

The Evolving Role of Gas in China

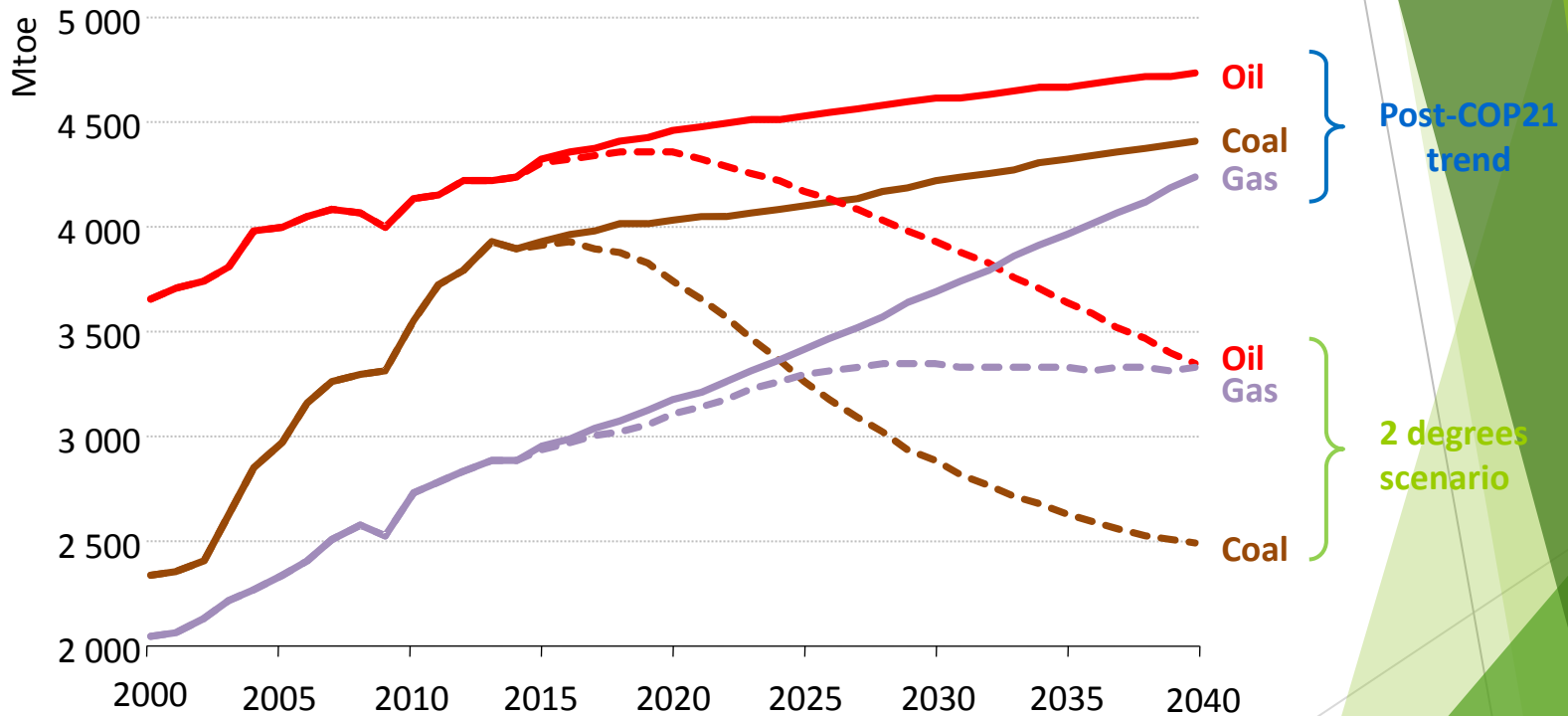
Todd M Johnson

Energy Leader, China and Mongolia

World Bank

Gas and climate policy

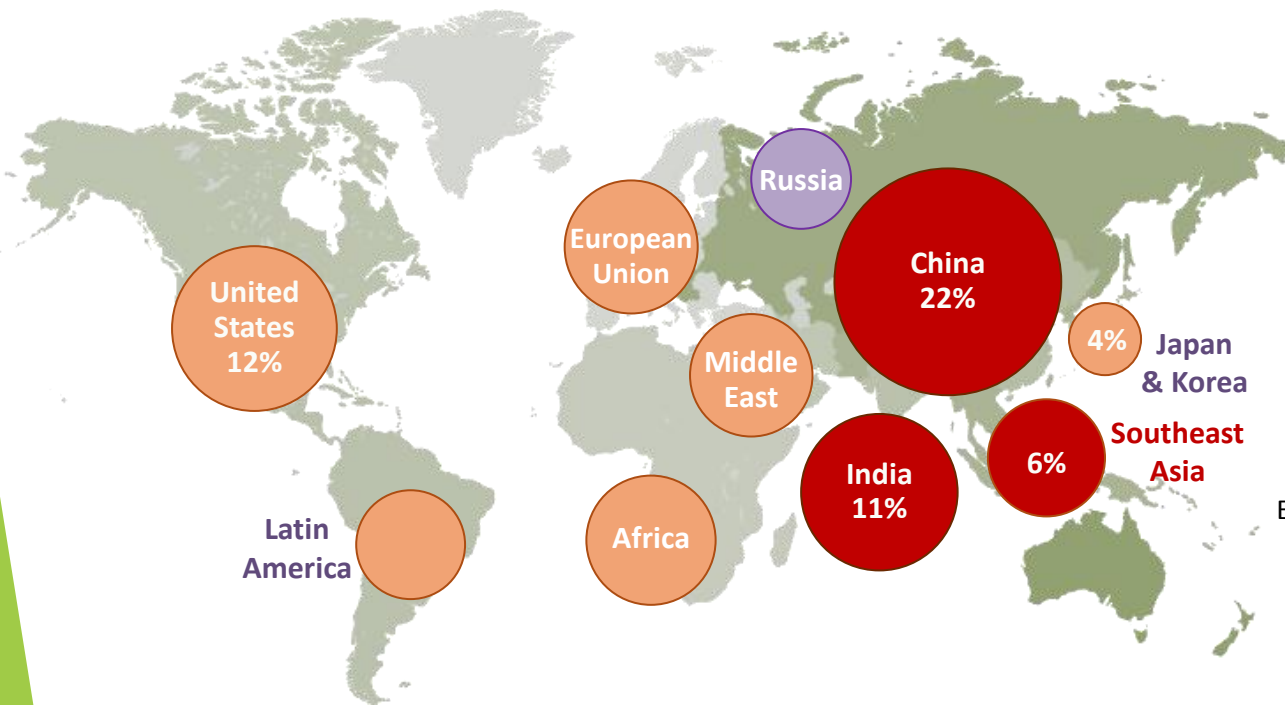
Global fossil-fuel demand by scenario



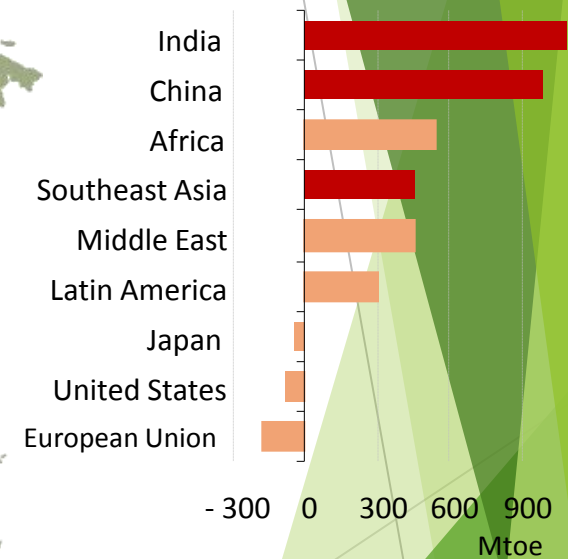
Where it replaces more carbon-intensive fuels or aids the integration of renewables, natural gas can be a good fit for decarbonising energy systems

