



NATURAL GAS AND LNG IN THE FUTURE OF GLOBAL ENERGY

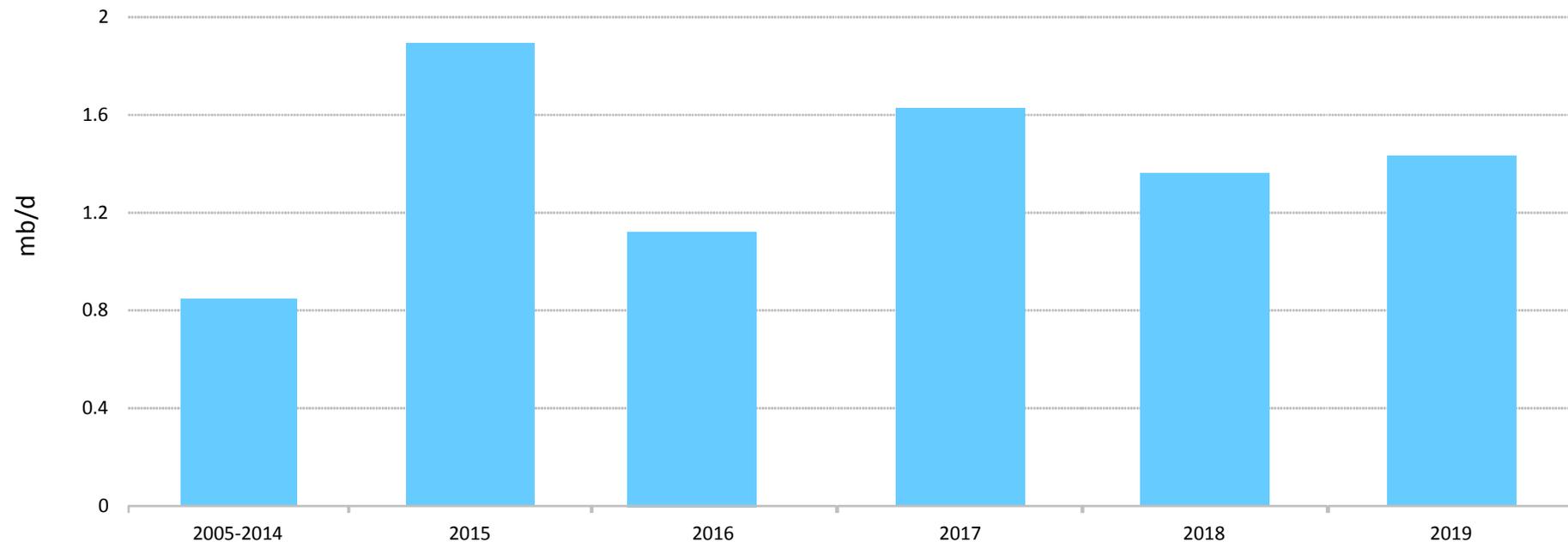
Dr. Fatih Birol

Executive Director, International Energy Agency

World Gas Conference, 26 June

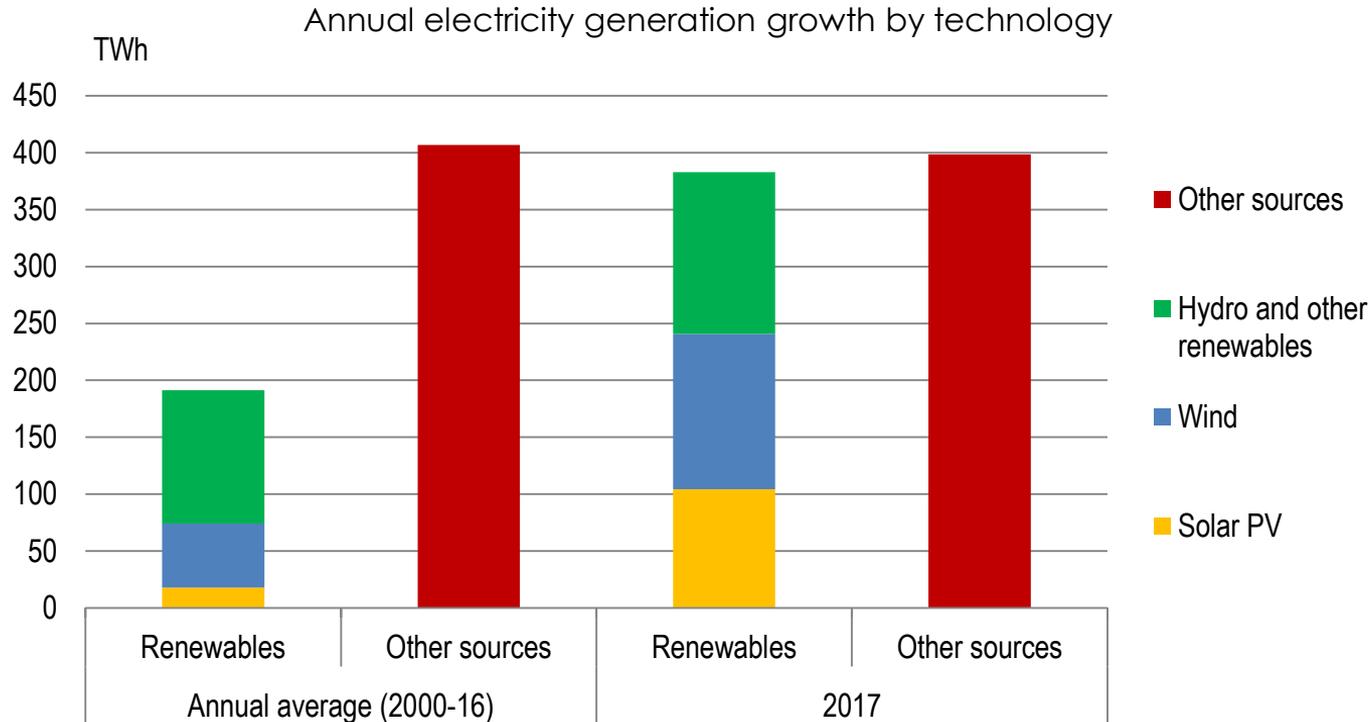


Global oil demand remains robust



Global oil demand is set to rise by 1.4 mb/d in 2019, with China and India