



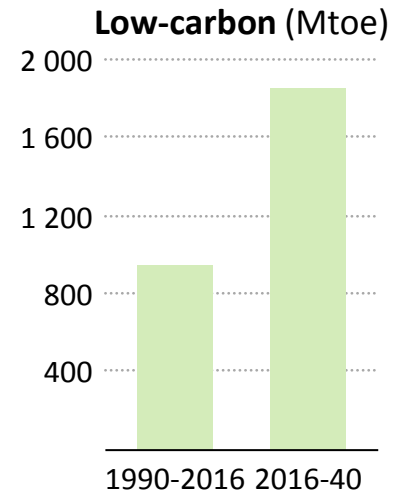
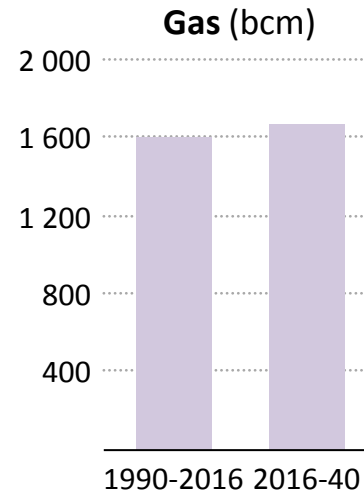
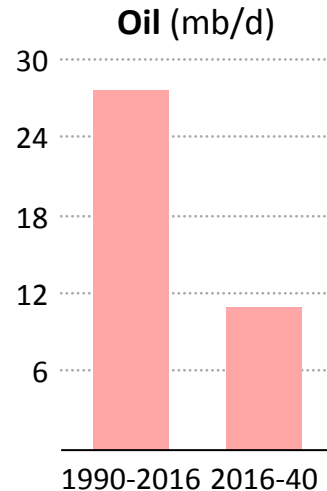
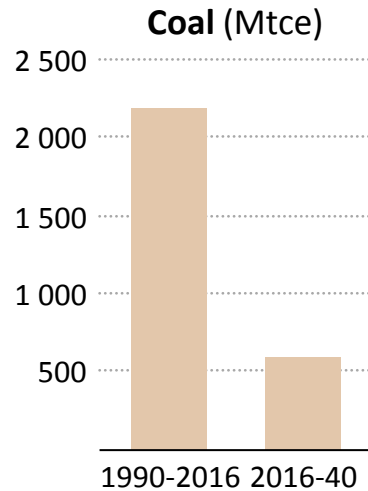
World Energy Outlook 2017

Beijing, 8 December 2017

A world in transition, and moved by China

- Four large-scale upheavals in global energy set the scene for the new *Outlook*:
 - The **United States** is turning into the undisputed global leader for oil & gas
 - **Solar PV** is on track to be the cheapest source of new electricity in many countries
 - **China's** new drive to “make the skies blue again” is recasting its role in energy
 - The future is **electrifying**, spurred by cooling, electric vehicles & digitalisation
- China's drive for “blue skies” has domestic and global implications:
 - New era of development & economic **shift towards light industries & services** change structure of energy use
 - Energy demand growth slowing; predominance of **coal under challenge**
 - Leadership for China in a range of **clean energy technologies**, increasing role in gas markets
 - Environmental considerations to the fore, notably **air quality**

