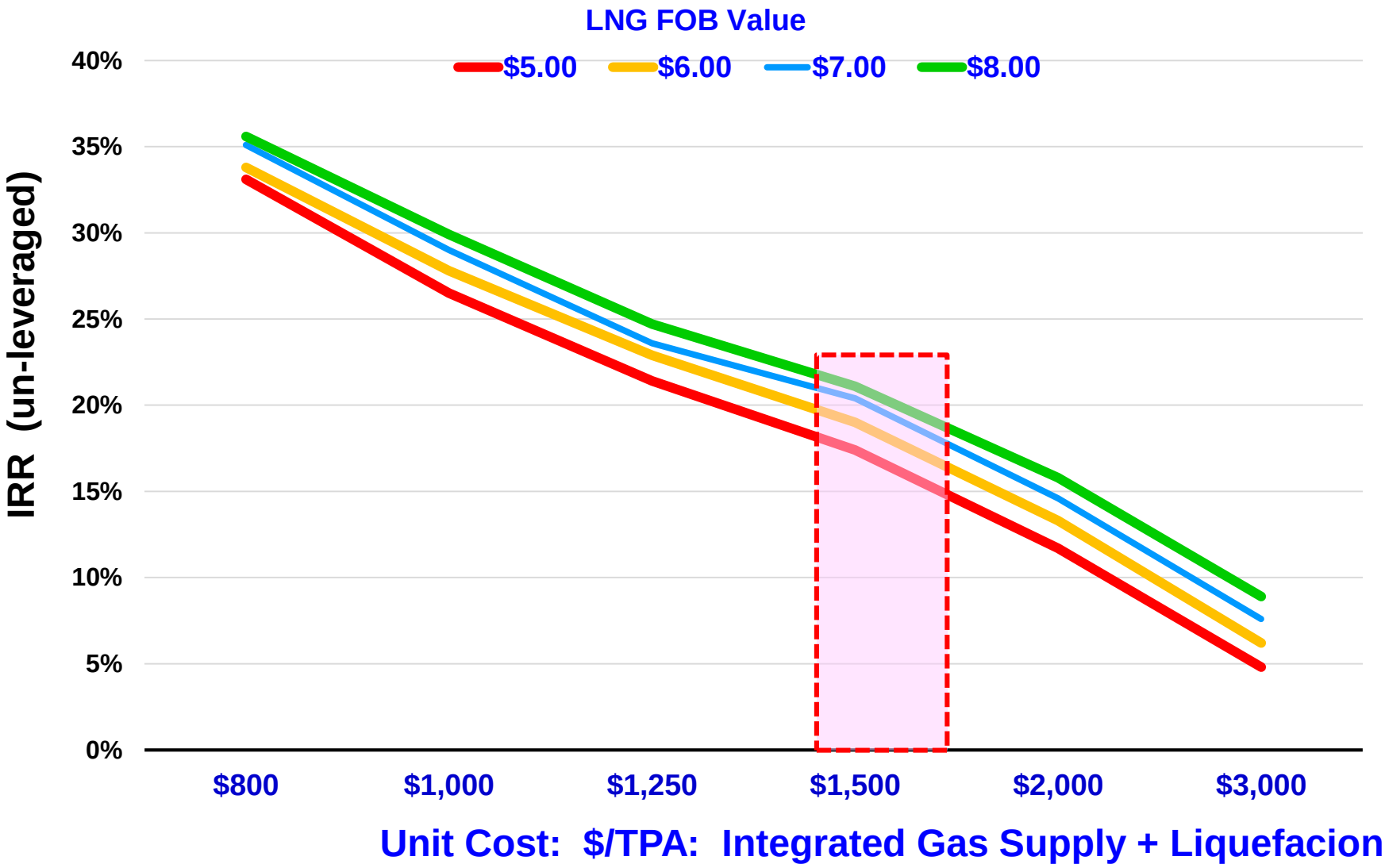
Cost & Economic Situation

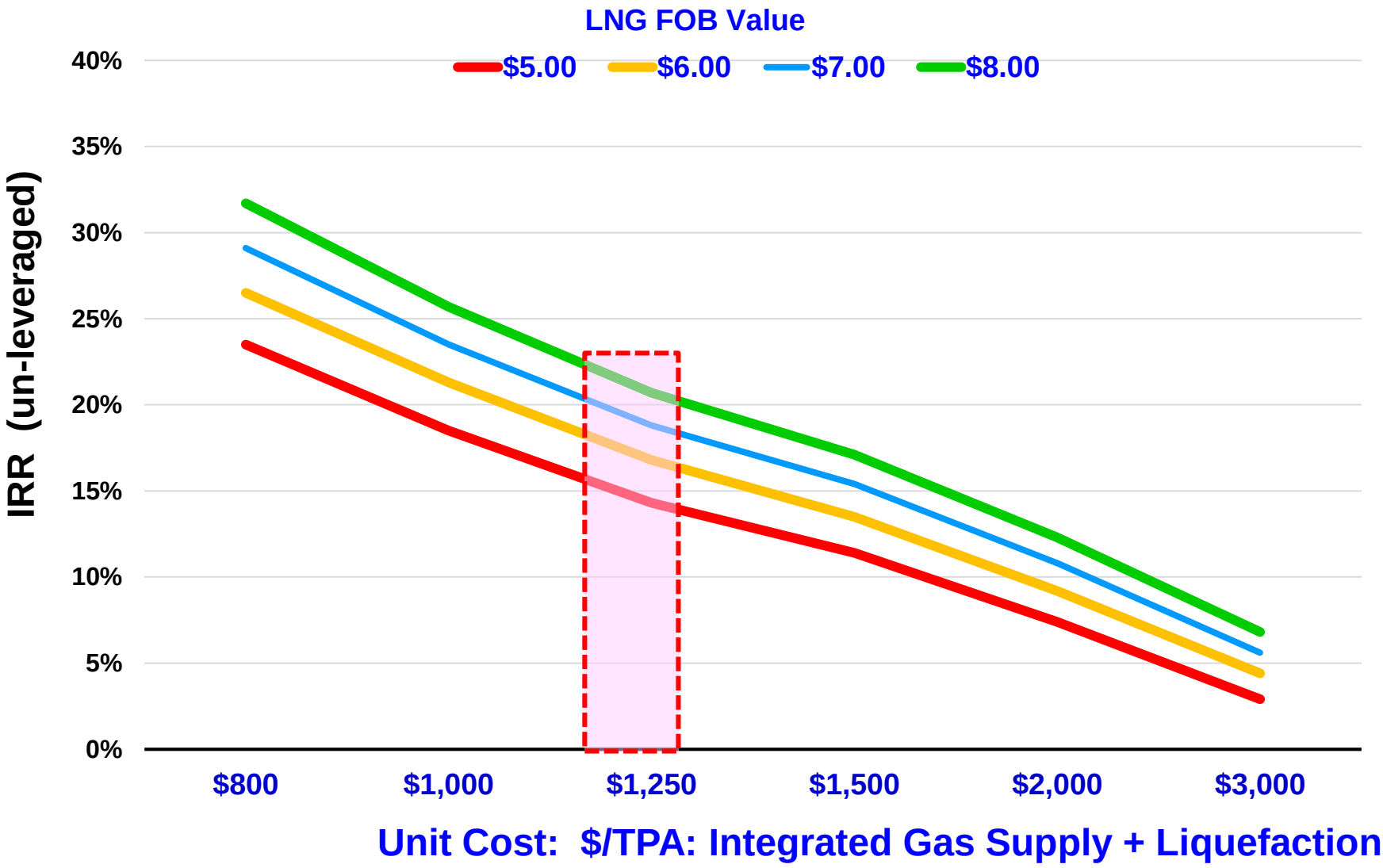
IRR vs Unit Cost

Deepwater W Africa, High Liquids Yield



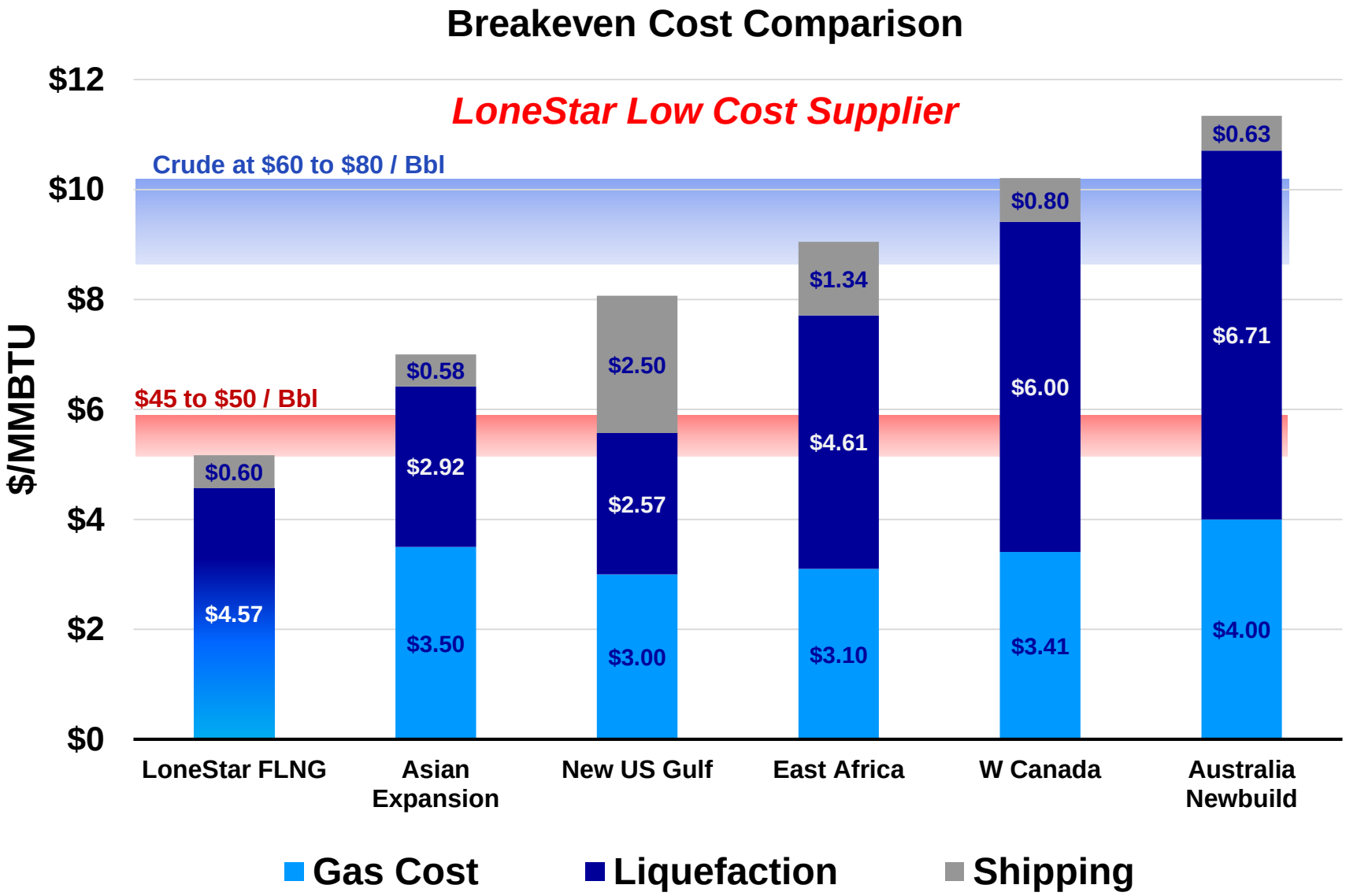
IRR vs Unit Cost

Deepwater W Africa, Dry Gas

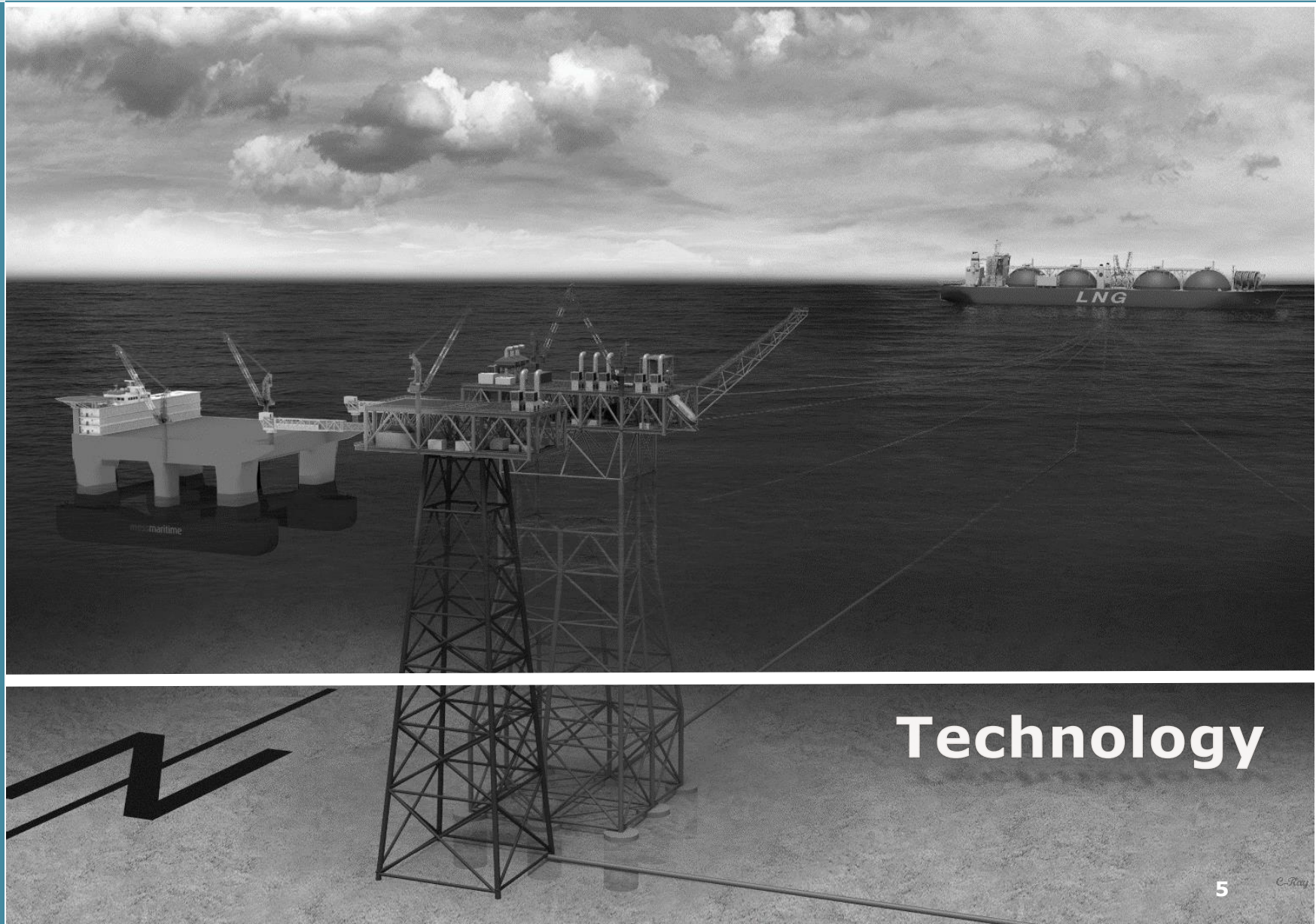


Growth Strategy

Cost Matters



LoneStar and Wood Mackenzie



Technology

Technology

Why is LoneStar Different?

- **Separation of Upstream and Midstream**
  - Upstream Facilities – Site Specific: drilling, production, gas treatment
  - Midstream Facilities - Generic: liquefaction, storage, offloading
  - Conventional designs, flexible & reusable
- **Dual Nitrogen Liquefaction**
  - Most widely used cryogenic liquefaction process in the world
