



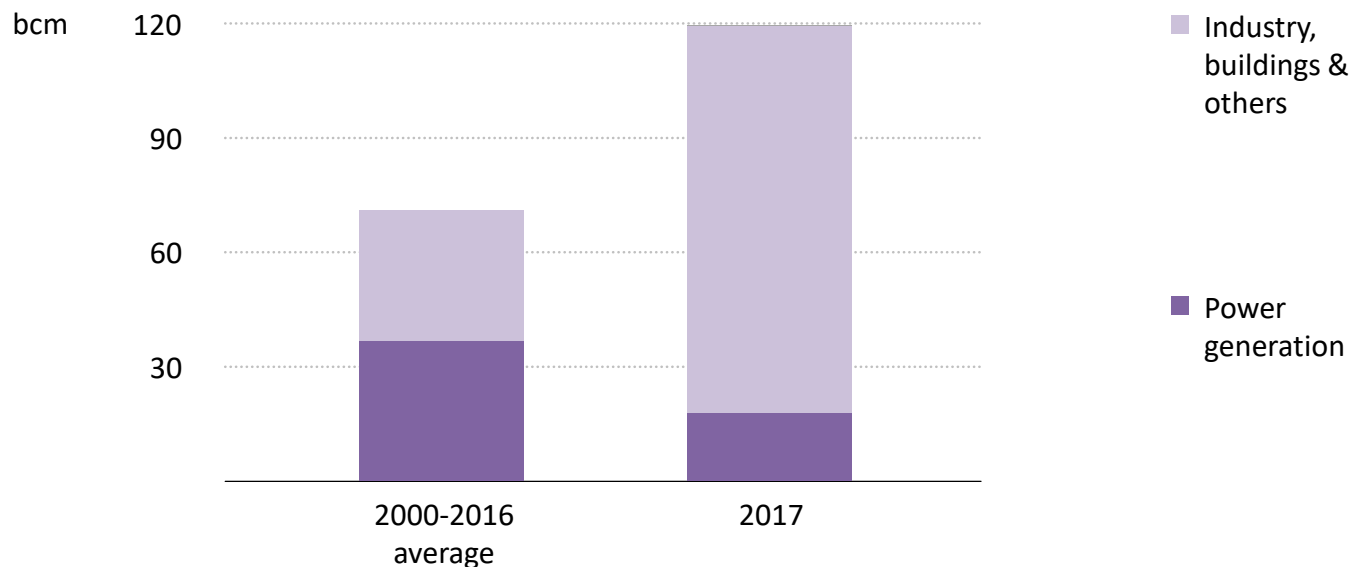
Gas Market Report 2018

Peter Fraser, Head of Gas, Coal and Power Markets Division
Oslo, 14 September 2018



- Gas growth is in the fast lane, thanks to its flexibility & ability to ease environmental problems
- Global gas markets are being re-shaped by three major structural shifts
 - *China becoming the world's leading importer*
 - *2nd boom in US gas production going global via LNG*
 - *Industry displacing power generation as the leading growth sector*
- The gas industry's future remains bright, but it is not without challenges
 - *Gas price competitiveness & market reforms in emerging markets*
 - *Curbing methane leaks along the value chain*

