Qilak LNG

QILAK LNG - PROJECT UPDATE

Meet Alaska Conference

March 18th 2022

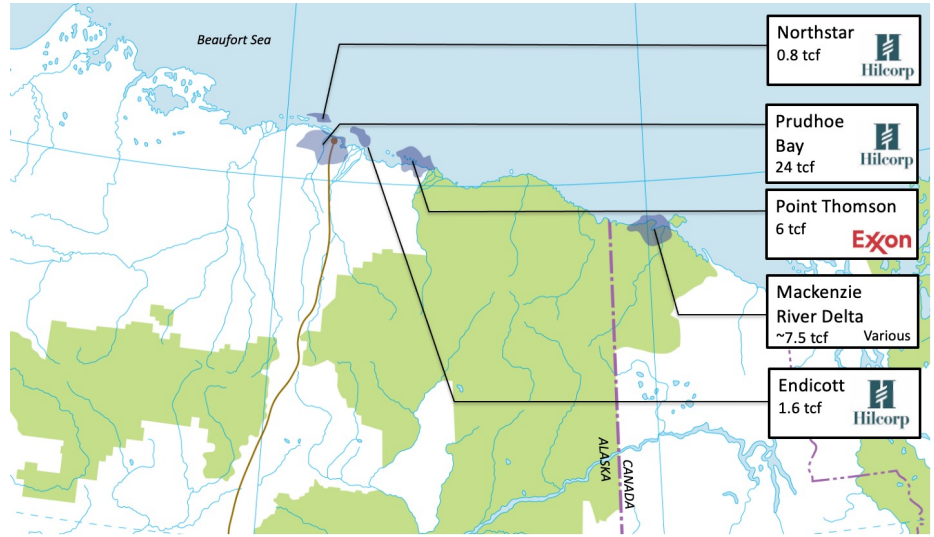
David Clarke, President

Qilak LNG 1: Project Overview

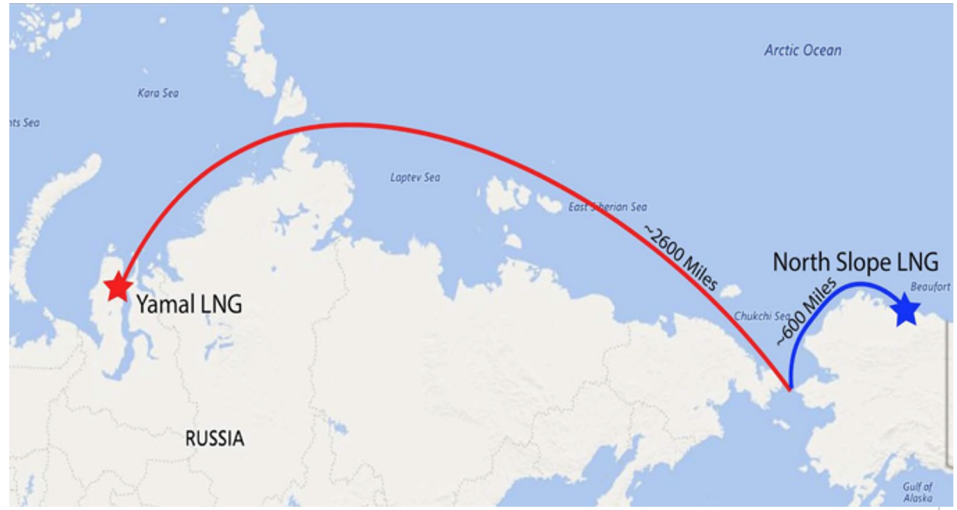
Arctic LNG is a proven concept

- Proven gas reserves of 32+ TCF across gas fields in the Alaskan North Slope with probable gas reserves of 100+ TCF
- Yamal LNG in Russia has proven the economic viability of Arctic LNG using icebreaking LNG carriers to export LNG throughout the year
- Arctic North American reserves closer to Asian end markets compared to Gulf of Mexico (via Panama) and Northern Russian coast (2,000 miles shorter distance than Yamal)
- NSLNG concept provides a number of advantages:
  - Uses incremental liquefaction plants built in a shipyard and floated into place
  - Minimal infrastructure required and standardized equipment
  - Scalability
    - 4 to 6 MTPA units
    - Design one, build many