  - Proven in service on 50+ LNG carriers
  - Selected for 2 of 4 current FLNG vessels
  - Safe, compact, ease of operation, open technology
- **Improved Offloading System**
  - Cryogenic Floating Hoses
  - Dedicated DP tanker avoids tugs, minimize risk, weather tolerant

Technology

How can we Deliver a Step Change in Costs

Current "Integrated" FLNG Approach

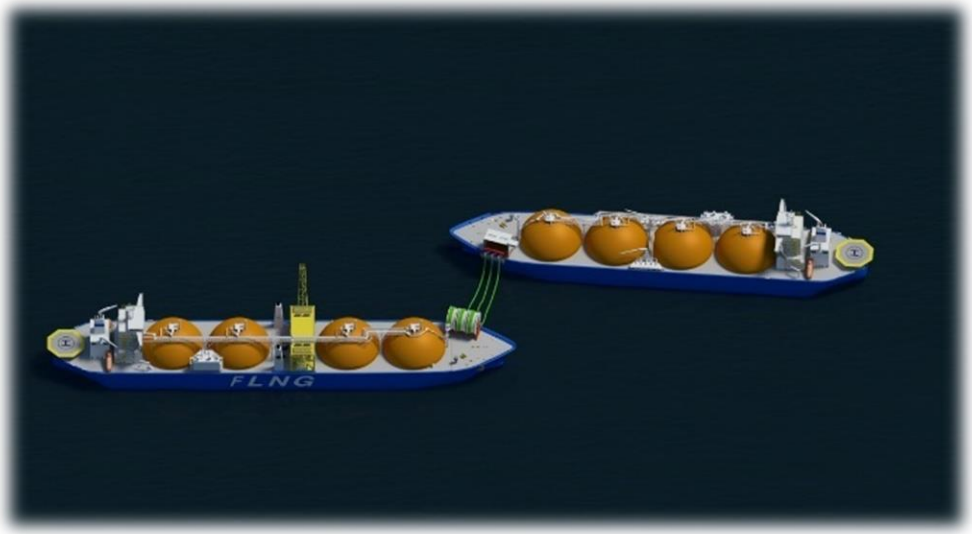
- *Complex, multi-function vessel*
- *Few construction sites*
- *Schedule & cost risk*
- *Unsatisfactory LNG offloading*

Large, Complex, Integrated Vessel

LoneStar FLNG "Split" Approach

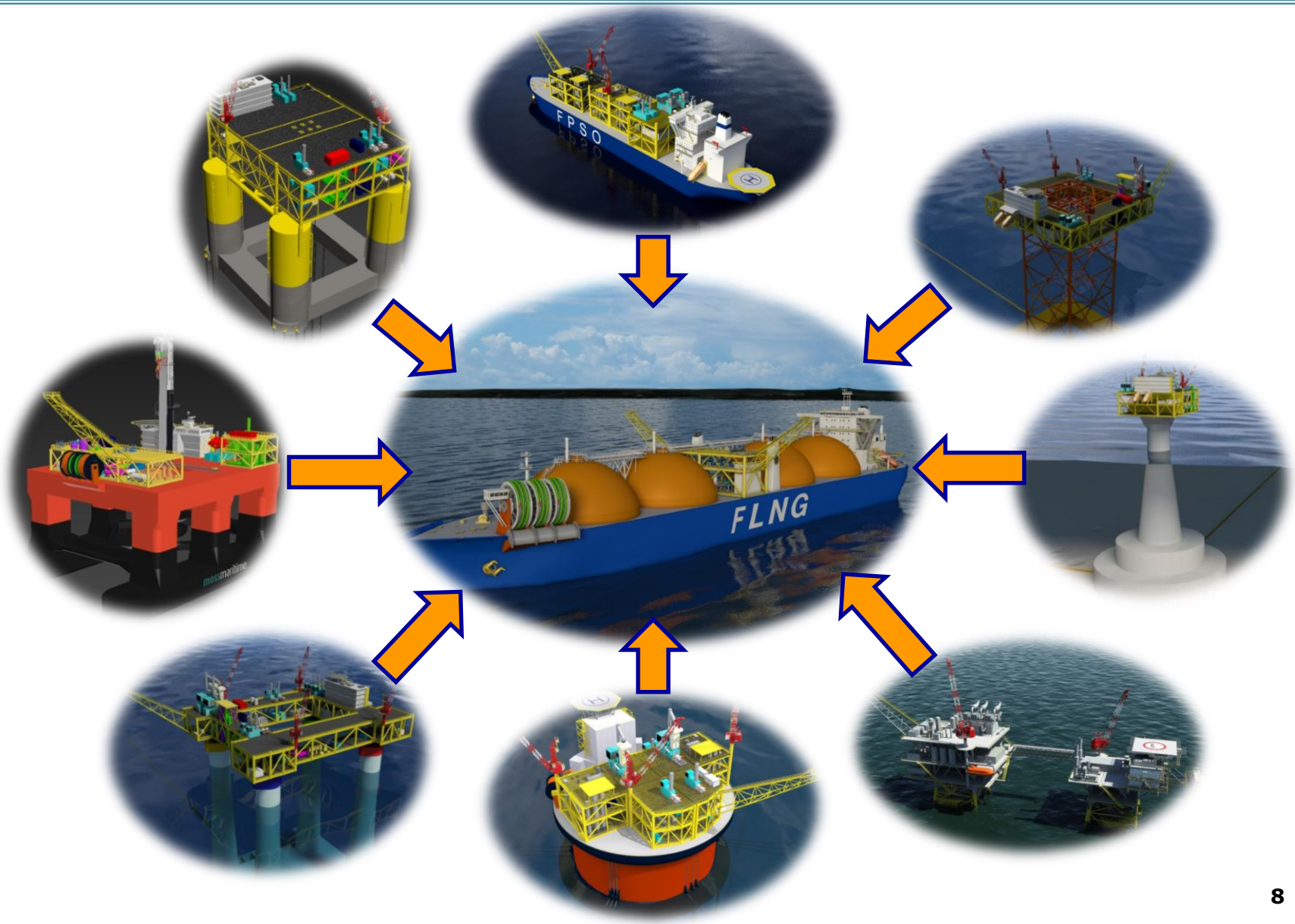
- *Separate, conventional vessels*
- *Conventional designs for Upstream*
- *Standardized design for Midstream*
- *Improved LNG offloading*