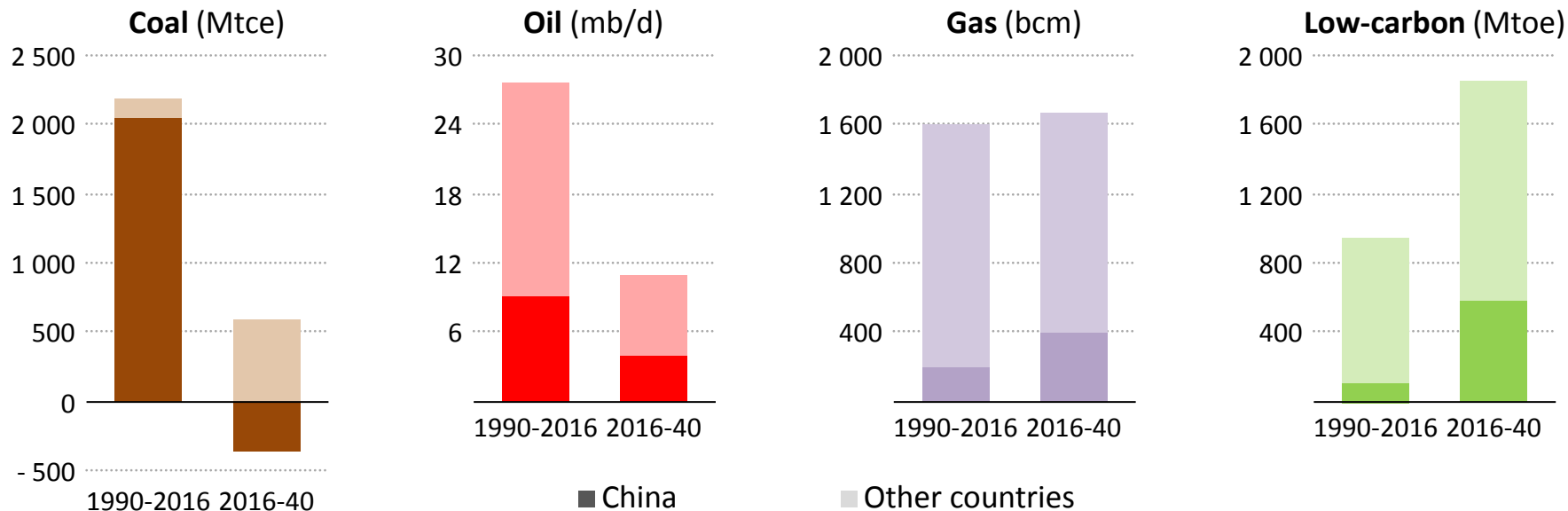
Change in world energy demand by fuel



Low-carbon sources & natural gas meet 85% of the increase in global demand:

.. as China moves global energy markets, again

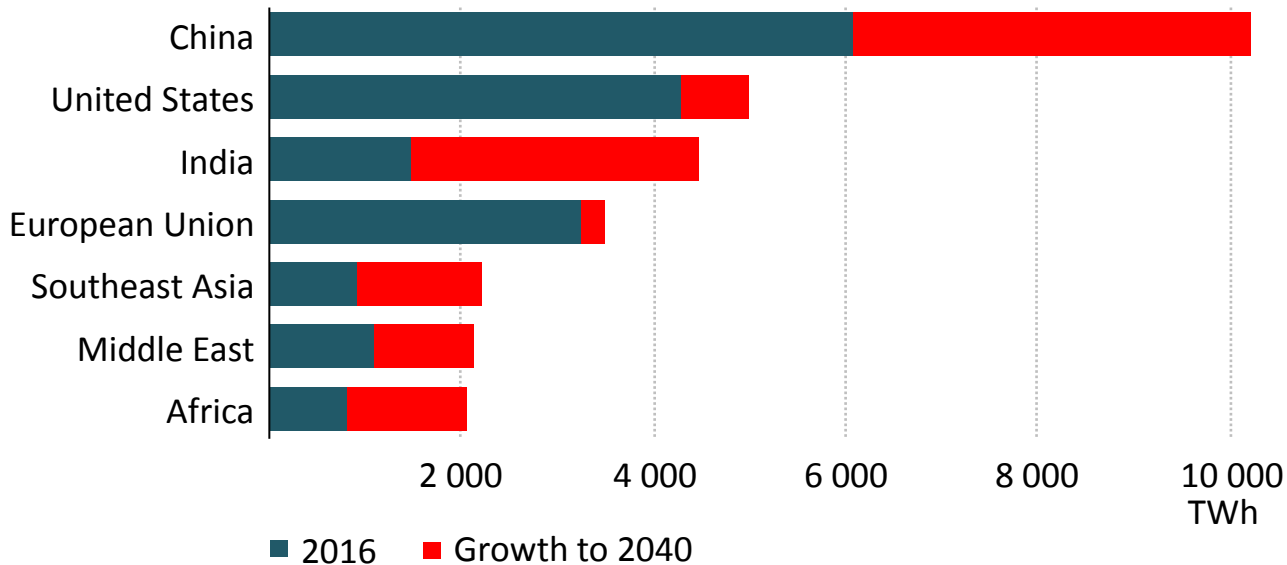
Change in world energy demand by fuel



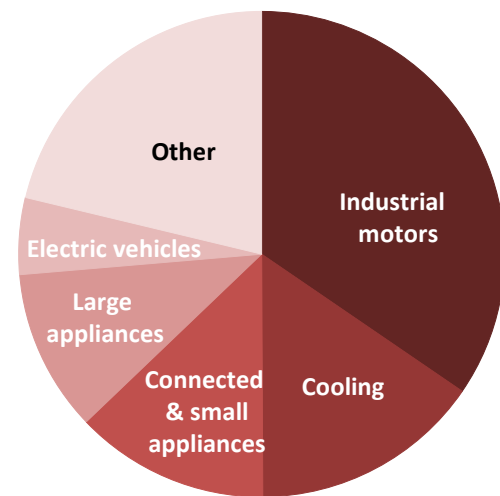
*Low-carbon sources & natural gas meet 85% of the increase in global demand:
China's switch to a new economic model & a cleaner energy mix drives global trends*

The future is electrifying

Electricity generation by selected region



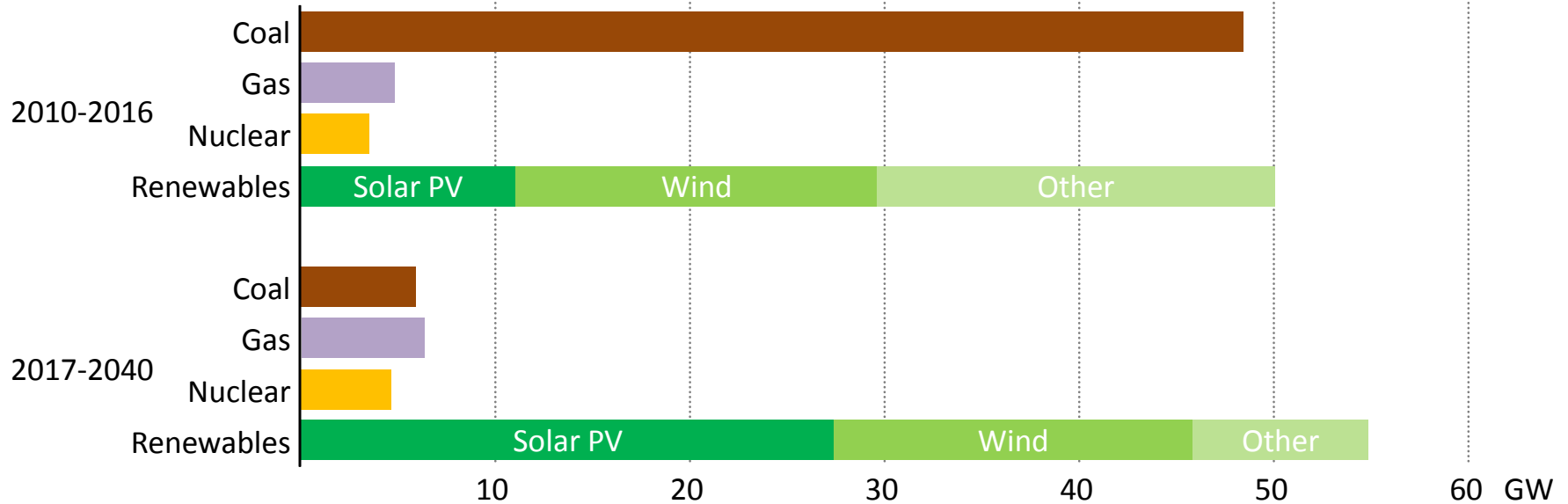
Sources of global electricity demand growth