Stranded gas reserves in North American Arctic



Significantly shorter distance to Asian markets



Russian Gas Developments in the Arctic (existing & proposed)

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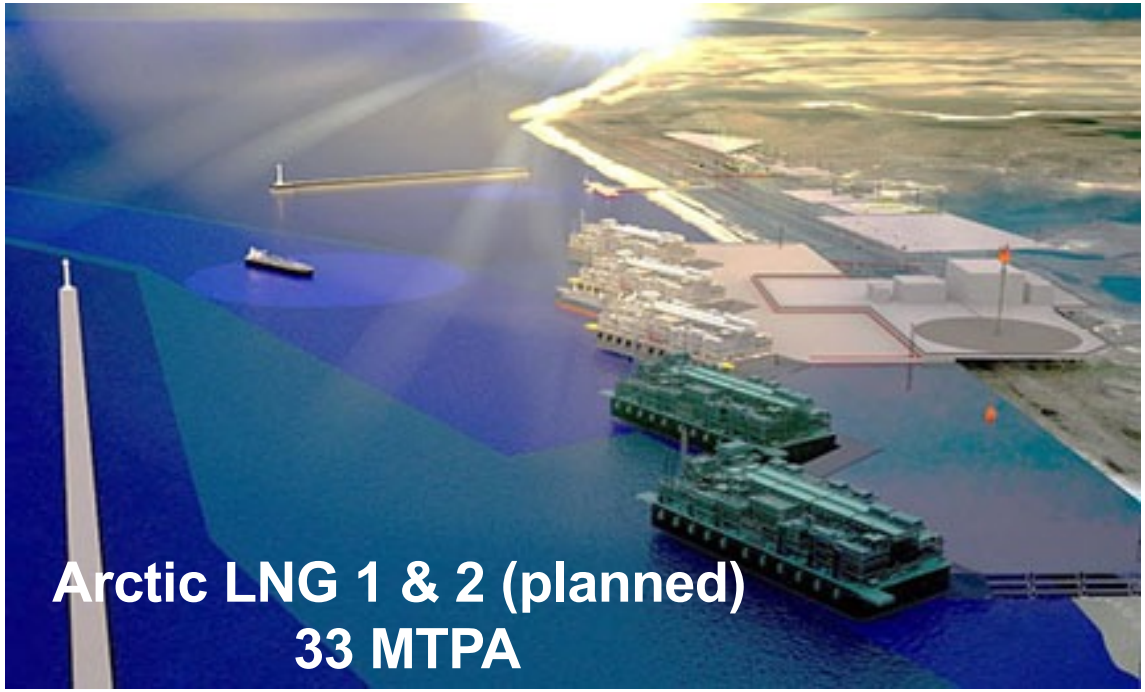
Proposed Russian Arctic LNG projects:

	MTPA
Arctic LNG 2 (Novatek)	20
Arctic LNG 1 (Novatek)	13
Ob LNG (Novatek)	7
Taymyr LNG (Rosneft)	30-50
Kara LNG (Rosneft)	30
Total (inc. Yamal)	120-140
LNGC cargoes:	5-6/day



The Impacts of Covid-19

The pandemic had a dramatic negative effect on global energy markets:

1. Collapse in spot LNG prices - falling to a low of $2/mmBTU in summer 2020
2. International travel curtailed – difficult to meet face-to-face with overseas investors and LNG buyers

The Global market for gas and LNG had radically changed in the past 4 weeks:

Consequences of the Russian invasion of Ukraine:

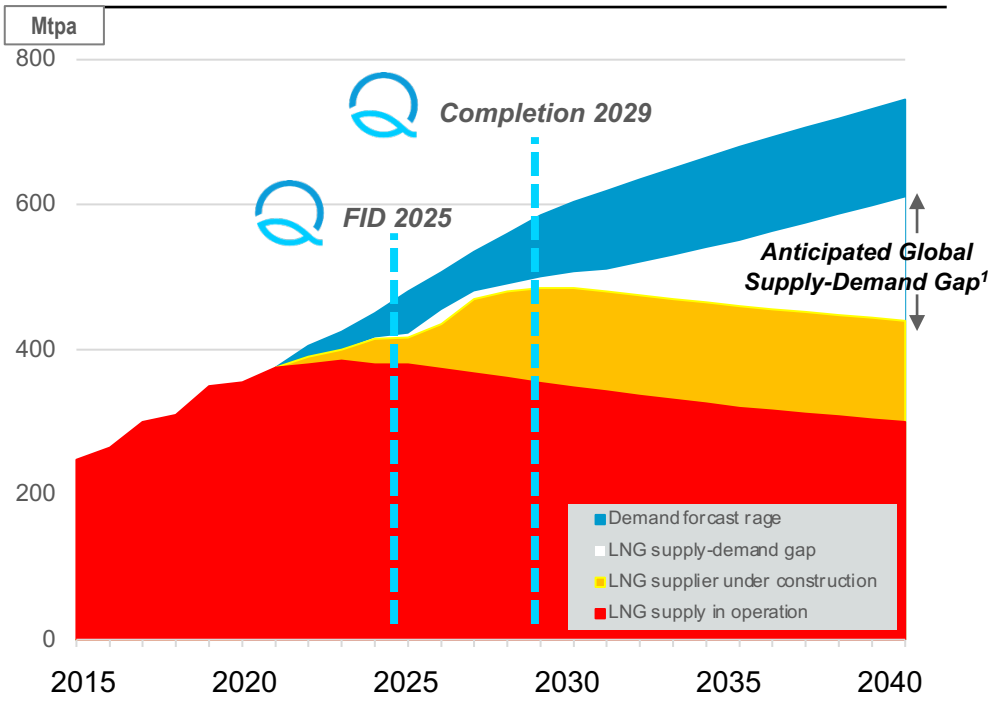
1. Germany canceled the Nord Stream 2 pipeline and will now build 2 LNG import terminals
2. Huge spike in spot LNG prices to record $60/mmBTU during 1st week of March
3. LNG cargoes from US Gulf Coast to Asia diverted mid Pacific to Europe
4. Drive for more Long-Term LNG contracts to avoid risk of volatile spot prices
5. Increased European and Asian demand for North American LNG to reduce reliance on Russian gas
6. Increased opportunity for Alaska to supply Asian markets (USGC gas to Europe)

"Tough to make predictions, especially about the future" – Yogi Berra

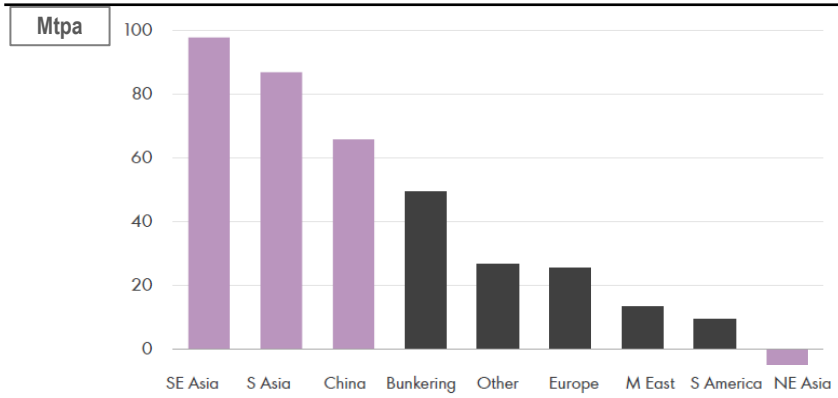
Qilak LNG is Positioned to Benefit From the Anticipated LNG Supply-Demand Gap