Asia at the heart of energy demand growth

Share of primary energy demand, 2040

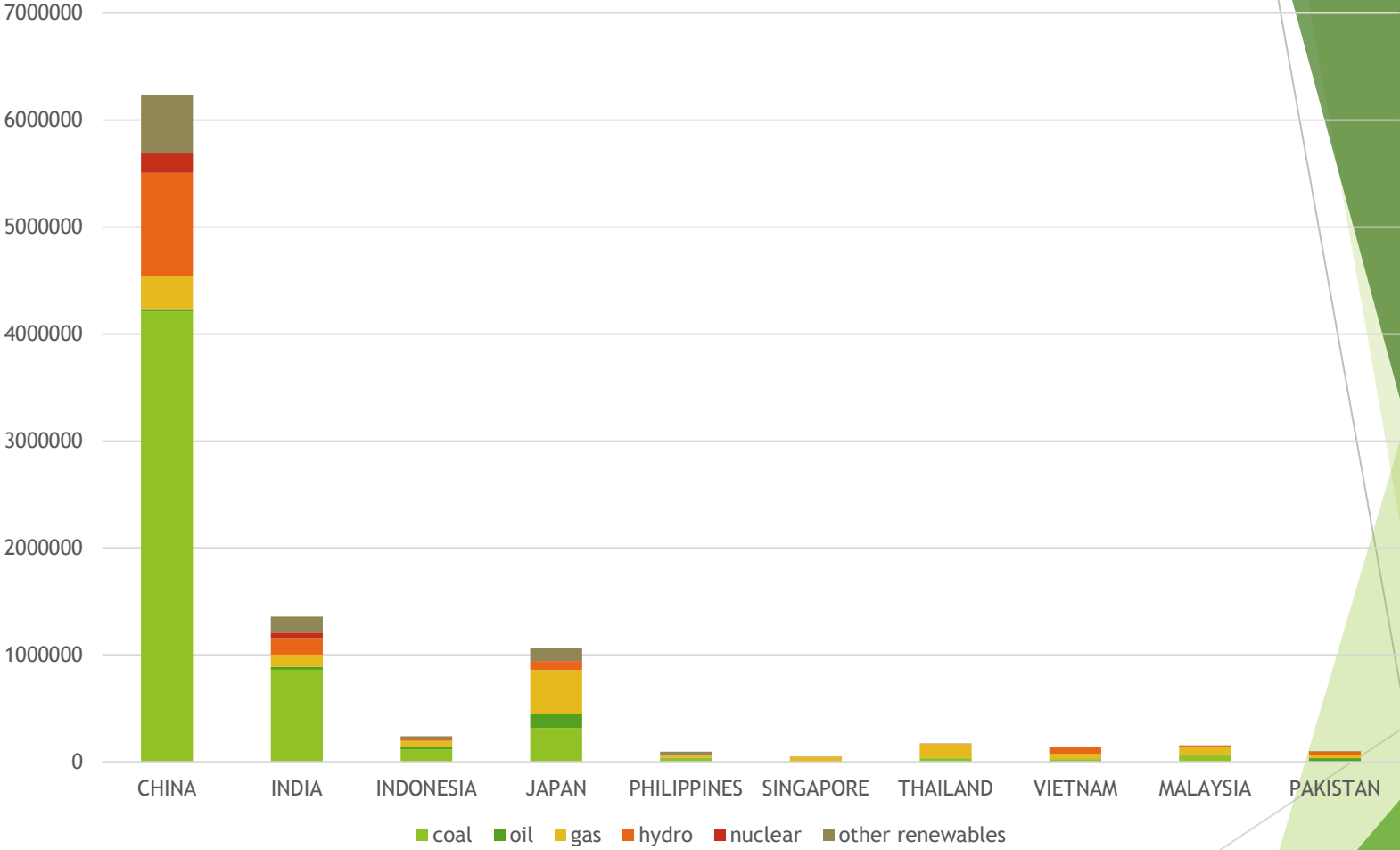


Change 2014-2040



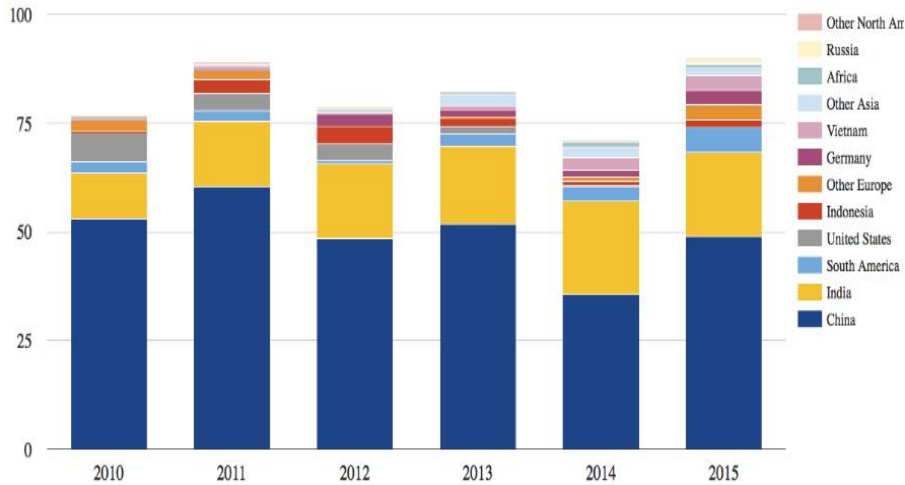
Asia absorbs an increasing share of global energy commodity