# El rol de México frente a la dinámica de la demanda global del gas natural

## Foro de mercados de gas y energías renovables

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**Head of Gas and Power Market Research**

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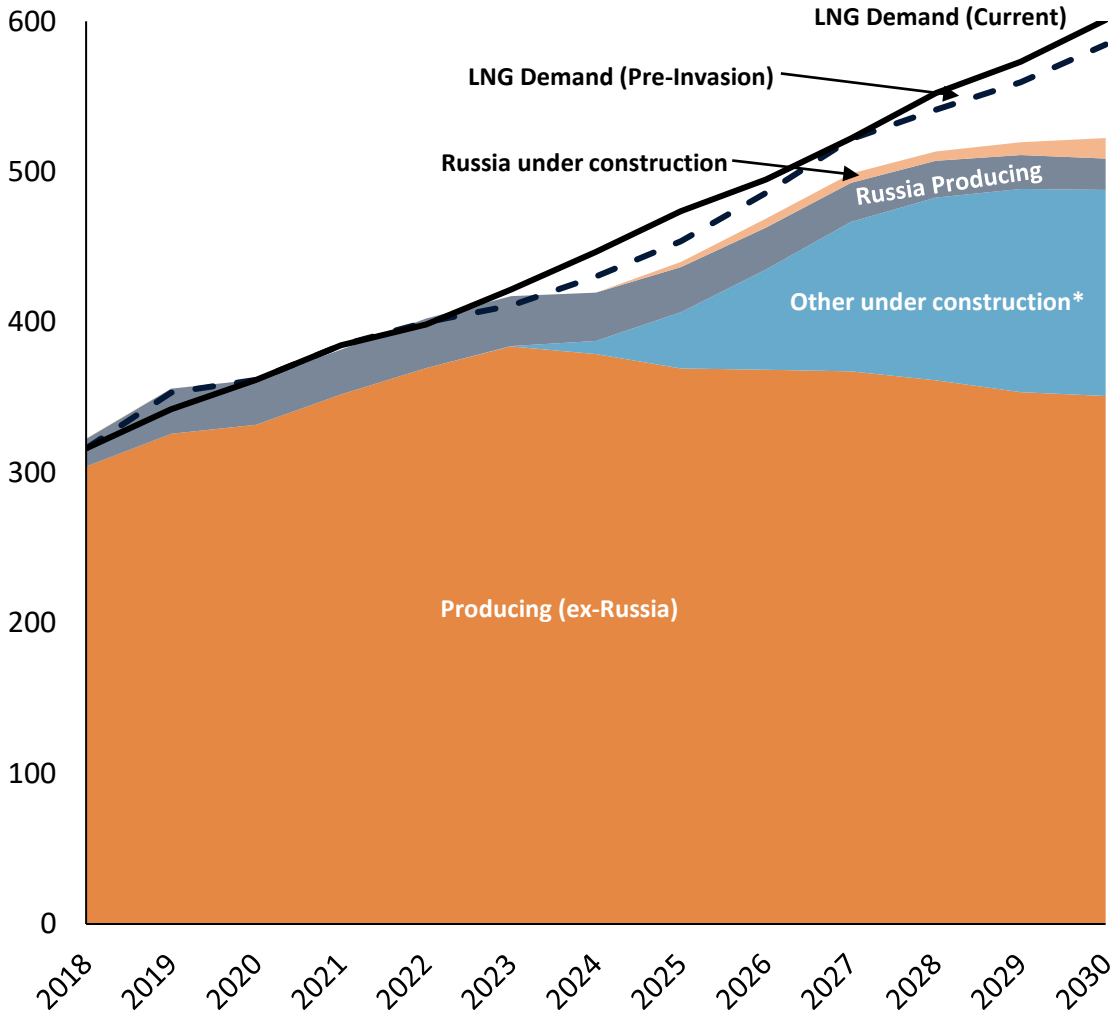
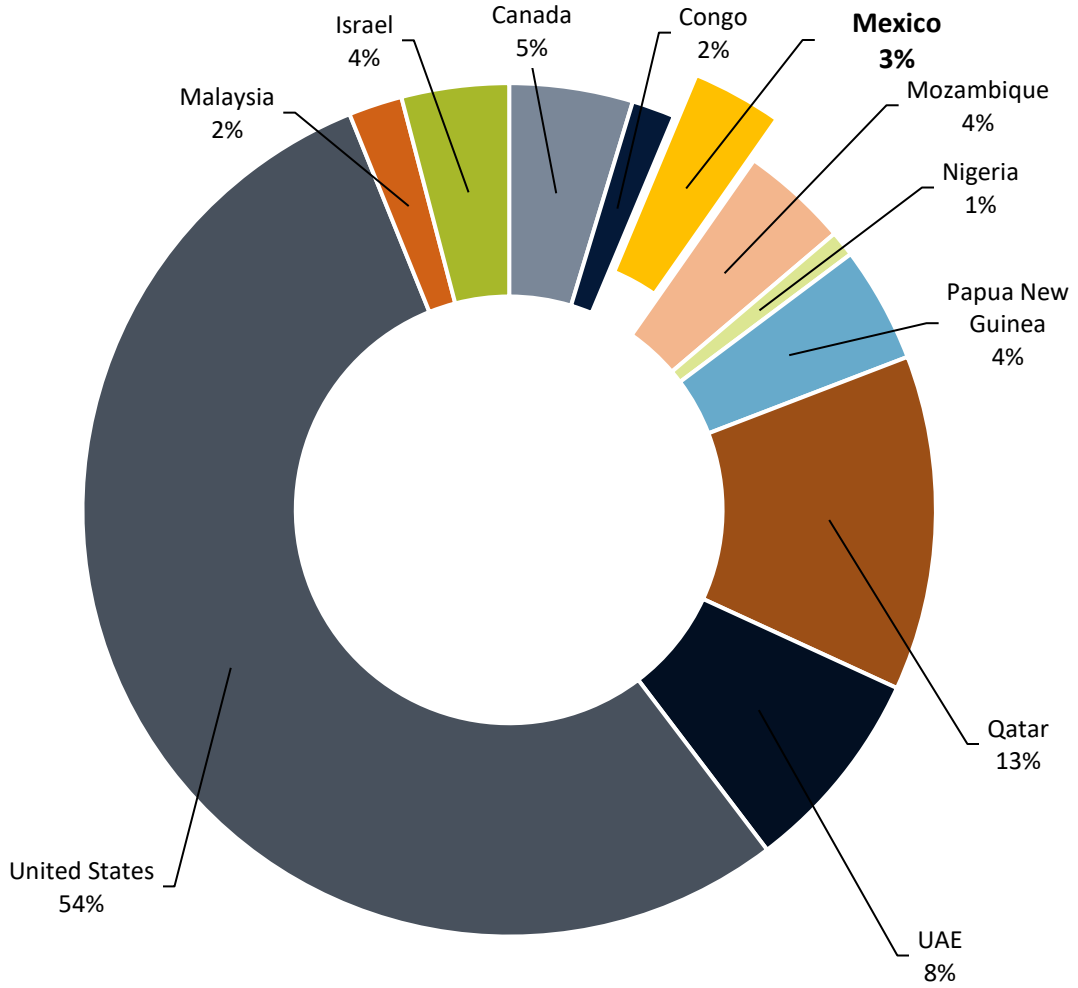
# We still need > 80 Mtpa of LNG supply by 2030