Longer-term global GDP growth, particularly in hydrocarbon-poor countries, will continue to support LNG growth, with need for significant expansion of LNG supply beginning in 2025

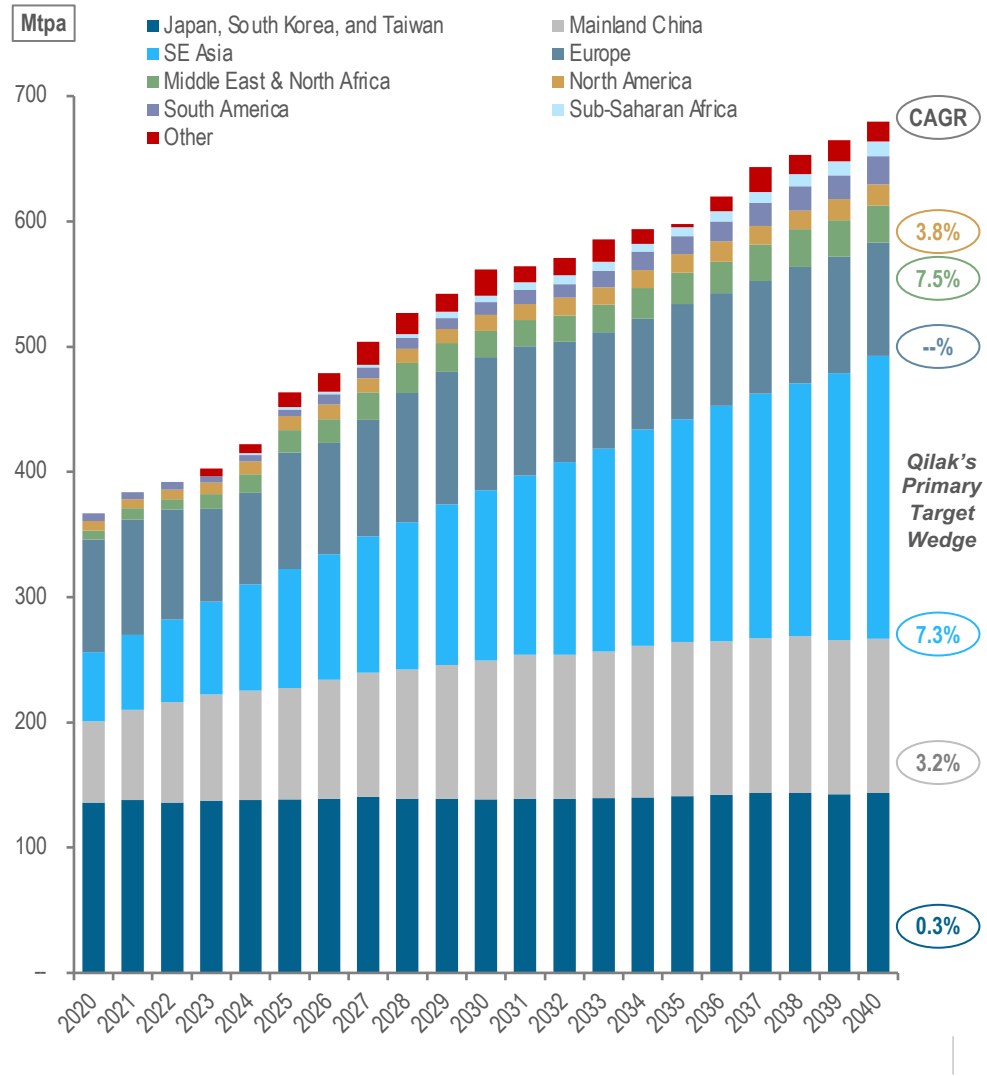
