

World Energy Outlook 2014

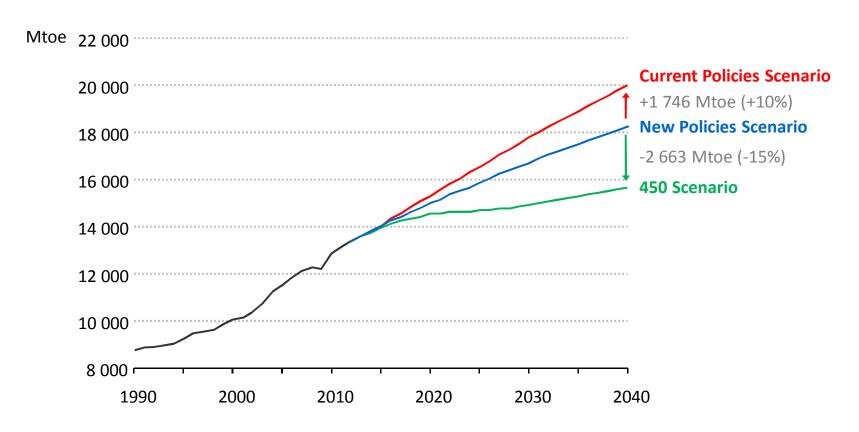
Directorate of Global Energy Economics
International Energy Agency

APERC Annual Conference 2015 9 -10 June 2015

Outlook for energy demand to 2040



World total primary energy demand by scenario

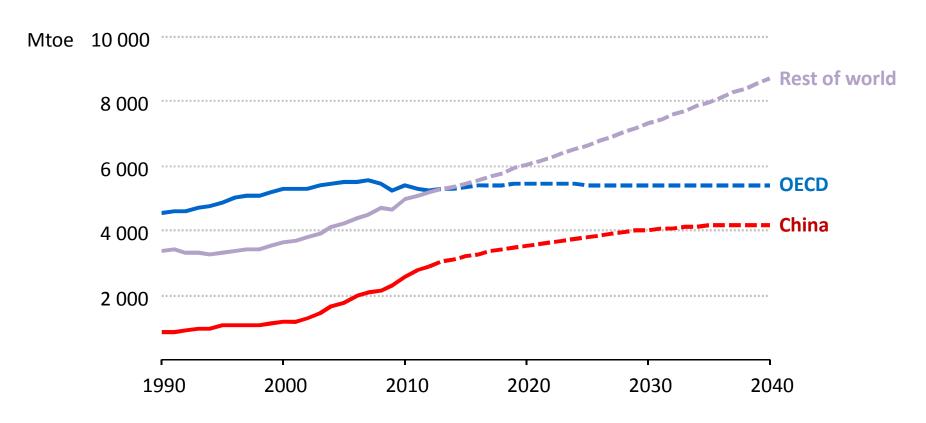


The three scenarios presented demonstrate the impact of the policy choices made by governments: rates of growth in energy use & the types of fuels supplied are markedly different

Changing dynamics of global demand



Energy demand by region

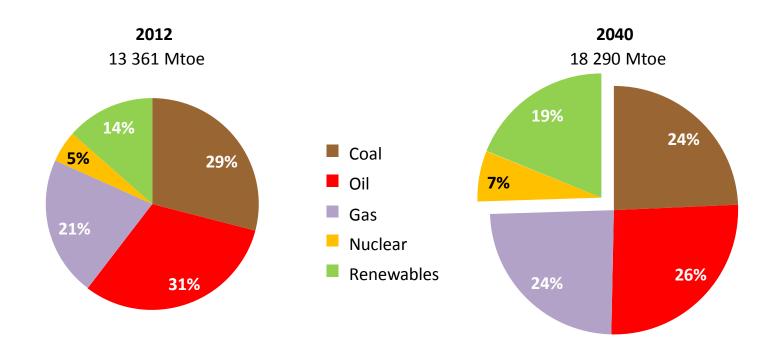


As China slows, then India, Southeast Asia, the Middle East and parts of Africa & Latin America take over as the engines of global energy demand growth