Growth in global natural gas demand

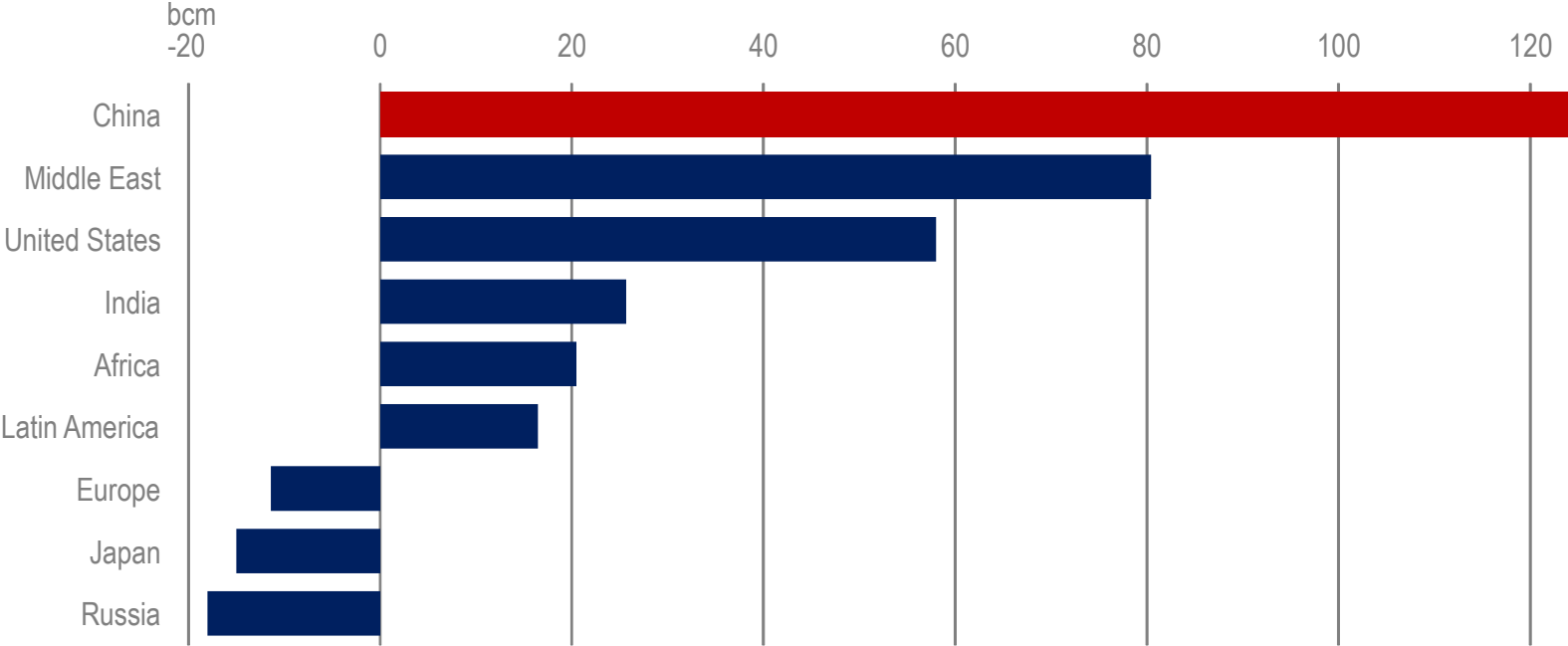


**Industry & buildings have taken over from the power sector as the drivers of gas demand;
China accounted for 30% of the increase in global gas demand in 2017**