Standardized FLNG & DP Ship



Technology

"Best" Upstream Design tied to a Generic FLNG Vessel

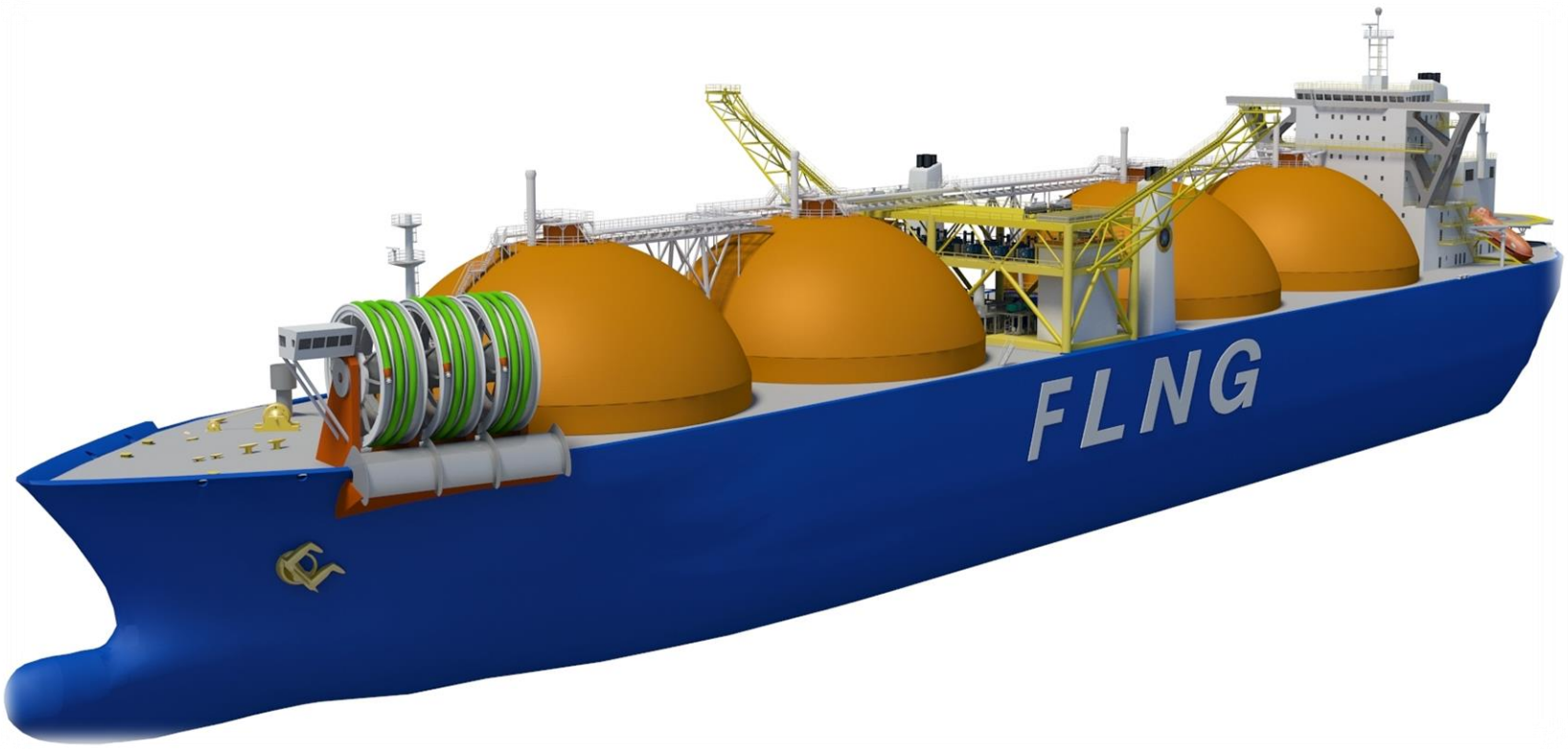


Technology

Generic Liquefaction Vessel

LoneStar FLNG Liquefaction Vessel

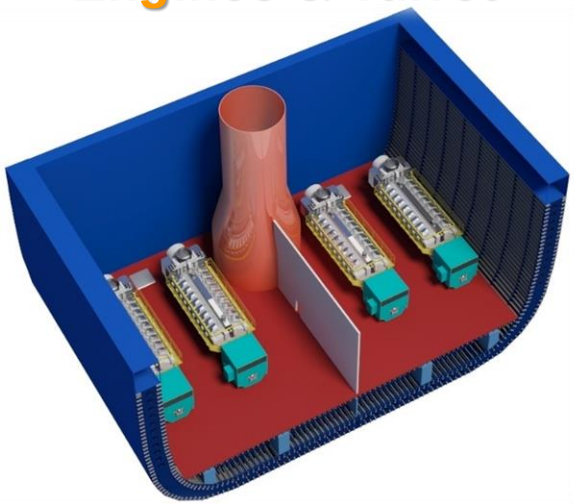
- Standard Moss LNG Carrier
- Self-Contained Mid-ship Module for Liquefaction & Power
- Cryogenic Floating Hoses for offloading to DP tanker
- Easily, quickly disconnect for Tropical Storms or dry docking



