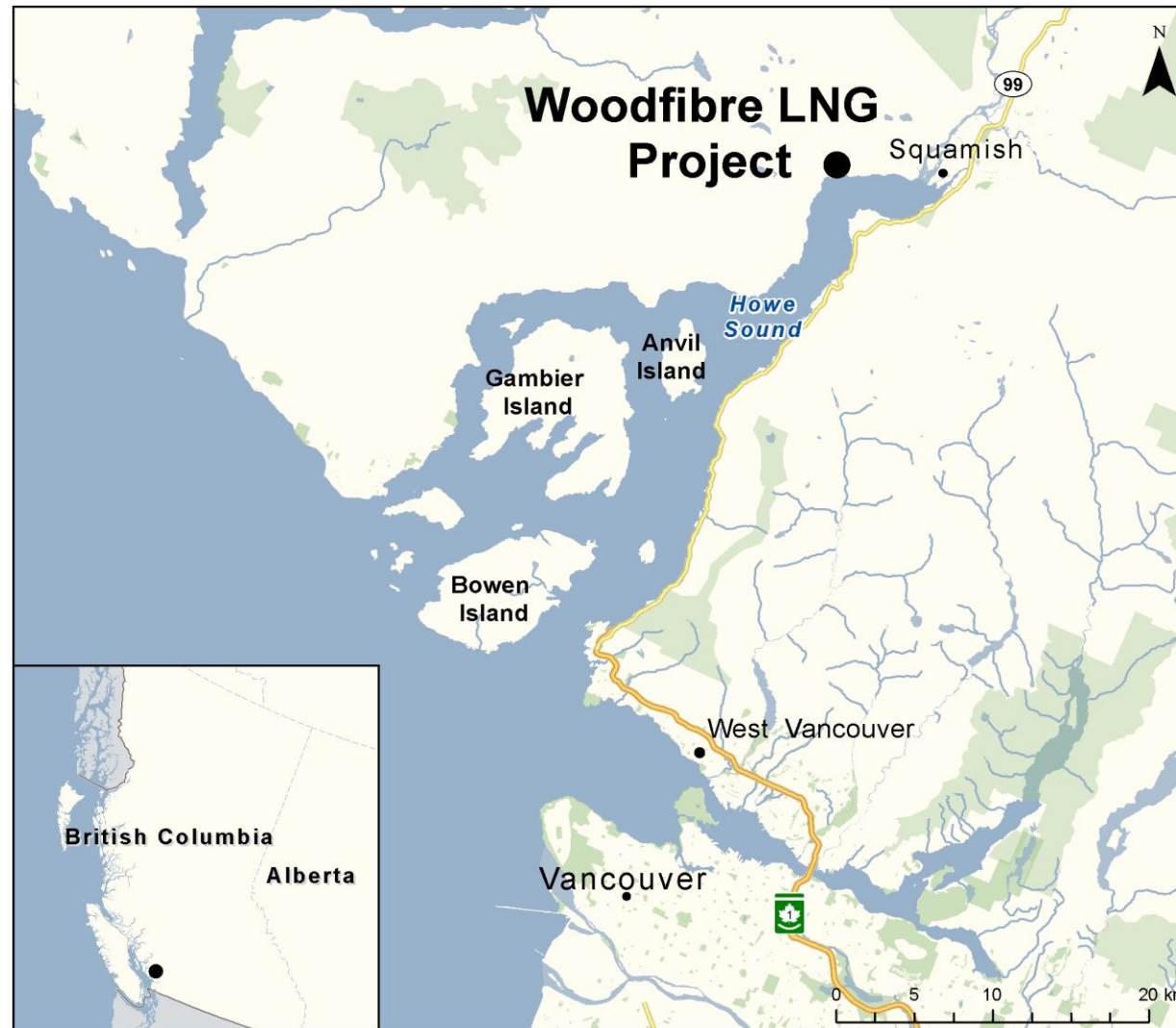
Environmental Context

Plot Twist

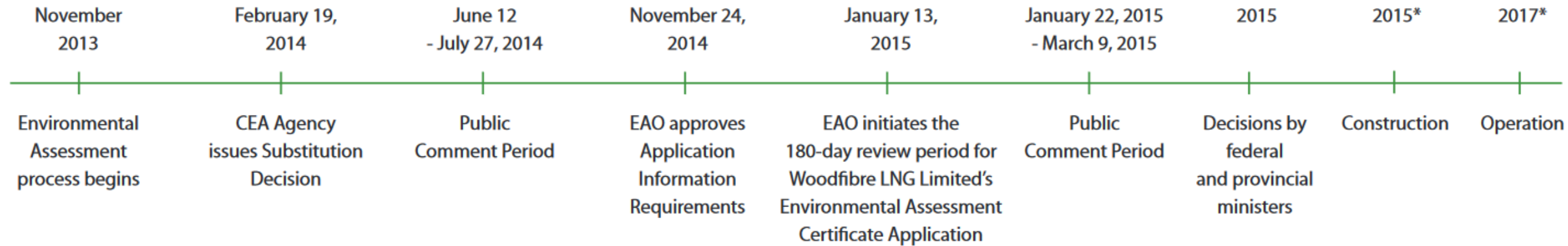
Political Context

Power Structures

# Woodfibre LNG: Project Outline



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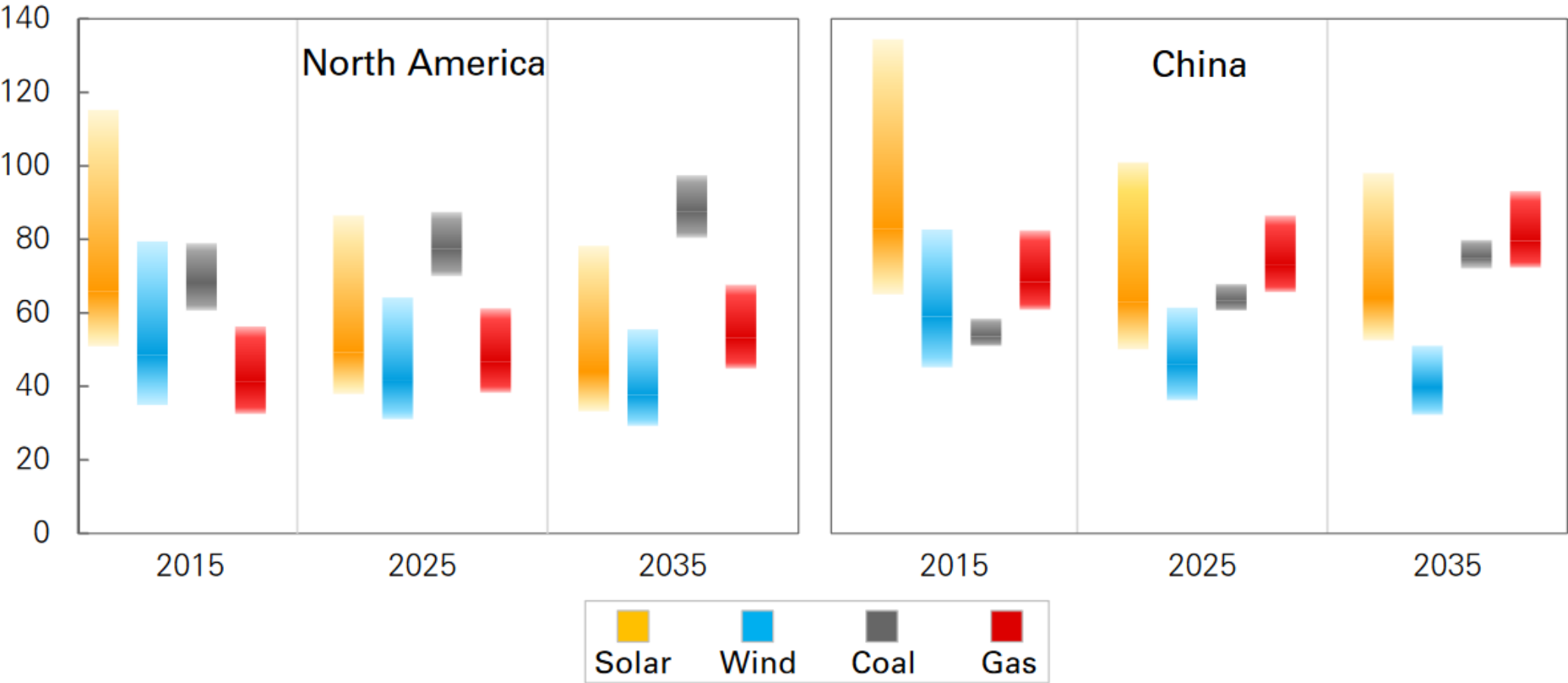
## ECONOMIC BENEFITS

- **\$83.7 MILLION:** Estimated in tax revenue for all three levels of government during the construction phase of the Project.
- **\$86.5 MILLION:** Estimated in tax revenue for all three levels of government per year of operation.
- **\$243.3 MILLION:** Estimated to the District of Squamish, Resort Municipality of Whistler, Electoral Area D of Squamish-Lillooet Regional District, Squamish First Nation communities, and Metro Vancouver gross domestic product (GDP) during construction and more than **\$122.8 MILLION** in GDP per year during operation.