China leads world gas consumption growth

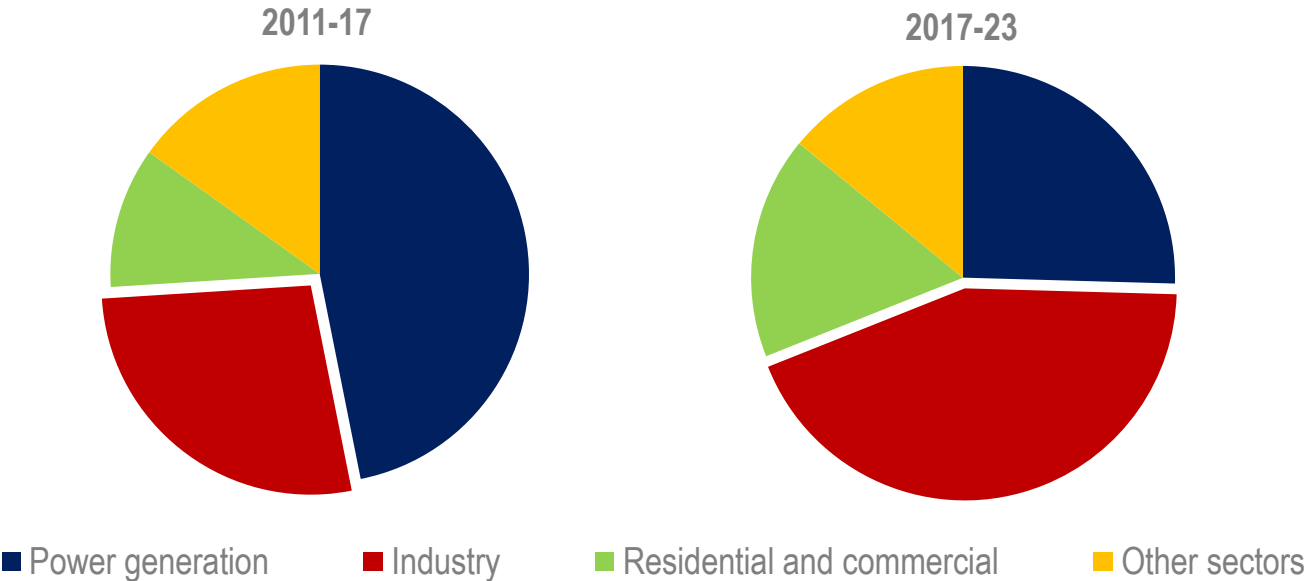


World natural gas consumption growth for selected countries and regions, 2017-23



Global consumption passes the 4 tcm mark by 2022
China to account for almost 40% of growth driven by clean air policy target

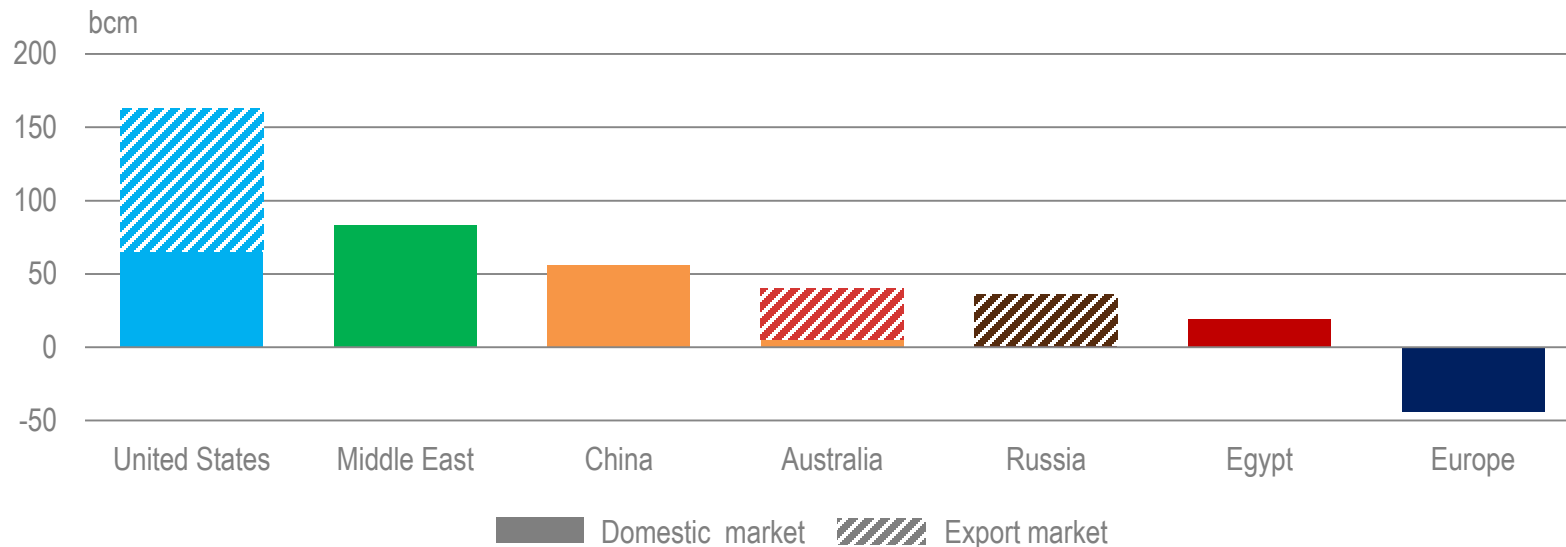
Natural gas consumption growth by sector (%)



Industry accounts for over 40% of the growth in global gas demand to 2023, mainly on greater use for petrochemicals and fertilizers