Emerging LNG Supply-Demand Gap



Incremental LNG demand 2020-2040

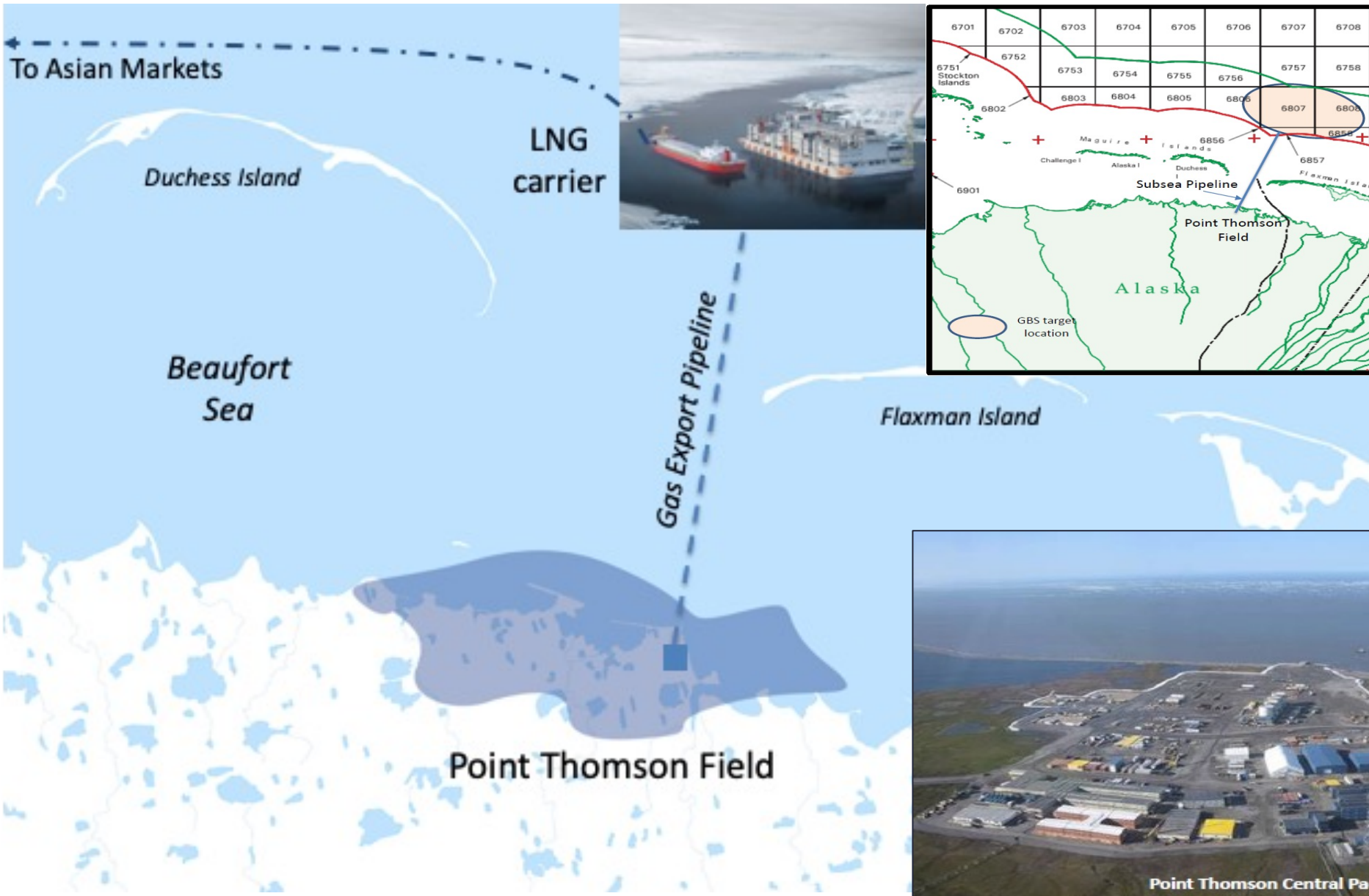


LNG Demand Growth Through 2040



[1] Source: Shell interpretation of IHS Markit, Wood Mackenzie, FGE and Poten & Partners 2021 and 2022 data