**LNG demand and supply balance**

Million tons




**Planned Liquefaction Capacity by Country**




* Includes Plaquemines LNG Phase 2 and Port Arthur LNG

Source: Rystad Energy GasMarketCube

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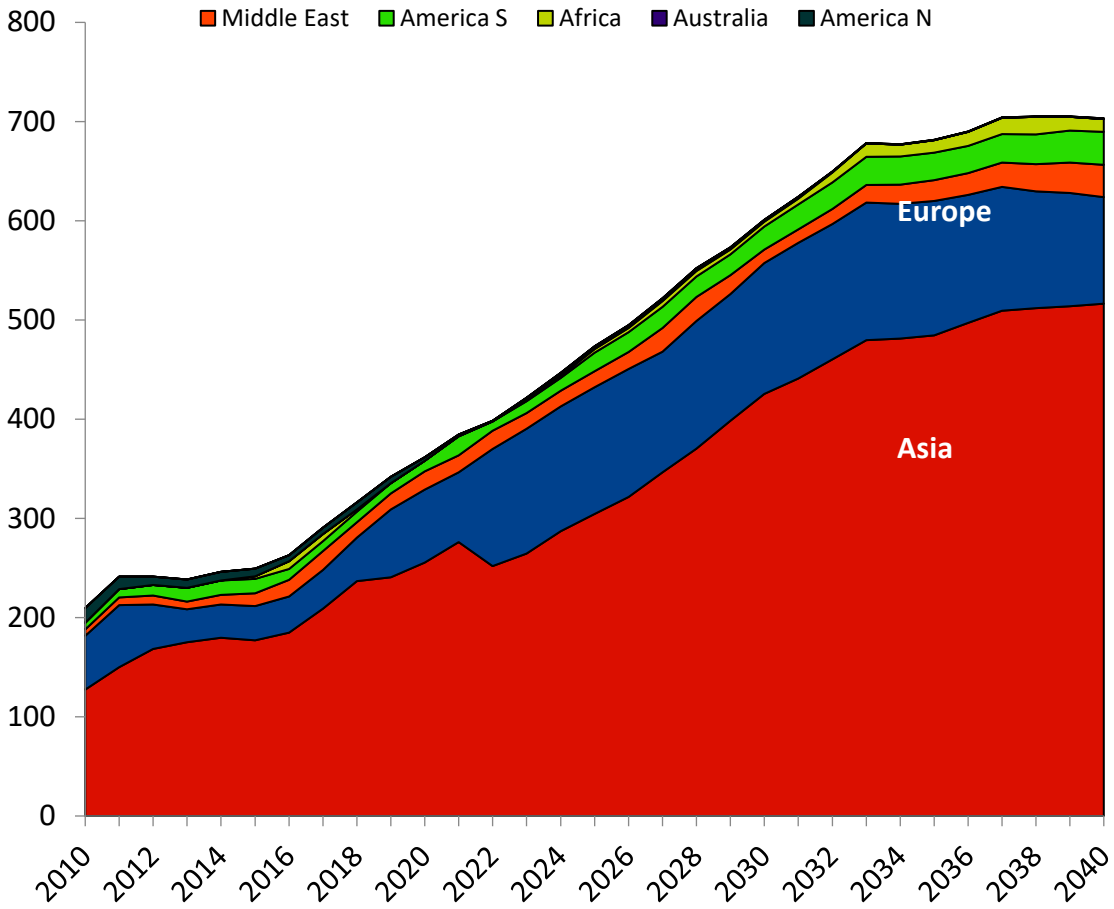
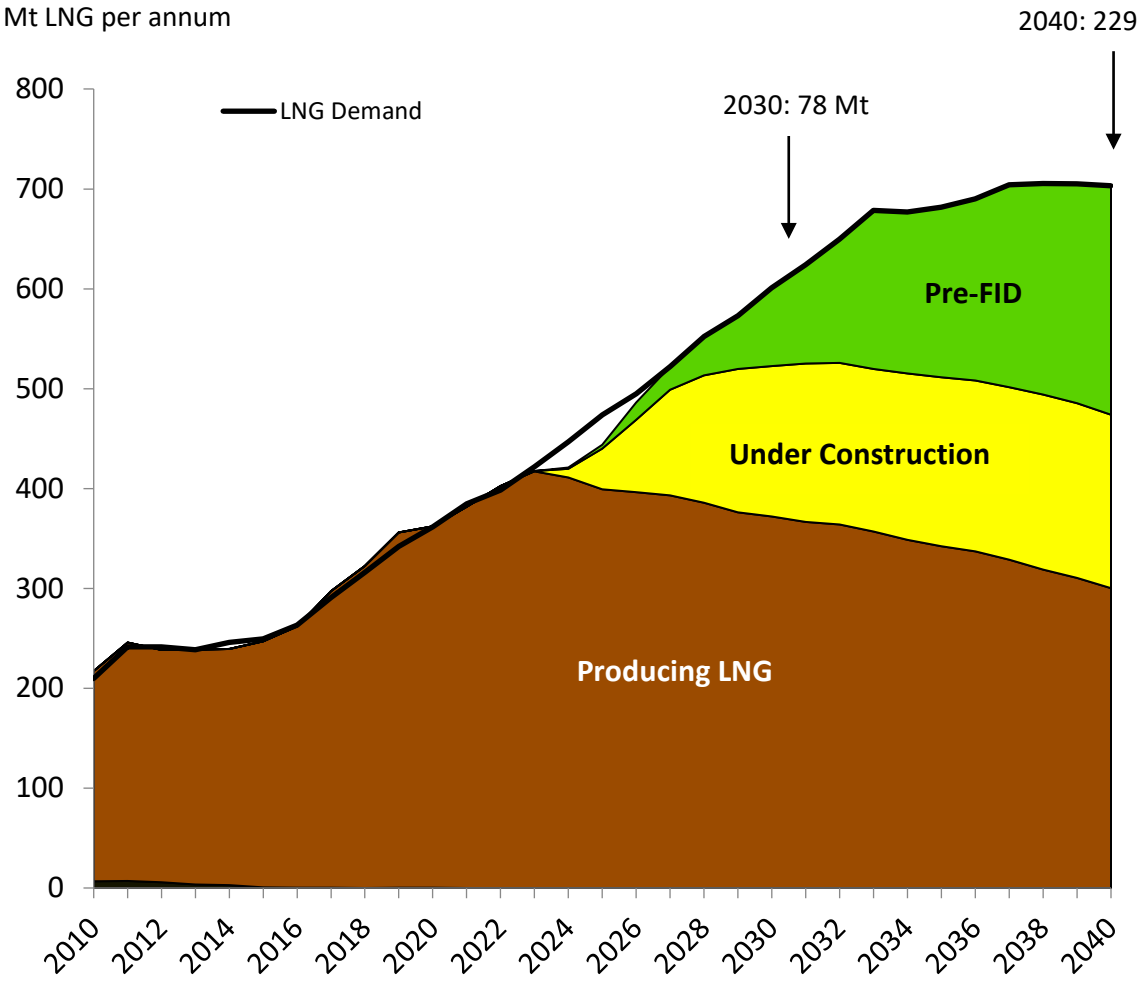
# 288 Mt of New LNG Supplies needed by 2040 to meet growing LNG Demand in Europe and Asia

**Global LNG Demand by continent**
Mt LNG per annum




**Global LNG Supply and Demand Balance**
Mt LNG per annum

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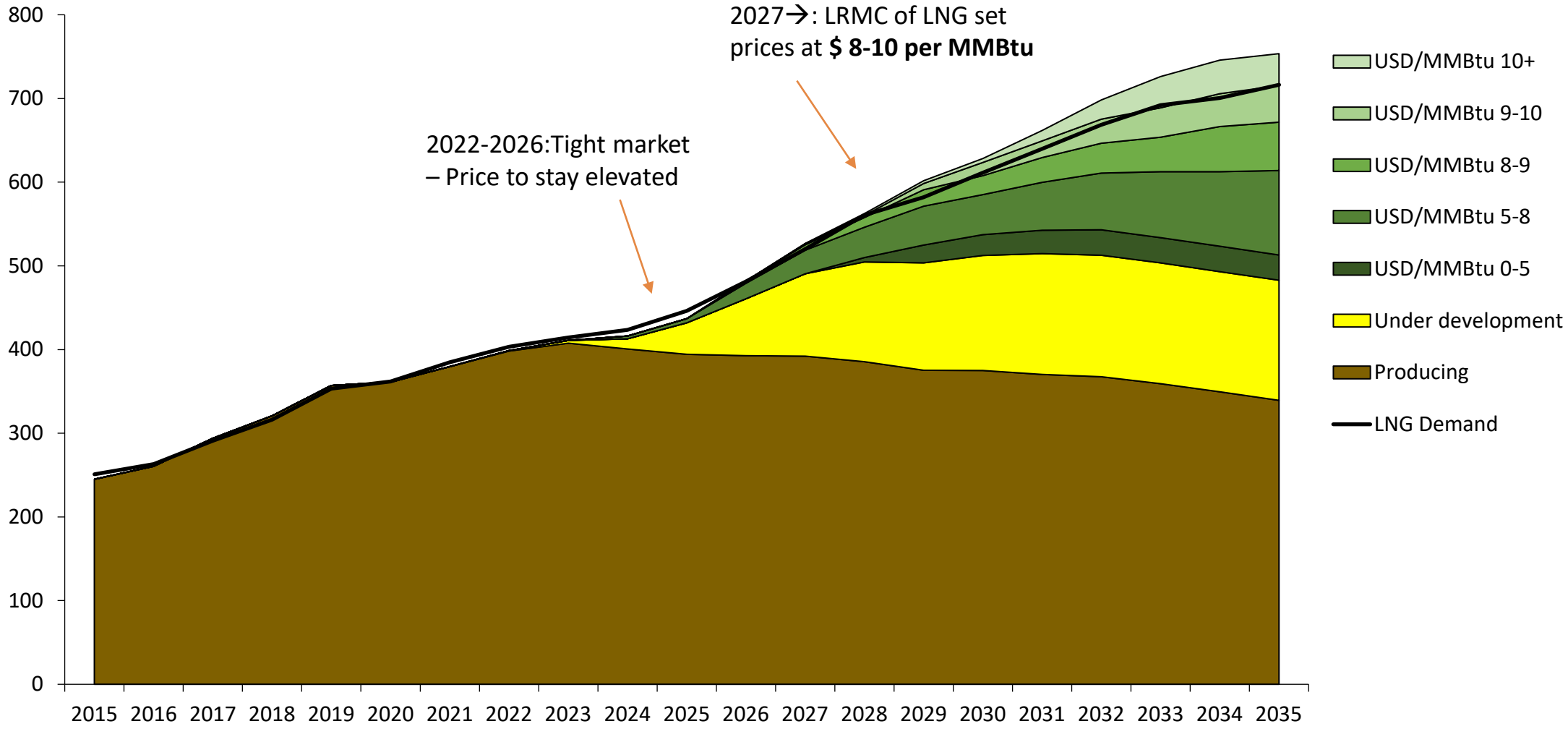
Source: Rystad Energy GasMarketCube

