

LNG Demand Growth in Asia

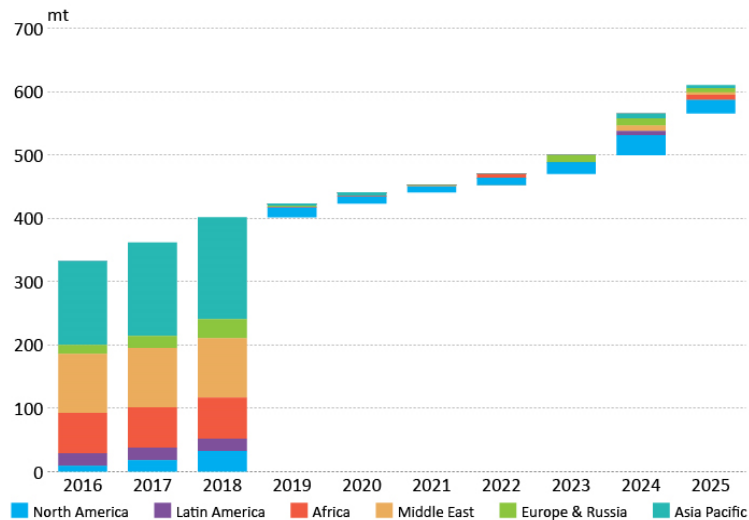


Peter Stewart, Chief Energy Analyst

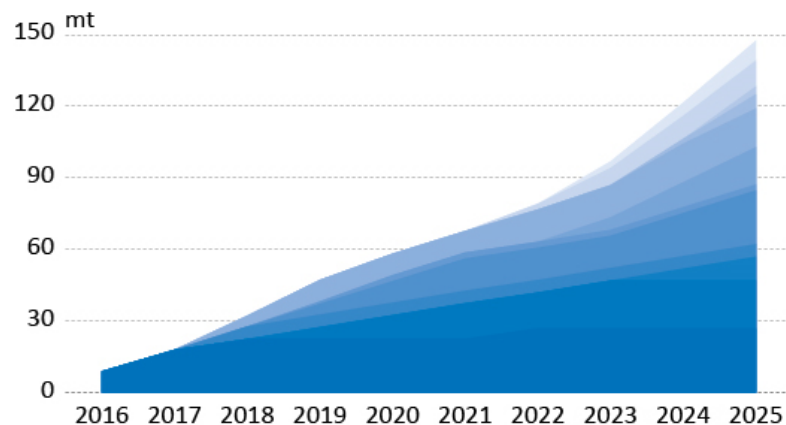
Interfax Global Energy

Liquefaction Outlook is Bullish

EXISTING LIQUEFACTION CAPACITY AND GROWTH TO 2025



US LIQUEFACTION CAPACITY



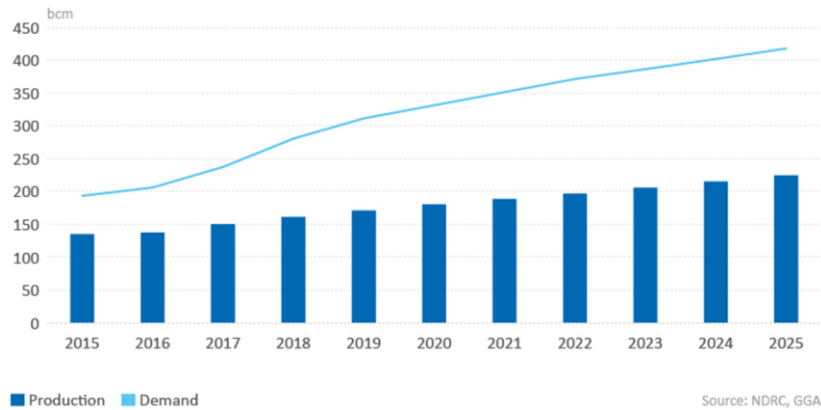
- Record FIDs expected in 2019-2020 which could potentially add as much as 200 mtpa to global liquefaction capacity by 2025
- Simple question: Will demand growth by 2025 support this level of investment?

Free Map Available !