## WHY WE CHOSE THE WOODFIBRE SITE

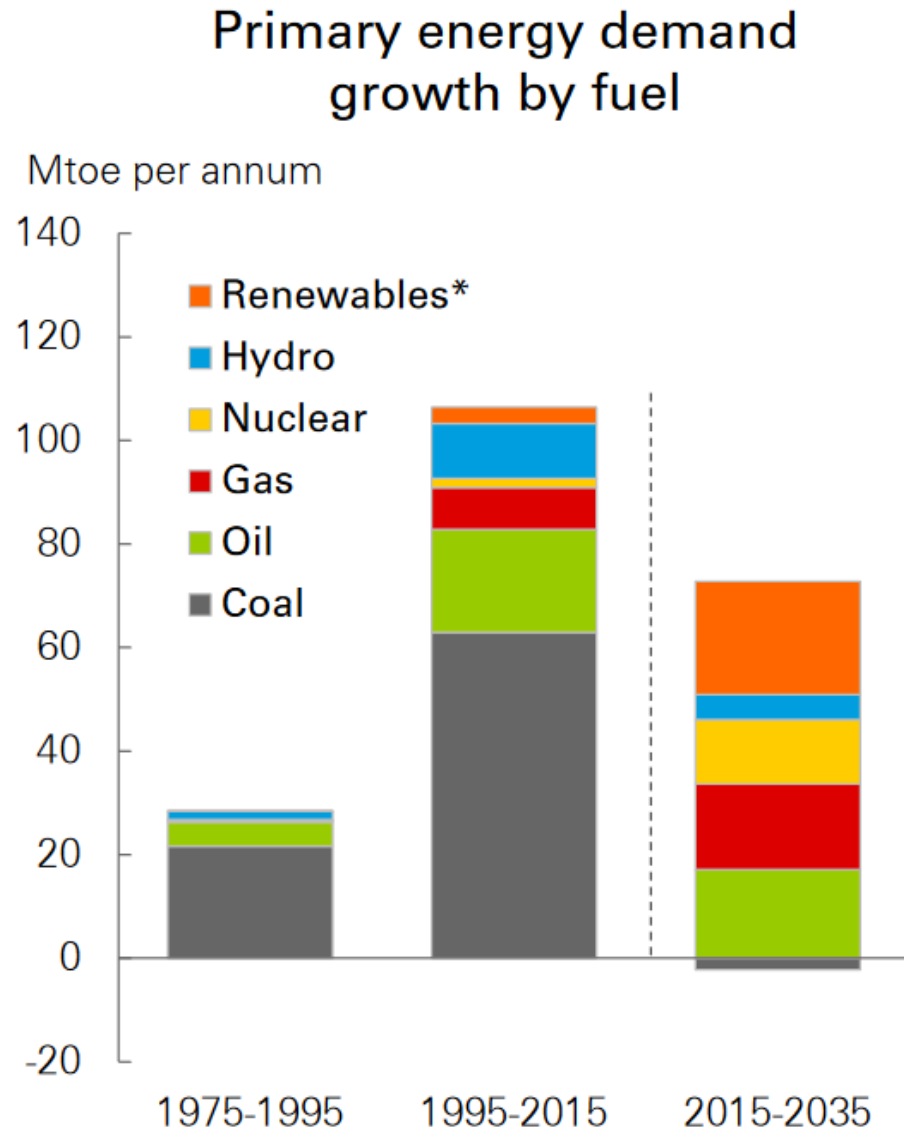
- ✓ Historic industrial site
- ✓ Zoned Industrial
- ✓ Deepwater port
- ✓ Access to established commercial shipping routes
- ✓ Access to FortisBC pipeline
- ✓ Access to BC Hydro transmission grid
- ✓ Access to labour force

# Economic Context: Gas Remains Cost Competitive

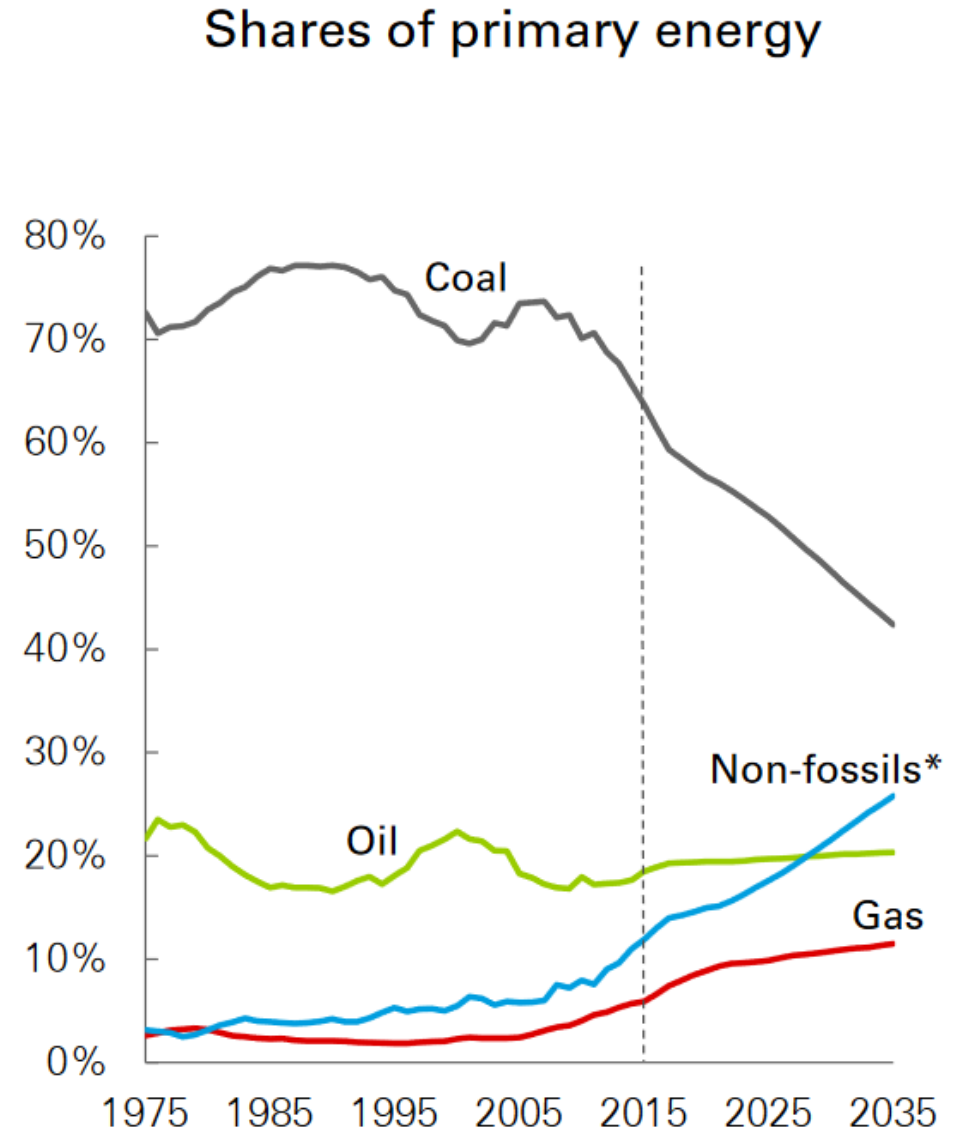


\*Levelized cost of power over the lifetime of a plant. Ranges reflect the impact of low/high estimates for: cost of capital; load factors for solar and wind; fuel prices for gas and coal. Solar and wind include estimates of system integration costs

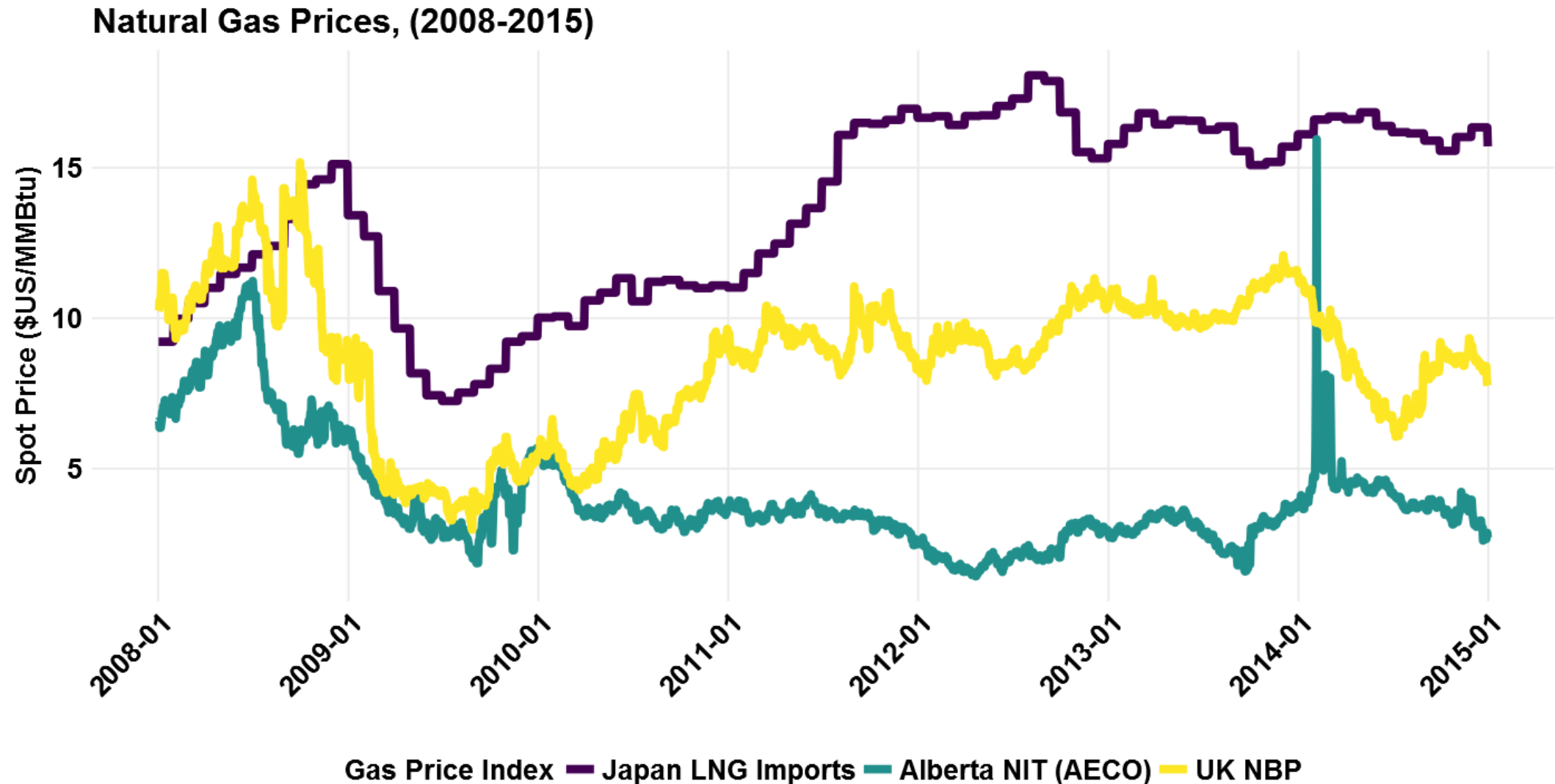
# Economic Context: Gas Isn't Going Anywhere