The United States leads global supply growth

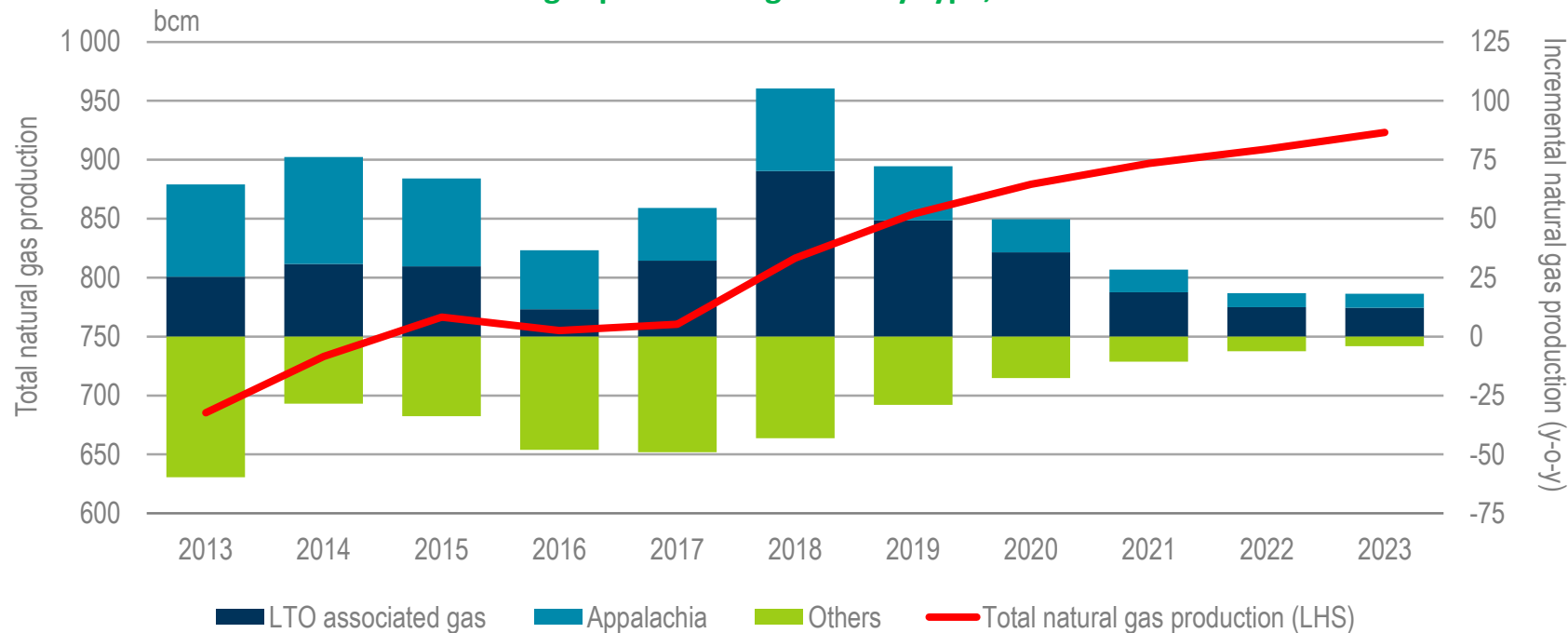
Natural gas production growth for selected countries and regions, 2017-23



The United States accounts for almost 45% of natural gas production growth and 75% of LNG exports growth