Qilak LNG Terminal location



- Qilak LNG 1 proposes a Gravity Based Structure (GBS) 6-9 miles offshore Point Thomson, with site selected for navigability (water depth) and avoidance of subsistence whale hunting

LNG Shipping Solution for Arctic Waters – A Proven Concept

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One-quarter of the journey will likely require icebreaking for part of the year, with following of leads and avoidance of pressure ridges playing a key role

Remaining three-quarters of journey is "open water," where the vessel faces forward and travels at speed

- The Yamal LNG project has 15 Mk 1 vessels in operation. Another 21 of the Mk 2 design will be required for the Arctic LNG 2 project
- Qilak LNG will require 3 to 5 vessels depending on LNG destination

Asia's Closest U.S. Source of Natural Gas to be Offered by Alaska

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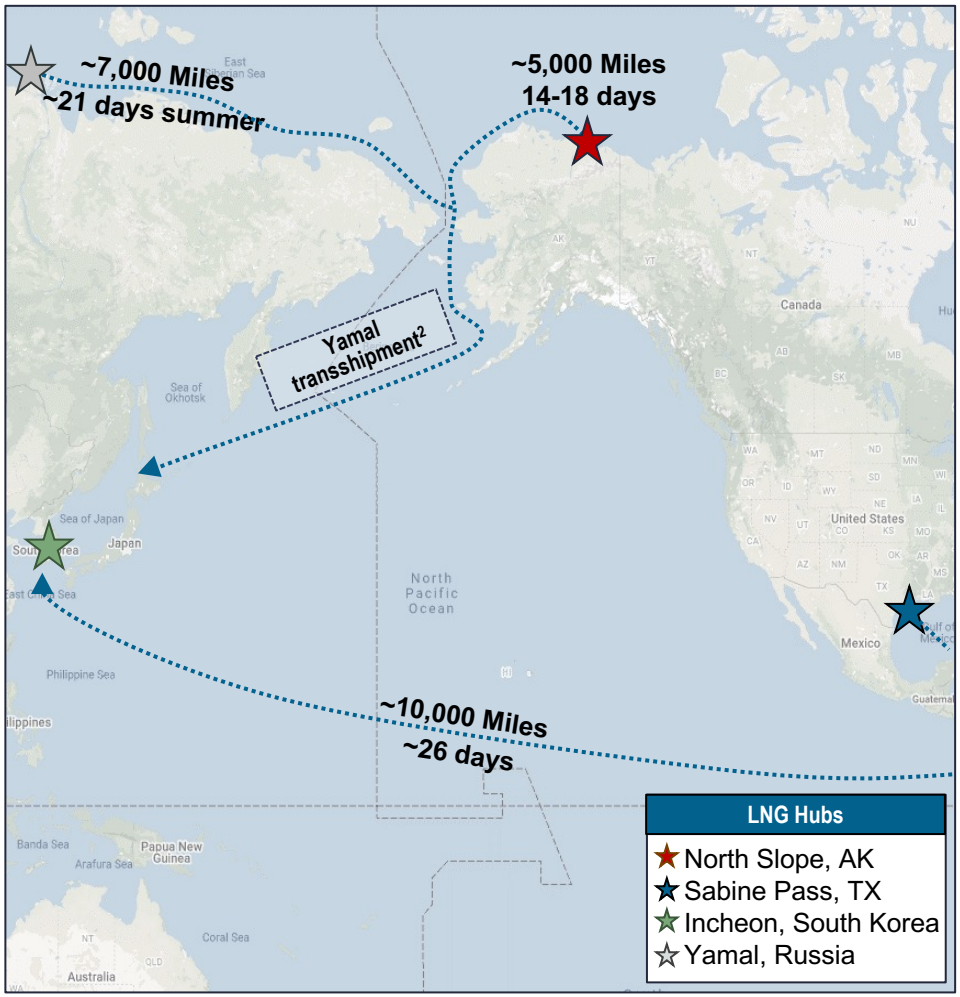
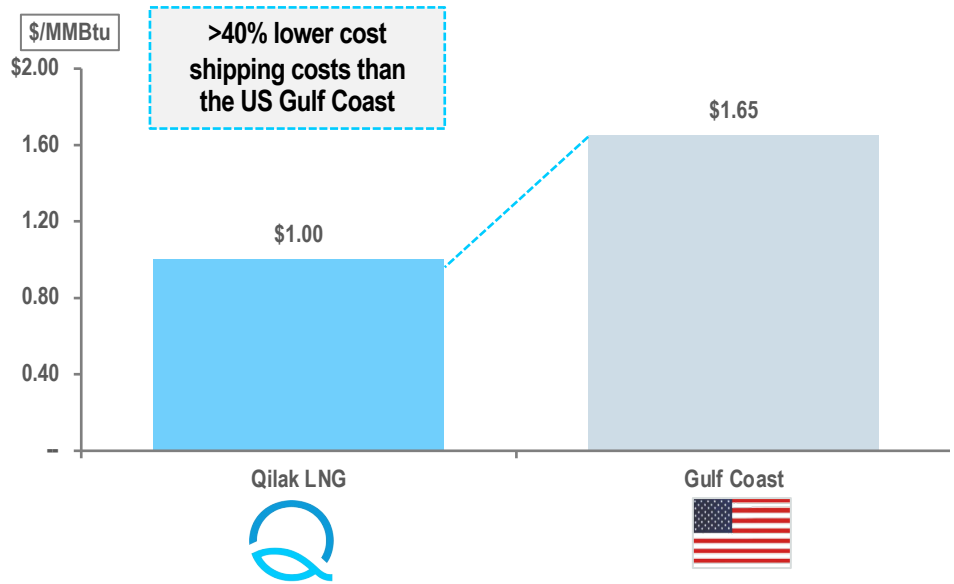
Lower upstream costs from a prolific conventional source and proximity to Asian demand provide a differentiating LNG proposition