\*Including biofuels

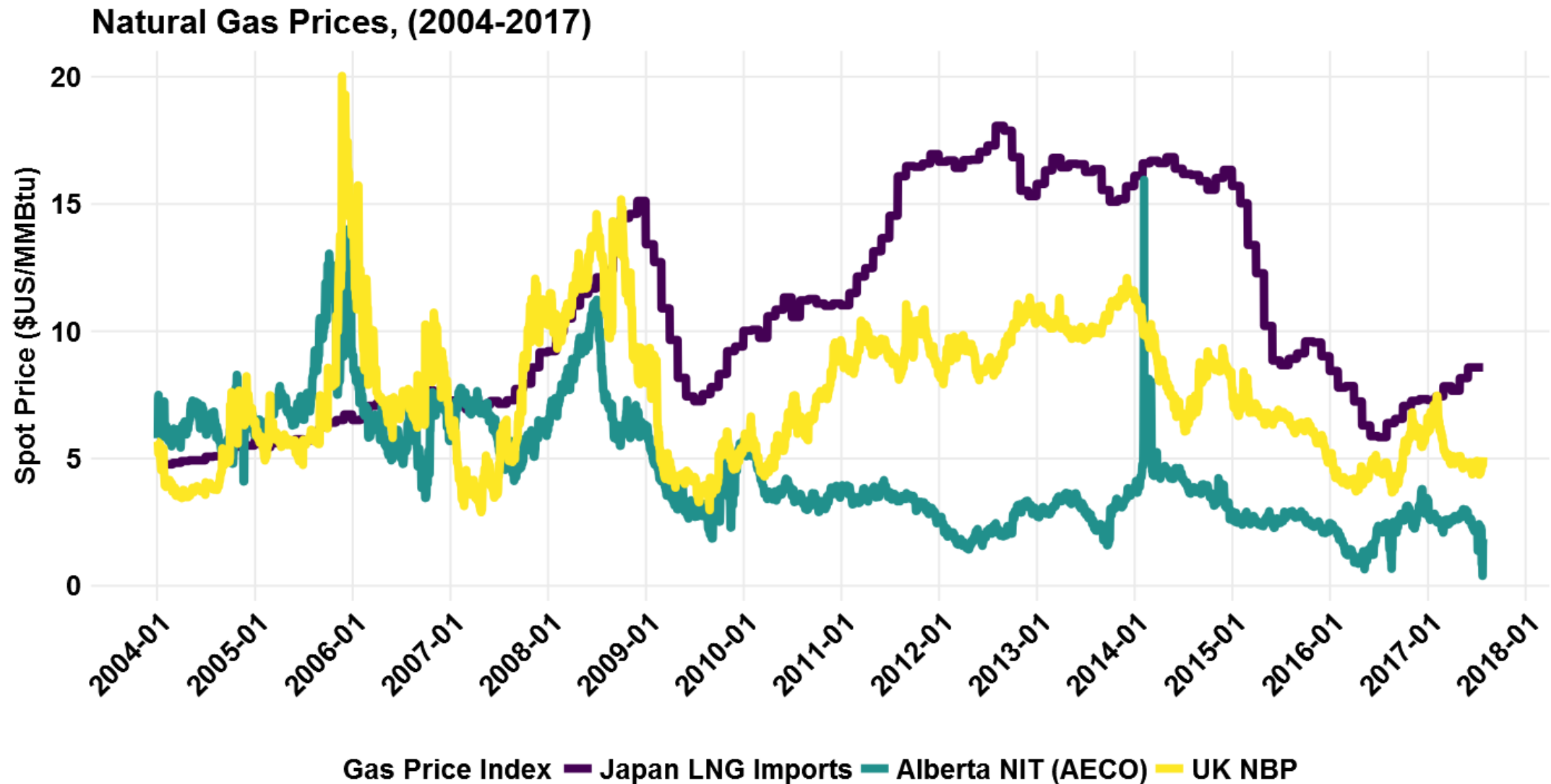


# Economic Context: Favourable Investment Climate



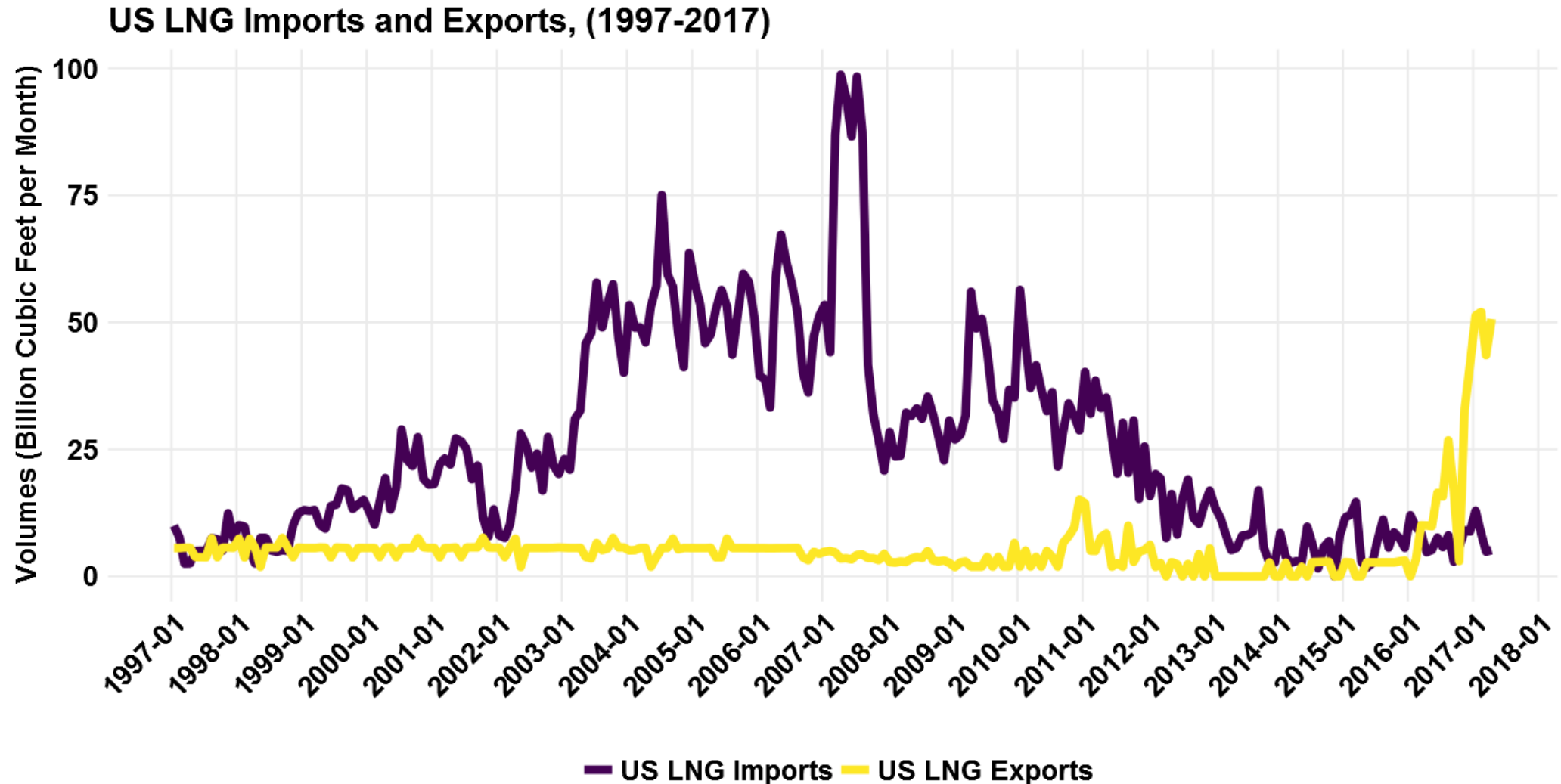
Source: Bloomberg Data, Graph by @Andrew\_Leach