India adds the equivalent of today's European Union to its electricity generation by 2040, while China adds the equivalent of today's United States

Solar PV forges ahead in the China's power mix

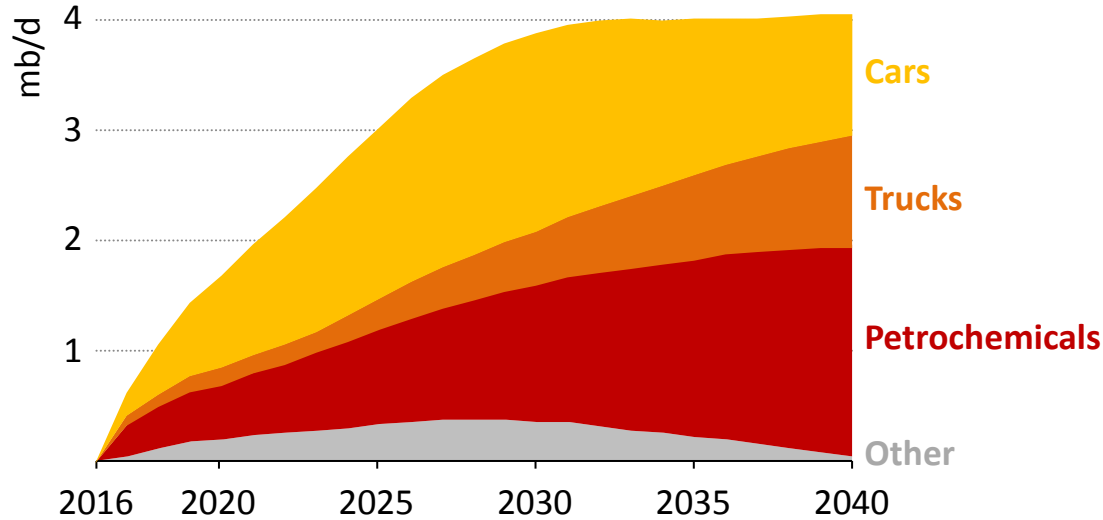
China average annual net capacity additions by type



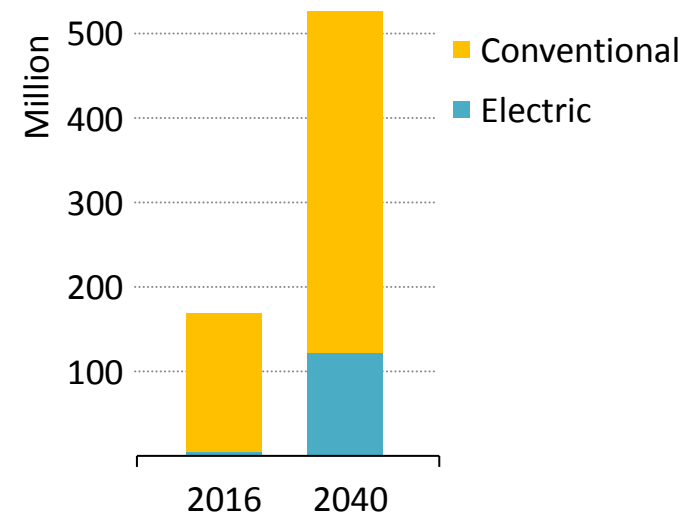
China turns away from coal while confirming its position as the global leader in clean energy, leading the way on solar PV, wind power, hydropower and nuclear