# The LNG market will remain tight while waiting for new pre-FID projects to move forward

**LNG demand and supply balance**
Million tonnes




Source: Rystad Energy GasMarketCube

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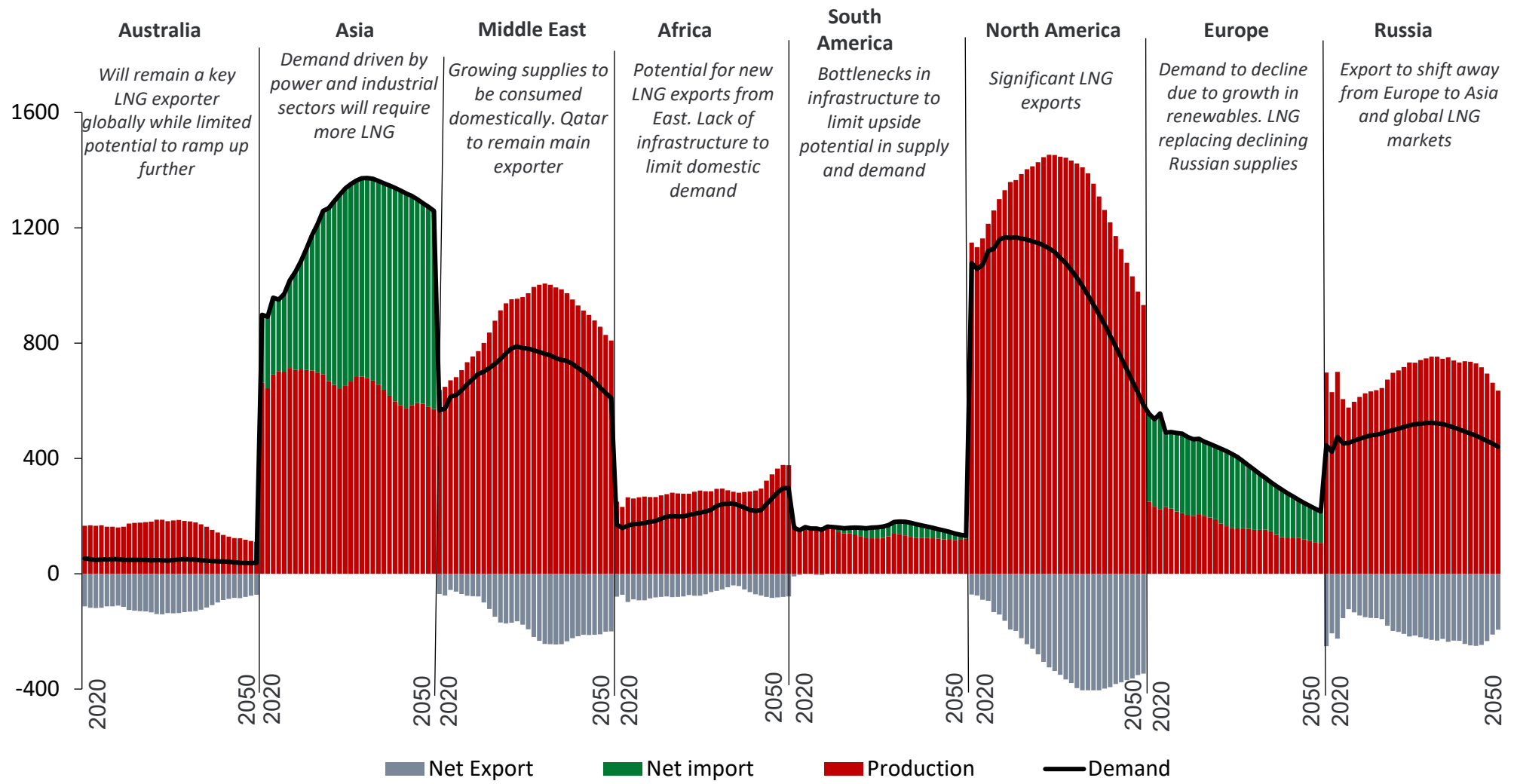
# Longer distances between supply and demand of natural gas to facilitate more LNG trade

**Supply and demand of natural gas by continent**
Billion cubic meters




Source: Rystad Energy GasMarketCube

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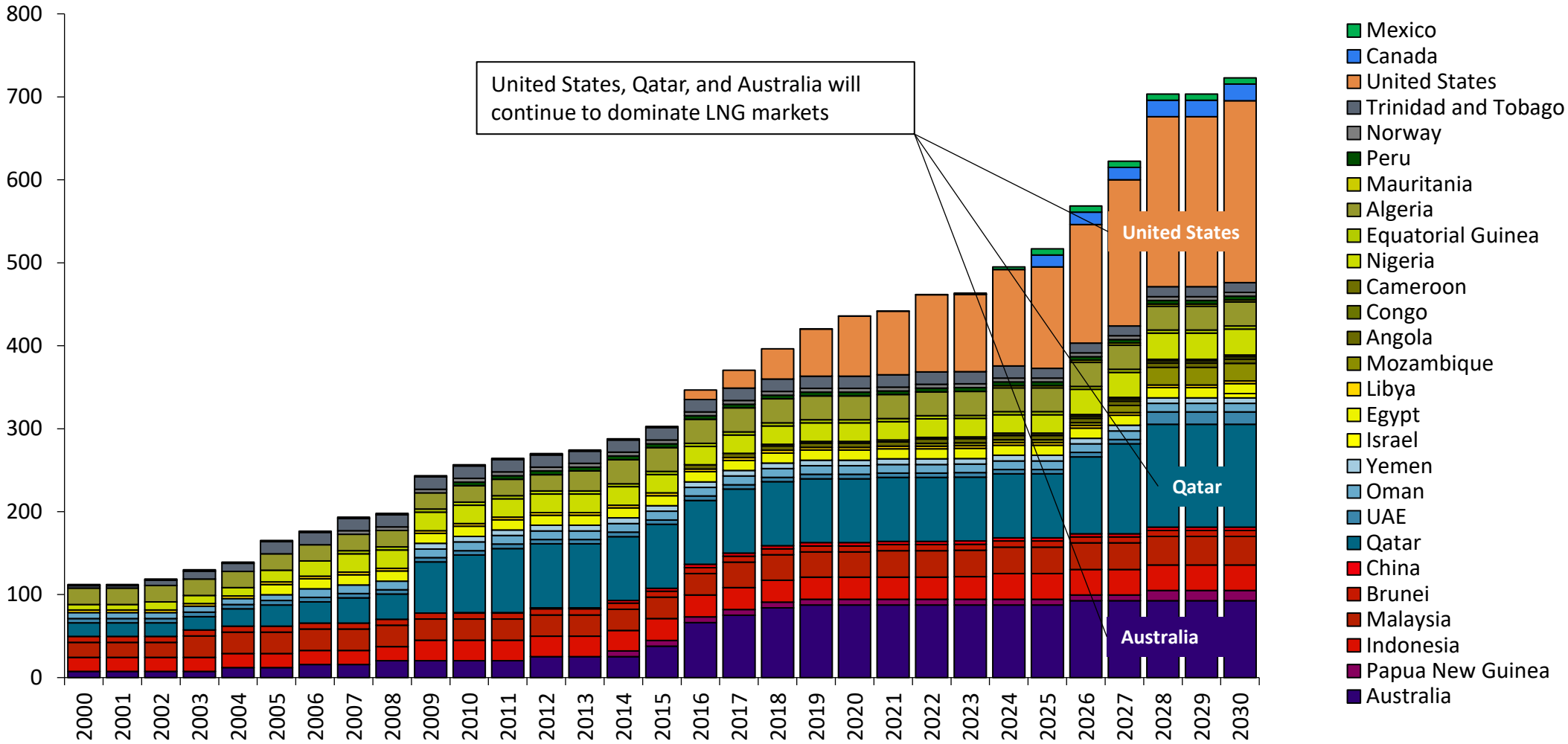
# Long-term liquefaction outlook revised higher amid new demand from Europe