# Economic Context: Current Investment Climate



Source: Bloomberg Data, Graph by @Andrew\_Leach

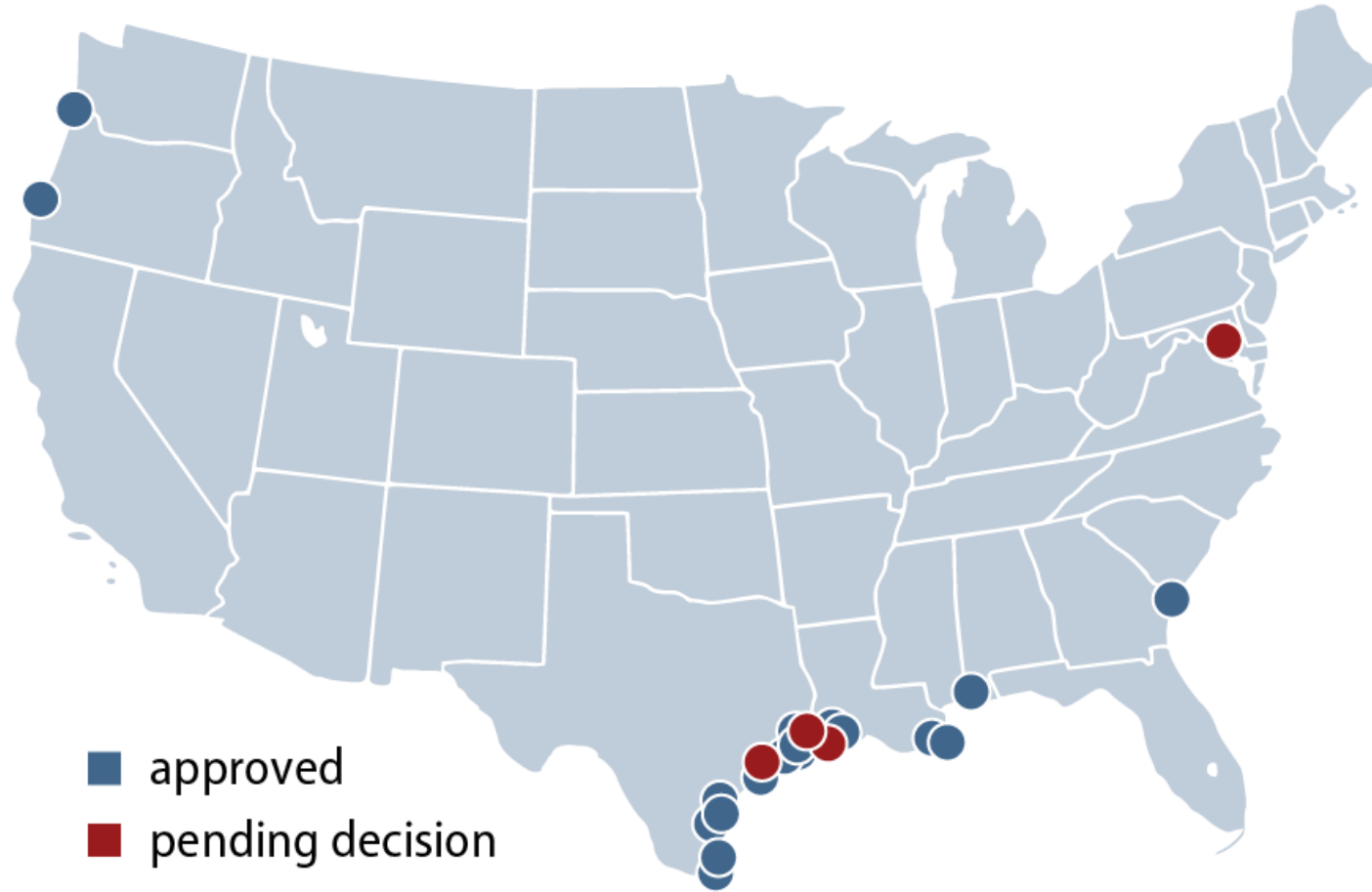
# Economic Context: Boom in US LNG Exports



Source: EIA Data, Graph by @Andrew\_Leach

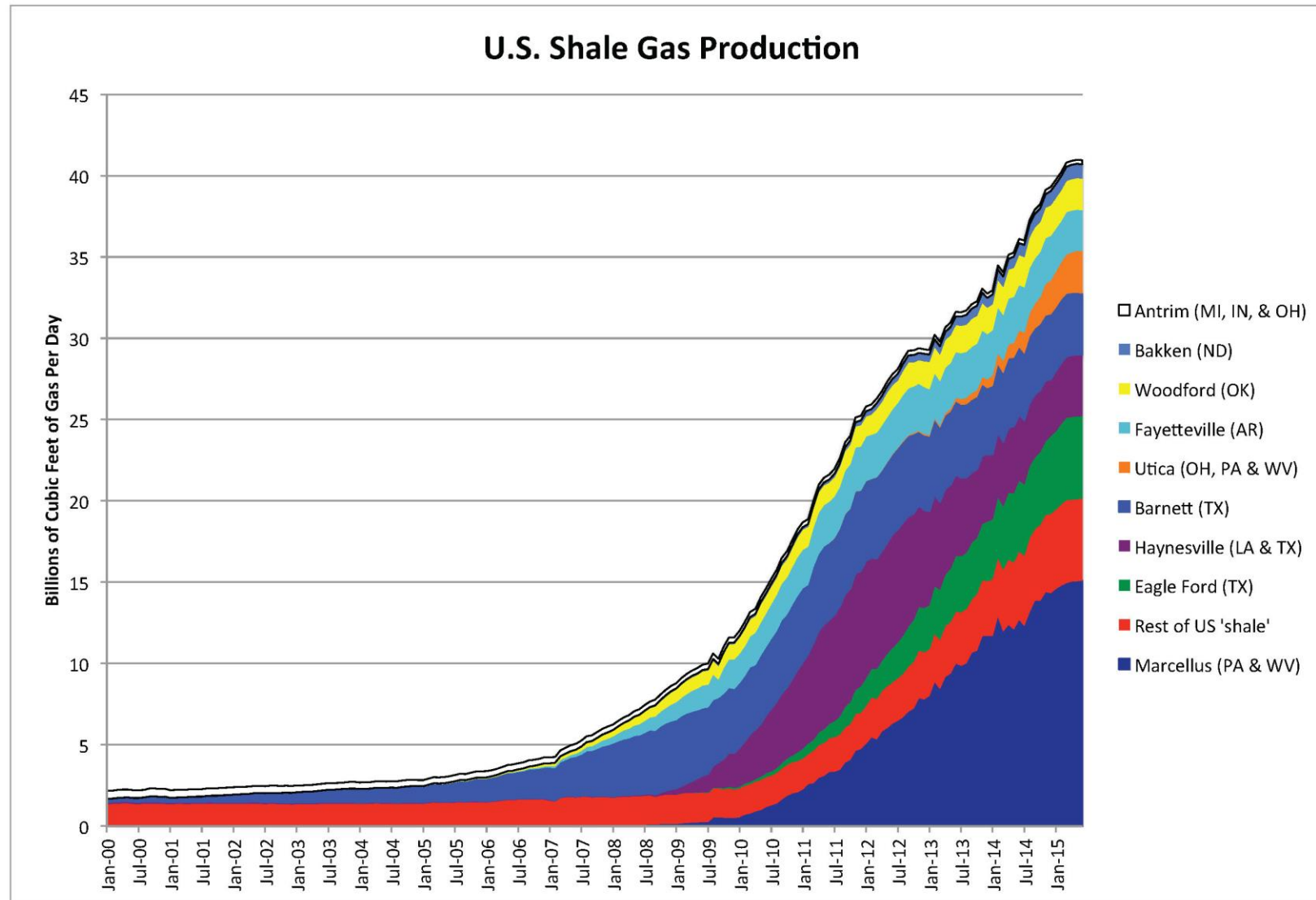


## Economic Context: Boom in US LNG Exports

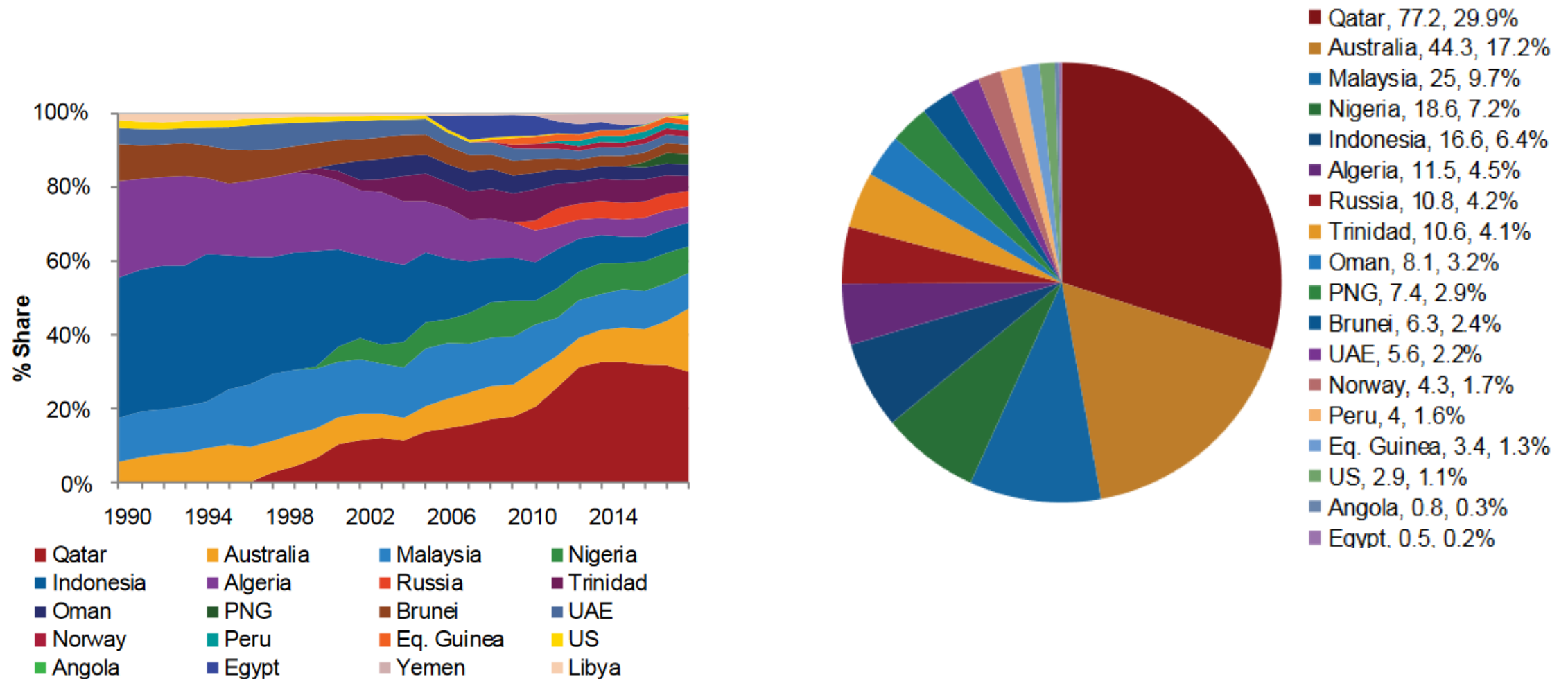


Source: DOE, "Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States (as of September 19, 2013)," available at [http://energy.gov/sites/prod/files/2013/09/f2/LNG%20Export%20Summary\\_1.pdf](http://energy.gov/sites/prod/files/2013/09/f2/LNG%20Export%20Summary_1.pdf).