A mix slowly moving towards lowcarbon energy



Fuel shares in world primary energy demand

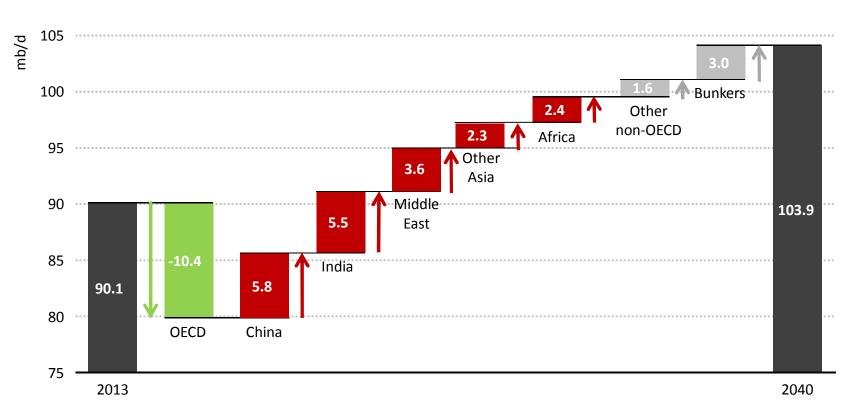


Declining shares of oil & coal in the mix bring the overall share of fossil fuels down to just under three-quarters by 2040, with gas on the way to becoming first fuel

The changing geography of oil demand

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Growth in world oil demand by region

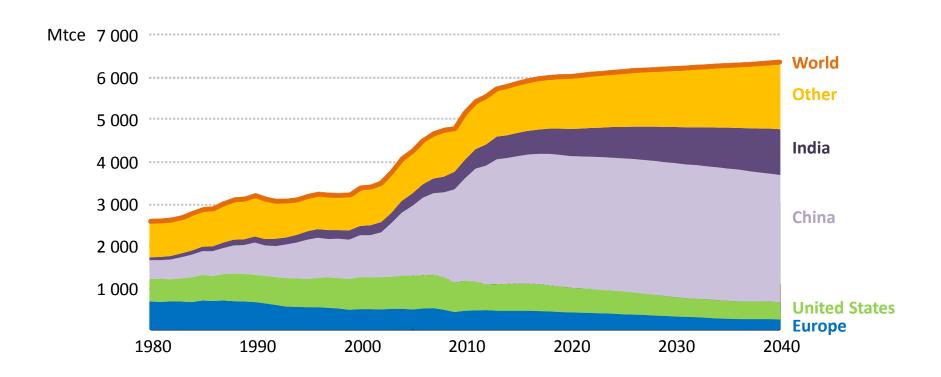


The short-term picture of a well-supplied market should not obscure future risks as demand rises to 104 mb/d & reliance grows on Iraq & the rest of the Middle East

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Global coal demand leveling off

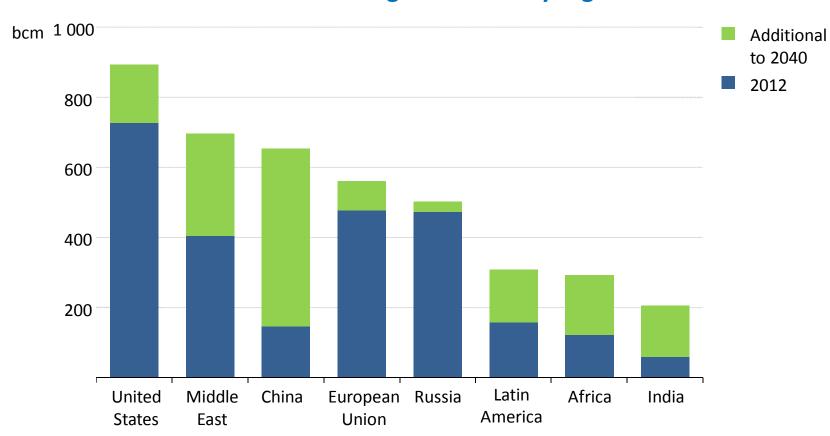
Global coal demand by key region



Global coal demand growth slows rapidly due to more stringent environmental policies, underlining the importance of high-efficiency plant & CCS to coal's future