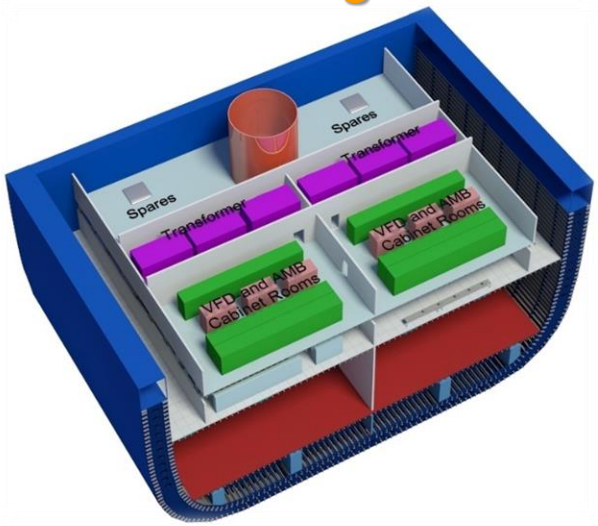
Technology

FLNG Vessel Conversion: Mid-ship Section

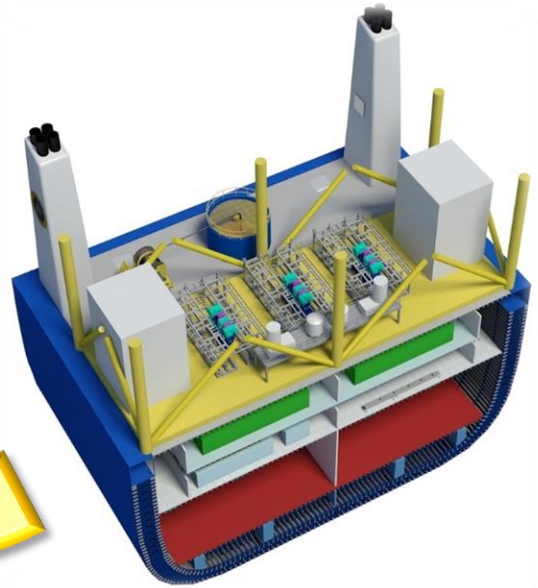
Engines & Turret



Switchgear



Completed, Self-Contained Section



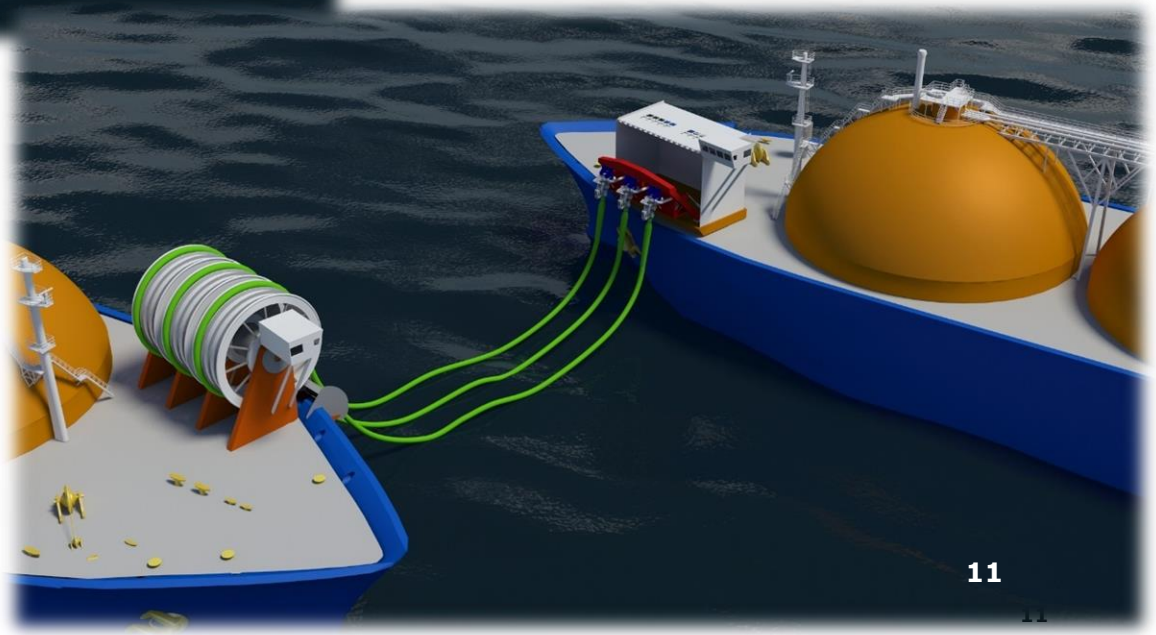
Liquefaction Module

Technology

FLNG Vessel & DP Tanker: Offloading LNG

Improved Offloading System

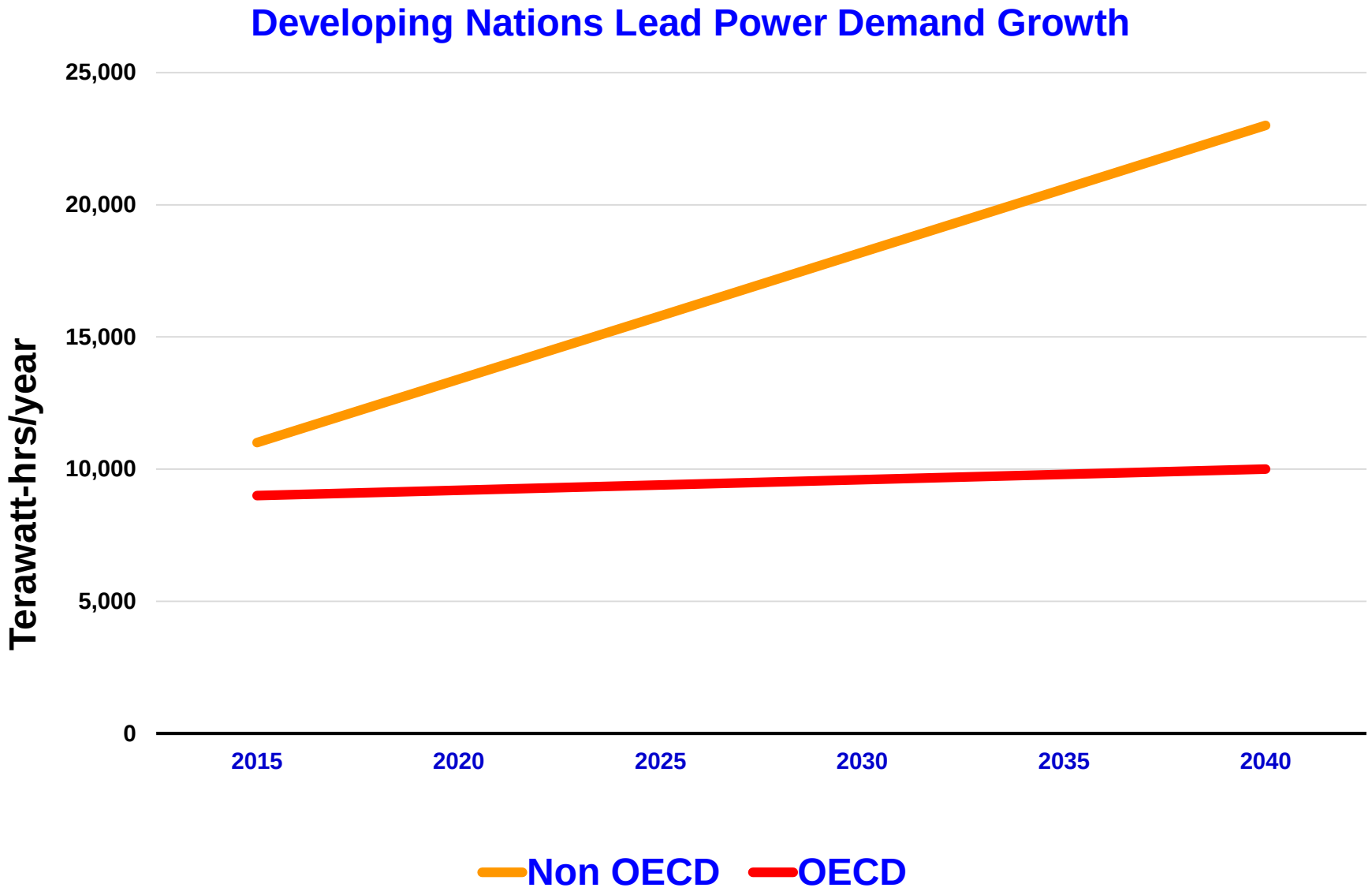
- ***Cryogenic Floating Hoses***
- ***Dynamically Positioned Tanker***
- ***No Tug Assist Required***
- ***Moderately Rough Seas***