# Economic Context: Boom in US Shale Gas

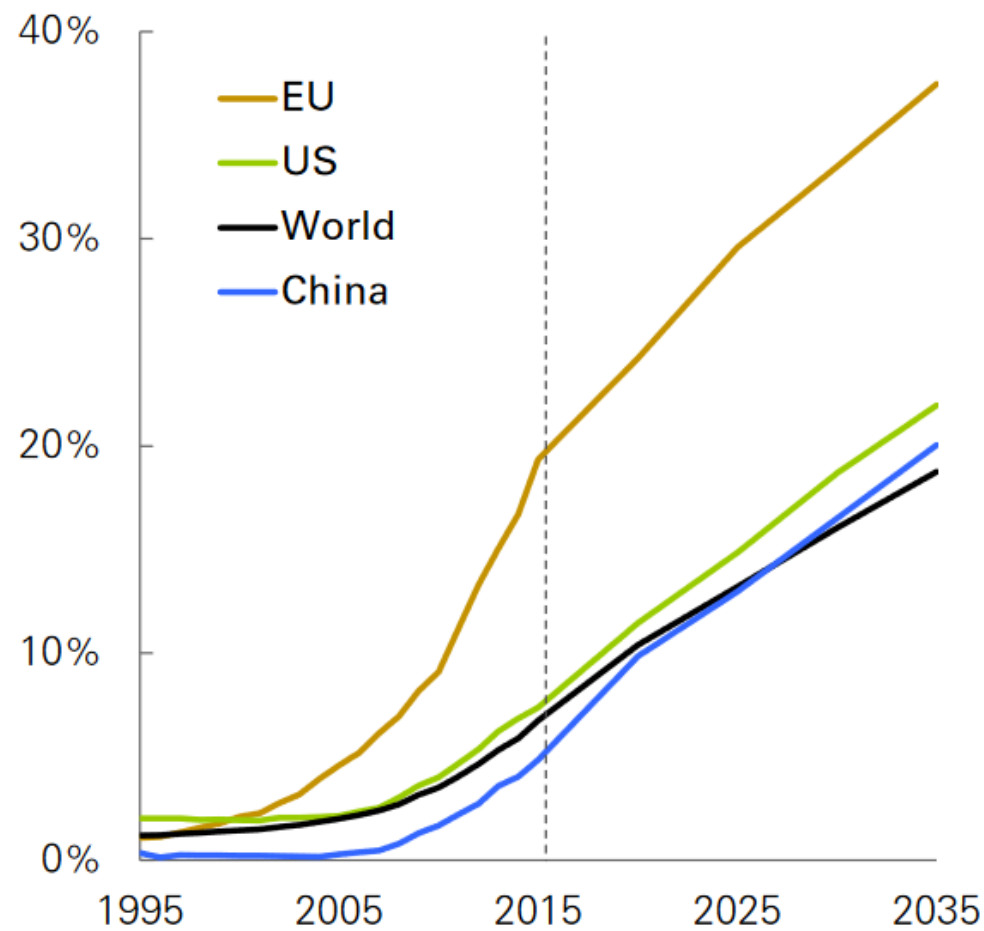


# Economic Context: Global LNG Exports

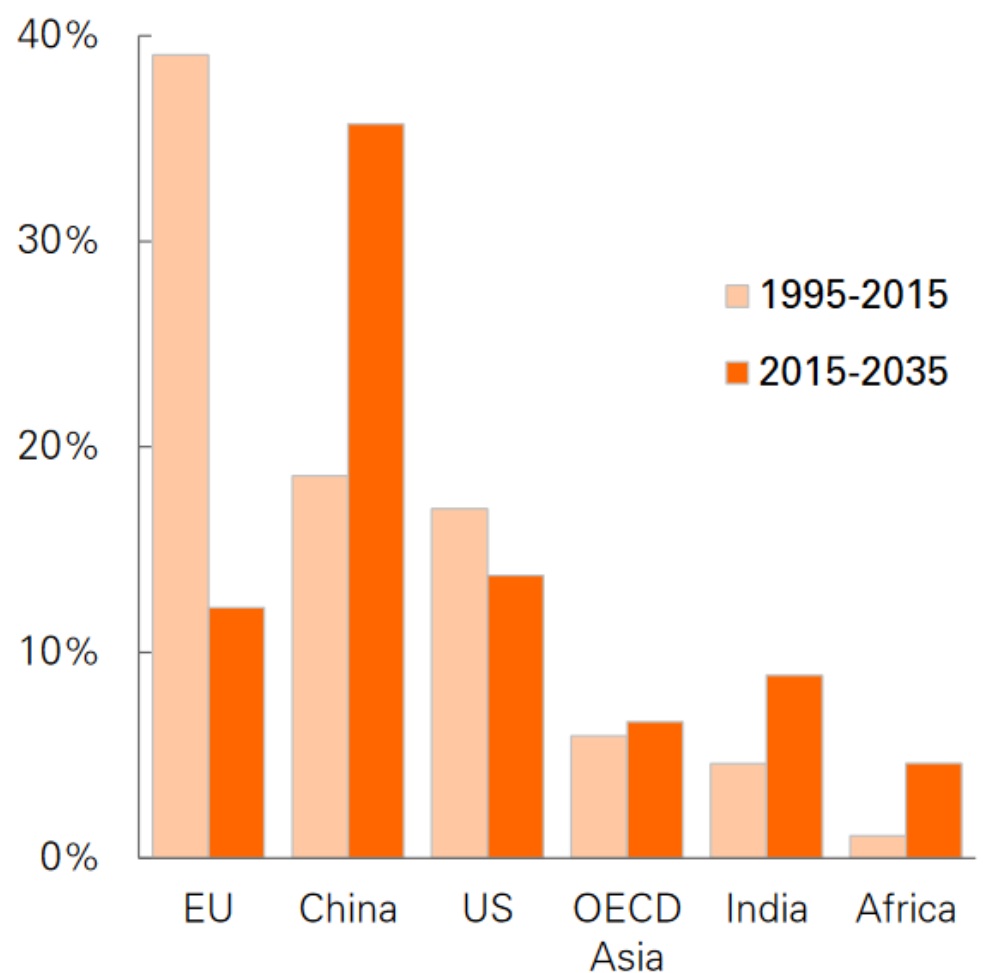


# Economic Context: Renewables Advance

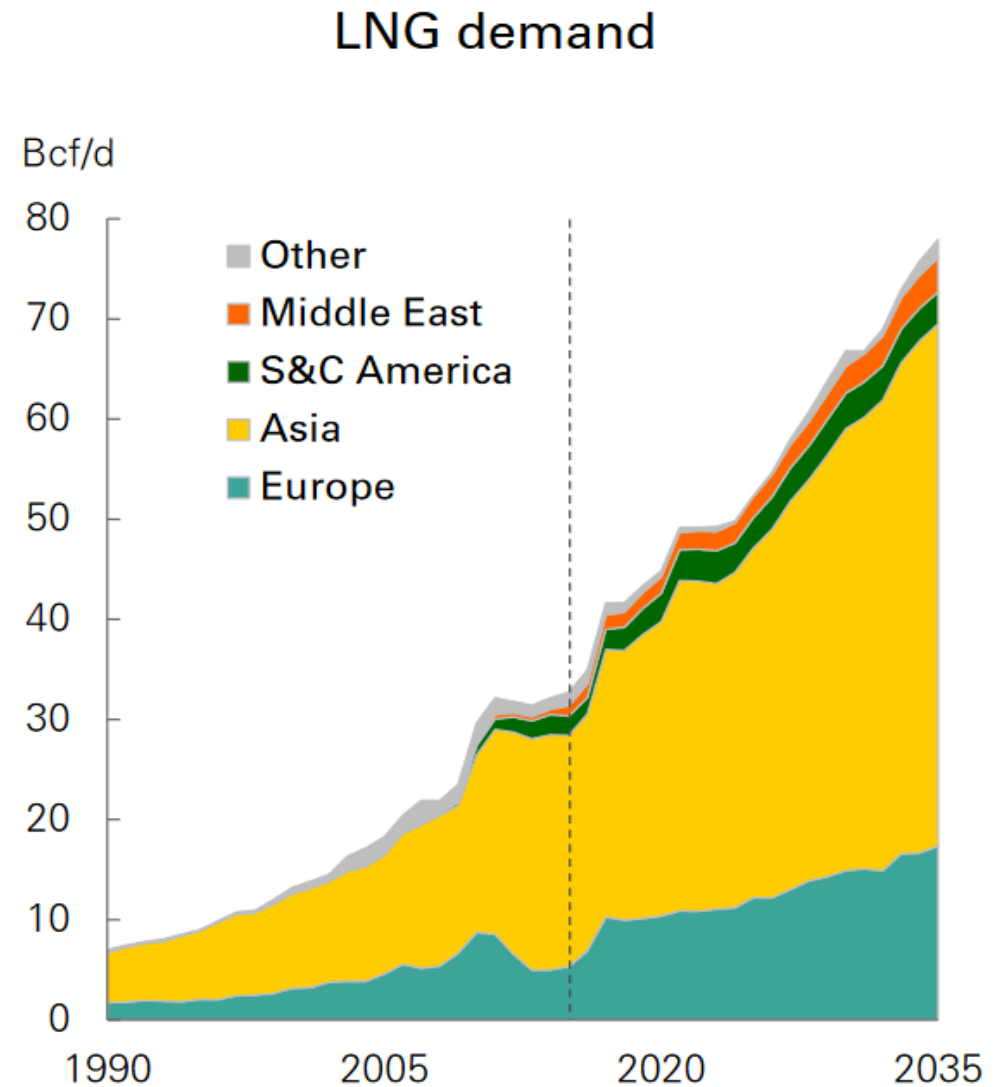
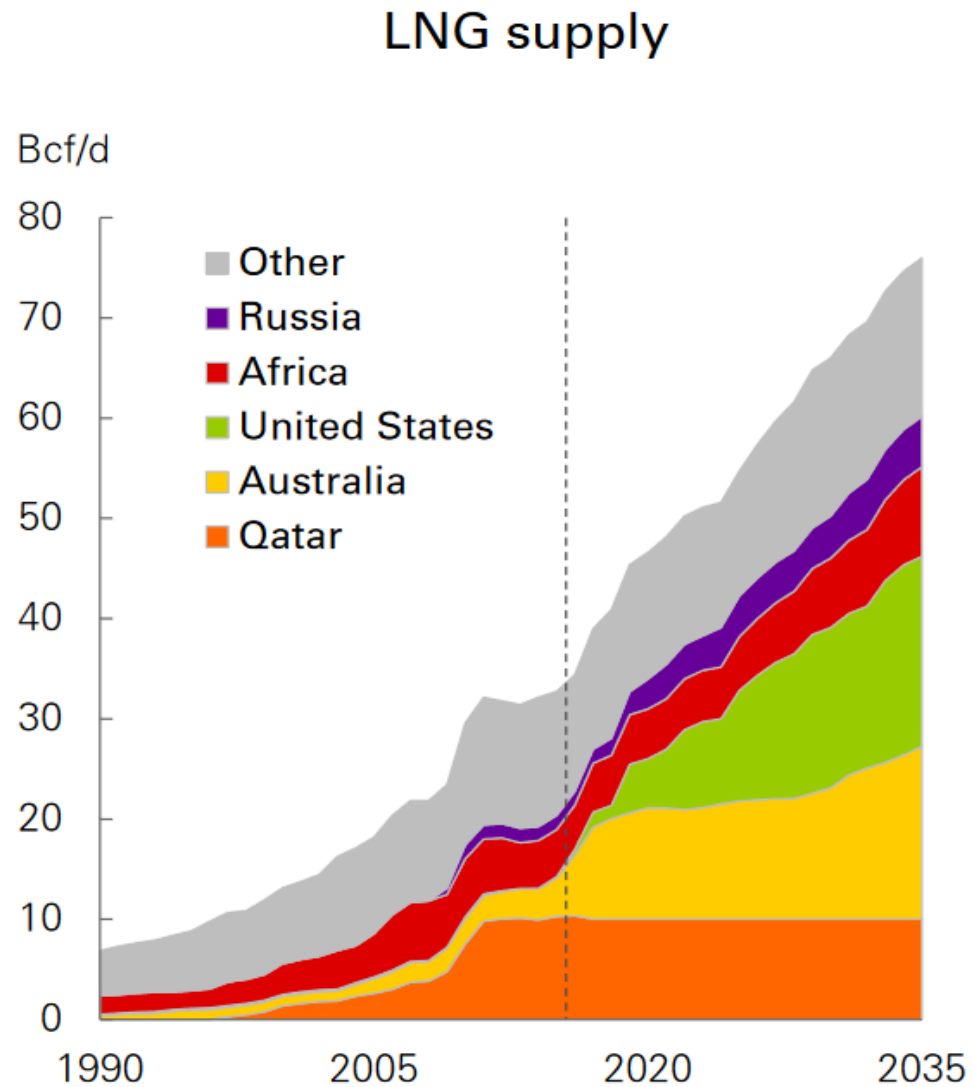
Renewables share of power generation



Shares of renewable power growth



# Economic Context: LNG Supply and Demand



# Economic Context: Questions

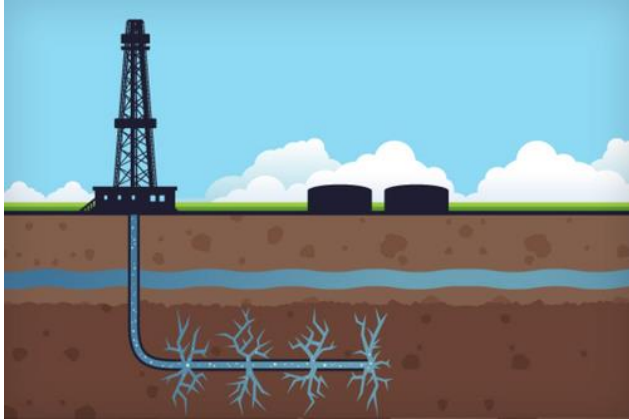
Do the economics **matter**?

Who's role is it to **determine**  
acceptable economic risk?

Who's role do you think it **should** be?



# Environmental Context: Upstream Impacts



# Environmental Context: Downstream Impacts





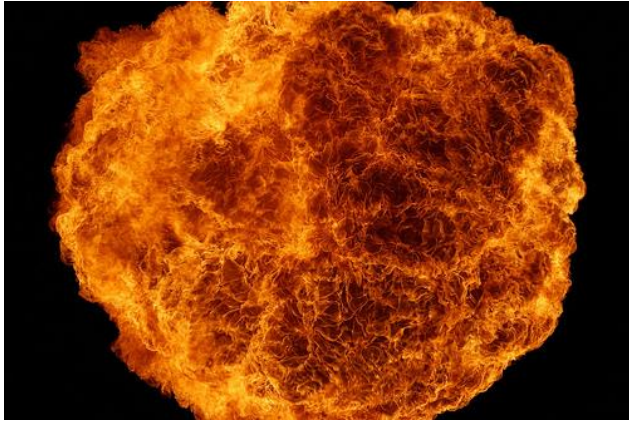
## Environmental Context: Downstream Obligations?

“So let me just say this, when you’ve got 500,000 Chinese dying each year attributed to air pollution specific to coal ... And I say we have a **moral obligation** to do it and we need to get on with the job.”

Gordon Wilson, LNG Advocate



# Environment: Midstream Impacts





# Political Context: The Canadian Project

Canada and Newfoundland.



Canada and Newfoundland  
The Dominion of Canada (1867)

- |                         |   |
|-------------------------|---|
| Province of Nova Scotia | Founded 1713. Secured responsible government, 1848. Entered the Dominion, 1867.   |
