



# Shell LNG Outlook 2019

## OVERVIEW

- Growing recognition of the role of liquefied natural gas (LNG) as the world tackles poor air quality and climate change
- Asian LNG imports exceed expectations again in 2018, absorbing continued supply growth
- Near-term supply growth expected to be absorbed by Europe and Asia. Continued need for investment in supply to meet long-term demand growth

## Growing recognition of the role of LNG as the world tackles poor air quality and climate change

Demand for energy will continue to rise to meet the lighting, heating, cooling and transport needs of a growing global population. At the same time, there is an increasing need to significantly reduce carbon emissions by changing the way energy is produced, delivered and used.

The Paris Agreement has set out a political framework for reducing emissions. And, while countries are concerned with how to deliver their Nationally Determined Contributions (NDCs), they are also concerned with better air quality for their increasingly urban populations.

Projections to 2035 estimate that more than 70% of energy demand growth will be met by gas and renewables combined, with gas supplying more than 40% of the additional demand. China, India and other major importers are putting policies in place which drive preference for gas over coal.

Gas emits between 45% and 55% lower greenhouse gas emissions than coal when used to generate electricity. Coal to gas switching has led to a 78% improvement in Beijing's winter air quality over the last five years. Blue skies are not the only benefit of the measures China has taken to improve air quality in Beijing. There has been a calculated annual reduction of 176 million tonnes of carbon dioxide (CO<sub>2</sub>) in Beijing and surrounding areas.

LNG continues to be the fastest-growing gas supply source, with an expected compound annual growth rate of 4% a year between now and 2035. We expect growth in LNG demand to continue around the world, led by Asia and Europe.

LNG provides flexible supply to meet the seasonal and short-term demand requirements of an importer, providing greater security of supply. It is also a

Coal-to-gas switching leads to

# 78%

improvement in Beijing winter air quality in last five years



reliable partner for renewables because it can quickly compensate for dips in solar or wind power supply and rapidly respond to sudden increases in demand.

The number of LNG importing countries continues to increase, reaching 42 in 2018, with Panama and Bangladesh turning to LNG imports for reliable, affordable and cleaner energy.

The use of LNG in transport is growing, especially in the heavy-duty transport sector. Europe is predicted to have over

280,000 LNG trucks on its roads by 2030. China already has over 300,000 LNG-fuelled trucks and bus on the road.

## Asian LNG imports exceed expectations again in 2018, absorbing continued supply growth

A look back at the 2018 global LNG market shows continuing strength with delivered volumes reaching 319 million tonnes – enough to power around 643 million homes.



LNG trade increased by 27 million tonnes – growth supported by 70% of the LNG capacity additions sanctioned between 2011 and 2015 coming online. Japan remains the world’s largest LNG importer, followed by China, which eclipsed South Korea for the second year in a row.

### Focus on China:

- China’s strong demand for energy continues with gas the fastest-growing fuel source, accounting for more than 40 billion cubic metres (BCM) of growth
- China has become the world’s largest gas importer, with LNG imports doubling over the last two years
- This demand has been driven by industrial use (+44%) and residential and commercial use (+38%)
- More than half of this gas demand growth was met by LNG

India is also using LNG to meet its increasing needs for a secure energy supply. Domestic gas production dropped and the resulting increase in demand for imported gas was met by LNG (up 10% year on year). LNG’s share of India’s total gas supply mix exceeded 50% for the first time in 2018.

Marine LNG also continues to grow strongly. There are currently 143 LNG fuelled ships in operation and 135 on order. 2018 saw a number of

Economic and environmental benefits making LNG an attractive road transport option



6.7 million tonnes of LNG used on China’s roads in 2018



Bunkering of world’s first LNG-fuelled oil tanker and cruise ship

announcements from across the marine sector supporting new LNG ship building and infrastructure development.

Encouragingly for the long-term health of the global LNG market, the average length of contracts signed more than doubled from around six years in 2017 to about 13 years in 2018. Meanwhile, the total contracted volume more than doubled to almost 600 million tonnes in 2018. There were more than 1,400 spot cargoes delivered in 2018.



1400+ spot cargo deliveries in 2018

## Near term supply growth expected to be absorbed by Europe and Asia – continued need for investment in supply to meet long-term demand growth

Looking out to 2019, 35 million tonnes of additional LNG supply is expected. This supply growth is expected to be absorbed by both Europe and Asia.

2018 saw final investment decisions on 21 million tonnes of new capacity, compared to a total of 7 million tonnes

over the last two years, combined. A rebound in new long-term LNG contracting in 2018 could revive investment in liquefaction projects. There is potential for a supply shortage developing in the mid-2020s, unless more LNG production project commitments are made soon

35

million tonnes additional supply expected in 2019 – Europe and Asia expected to absorb supply growth