**Global Liquefaction Capacity Outlook**

Million tons per annum




*Includes all operational, under construction and planned projects

Source: Rystad Energy GasMarketCube, April 2023

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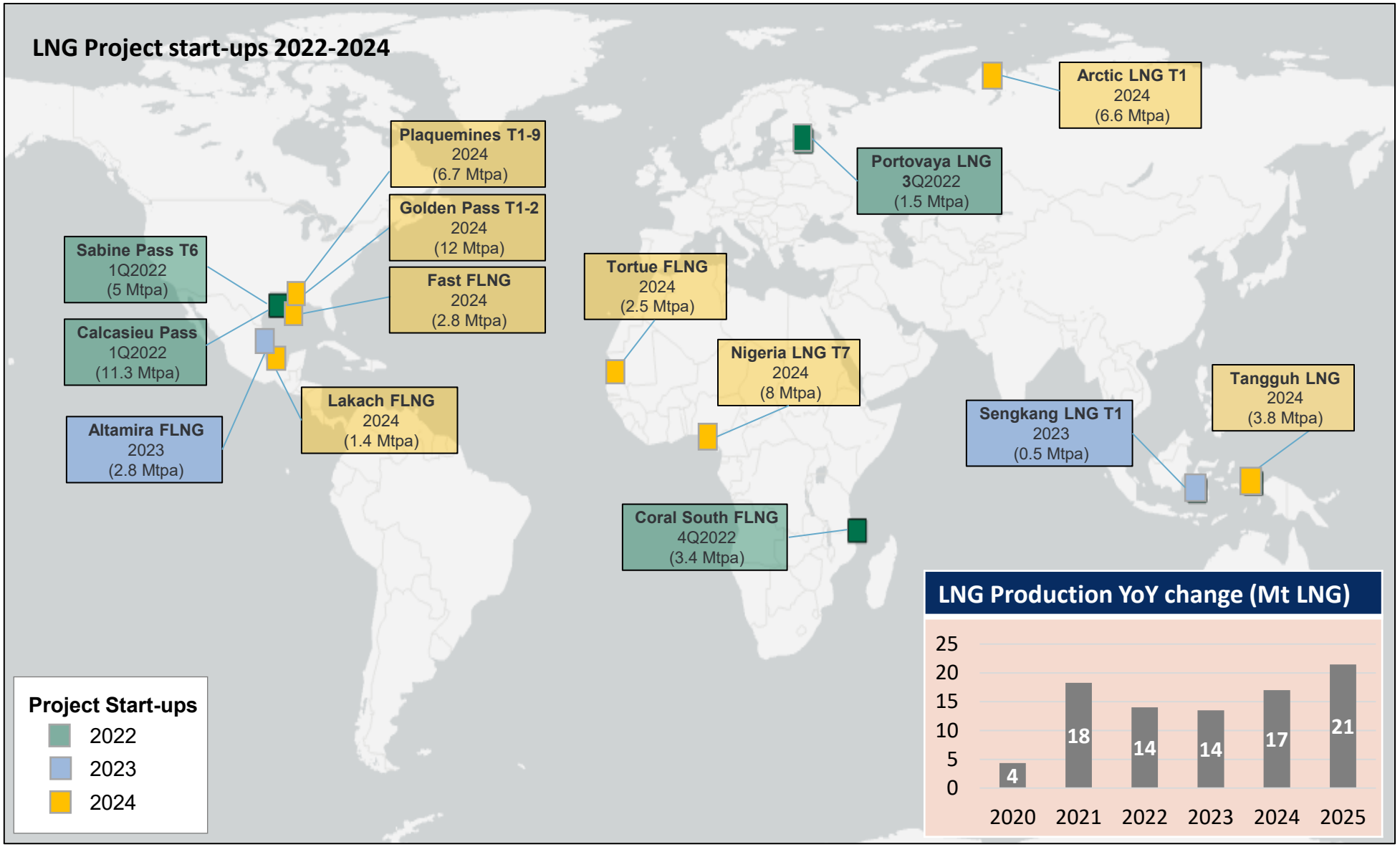
# Limited LNG Supply: Few LNG start-ups scheduled for 2023 but LNG supply expected to grow 14 Mt




Source: Rystad Energy US Gas Market Fundamentals Dashboard

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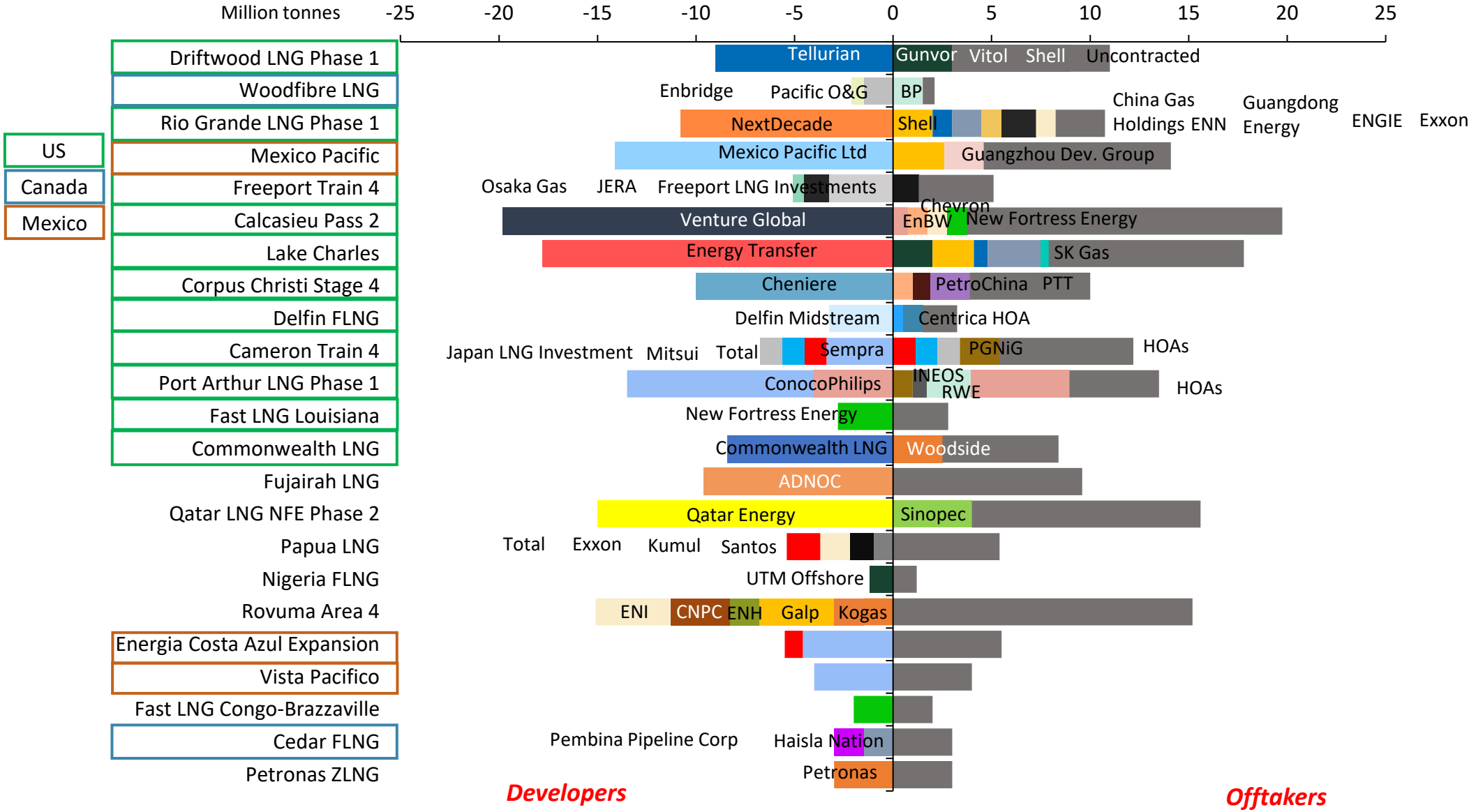
# The “Cold” Rush – North America leading the race; US LNG projects dominate contracting activity