| " " Ontario             | Part of province of Quebec 1774. Divided into Upper Canada and Lower Canada, 1791. Reunited, 1841. Full responsible government, 1849. Entered the Dominion as separate provinces, 1867. |
| " " Quebec              | Separated from Nova Scotia, 1784. Responsible government, 1836. Entered the Dominion, 1867.   |
| " " New Brunswick       | Formed out of Rupert's Land and N.W. Terr. and admitted to the Dominion 1870.   |
| " " Manitoba            |   |



## Political Context: *Terra nullius*



# Political Context: Resource Rulers





# Political Context: Power Shifts



35(1) The **existing aboriginal and treaty rights** of the aboriginal people in Canada are hereby recognized and affirmed.

(2) In this Act, “Aboriginal Peoples of Canada” includes the Indian, Inuit, and Métis Peoples of Canada.

(3) For greater certainty, in subsection (1), “treaty rights” includes rights that **now exist** by way of land claims agreements or **may be so acquired**.

## Political Context: Policy Shifts Federally

“We will enact the recommendations of the Truth and Reconciliation Commission, starting with the **implementation** of the United Nations Declaration on the Rights of Indigenous Peoples.”





## Political Context: Policy Shifts Provincially



“A B.C. government, led by me, will officially adopt the United Nations declaration on the rights of indigenous peoples.”