accounting for almost half of the increase; Petrochemicals are becoming increasingly important drivers of oil demand

Renewables growing rapidly in the power sector



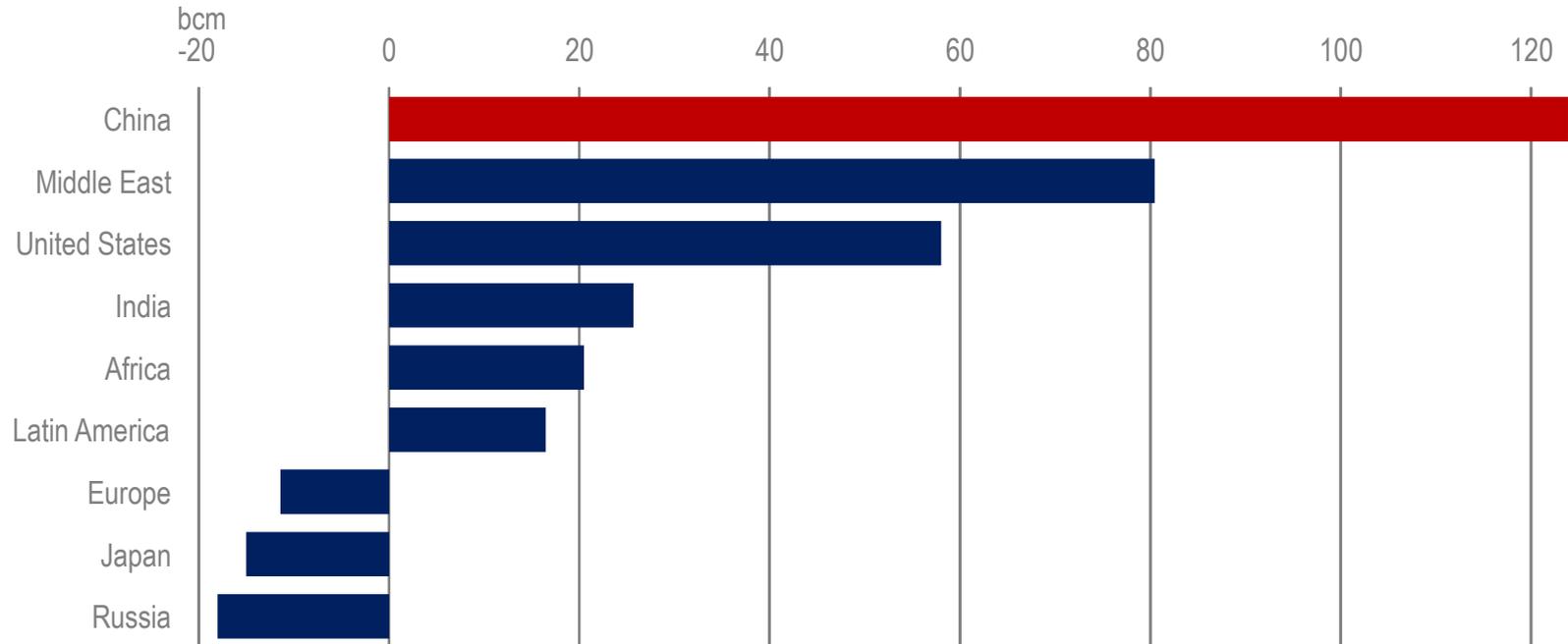
Renewables accounted for almost half of the growth in electricity generation in 2017 and are set to meet a higher share of the growth going forward