Qilak LNG is ~2,000 Miles Closer to Market than Yamal



Qilak LNG Shipping Costs Superior to USGC LNG

- **50% shorter route to Asian markets**
- **Avoids the Panama Canal fees and bottlenecks**
- **Fewer vessels required due to shorter distance**
  - ~5,000 miles from Qilak LNG to Asia
  - ~10,000 miles from USGC to Asia
- **Capability to ship year-round has been demonstrated by performance data from Yamal LNG and shipping simulations**



GHG Emissions for Chinese Power Generation: Local coal versus LNG sourced from USGC, Kitimat and Qilak LNG

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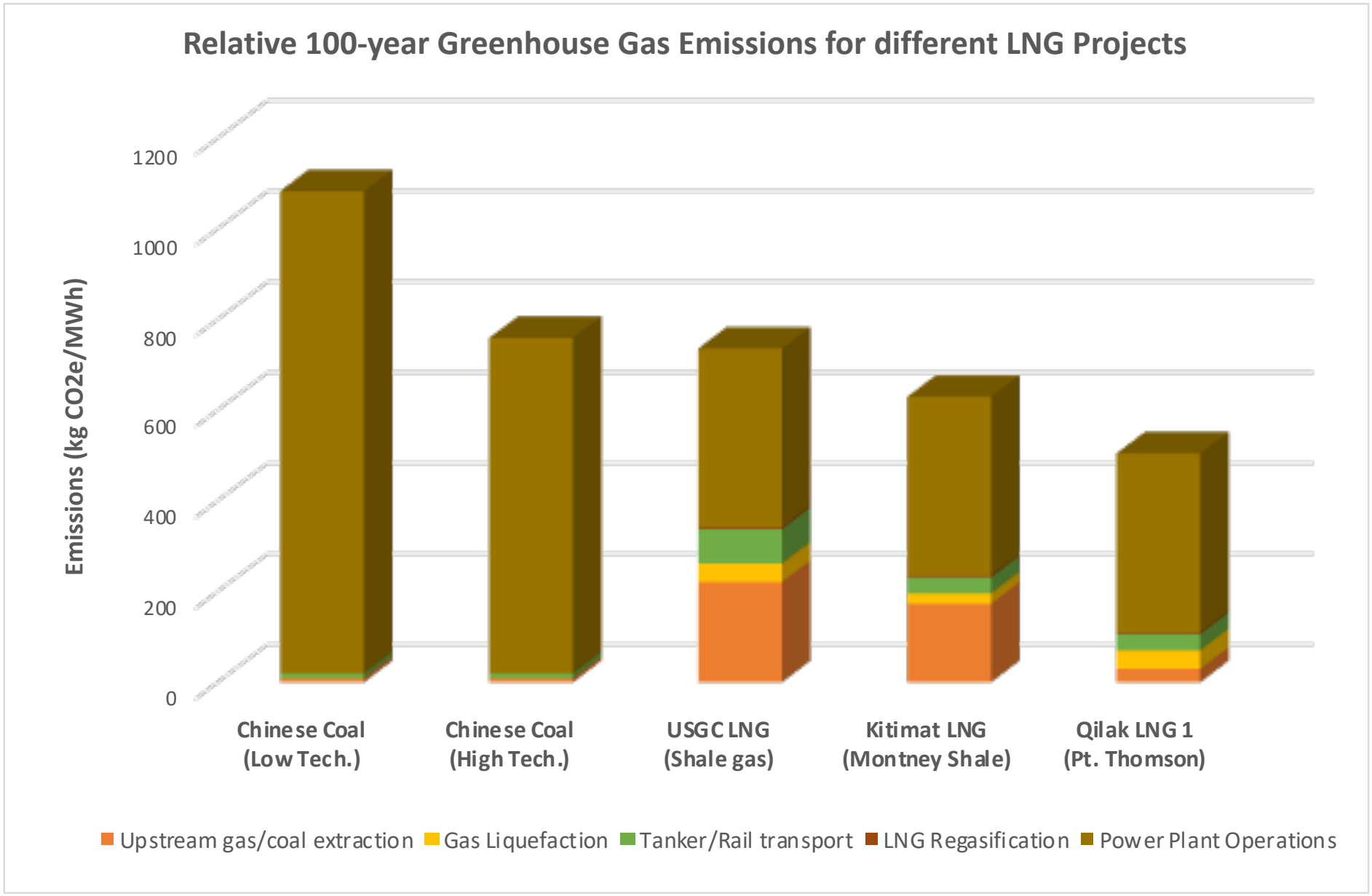

*Alaska can provide "**greener**" LNG than any other North American supplier*

Next Steps and Path Forward

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Key Issues to be resolved during Feasibility Study

Technical

1. Optimal LNG capacity and storage
2. Detailed LNGC shipping simulation to determine –
    a. number of vessels required
    b. optimum vessel configuration (Mk III design)
3. Refined project Capital and Operating costs

Commercial

1. Build investor consortium
2. Negotiate Gas Sales Agreements
3. Negotiate LNG Sales Agreements

Project Timeline

Pre-Construction	2022	NEPA Filing	Complete Feasibility Studies	Award FEED Contract			
	2023/4	Complete FEED	Continuation of Detailed Design				
	2025	Target FID					
Construction	2026	LNG Facility Begins Construction	Award Contract for LNGC and Icebreaker Construction				
	2027	LNGC and Icebreaker Construction					
	2028	Pipeline Infrastructure Installation					
	2029	Complete Pipeline Infrastructure Installation	LNG Facility Installation	Commissioning	LNG Plant Start-Up	First LNG Cargo (Jan. 2030)	

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"Natural gas is one of the mainstays of global energy. Where it replaces more polluting fuels, it improves air quality and limits emissions of carbon dioxide."

Dr. Fatih Birol, IEA Executive Director