Note: does not consider portfolio offtake to project sponsors, project list may not be exhaustive
Source: Rystad Energy GasMarketCube

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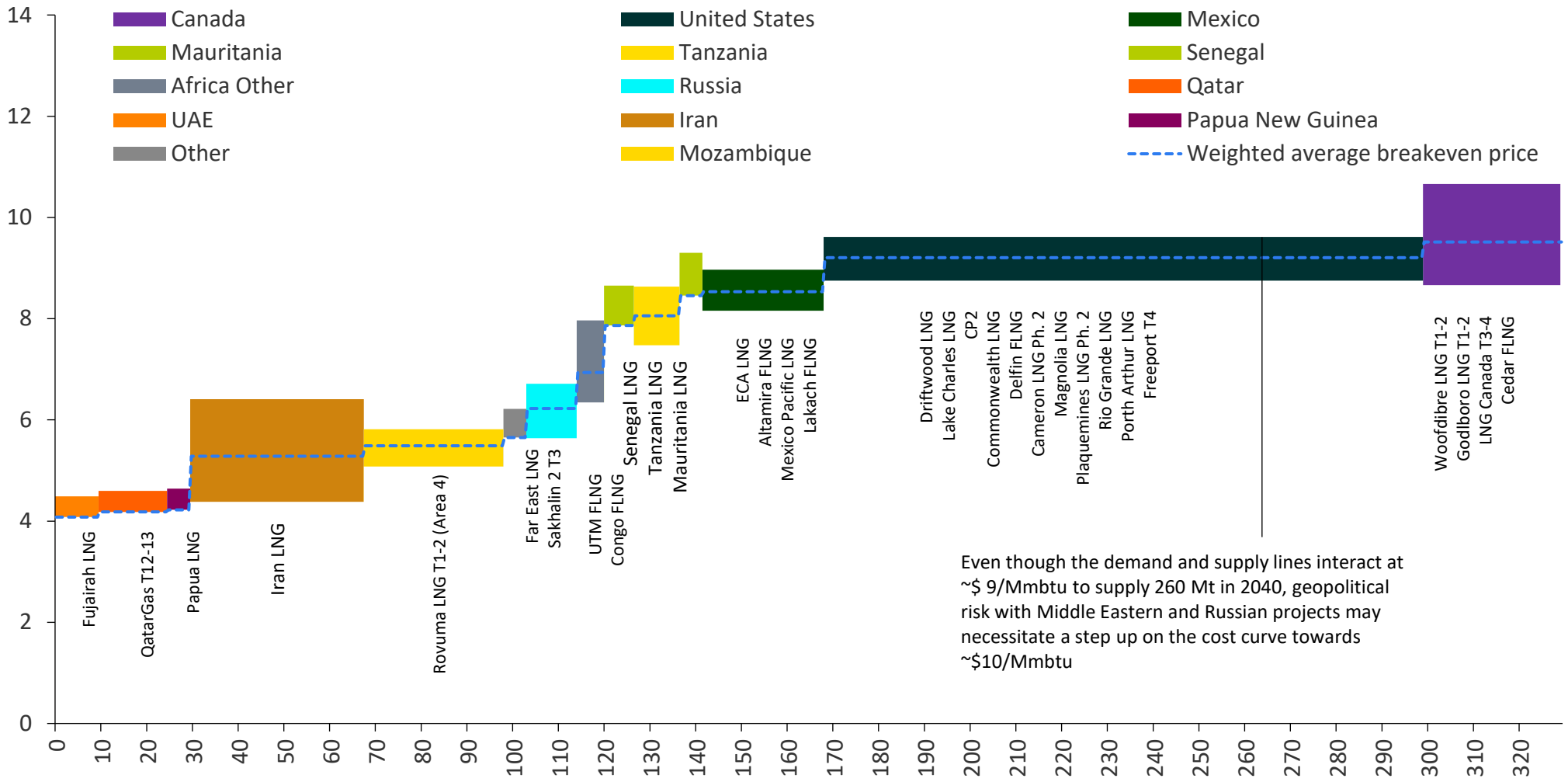
# $10/MMBtu required in Asia to supply 260 Mt of pre-FID LNG in 2040

**Volumes and breakeven prices* for unsanctioned LNG projects**, 2040 (including transport to Asia)**
Y-axis: USD per million British thermal unit (MMBtu), X-axis: million tonnes per annum (Mtpa)

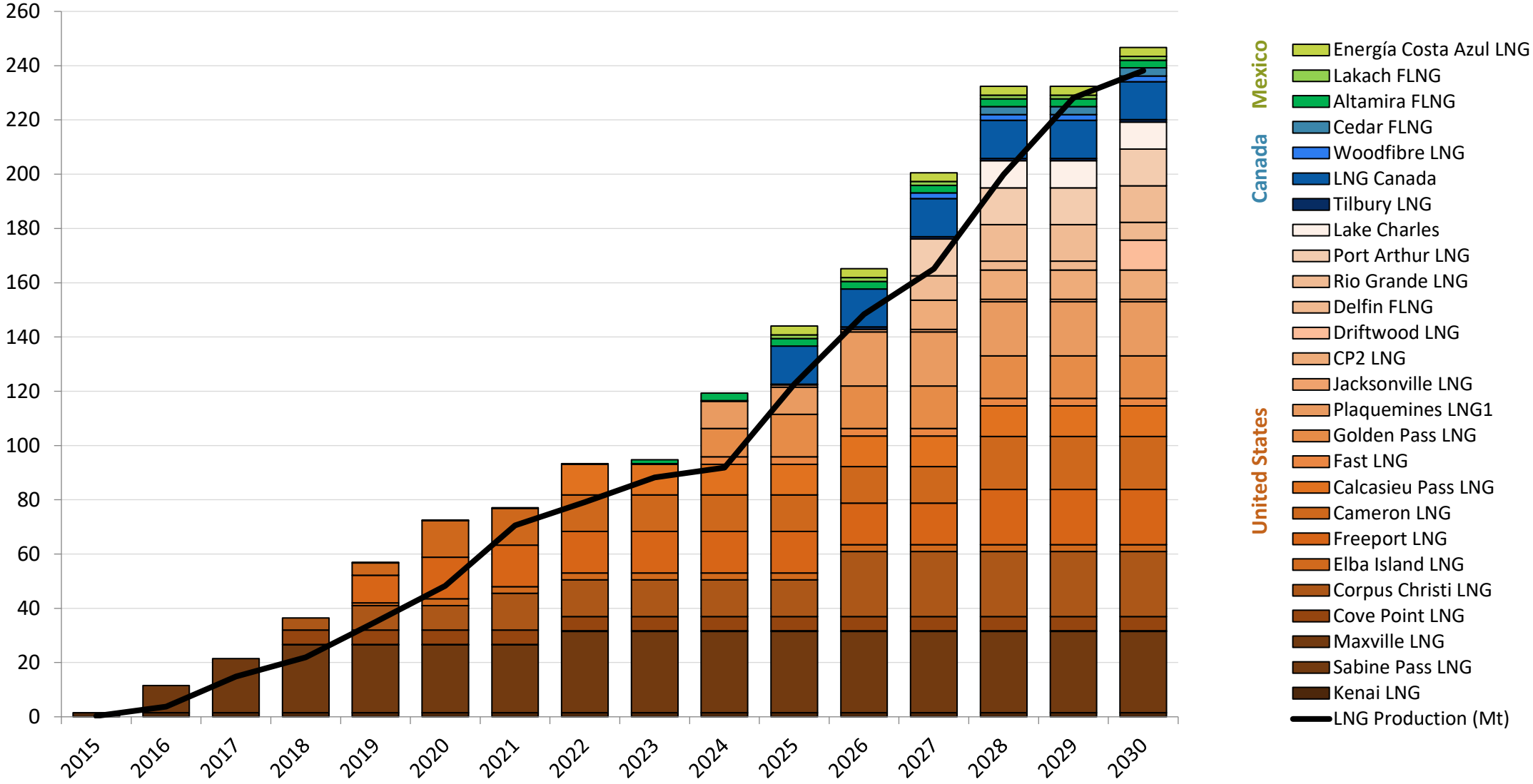



*Includes transportation cost to Tokyo. **Names of key projects are highlighted in the text boxes
Source: Rystad Energy GasMarketCube