trade – 80% of coal, 75% of oil and 60% of gas in 2040

Asia Electricity Generation, 2015 (TWh)

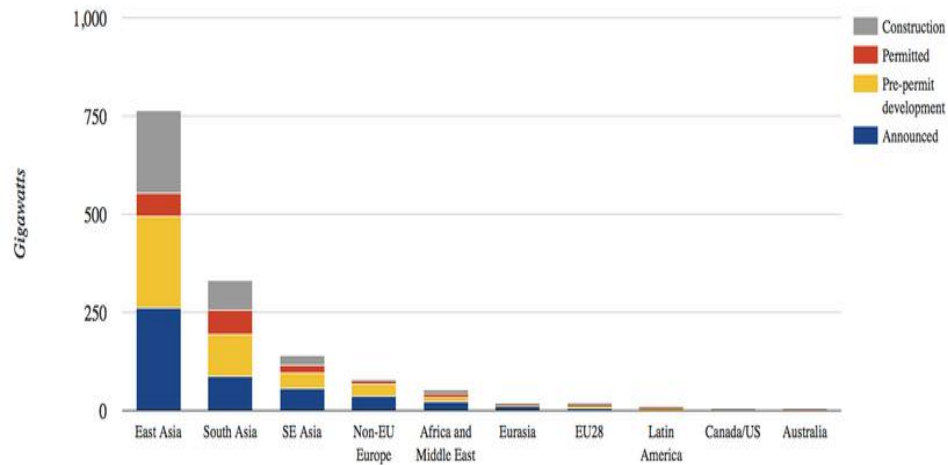


Source: Economist Intelligence Unit.

Global Coal Capacity (2010-15) and Planned Additions (GW)