- Gas demand 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 largest natural gas importer*
 - *US gas production and LNG exports rising dramatically*
 - *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*

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

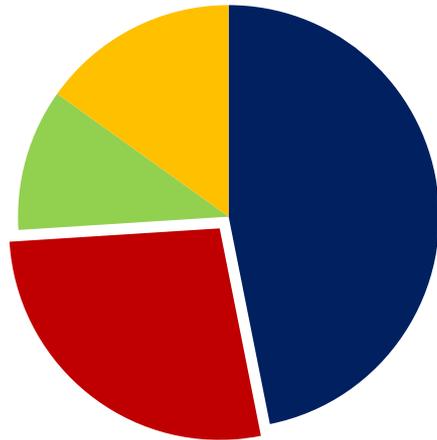
Natural gas production growth for selected countries and regions, 2017-23



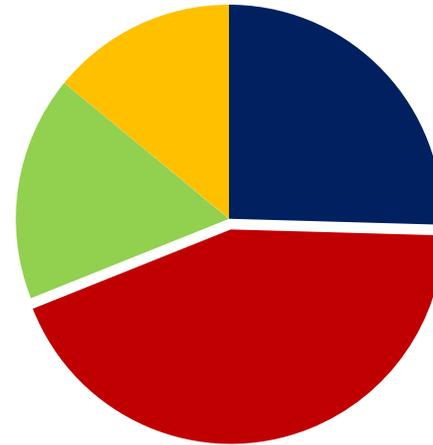
The United States accounts for almost 45% of global growth in natural gas production and 75% of growth in LNG exports

Natural gas consumption growth by sector (%)