LNG to Power Projects

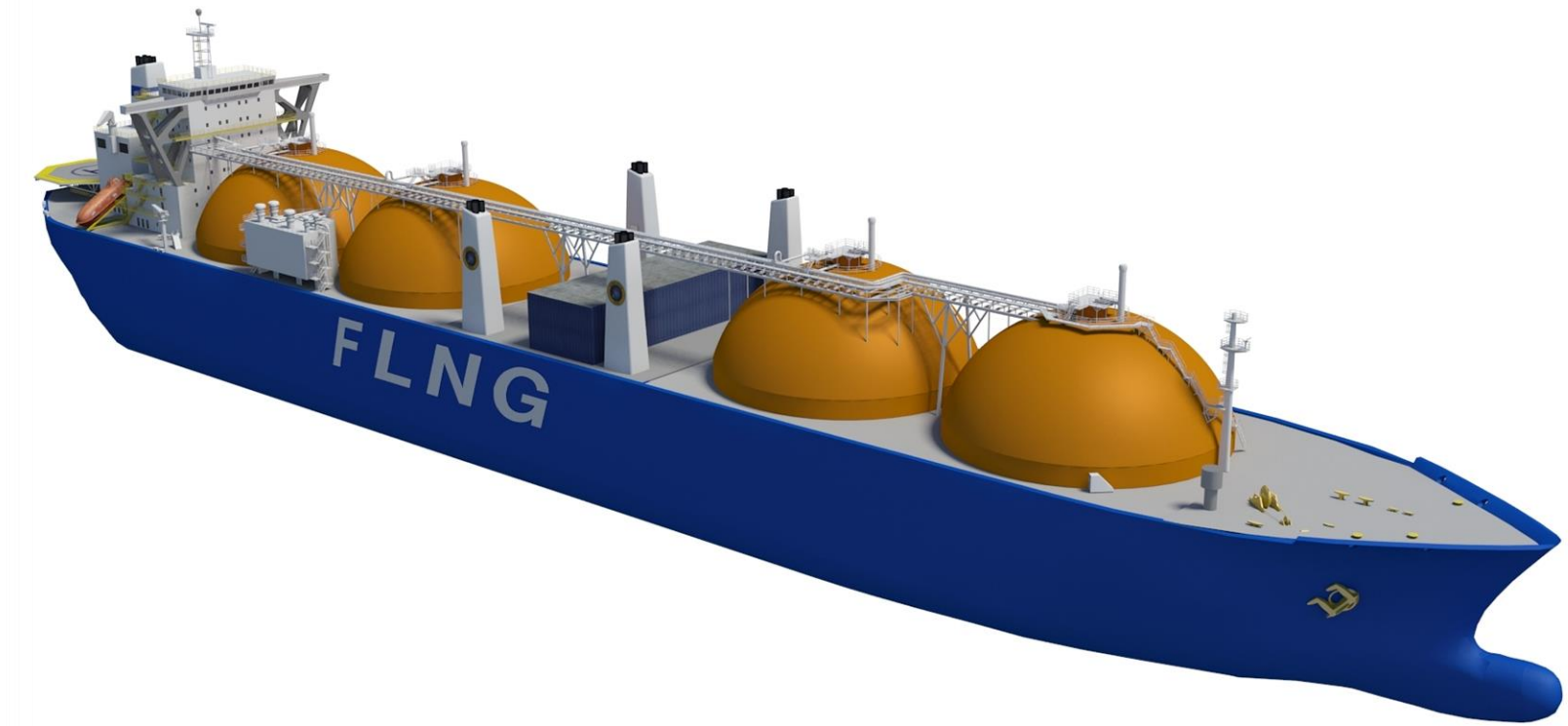
Business Plan Update

Growth in Power Demand



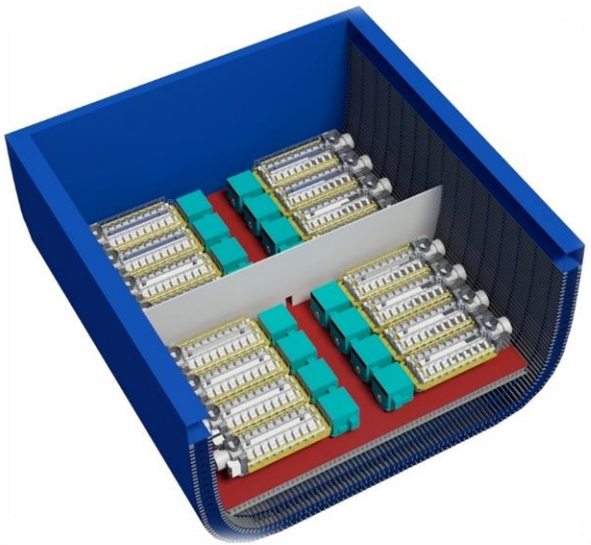
Power Vessels

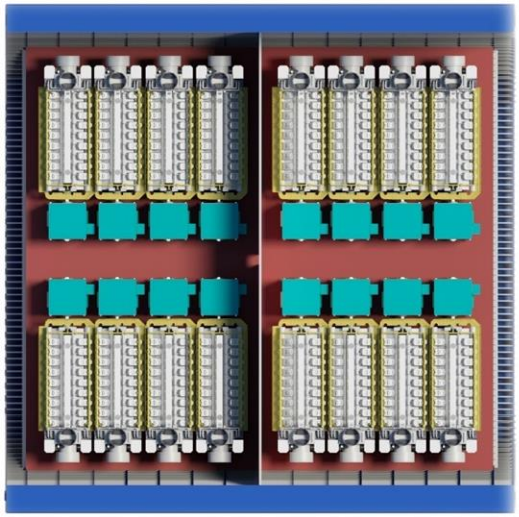
300 MW Power Ship/FSRU

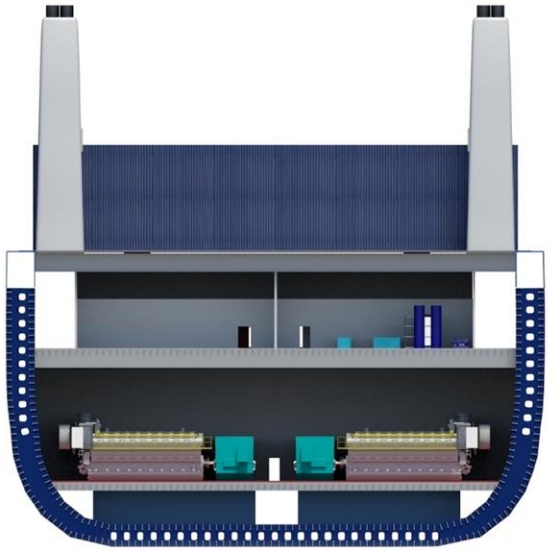


Power Vessels

Mid-ship Section: 300 MW Power Ship/FSRU

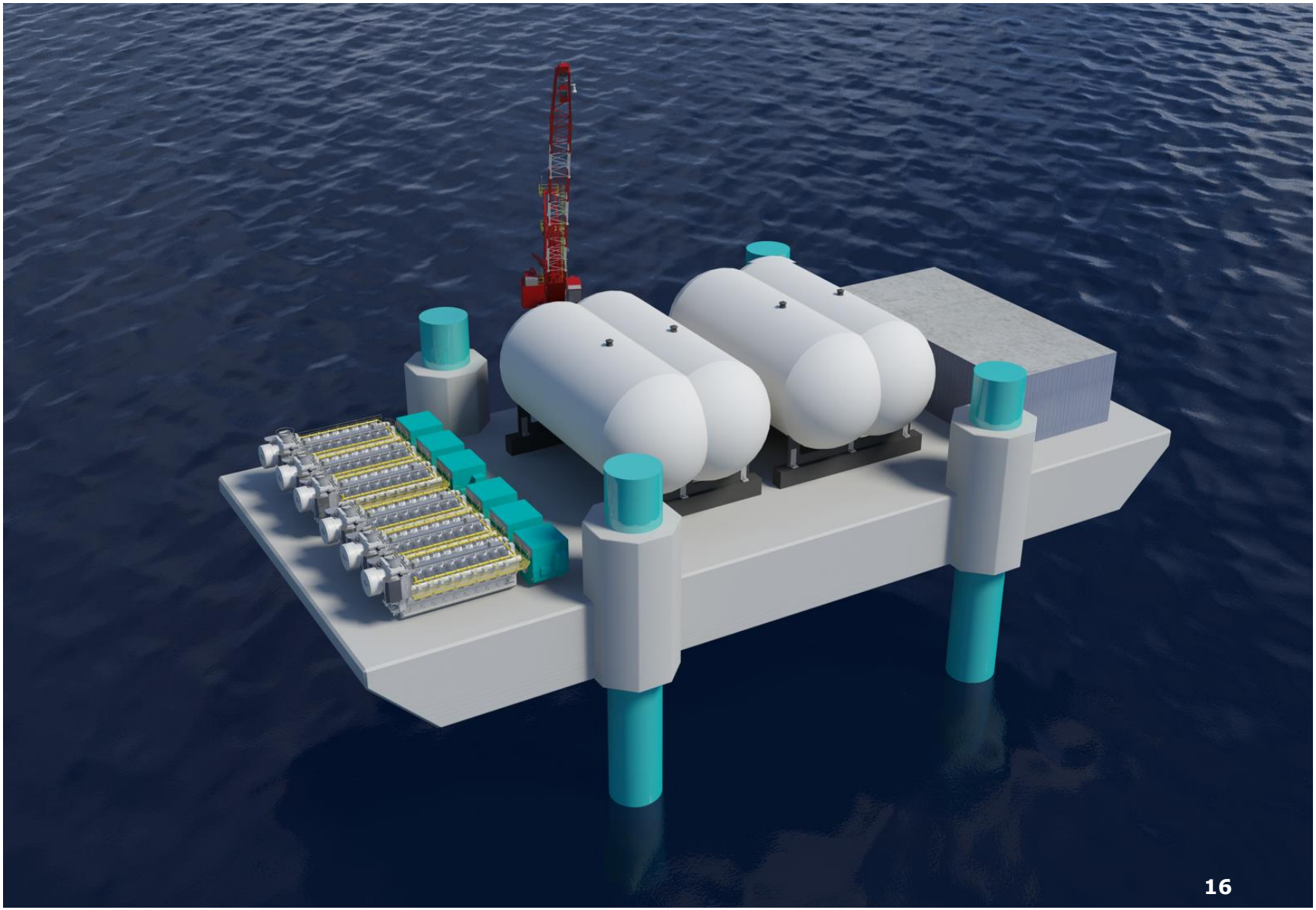






Power Vessels

100 MW Power Jack-Up Barge



Power Projects

Essential Criteria

Attractive Technical Solution

- Clean Fuel - LNG
- High Efficiency Plant – Thermal Efficiency >50%
- Mobile & Scalable, 50 – 300 MW

EPC Contract

- EPC Wrap
- Performance Guarantee

Financial Solutions

- Credit Enhancement Policies
- Multi-lateral & Private Project Financing
- Strong Support for Power in Developing Countries