**Rights, Respect and  
Reconciliation**

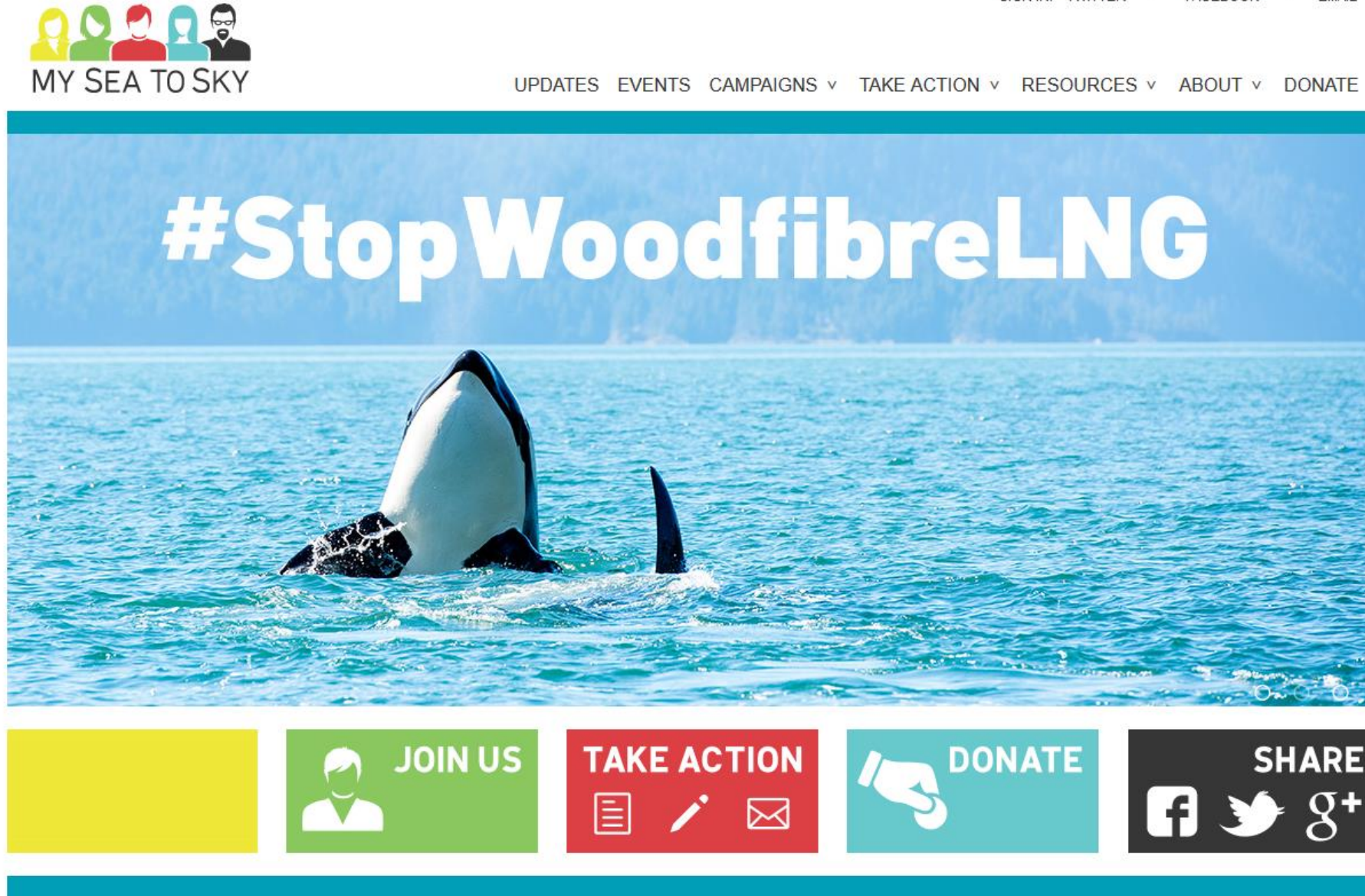


## Political Context: New (Old) Resource Rulers

"First Nations wield significant leverage in these projects. We have options... We chose **negotiation** as a preferred path to try to reconcile the province's desire to issue rights to third-party interests on top of our rights and title."



# Conflicting Voices: Community Groups



# Conflicting Voices: Community Groups



## WHO'S WHO?

### The people behind Woodfibre LNG

Woodfibre LNG is owned by the notorious Indonesian billionaire, Sukanto Tanoto, whose companies have a history of tax evasion, animal rights violations, and human rights offences. The vice-president, Byng Giraud, has been linked to a robo-call scandal, illegal donations to the BC Liberals, and used to work for Imperial Metals, the company responsible for the Mount Polley mining disaster.

[LEARN MORE](#)



## CORRUPTION

### Illegal donations to the BC Liberals

Woodfibre LNG and their staff have donated over \$166,934 to the BC Liberal party during the project's environmental assessment. This calls into question the integrity of the process.



## FRACKING

### LNG exports will increase fracking in BC

Over 70% of BC's natural gas is fracked. If Woodfibre LNG goes ahead it will require 24 new fracking wells every year in northeast BC for 25-40 years.



## REGULATIONS

### LNG in Howe Sound violates international safety standards and practices

LNG tankers have a relatively good safety record thanks to strict international guidelines. These guidelines are not being followed by Woodfibre LNG. Canada has no regulations for LNG tankers and the potential conflict between recreational boaters, ferries, and LNG tankers has not been adequately addressed. [LEARN MORE](#)



## SAFETY

### LNG tanker traffic puts residents at risk

As LNG tankers transit Howe Sound and English Bay, there is a hazard zone for 1,600 metres on either side of the LNG tanker. People within this zone risk death by asphyxiation, or death/injury by fire or explosion if an accident happens. [LEARN MORE](#)



# Conflicting Voices: Community Groups



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## JOBS

### Jobs for Canadians may not materialize

Woodfibre LNG plans to build the project in modules offshore and float them here for assembly. The BC Liberals have signed deals with China to allow cheaper, temporary foreign workers that have more expertise. It's unlikely "BC workers will be first in line" for any jobs.



## TAXES

### LNG tax revenue = all risk and no reward

As LNG prices have plummeted 70%, the BC Liberals have slashed taxes to try to make LNG projects viable. With taxes charged on profits, BC bears all the risk and no reward as profits may never be realized. [LEARN MORE](#)



## WILDLIFE

### Local impacts to wildlife

Underwater noise and light pollution from LNG tankers, tugs, and the onshore liquefaction plant will affect salmon, herring, whales, and other marine mammals. The 115- metre flare stack will affect migrating birds and endangered bats.



## SUBSIDIES

### eDrive subsidy will increase your Hydro bill

The BC Liberals granted Woodfibre LNG an electricity rate at below cost. BC Hydro customers will need to pay an additional \$34-45 million every year, and more if Site C dam is built.

# Conflicting Voices: Community Groups



## CLIMATE CHANGE

### LNG is not clean

LNG is the most extreme fossil fuel: when you factor in emissions from fracking and pipelines, LNG creates more greenhouse gases than coal. Local and upstream carbon pollution from Woodfibre LNG is the same as adding 170,000 cars to the road every year.

[LEARN MORE...](#)



## HEALTH

### Access to clean air and clean water is a right

Air pollution from Woodfibre LNG will decrease our local air quality which will impact public health at an estimated cost of \$20 million every year. [LEARN MORE...](#)



## COMMUNITY

### How will this project impact our communities?

Decreased property values, increased crime and substance abuse, unaffordable rental accommodation. [LEARN MORE...](#)



## THE FUTURE WE WANT

### Investing in renewables, transit, and energy retrofits creates 8x more jobs

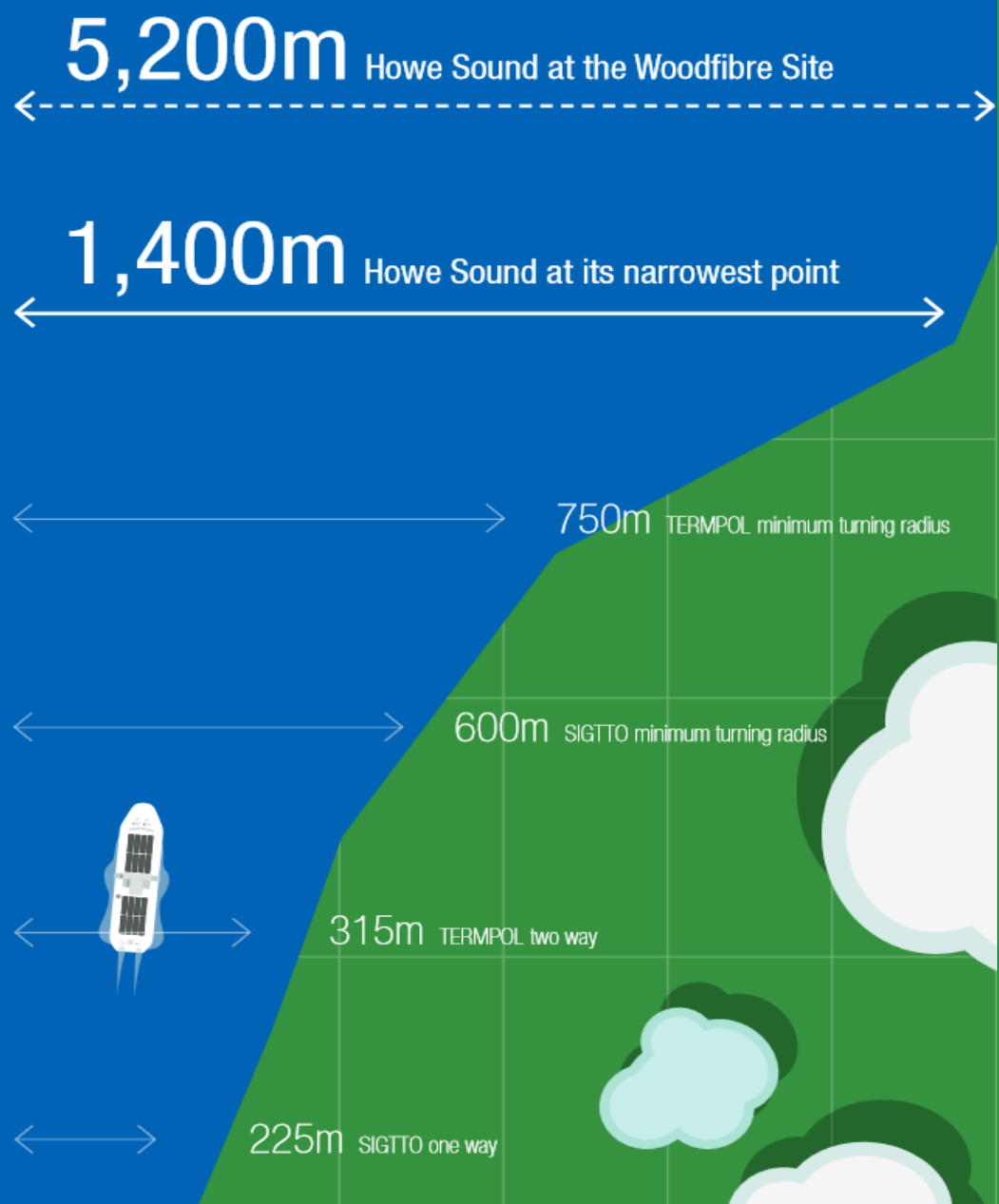
We should be retraining our workers in more sustainable, long-term industries, rather than investing in yet another boom and bust fossil fuel industry.

# Conflicting Voices: Corporate Interests

01	3 to 4 carriers will travel to Woodfibre LNG each month	
02	LNG carriers will travel at about 8 to 10 knots in Howe Sound	
03	Wake from LNG carriers is estimated at less than wind-generated waves typically found in Howe Sound* <small>*in normal conditions, less than 10 centimetres at 50 metres from carrier</small>	
04	LNG carriers will not bunker in Howe Sound or English Bay	
05	Woodfibre LNG Limited is an Associate Member of SIGTTO <small>(Society of International Gas Tanker &amp; Terminal Operators Ltd)</small>	

06	Siting of Woodfibre LNG complies in every way with SIGTTO guidance	
07	LNG has been shipped safely around the world for 50 years	
08	LNG ships are among the most modern ships in operation	
09	Using natural gas, not diesel, to fuel LNG carriers reduces GHGs by about 25%	
10	The Woodfibre LNG Project will increase large vessel movements in Howe Sound by less than 1%* <small>* Large vessel traffic relates to BC Ferries movements along scheduled routes, deep sea shipping traffic to Squamish Terminals and Port Mellon, and tug and barge traffic primarily related to forestry operations</small>	

# Conflicting Voices: Corporate Interests



## SIZE MATTERS

What is a narrow channel?