# US Liquefaction capacity has potential to increase to 220 MT by 2030; NA to reach 245 Mt

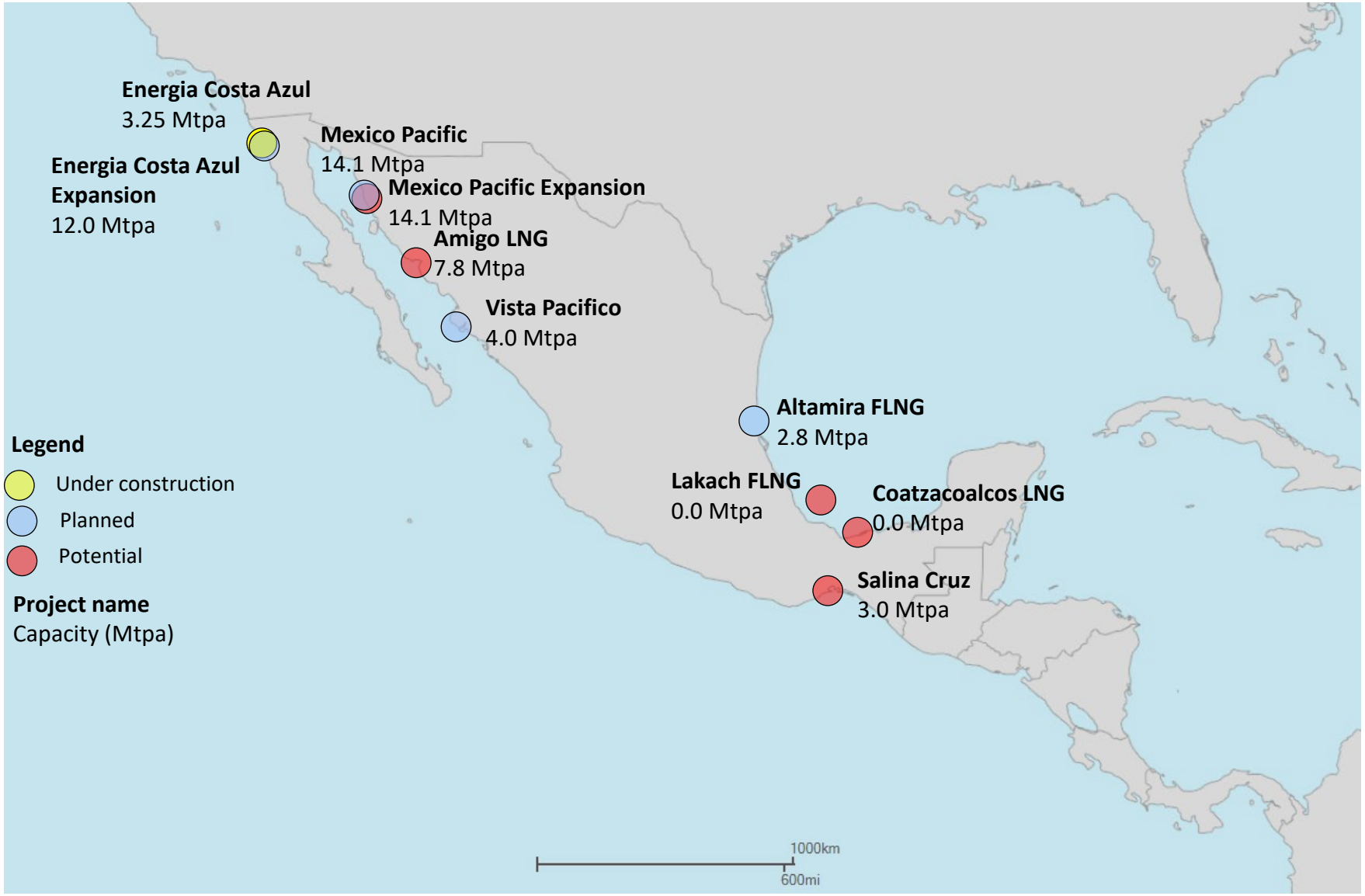
**North America LNG Capacity vs. LNG Production Outlook**

Million tons per annum




Source: Rystad Energy GasMarketCube

# Map showing location of existing, planned and potential LNG projects in Mexico




Approximate locations; project list may not be exhaustive

Sources: Rystad Energy GasMarketCube, Rystad Energy research and analysis

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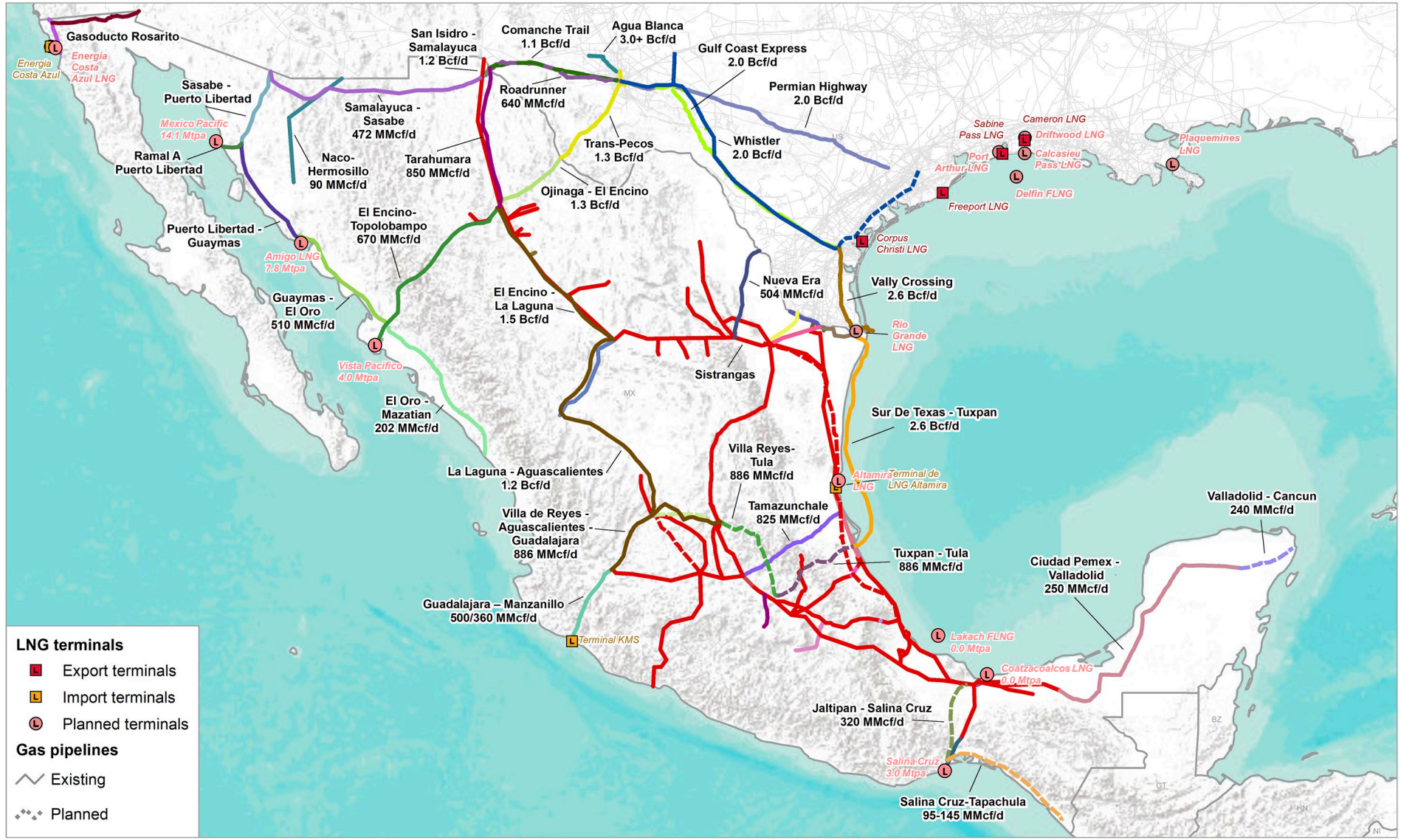
# New takeaway capacity from West Texas (Permian Basin) region can increase pipeline exports by 2.5 Bcf/d