IEG Independent Evaluation Group
WORLD BANK GROUP
World Bank • IFC • MIGA

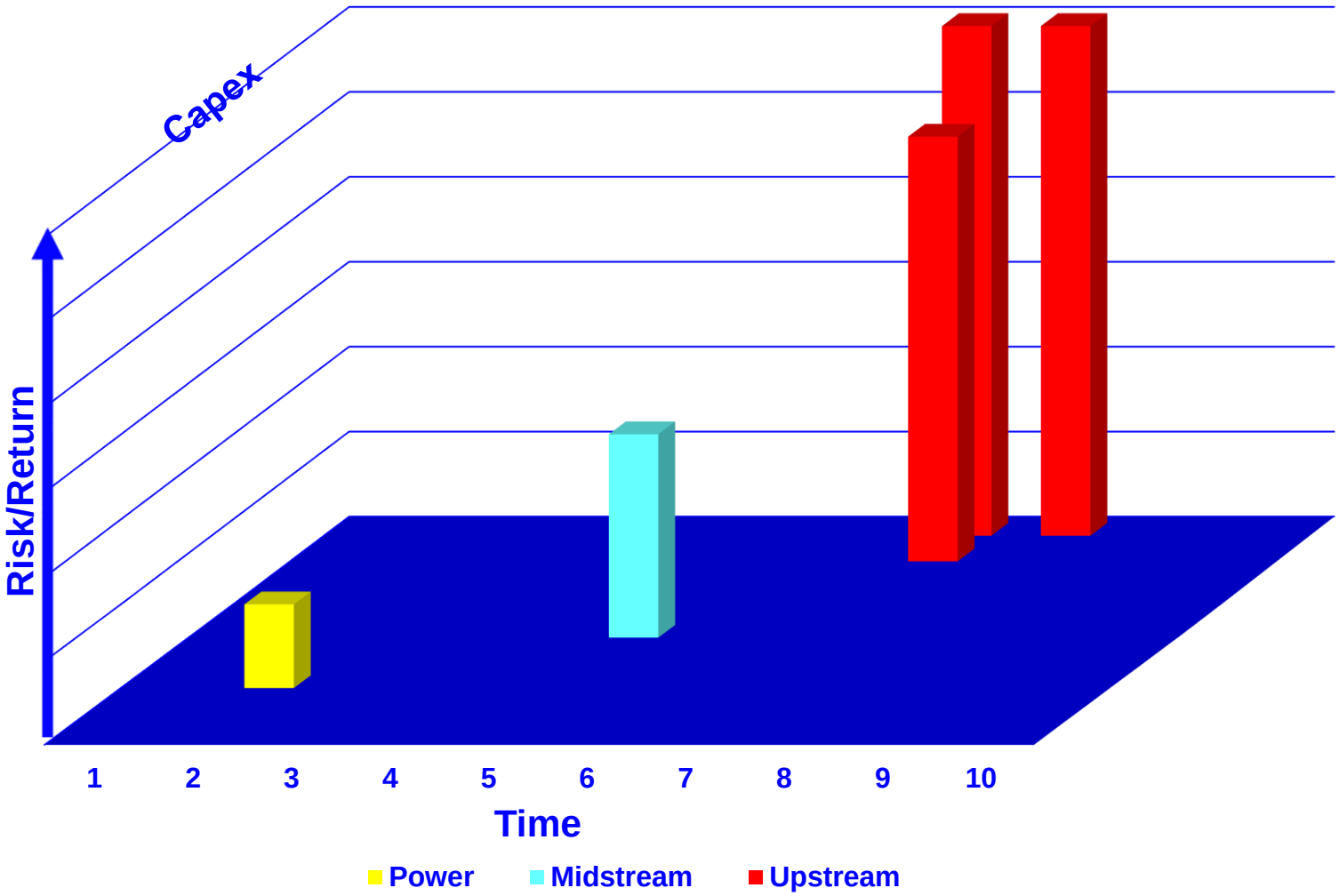
OPIC

USTDA
U.S. TRADE AND DEVELOPMENT AGENCY

POWER AFRICA

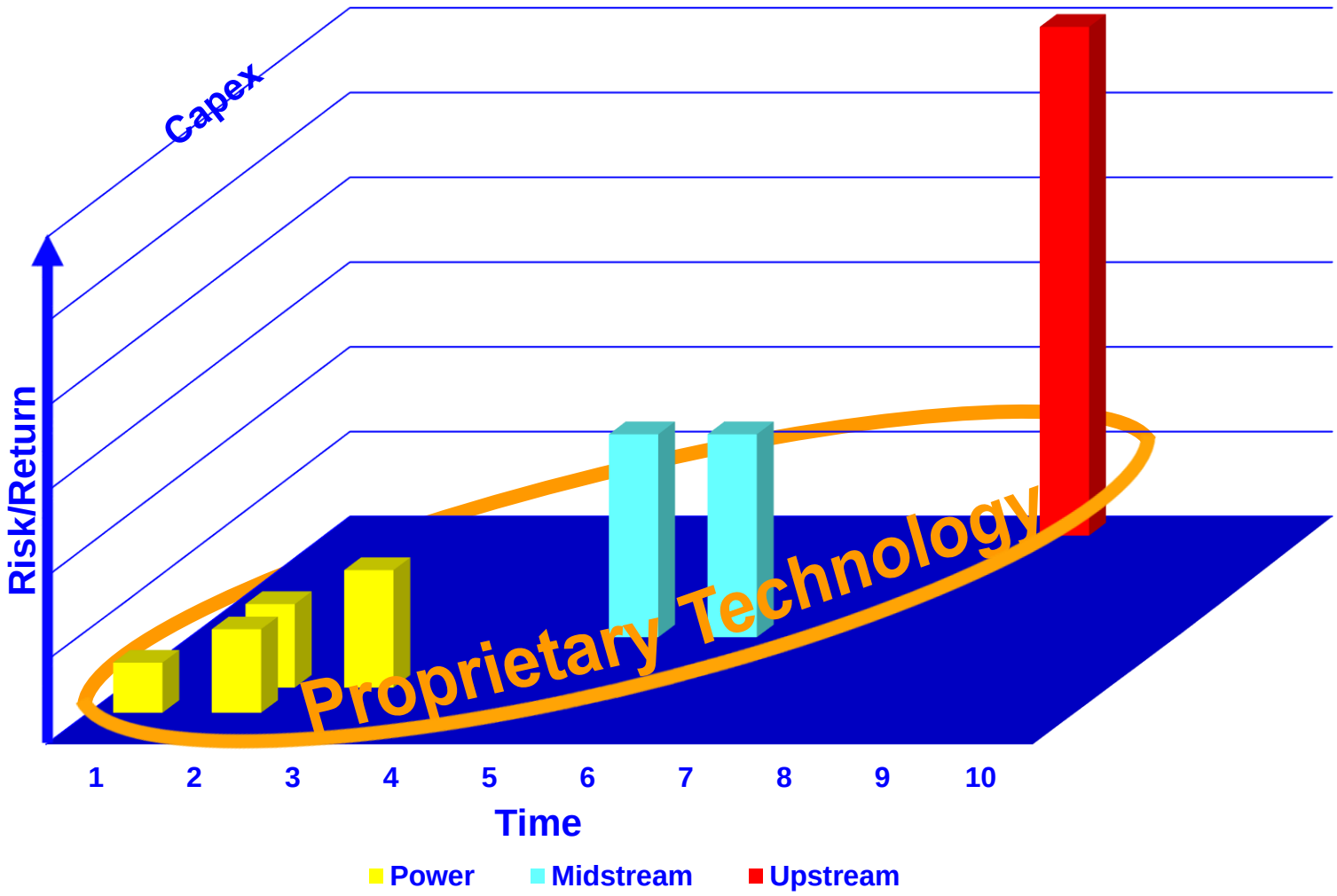
Business Plan Update

Original Upstream Focused Portfolio



Business Plan Update

Balancing the Portfolio



FLNG Development Case Studies

3

North Slope LNG

Arctic LNG Shipping

ARC 7 Ice Class LNG Ship

Double Acting Ice Breaking Hull

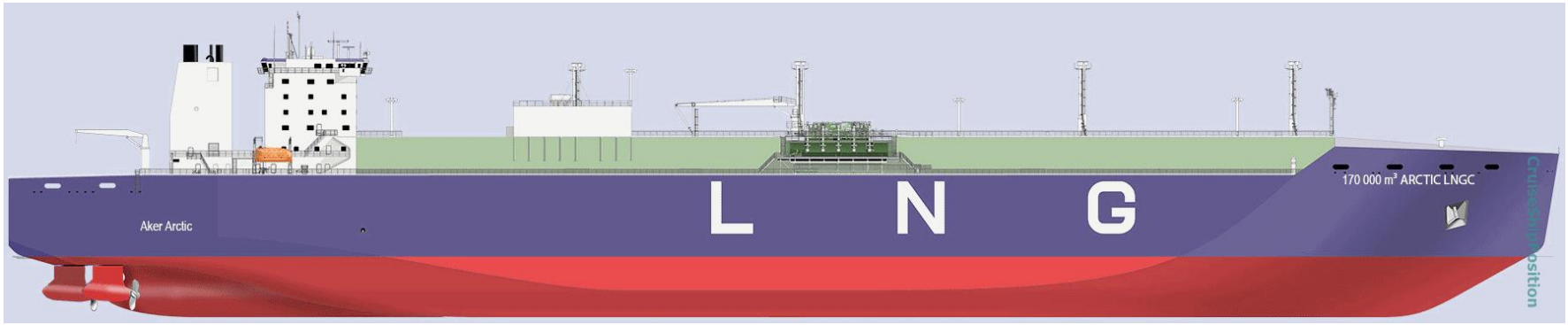
170,000 m3 LNG Capacity

DFDE Power Plant: 64 MW

3 x Azipods: 45 MW

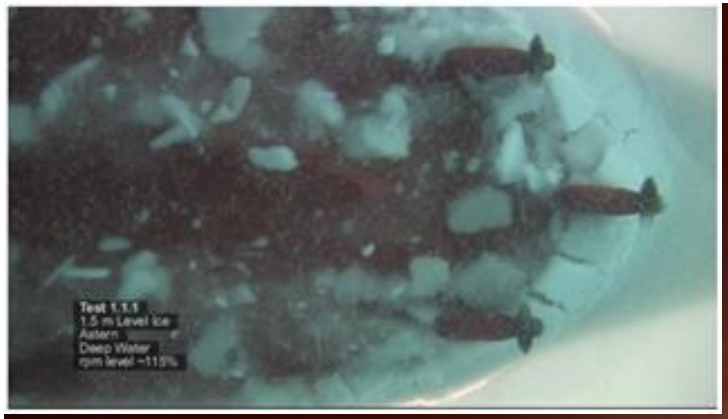