China and the Middle East: key sources of demand growth for natural gas

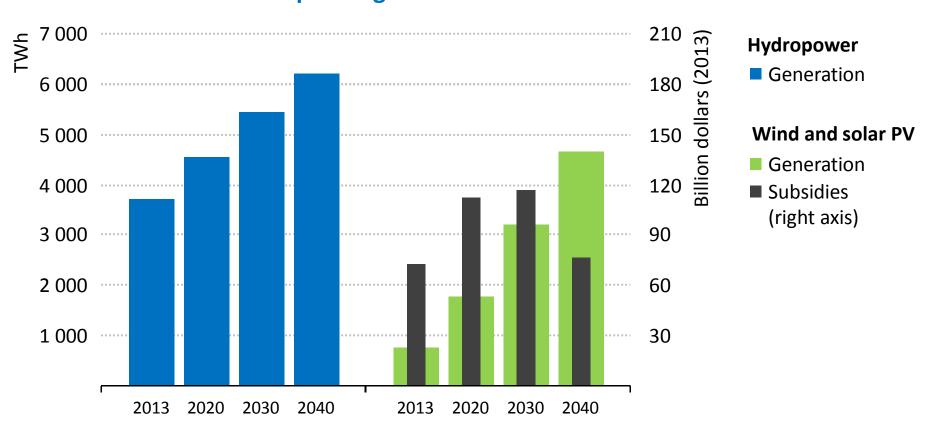
Natural gas demand by region



Gas demand growth in China & the Middle East alone, driven largely by the priority to diversify the fuel mix for power, is more than double the rise in total OECD gas use

Renewables overtake coal to become the leading source of power

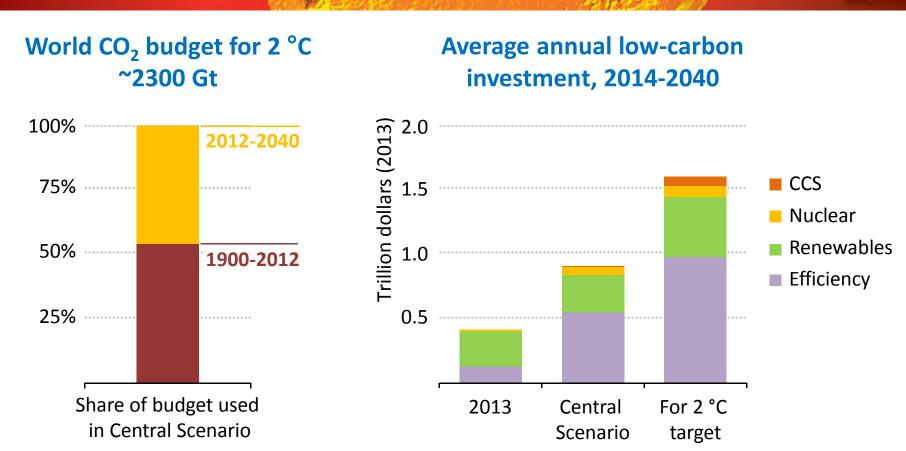
Renewables-based power generation and subsidies



Renewables supply half of the growth in global power demand; wind & solar PV subsidies decline from 2030 as costs fall & recent higher-cost commitments expire

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The 2 °C goal – last chance in Paris?



The entire global CO_2 budget to 2100 is used up by 2040 – Paris must send a strong signal that low-carbon investment needs to increase to four-times current levels

Navigating a stormy energy future



- Geopolitical & market uncertainties are set to propel energy security high up the global energy agenda
- Volatility in the Middle East raises short-term doubts on investment & spells trouble for future oil supply
- Without clear direction from Paris in 2015, the world is set for warming well beyond the 2 °C goal
- Far-sighted government policies are essential to steer the global energy system on to a safer course