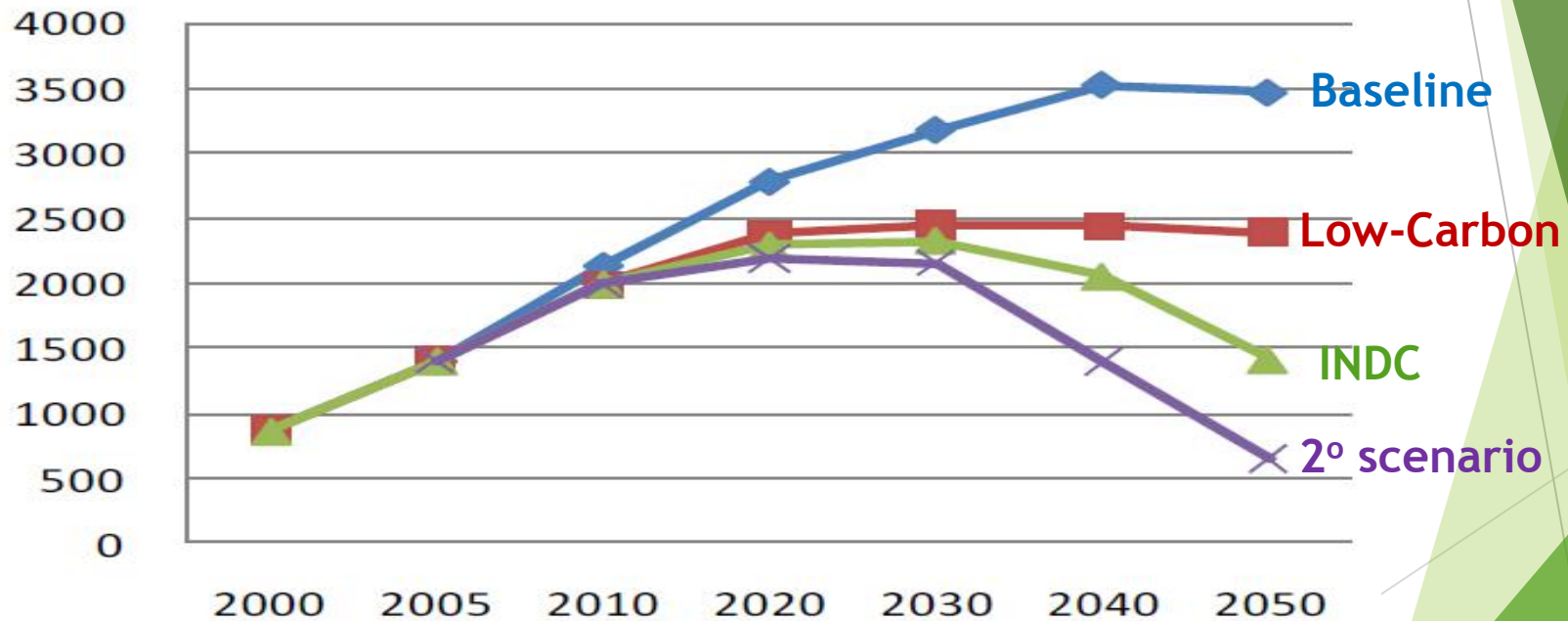


Source: CoalSwarm.
Chart by Carbon Brief.



Gigawatts of coal projects in the construction pipeline in January 2016. Source: CoalSwarm. Chart by Carbon Brief.

China's Future CO2 Emissions

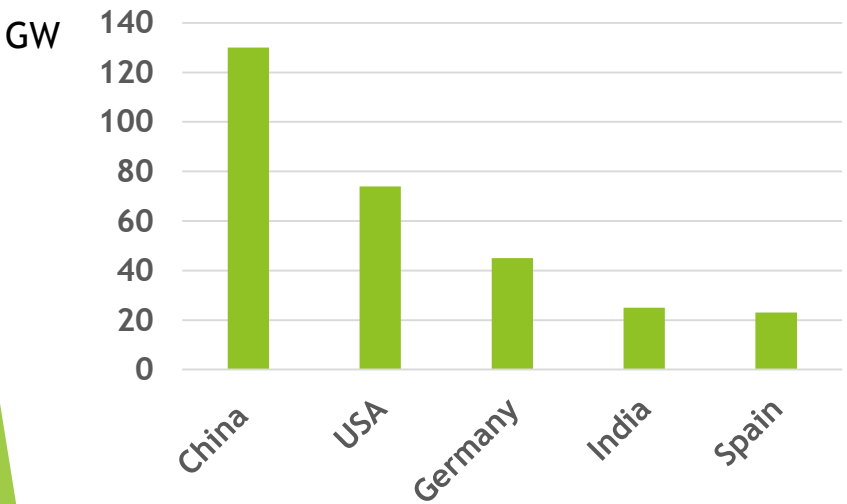


China: a global leader in renewable energy and energy savings

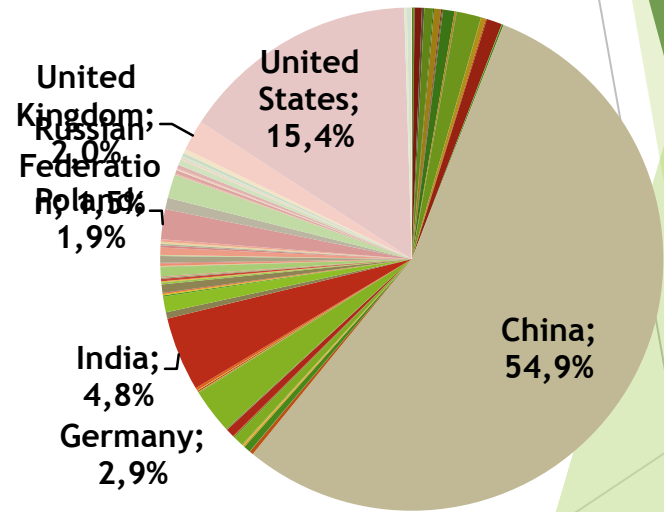
China has the world's largest wind and solar capacity