Speed – Open Water: 19 Kts

Speed – 1.5 m Ice: 5.0 Kts



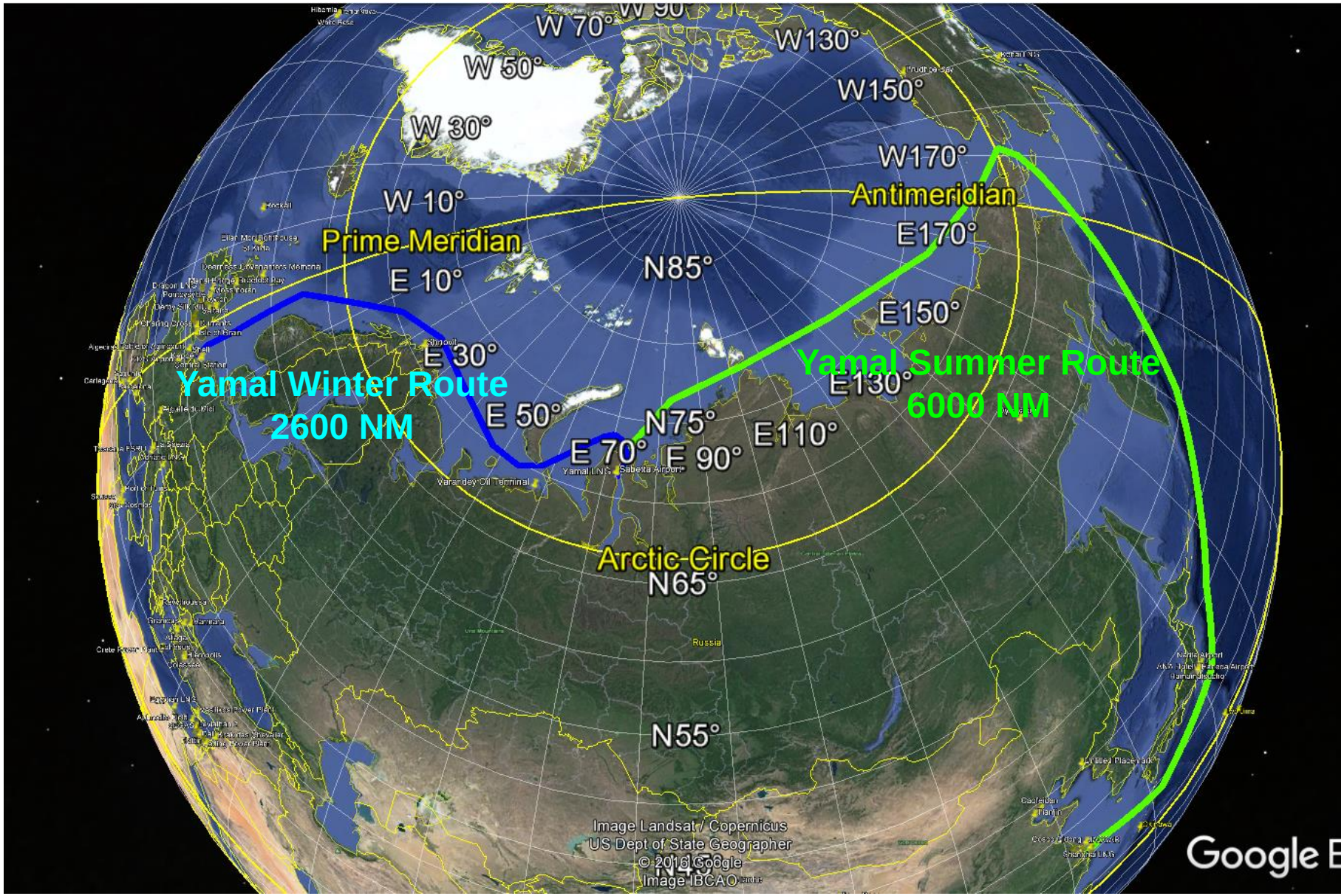
Arctic LNG Shipping

ARC 7 Ice Class LNG Ship – 3 x 15 MW Azipods



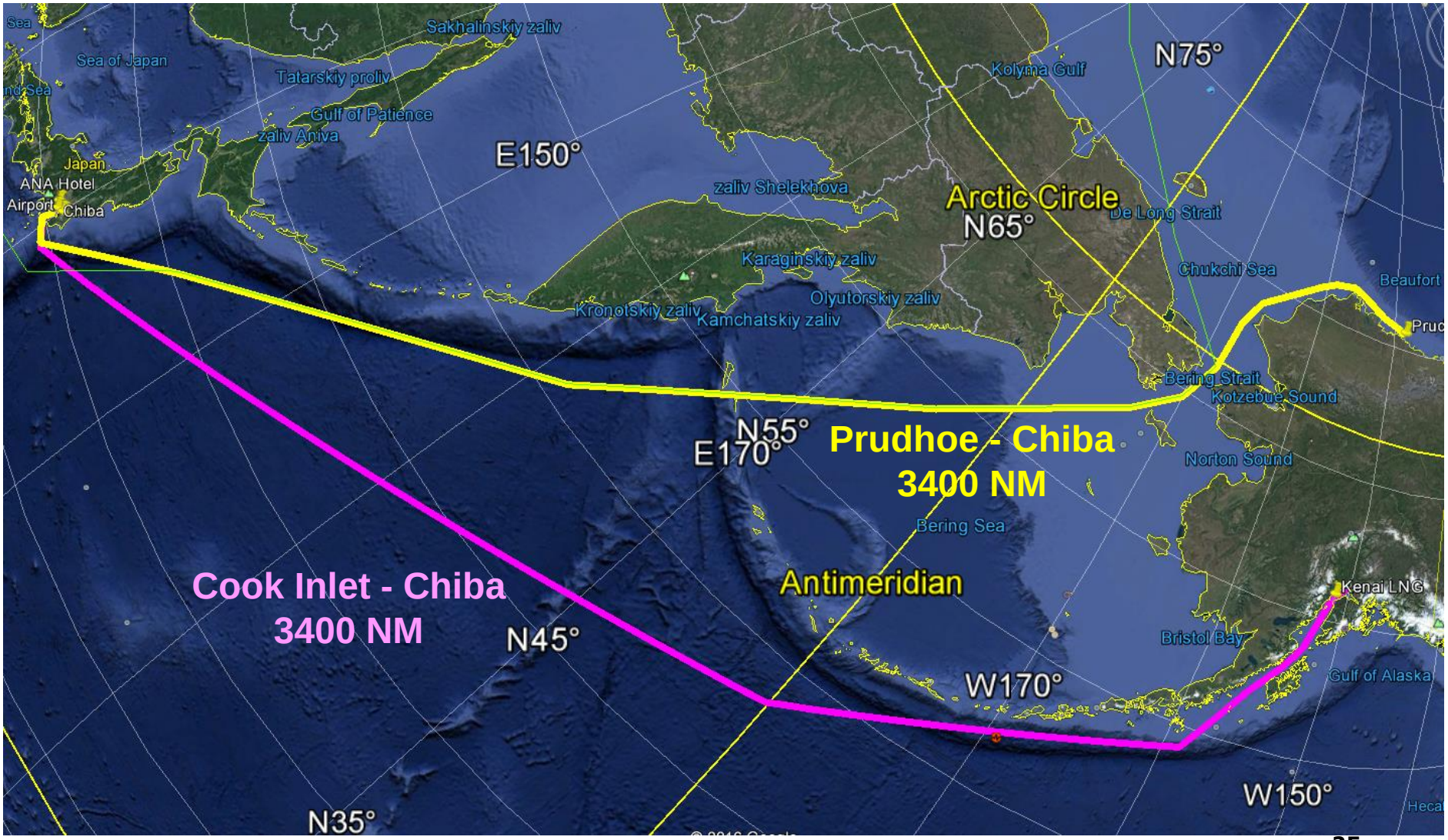
Arctic LNG Shipping

Yamal Shipping Routes



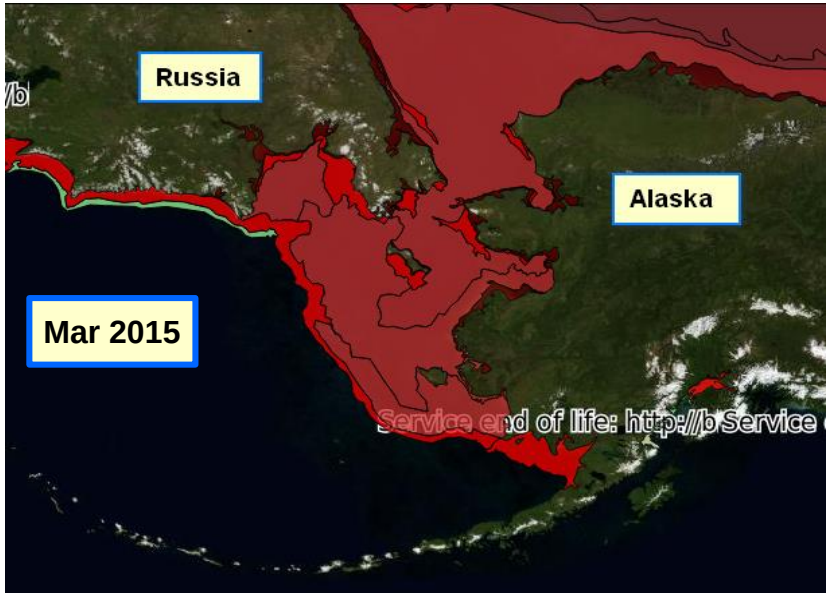
Arctic LNG Shipping

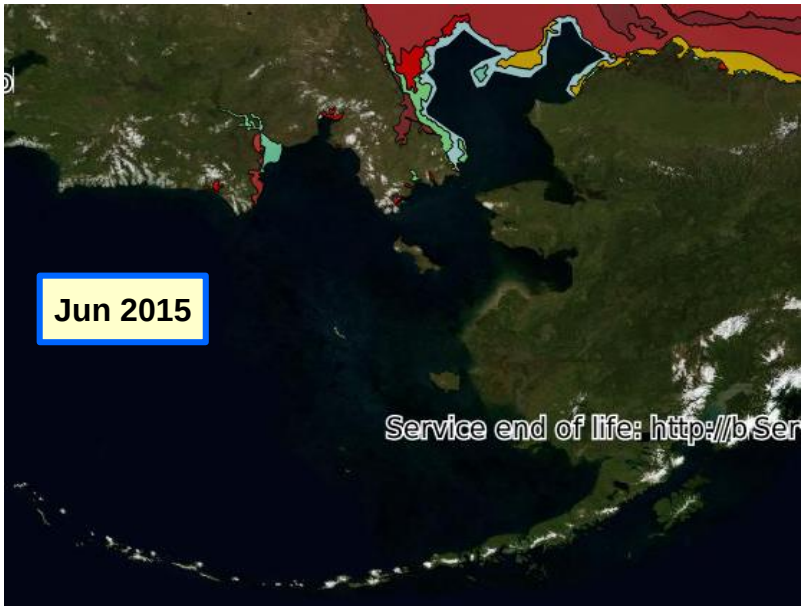
Alaska to Japan

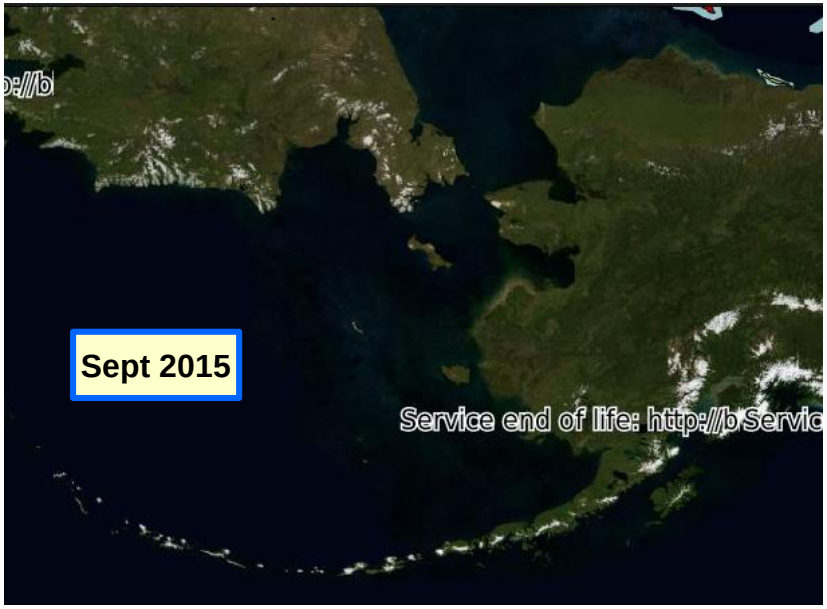


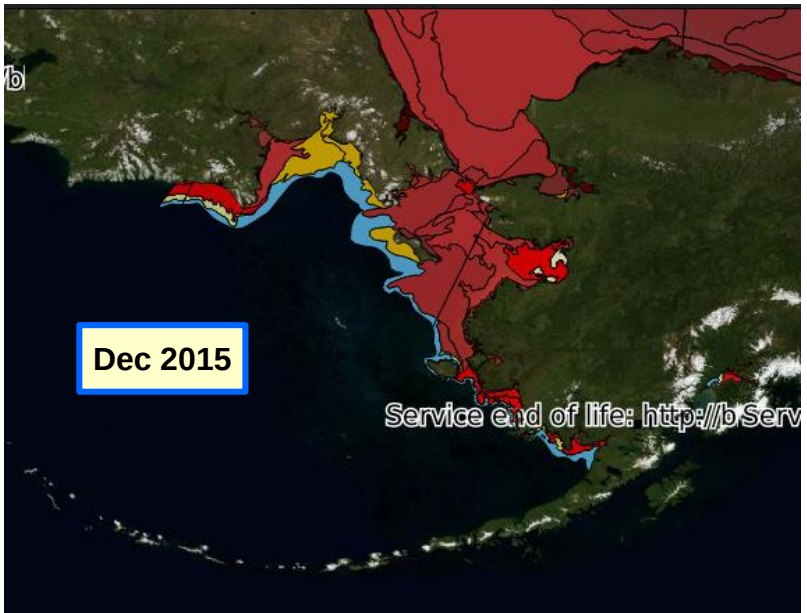
Shipping Capacity: N Slope - Japan

2011 – 2016 Hindcast: Seasonal Ice Coverage



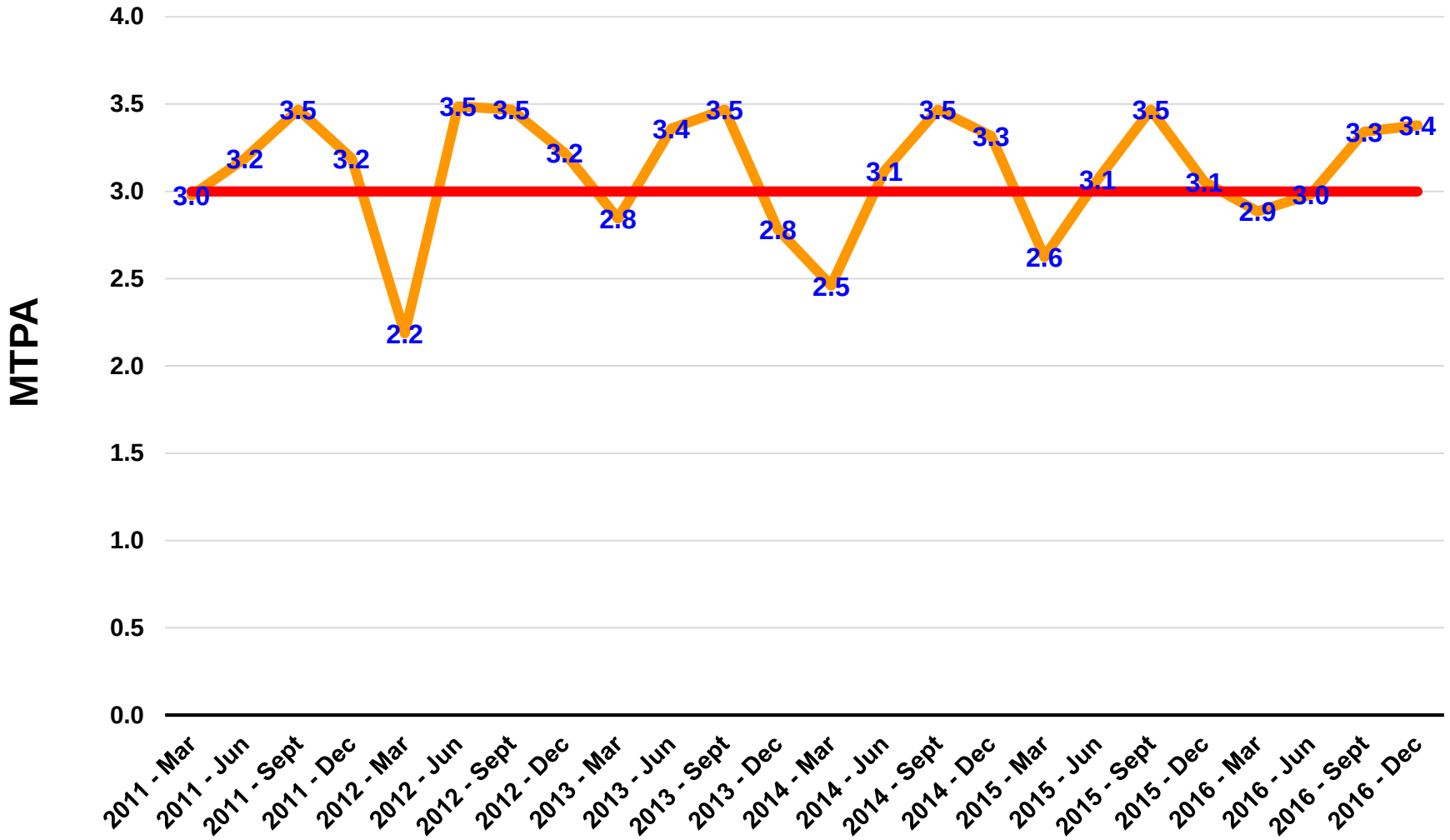