China becomes the world's largest oil importer

China oil demand growth by sector



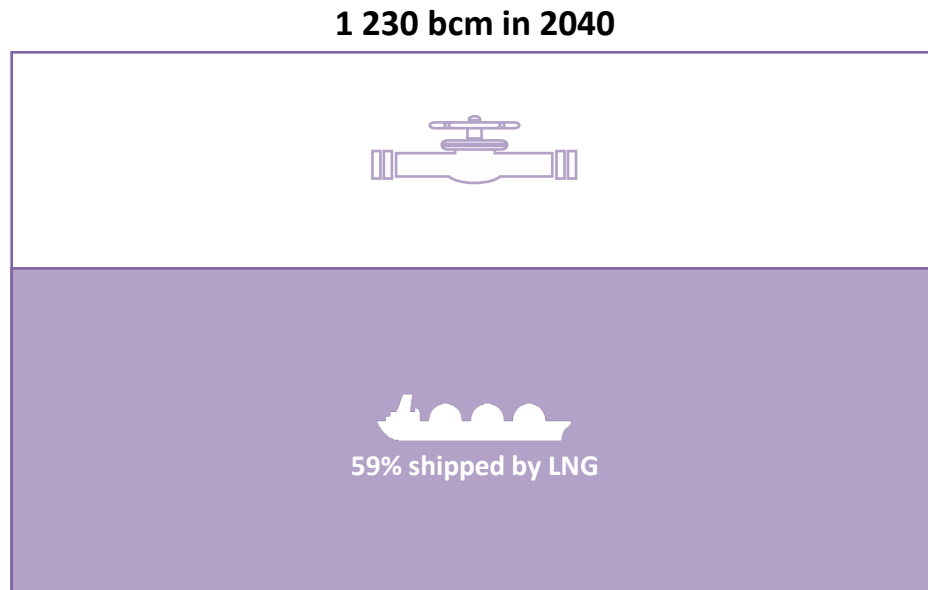
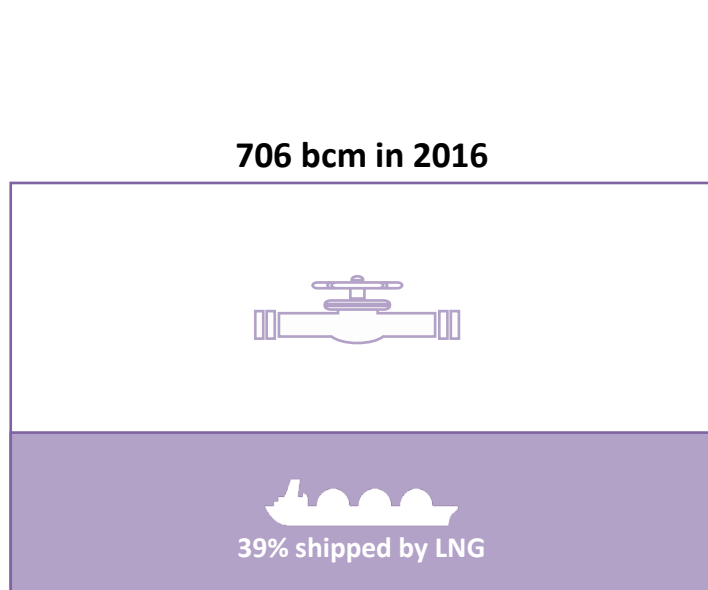
China passenger car stock



China becomes the world's largest oil importer by around 2020; air quality policies could lead to a plateau or peak in oil demand, but oil security remains a challenge