Source: Rystad Energy research and analysis

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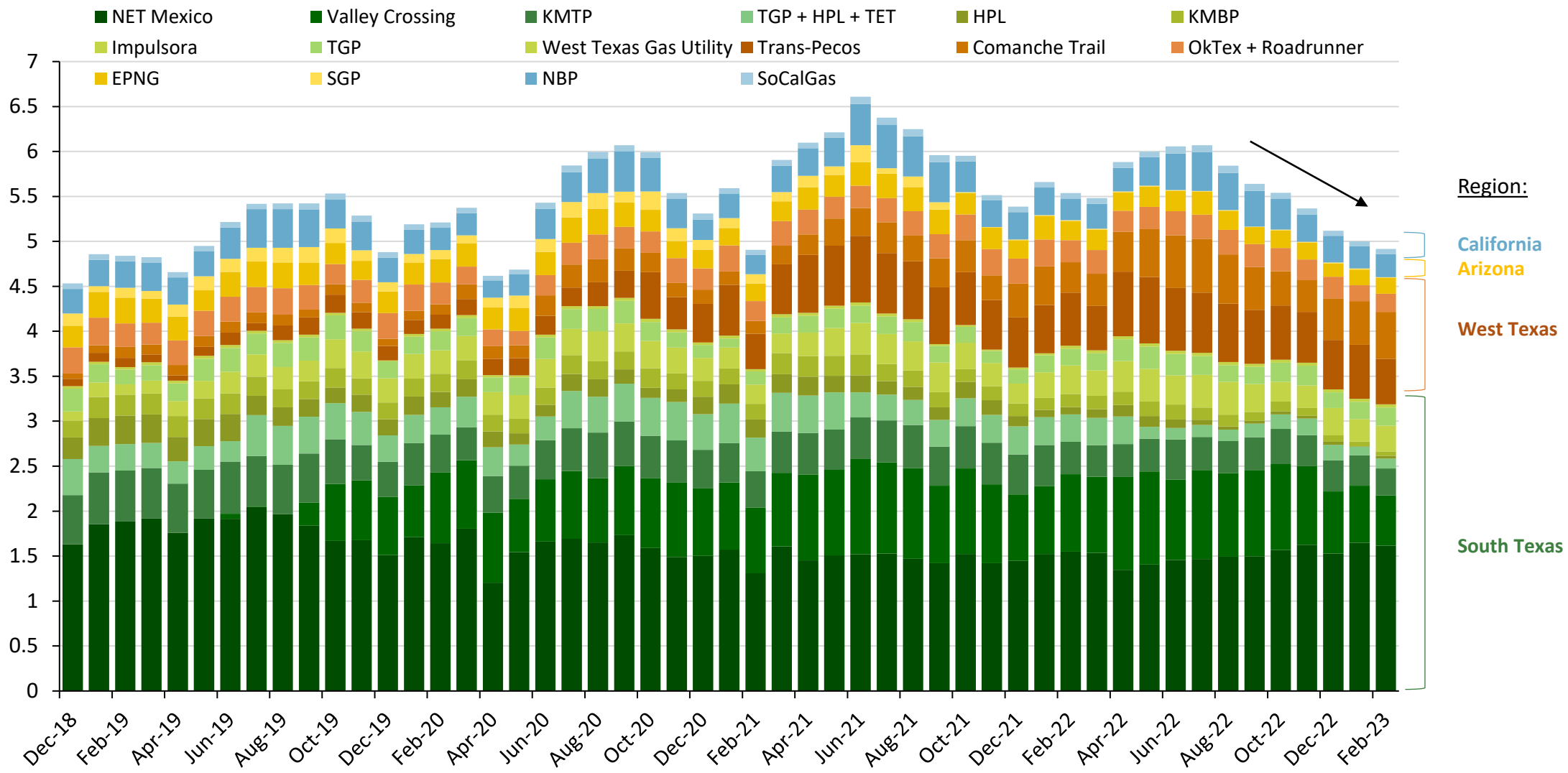
# Yet, US pipeline exports to Mexico continue to decline as Gulf Coast LNG competition picks up

**US piped exports to Mexico maintain descent**
Billion cubic feet per day




Sources: Rystad Energy US Gas Market Fundamentals Dashboard



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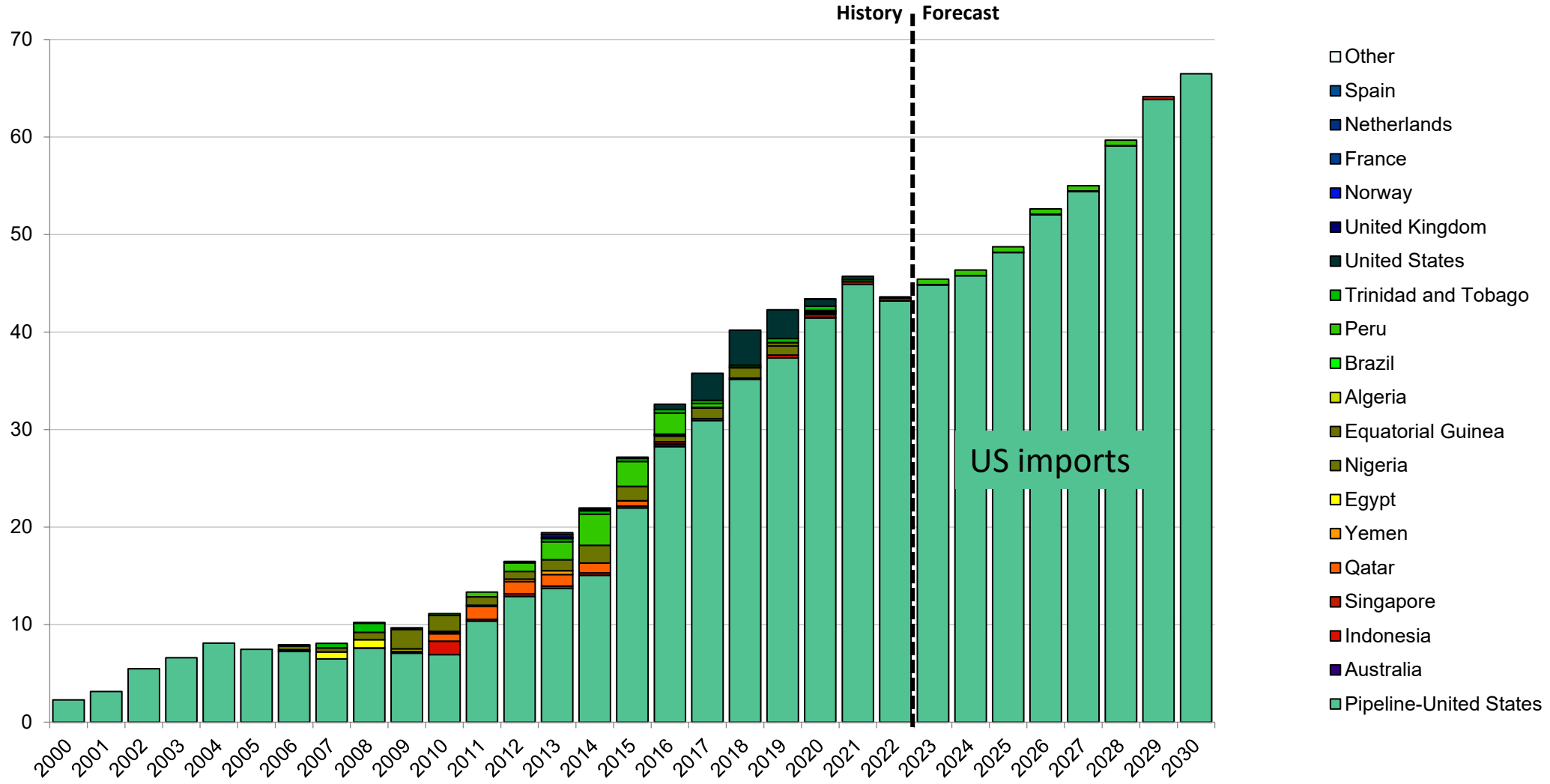
# Mexico to continue increasing pipeline imports from the US