Siting of the Woodfibre LNG facility complies in every way with the Society of International Gas Tanker + Terminal Operator Ltd's (SIGTTO) guidance. The location of the site is not within a narrow waterway as defined by SIGTTO and TERMPOL (Technical Review Process of Marine Terminal Systems and Transshipment Sites).

The measures we're taking to ensure our project is designed to withstand the following natural hazards:



**1 in 2,475**  
year earthquake



Wildfires



Major and minor avalanches

### CONSULTING WITH THE COMMUNITY SINCE LATE 2013

**8 Open Houses**  
1 Community Roundtable  
1100+ people attended

**338** Stakeholder & Small Group Meetings

**2 Telephone Town Halls**  
765 people participated

**2 Business Info Sessions**  
100 people attended

**8 Newsletters**

Squamish Community Office  
Opened in November 2014  
Averaging 90 visitors per month (2016)

**150+** answers you can search anytime on askwoodfibrelng.ca

facebook  
5500+ Likes

YouTube  
85 videos & 105,000+ Views

# Conflicting Voices: Corporate Interests



**The LNG shipping industry is well established internationally and has a long and proven safety record.**

In the 60 year history of shipping LNG...

- ⚓ 70,000+ LNG voyages have been completed worldwide
- ⚓ There has never been a loss of containment of LNG at sea



**The marine shipping industry has a similar safety record to that of the commercial airline industry.**

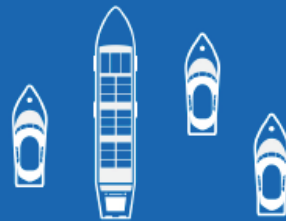
Both are safe, reliable forms of transportation, and both are in operation around the world on an hourly basis.



**When you're driving behind a truck and you can't see its mirrors, the driver can't see you.**



The same is true for a marine vessel. If a recreational vessel is unable to see the wheelhouse windows of a ship's bridge, the bridge team can't see them, which is one of the reasons why LNG carriers in Howe Sound will be accompanied by escort tugs.



**In Canada, foreign vessels over 350 gross registered tonnes are under the direction of a Canadian Marine Pilot and interact with ferries and recreational vessels on a daily basis.**

Through regulation, procedures and training, LNG carriers can be safely introduced to BC's coast.



**BC Coast Pilots are experts on our coast who provide local knowledge to visiting commercial vessels.**

**To become a BC Coast Pilot you need:**

- ⚓ At least 10 years experience as a master of a vessel in the region
- ⚓ To master a series of oral, practical and written exams
- ⚓ Complete up to two years of Apprenticeship training

Once pilots have been licensed, they continue to receive training yearly for the rest of their career.



## Plot Twist: Squamish Nation Takes Control

In a province divided between those who say "yes" to resource development and those who say "no," the Squamish said "maybe."

## Plot Twist: Emergent Resource Rulers

“To our knowledge this process has not been undertaken by any other First Nation in Canada. We’re quite proud of what this represents—a new approach for First Nations and for industry to embrace, as it’s in their interest as well.”



## Plot Twist: Industry Evolves

"It was new, it was a risk for both of us. Other businesses are scared of this. But this is the way things are going – you have to be more progressive."





# Plot Twist: Industry Evolves

## NO to Binding Legal Agreement

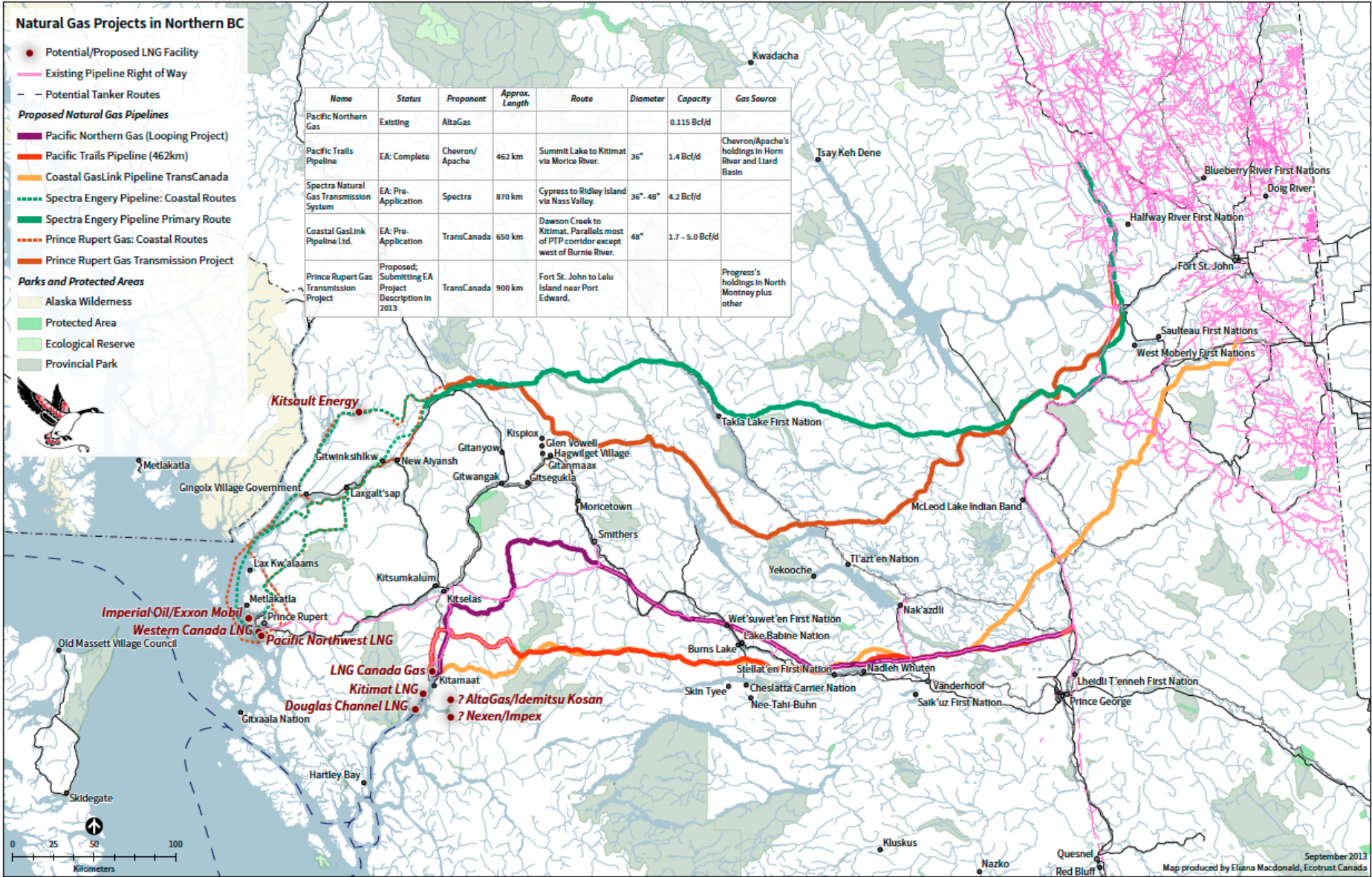
- Potential legal action.
- Follow the “rules”.
- But does the project proceed?

## YES to Binding Legal Agreement

- Project could be vetoed or altered.
- Take a risk, but one aligned with political trends.
- Gain a powerful ally.



# Power Structures: A New Path Forward



# Power Structures: Implications

## Old Model (Legal License)

- Hire expensive engineering firms.
- Submit detailed plans to Government, meeting all necessary legal standards.
- Consult with communities and First Nations groups.
- But limited willingness (or need) to actually change.

## New Model (Social License)

- Do everything in the Old Model, but..
- Build relationships with First Nations first.
- Get input into planning, design and implementation.
- Build partnerships, create meaningful economic opportunity, empower their expressions of rights and title.

# Power Structures: Changing Dynamics

## Old Model (Legal License)

- Communities, environmentalists, and First Nations aligned.
- Industry and government working closely together.
- “Consultation” a concept, not a reality.

## New Model (Social License)

- New alignments emerging:
  - Industry and First Nations partners
  - First Nations and communities at odds.
- Traditional government structures (e.g. the NEB) under severe strain.
- Consultation being phased out in favour of consent.

“This project simply does not fit **our** values. It does not fit **our** vision of ourselves, Howe Sound, or any of the **communities** on its shores.”



# Power Structures: Eco-colonialism?

Project	Capital \$\$	Status
Burnco McNab Creek Gravel Mine	\$60 million	BC/Federal Enviro. Assessment
Woodfibre Liquified Natural Gas (LNG) Project	\$1.7 billion	Initial proposal
Eagle Mountain Woodfibre Gas Pipeline Expansion Project	\$350 million	BC Environmental Assessment
Metro Vancouver Incineration Facility	\$500 million	Feasibility/ site selection
Box Canyon Creek RofR Hydroelectric Power Project	Unknown	Approved
Woodfibre Creek RofR Hydroelectric Project	Unknown	Unknown
Mill Creek RofR Hydroelectric Project	Unknown	In operation
Gambier Island Woodlot Harvest	Unknown	To be auctioned in 2014
Sea to Sky Gondola	\$22 million	Under construction, operational in 2014
Britannia Beach South residential development (4,000 homes)	Unknown	On hold



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Squamish Nation Involvement

Unlikely/No Data



Did the Squamish Nation...

strengthen, undermine or reinforce

...existing power structures by requiring  
their own environmental review?

Do communities have the right to make decisions that impact provinces or  
countries?

Do First Nations have the right to make decisions that conflict  
with local communities?

What should companies do?