China contributed more than half of the global energy savings 1990-2010

Top 5 wind power producing countries in 2014

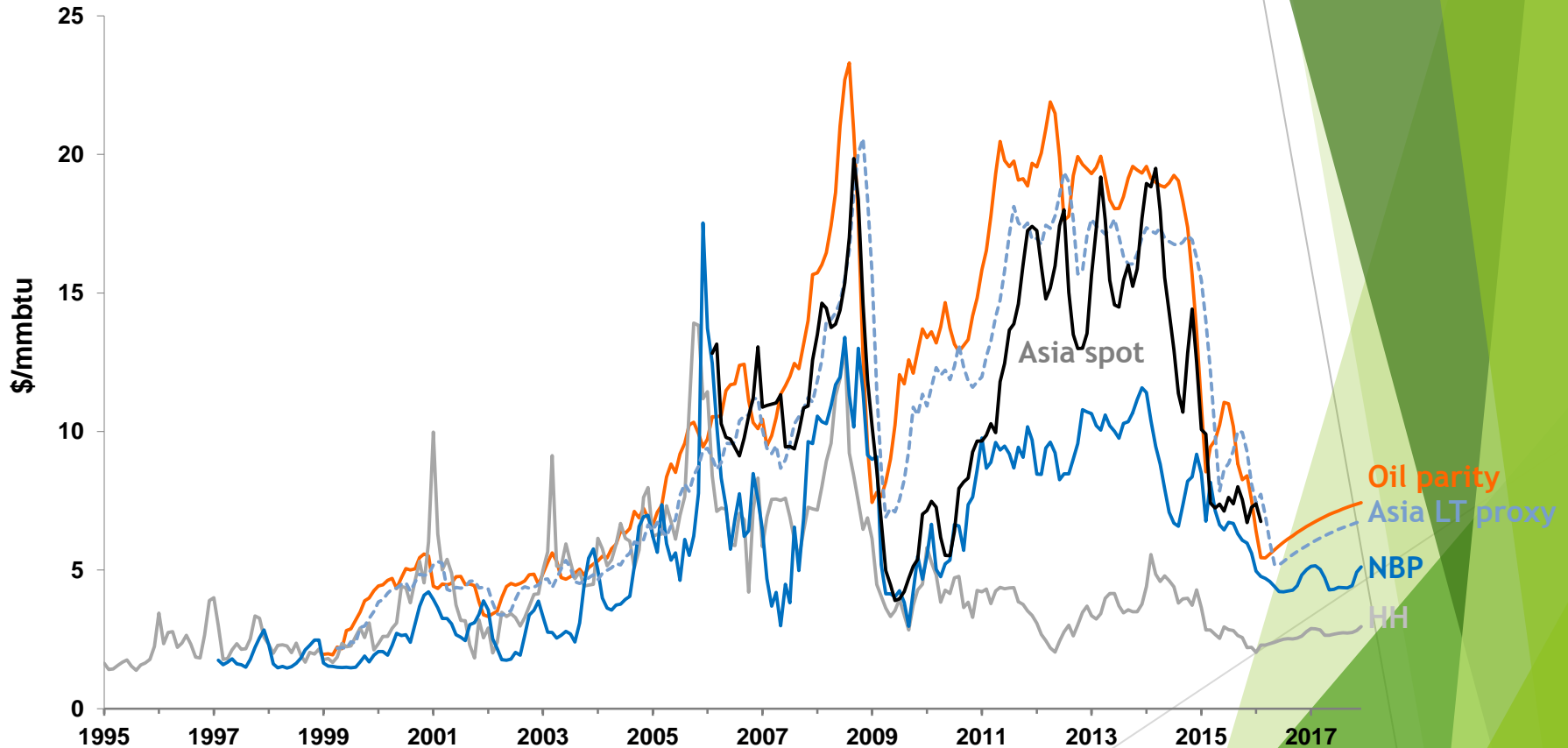


Source: Global Wind Energy Council



Source: WB Global Tracking Framework

Gas and LNG Prices (1995-2018)