US production growth is driven by associated gas

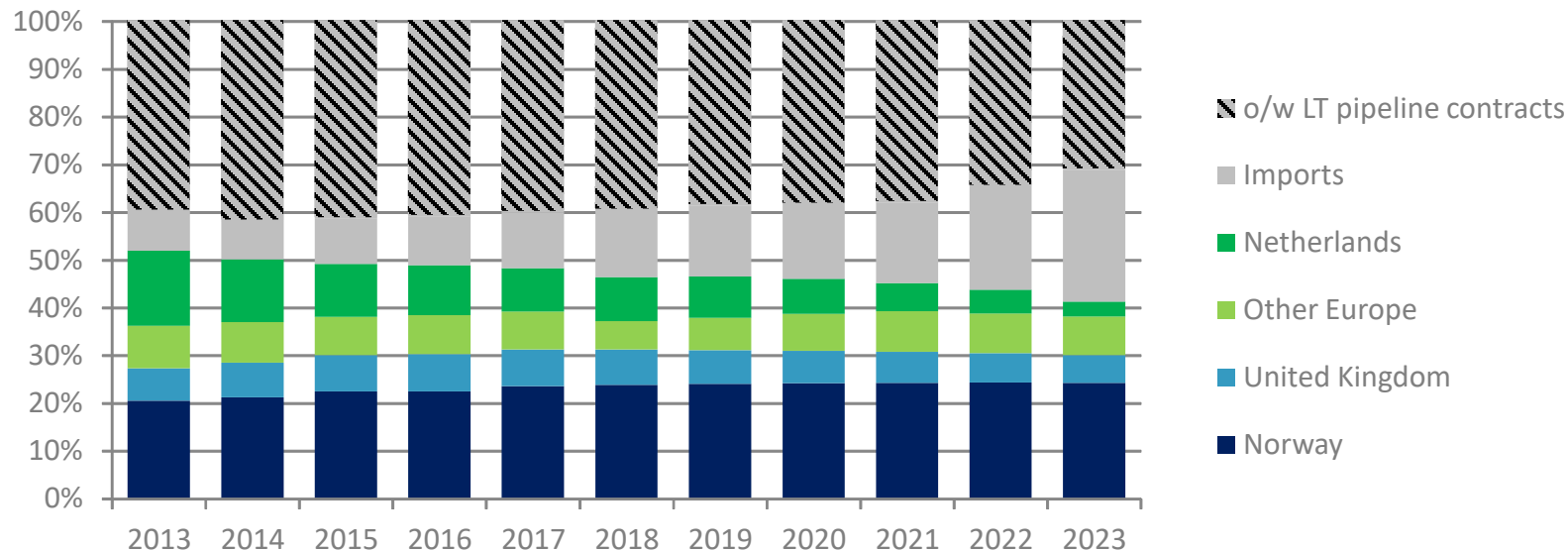
US natural gas production growth by type, 2013-23



Oil driven production provides the bulk of output growth
Ample supply sustains domestic market and export growth