**Mexico gas import outlook**
Million tonnes




Source: Rystad Energy GasMarketCube

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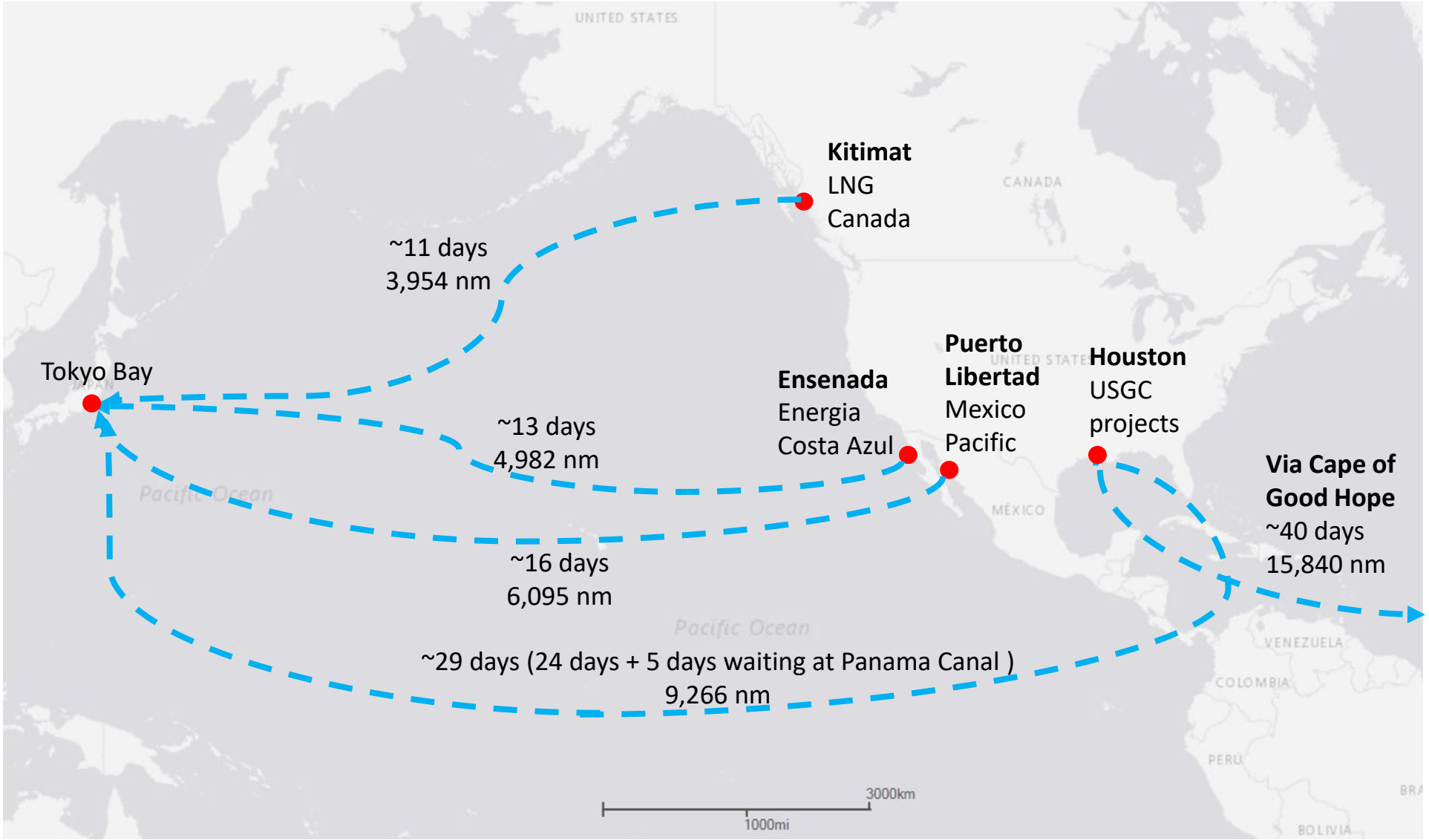
# North American LNG projects' nautical distance to Tokyo Bay*




*Locations and distances are approximate; assumes 16 knots for vessel speed. Nm: nautical miles.
Sources: Rystad Energy GasMarketCube, Rystad Energy LNG Trade Solution, sea-distances.org

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# Long-term LNG shipping cost estimates from NA projects to Tokyo Bay (real 2022)*

| Origin | Voyage time at 16 knots Days | Round trip time (RTT) Days | Charter cost USD million | Boiloff USD million | Shipping cost USD/MMBtu | VEQ for 1 Mtpa |
|---|---|---|---|---|---|---|
| USGC via Panama | 29 | 61 | 4.9 | 1.8 | 2.14 | 4 |
| USGC via Cape of Good Hope | 40 | 83 | 6.6 | 2.4 | 2.51 | 5 |
| Energia Costa Azul | 13 | 29 | 2.3 | 0.9 | 0.97 | 2 |
| Mexico Pacific | 16 | 35 | 2.8 | 1.0 | 1.14 | 2 |
| LNG Canada | 11 | 25 | 2.0 | 0.7 | 0.86 | 2 |

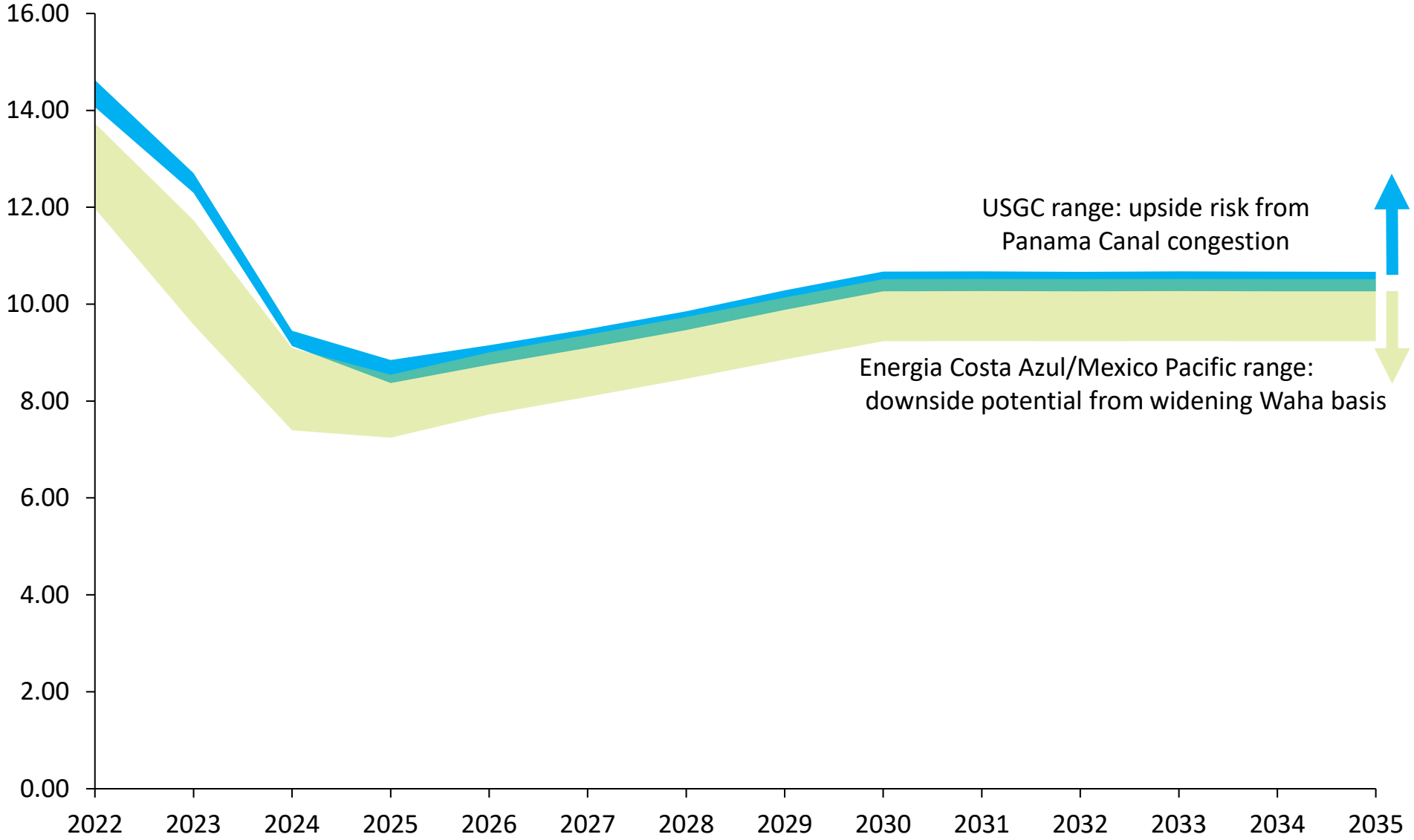
**Assumptions:**

- Charter rate: $80,000 per day for two-stroke vessel.
- Boiloff: 0.08% per day for laden and ballast voyages; valued at Rystad Energy's long-term LNG price of $9.6/MMBtu (real 2022).
- Three days at port with marine gas oil (MGO) burn; five days waiting each way at Panama Canal.
- $1 million in fees for Panama Canal and $500,000 in port costs and insurance.
- Cargo volume: 3.85 trillion British thermal units loaded.
- VEQ based on 300 days vessel availability per year

*NA: North America. USGC: US Gulf Coast. VEQ: vessel equivalent. MMBtu: million British thermal units.
Sources: Rystad Energy LNG Trade Solution, Rystad Energy research and analysis

# Landed costs to Tokyo Bay from USGC and Mexican projects

USD per MMBtu (real 2022)




Landed prices estimated at 115% Henry Hub or Waha + pipeline transportation fees + liquefaction fees+ shipping to Tokyo Bay. Top of USGC range assumes shipping via Cape of Good Hope.

Sources: Rystad Energy GasMarketCube, Rystad Energy LNG Trade Solution

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