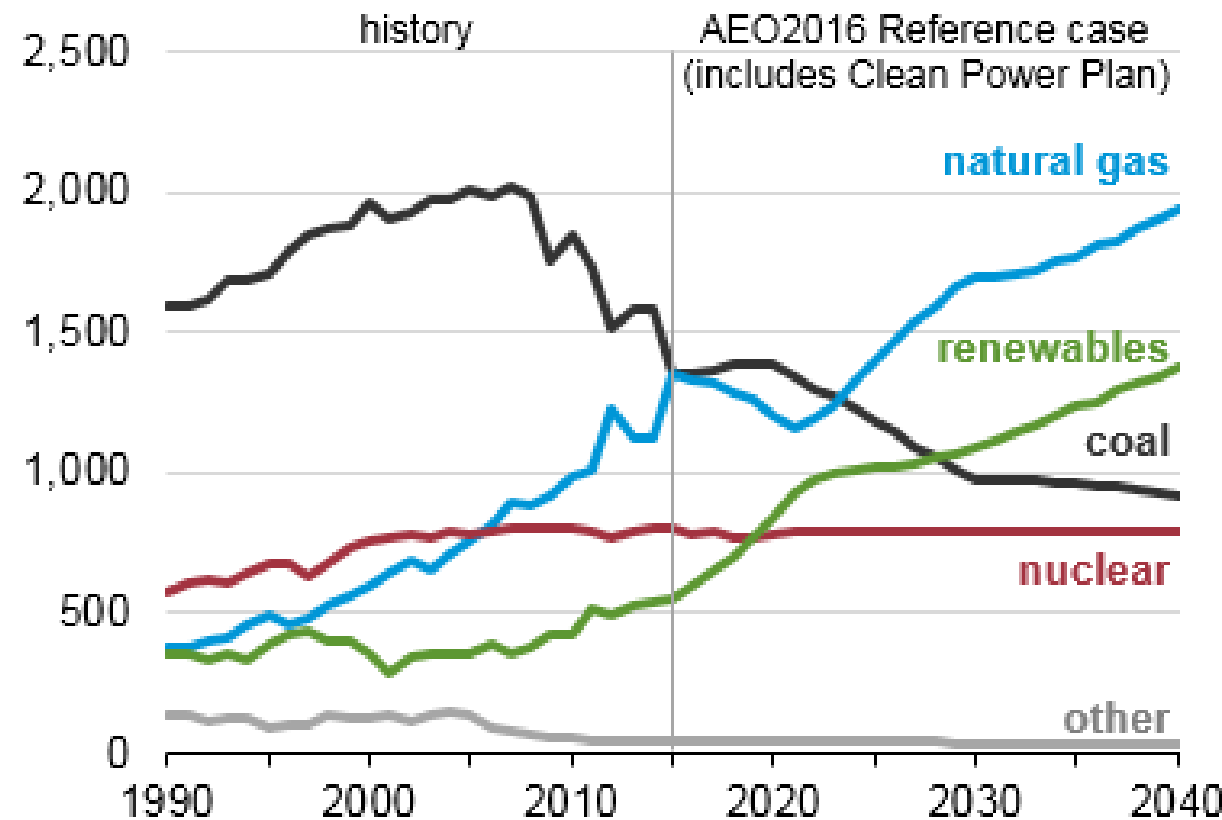
Source: Platts, Heren, IPE, Petroleum Association of Japan and Bloomberg (Jan 2016)

Note: Asia long-term proxy = $14.85\% \text{ JCC}(-3) + 0.50$; Oil parity = $\text{JCC} = \text{Japanese average crude price}$; JCC actuals to Oct 2015 and based on Brent thereafter

U.S. Example of Decarbonization

U.S. net electricity generation by fuel (1990-2040)

billion kilowatthours



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2016*

Natural Gas Infrastructure