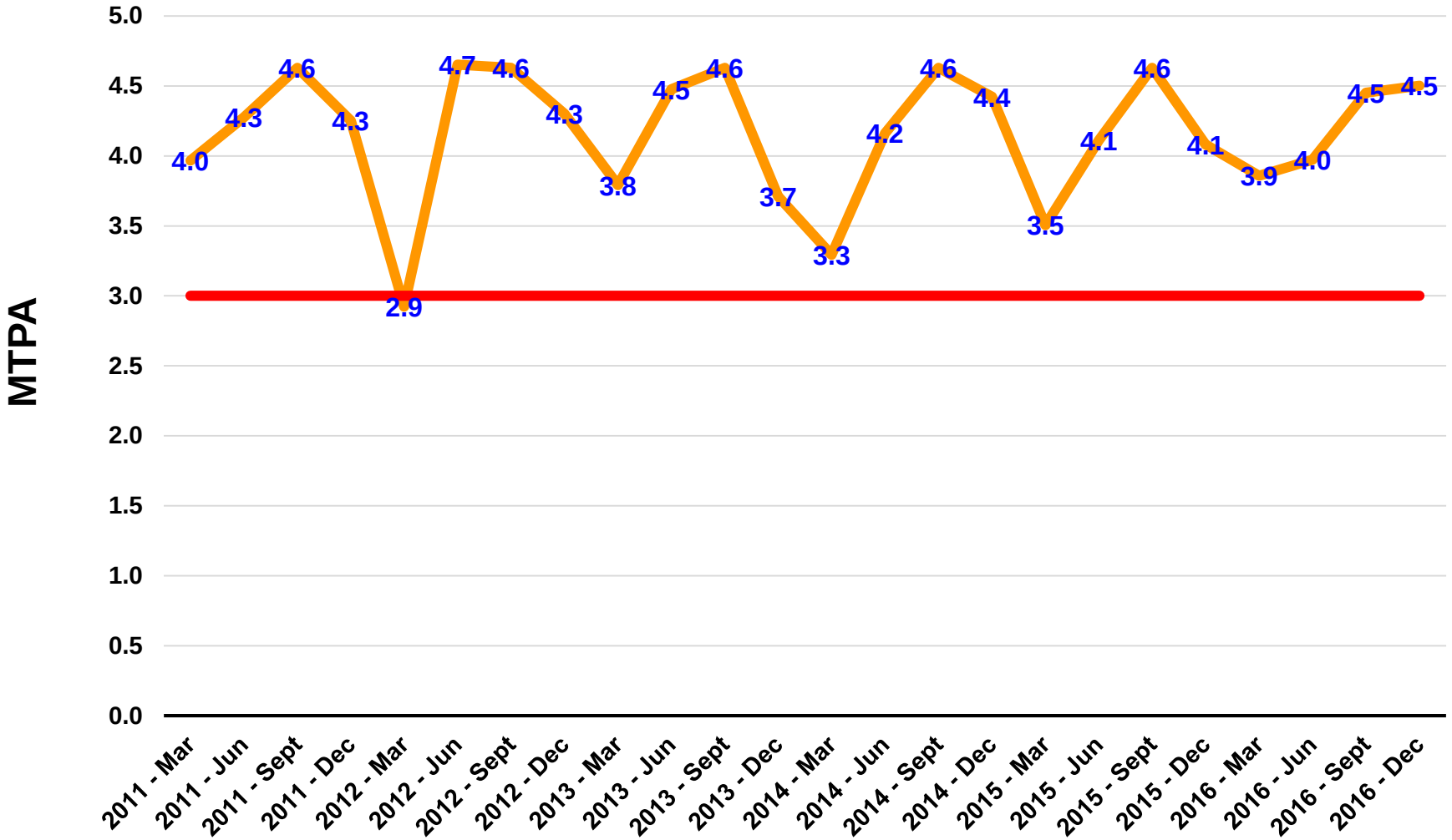
Shipping Capacity: N Slope - Japan

2011 – 2016 Hindcast: 3 x ARC7 LNGTankers



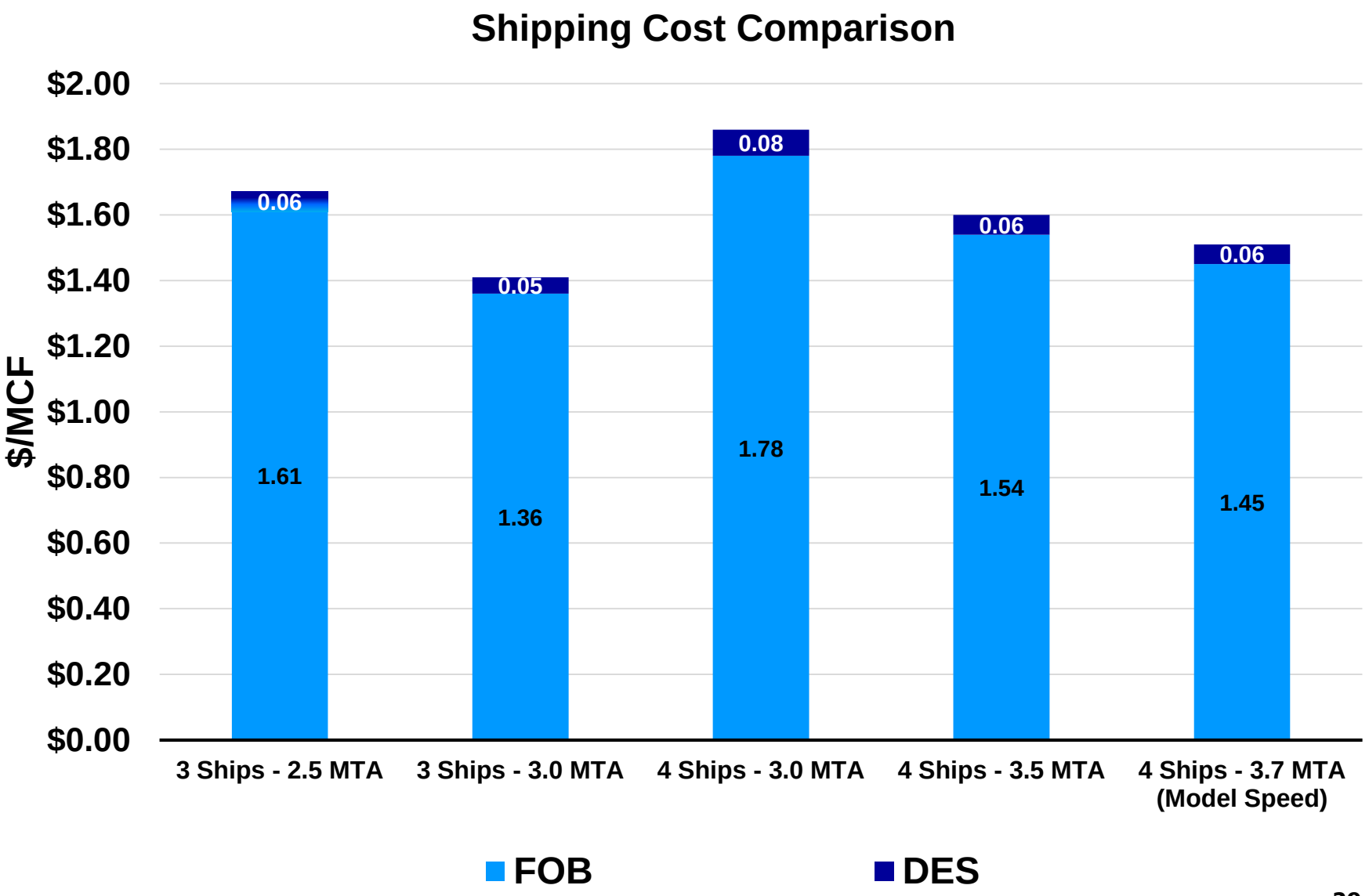
Shipping Capacity: N Slope - Japan

2011 – 2016 Hindcast: 4 x ARC7 LNGTankers



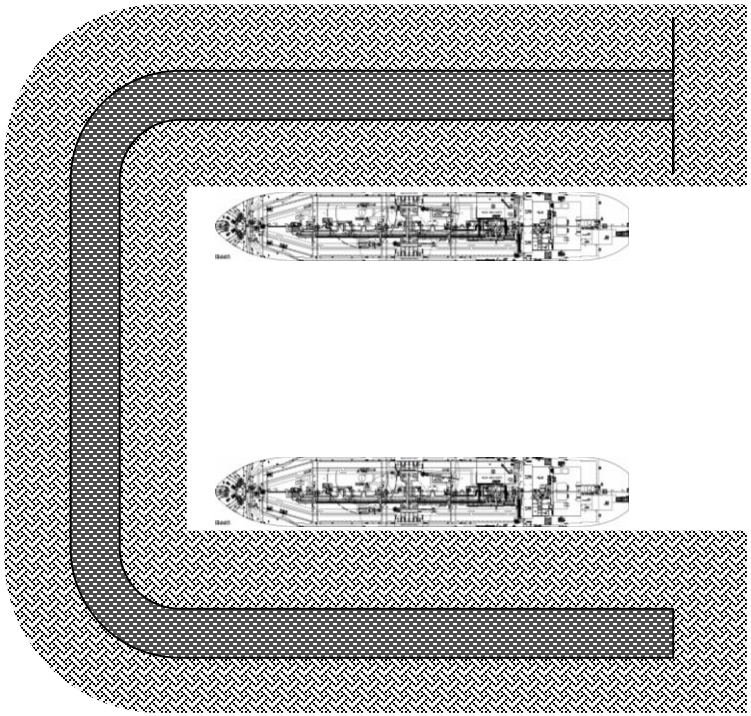
Shipping Capacity: N Slope - Japan

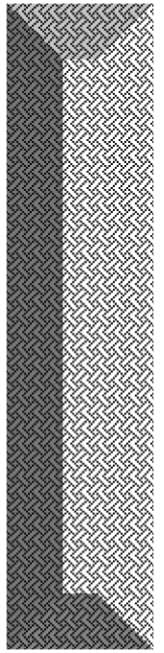
Unit Shipping Cost: $/MCF



N Slope FLNG

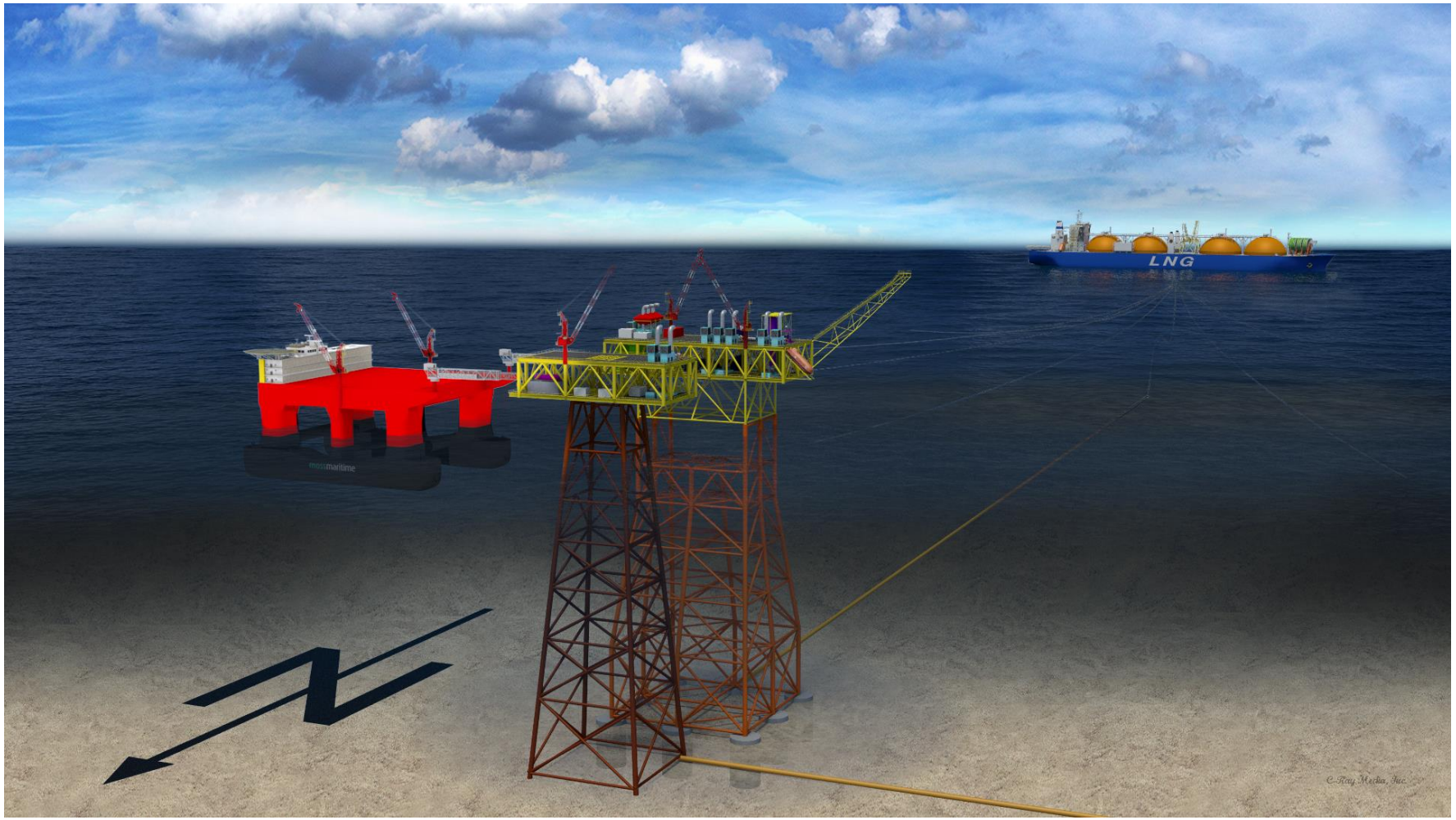
Artificial Island w/2 x 1.5 MTPA Liquefaction Vessel





Field Development

Fixed Platform Concept: High CO2 – Timor Sea



Field Development

TLP Concept: High CO2 – Browse Basin