2011-17



2017-23



■ Power generation

■ Industry

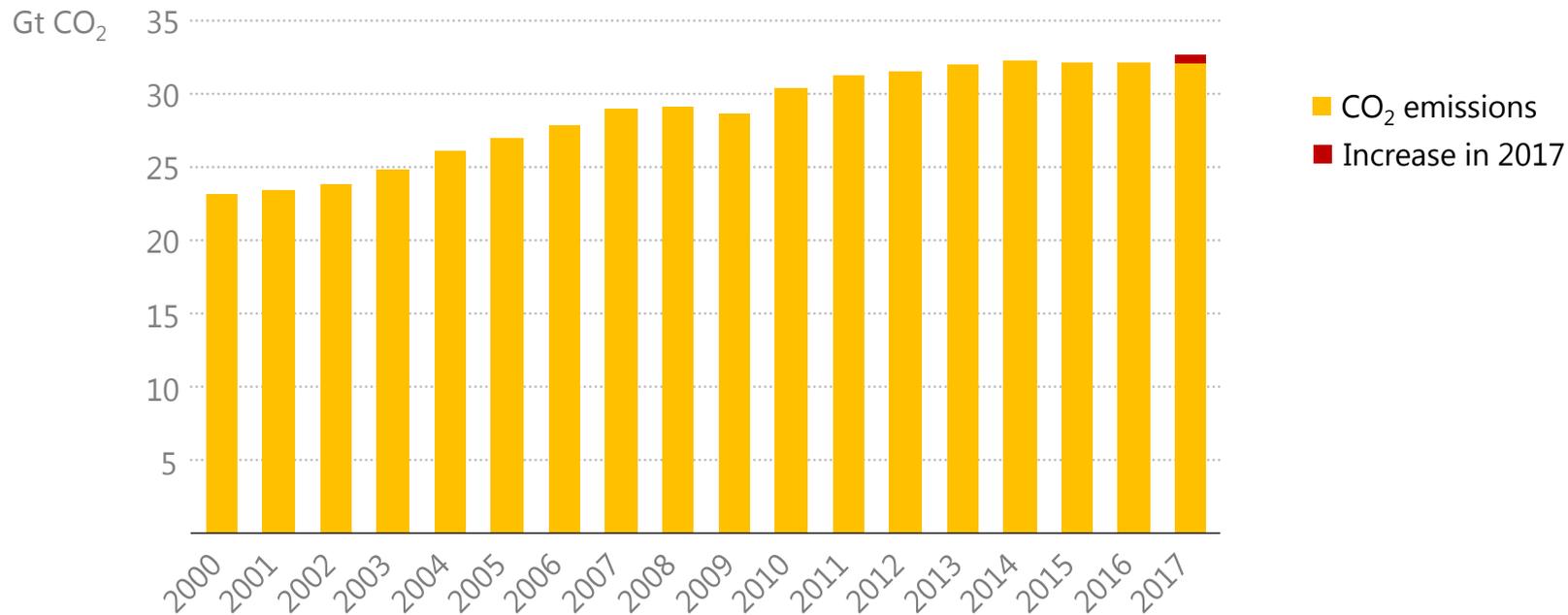
■ Residential and commercial

■ Other sectors

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

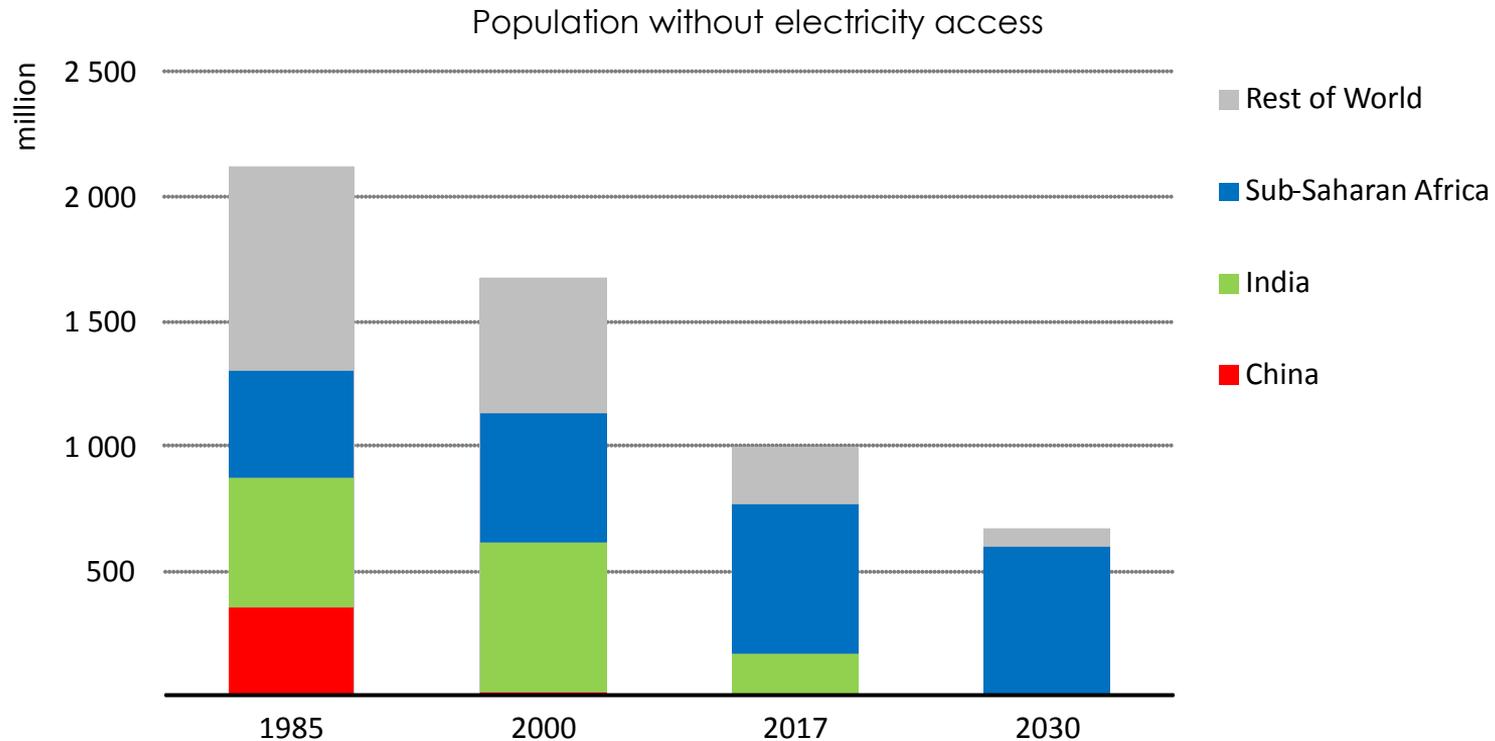
After plateauing for 3 years, global emissions are on the rise again

Global energy-related CO₂ emissions



After remaining flat for 3 years, global CO₂ emissions rose again in 2017, to an all-time high

Electrification success elsewhere, but sub-Saharan Africa still remains in the dark



China was a remarkable success story for electrification, bringing access to hundreds of millions in record time; India achieved electricity access for all its villages in 2018; Today the challenge is concentrated in sub-Saharan Africa

- The versatility of natural gas means that it is well placed to grow, with LNG underpinning the shift to a more competitive, global gas market
- Gas demand continue to rise in all IEA scenarios to 2040
- For the future of gas to remain bright, prices need to stay competitive in emerging markets & industry needs to continue to improve its environmental performance
- Gas can play a role in overcoming the challenges of local air pollution, climate change & energy access
- The IEA will continue to help governments & industry with timely data, rigorous analysis, an all-of-technology approach and real-world solutions