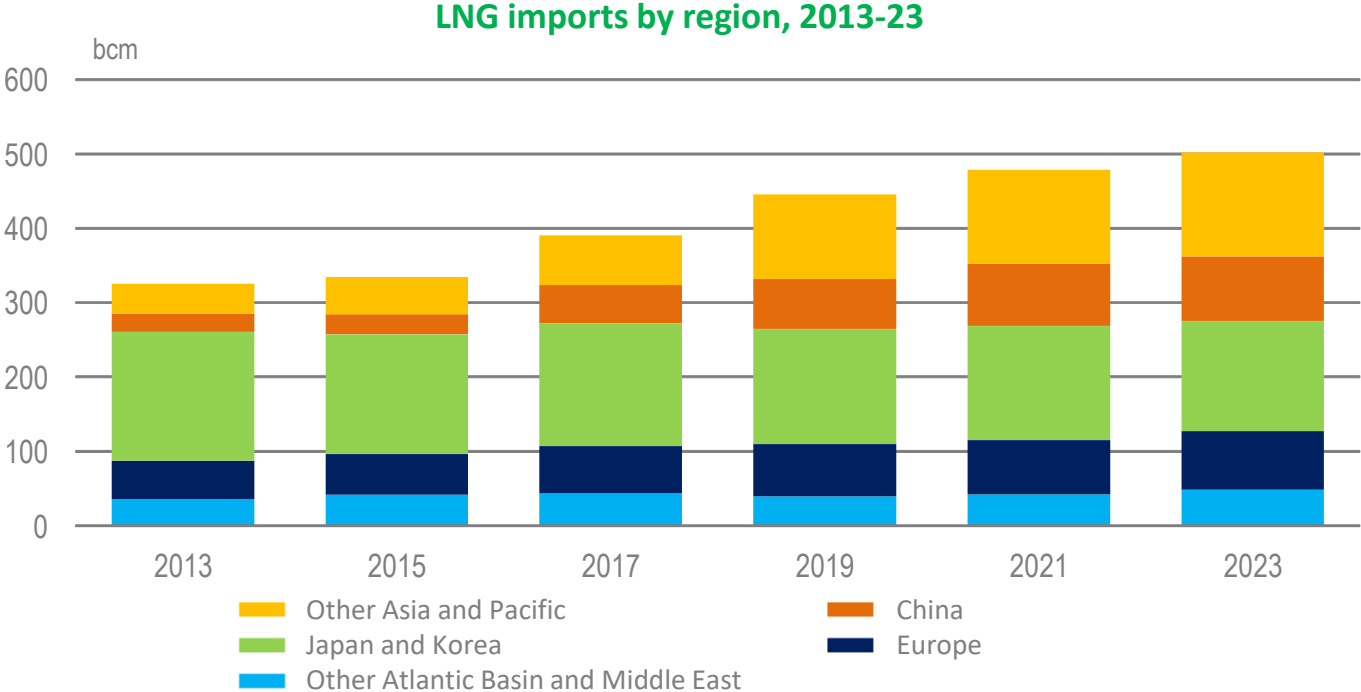
Europe's supply demand gap increases

Europe's natural gas balance, 2013-23



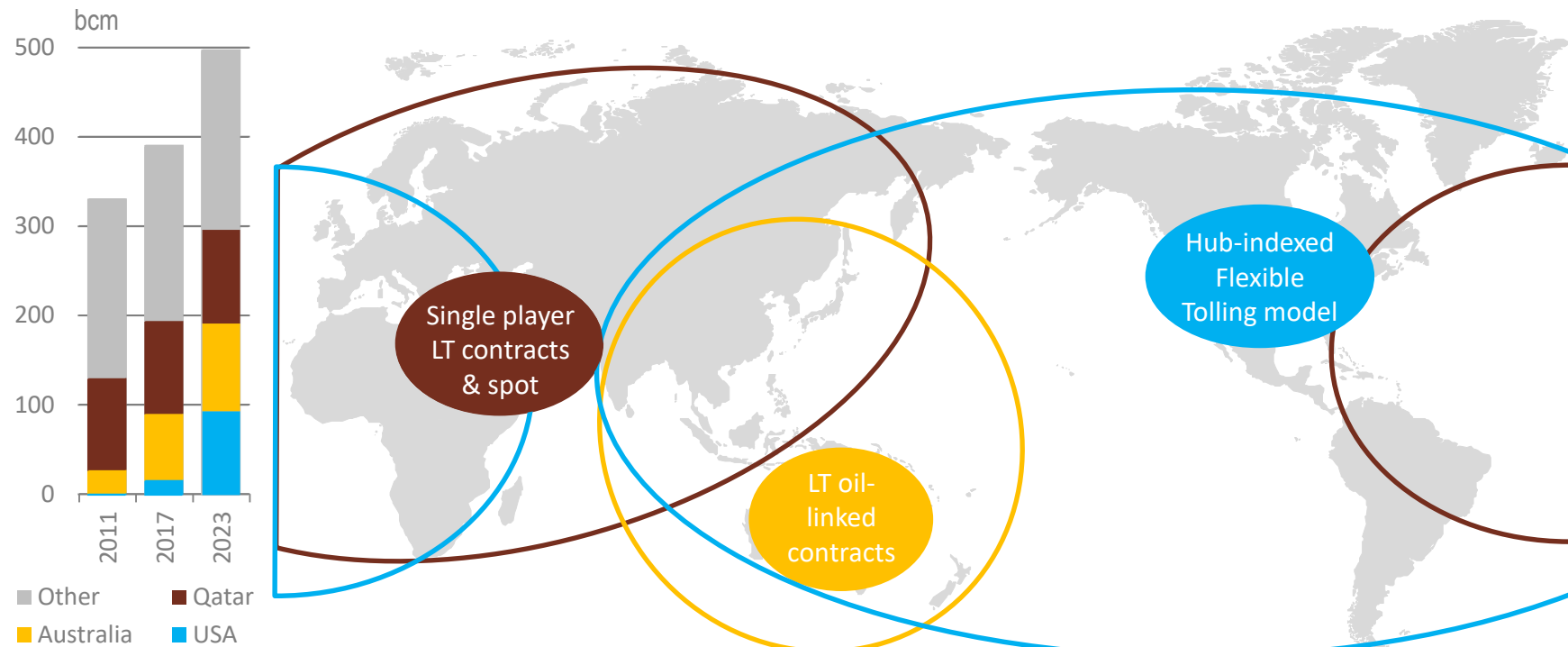
Domestic production decline further accelerates with plan to phase out Groningen field
New options for supply from pipeline and LNG, especially in North West Europe