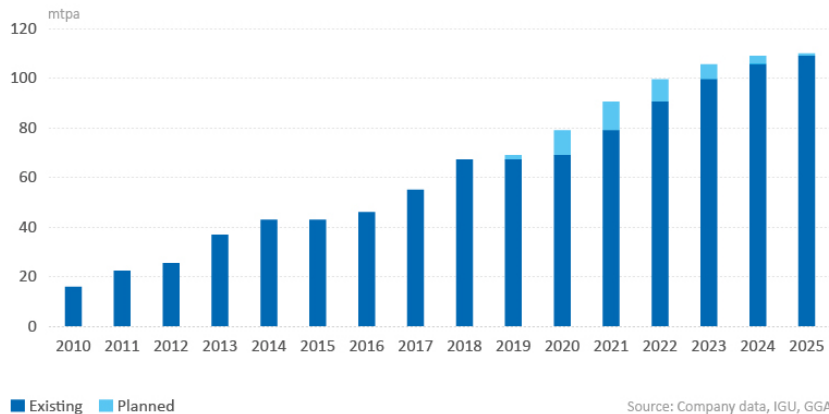


Chinese gas demand growth

CHINA GAS SUPPLY/DEMAND OUTLOOK



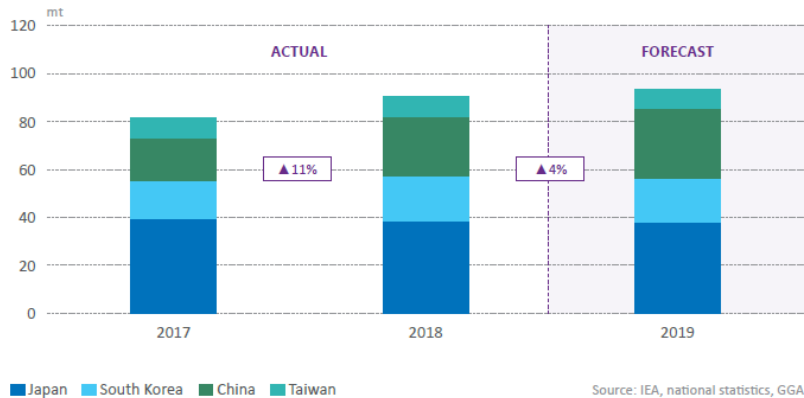
CHINA LNG CAPACITY – EXISTING AND PLANNED



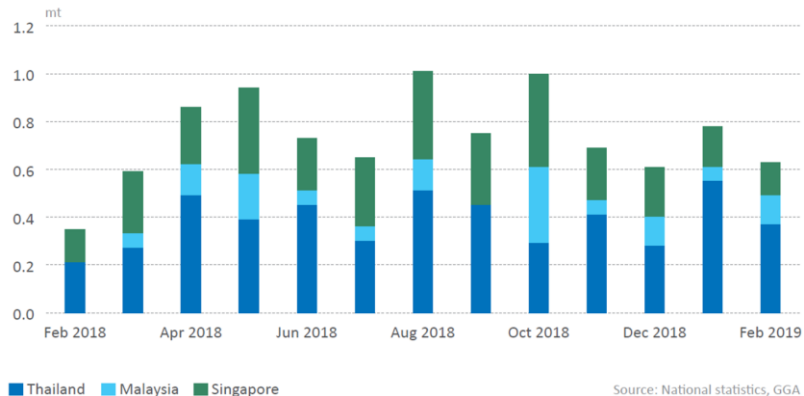
- Chinese demand growth and LNG imports slowing after a period of strong growth
- Policy-led switch from coal to gas was triggered primarily by air quality issues, not climate change
- Demand growth 18% p.a. in 2018 and looks set to slow to 11% in 2019 and average 7% 2020-2025 as 5YP targets met
- Coal will not make a significant comeback; but nor will it go away
- China is the largest investor in renewables globally even though this slowed last year