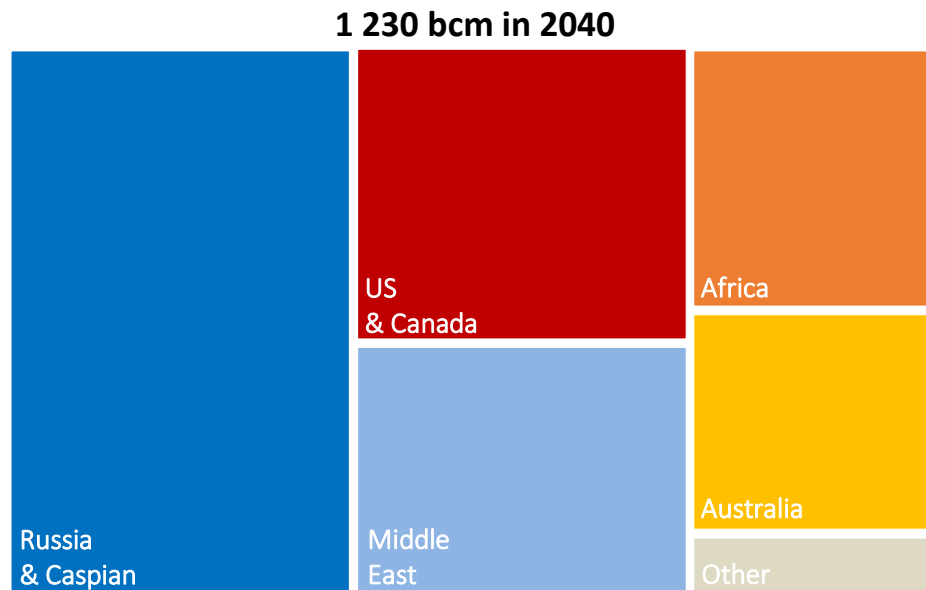
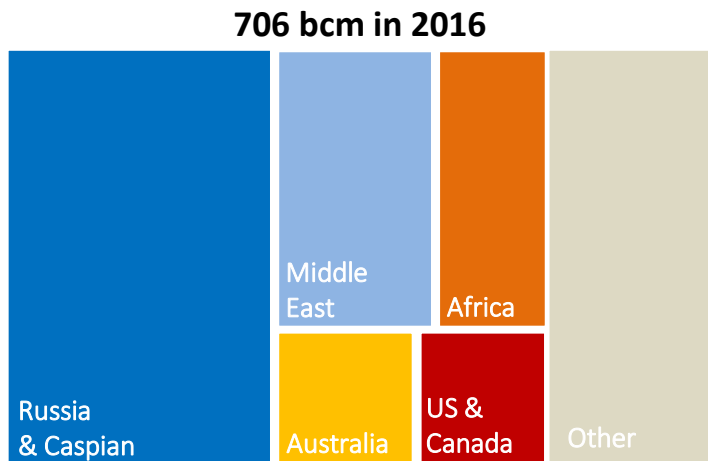
LNG ushers in a new global gas order