Global LNG market reaches 500 bcm mark by 2023



LNG trade passes 500 bcm mark by 2023, reaching almost 40% of global gas trade from around a third today; Developing Asian markets account for almost half of LNG market by 2023

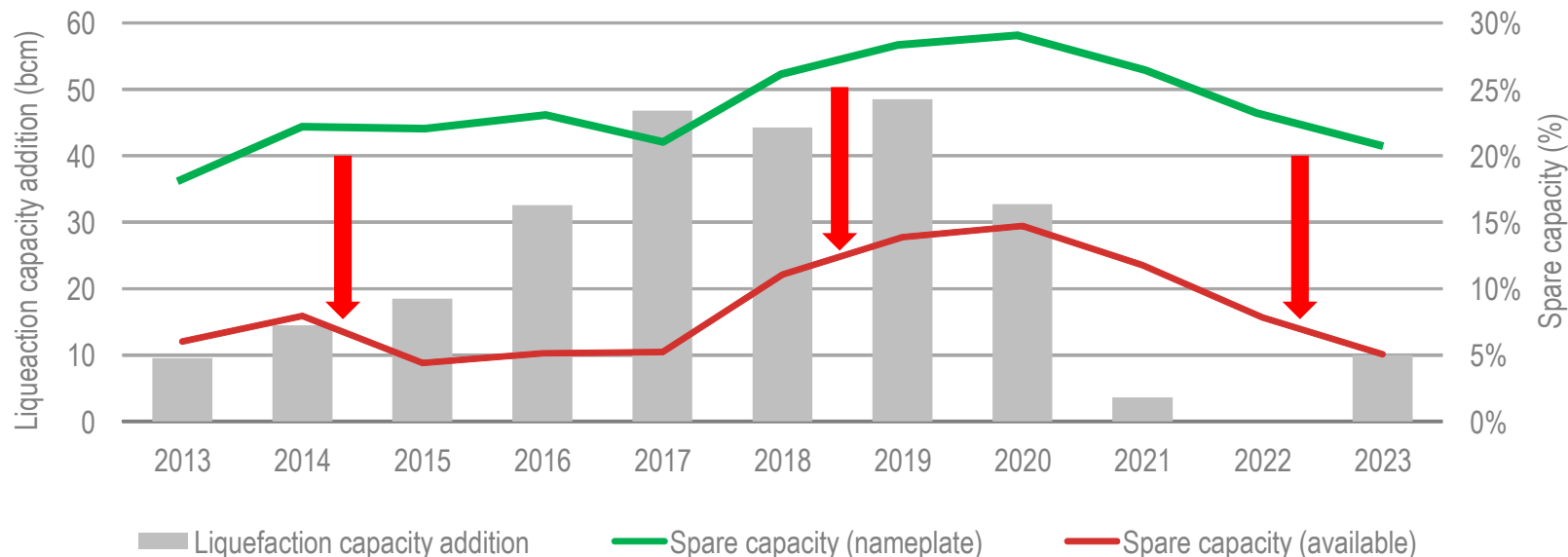
LNG markets redefined by the emergence of global exporters



This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

Qatar, Australia and the US will supply 60% of the world's LNG by 2023 each with a different business model
Fast growing Asian markets will be the main supply competition arena

LNG liquefaction capacity and utilisation, 2013-23



LNG liquefaction capacity is growing faster than demand, but new projects have ground to a halt

- Global demand for natural gas to grow strongly over the next 5 years, led by China
- The United States to become a leading player in LNG markets, driven by a 2nd boom in US gas production
- LNG trade to expand by 30% over next 5 years, underpinning a shift to a more competitive, global natural gas market
- New investment will be required along the entire natural gas value chain to provide flexibility & security of supply
- For future of gas to remain bright, industry needs to continue to improve environmental performance & prices need to stay competitive in emerging markets