Asian Import Growth Spurt to Slow

NORTHEAST ASIA LNG IMPORTS – APRIL-SEPTEMBER



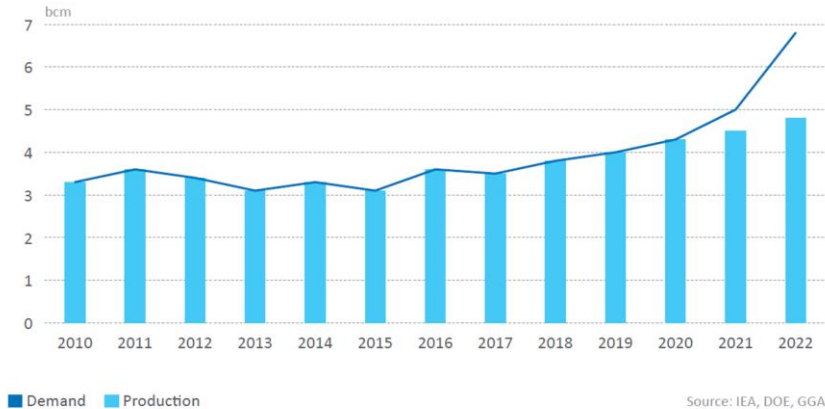
SOUTHEAST ASIA LNG IMPORTS



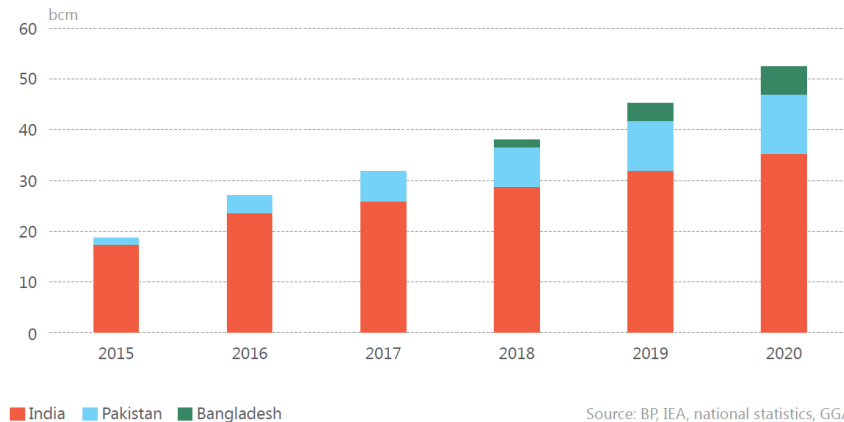
- Chinese LNG import growth still strong but below ~40% peaks of recent years. Will slow further as Russia's 38 bcma gas pipeline ramps up to full capacity by 2025
- Japanese nuclear outages for counter-terror retrofit will boost LNG demand to 2022 but imports will slow structurally after that
- South Korea, Taiwan LNG import growth to slow due to nuclear referendum and government policy favouring resurgence of nuclear
- Southeast Asia will grow but from low base.
- No sign yet of any step change in marine demand from IMO 2020

High Population Low Income Countries

Philippines
SUPPLY AND DEMAND OUTLOOK



SOUTH ASIA SUPPLY/DEMAND GAP



- We conclude that low income high population countries will be major driver of gas demand growth in Asia
- Particularly if gas-to-power demand is accompanied by growth in transport demand for gas
- Pipeline is unlikely to be a viable method for delivery of gas for most of these due to geography and political issues
- Philippines, Vietnam, Pakistan, Bangladesh and India all have ambitious plans to boost LNG
- But outcome will depend on prices staying in or around \$6-8/MMBtu band seen as “competitive” for long-term
- Structural over supply of LNG may be desirable for long-term future of market.
- Coal is always going to be waiting in wings (unless renewables costs reduced, or carbon taxes/prices implemented).

Asian Public Opinion is Changing



Political change
tomorrow'



- Asia's environmental agenda has been driven in the past by air quality not climate change
- But this is changing – climate protests in India, Australia, New Zealand, SIDs
- Nascent climate movements in Taiwan, Pakistan, Japan South Korea
- Many not large-scale (in Japan, <100 protesters) but XR was only formed in October 2018, and is now going global
- Gas industry needs to wake up to the scale of this shift. No longer isolated to a few radical environmentalists
- Marketing the image of gas-with-renewables as a decarbonisation strategy has largely failed in Europe
- The recurrent promise of global carbon pricing and/or large-scale CCS/CCU to mitigate emissions impact is wearing thin

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Conclusions

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Weekly insight and analysis on projects in emerging gas markets

Natural Gas Insight

Italy plans gas investment to switch from coal

Silvia Favasuli / Europe specialist

Interfax Global Gas Analytics
Issue 77
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interfaxenergy.com/analytcs

Research Note
Issue 13 / April 2019

The key issue
Enel and Edison, Italy's two largest power producers, are looking to boost their gas-fired generation capacity as the country aims to phase out coal by 2025.

Interfax analysis
Italy's decision to phase out its coal-fired generation capacity by 2025 is likely to trigger an increase in power sector gas demand of 3.0-4.5 billion cubic metres per year.

The coal phase-out, together with a forecast increase in electricity consumption, means Italy will need 5-7 additional 600 MW combined gas turbine (CGT) plants in the next 6-7 years. With each plant consuming about 1 bcm/y at capacity, the expected 70% utilisation rate would result in a plant consuming about 700 million metres per year (MMcm/y) of gas.

Edison – part of French utility Edf – is thinking of building two new 800 MW CGT plants, a source close to the company said. The exact location of the plants have yet to be confirmed, one will be in the north of the coast while the other will be in the south.

Argentina's perilous
Abhishek Kumar
Head of analytics

Policy & Regulation • Europe
Gas industry holds breath on EU tax revision

LNG • Africa
Eq. Guinea eyes new feedstock for Punta Europa

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Qatar's LNG market strategy
Qatar will remain a reliable LNG supplier and will defend its share of the LNG export market.

Germany's coal phase-out
There are potential opportunities for gas – but challenges remain.

Asia Pacific
LNG import growth in China will ease in 2019, with implications for the region.

Europe & Russia
Above-average temperature will continue to hit occasional demand in the region.

Middle East & Africa
Egypt is targeting seven key projects to boost domestic gas production even further.

Americas
The Golden Pass project will see an influx of US LNG into Europe.



- GIIGNL 2019 report suggests global LNG imports in 2018 stood at 313.8 mtpa
- Even with 4% annual growth in demand out to 2025, growth in global LNG market will only be around 100 mt
- Our map shows credible projects that could add as much as 200 mtpa to capacity by 2025
- Structurally, this suggests steady or even lower slopes -- especially if crude prices strengthen
- Tolling-based and modular projects can act as fine-tuning mechanism to match supply and demand
- Underutilised capacity offers suppliers flexibility to manage the market

Thank you! Questions?



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