Global gas trade



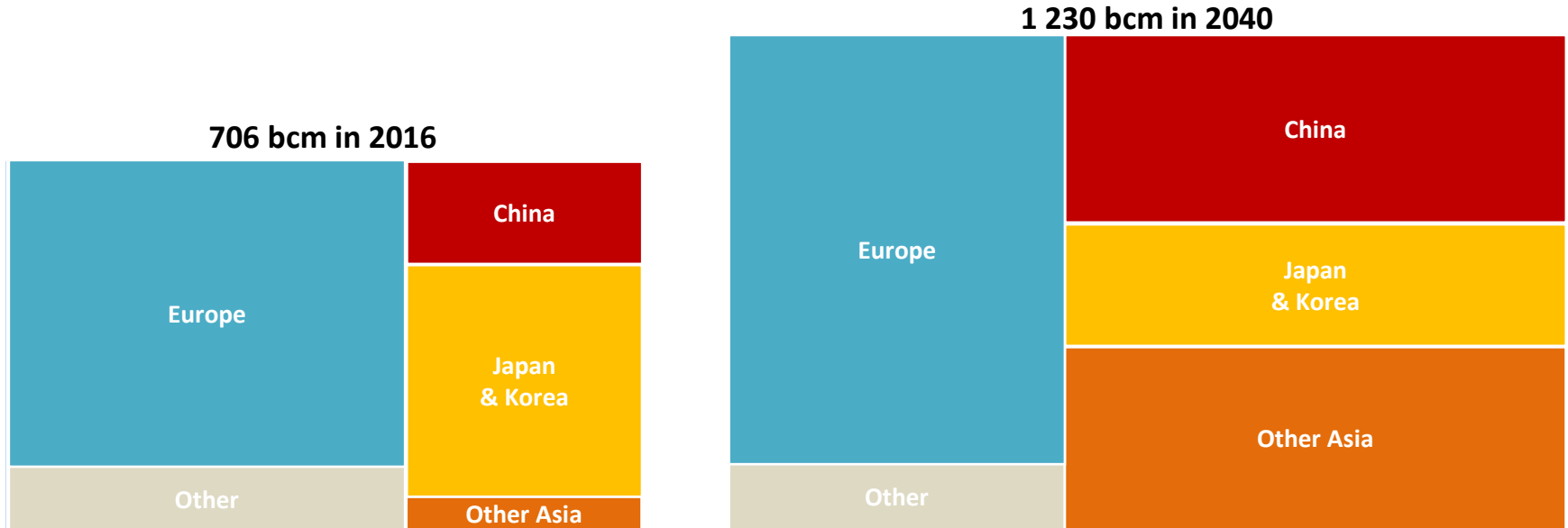
LNG ushers in a new global gas order

Gas exporters



LNG ushers in a new global gas order

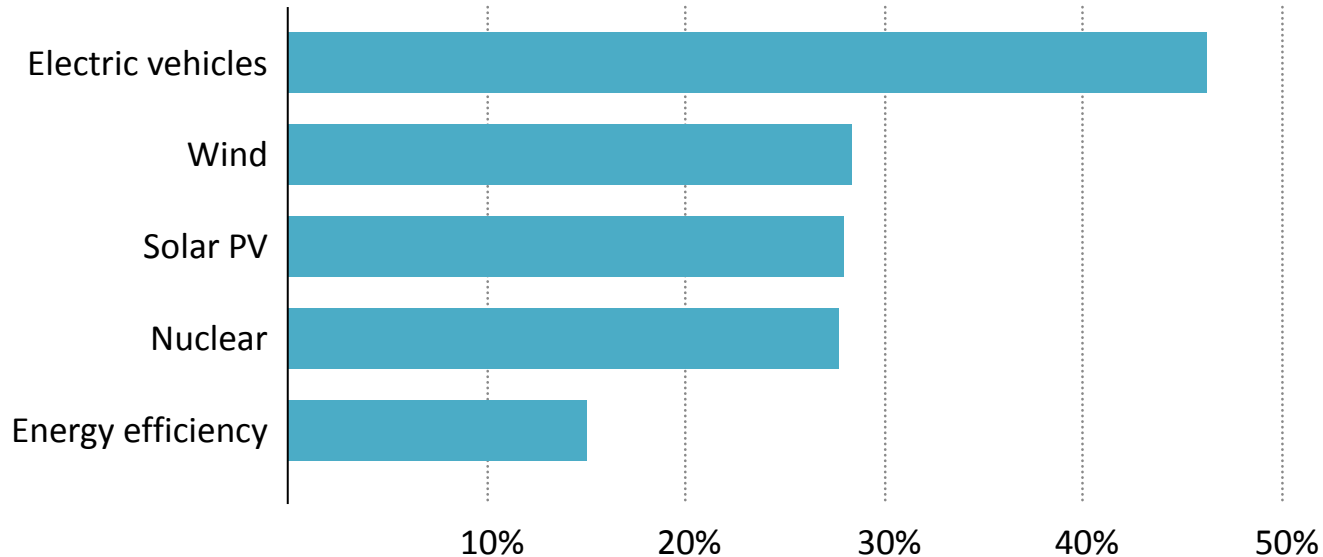
Gas importers



Asia's growing gas import requirements are largely met by LNG, with exports from the US accelerating a shift towards a more flexible, liquid global market

China leads the push for clean energy technologies

China's share of global investment, 2017-2040



China is the leading global investor in power generation and end-use sectors; its emphasis on clean energy investment is a driver of the global clean energy transition

- Structural shifts in the economy and the clean energy transition change quantity & quality of energy demand growth; China moves global energy markets – once again
- China is set first to become the world's largest oil importer, and then the largest oil consumer; future oil security hinges on supply- and demand-side policies
- Natural gas helps to replace coal in the energy mix and soon makes China the world's largest gas importer, with strong implications for global LNG markets
- China remains the world's largest investor in clean energy; its success in delivering on a clean energy transition is critical for its own as well as global environmental goals
- As China joined the IEA family in 2015 and partnership grows, the WEO-2017 China Outlook sheds light on China's energy challenges & opportunities in a global context



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