



INTERNATIONAL ENERGY FORUM

A world map is depicted in the background, rendered in a light gray color. Overlaid on the map is a complex network of thin gray lines connecting numerous small gray dots, representing a global supply chain or energy network. The map shows the outlines of continents and major landmasses.

Natural Gas and Coal Supply Chains

Moving Towards Sustainability

Dr Sun Xiansheng

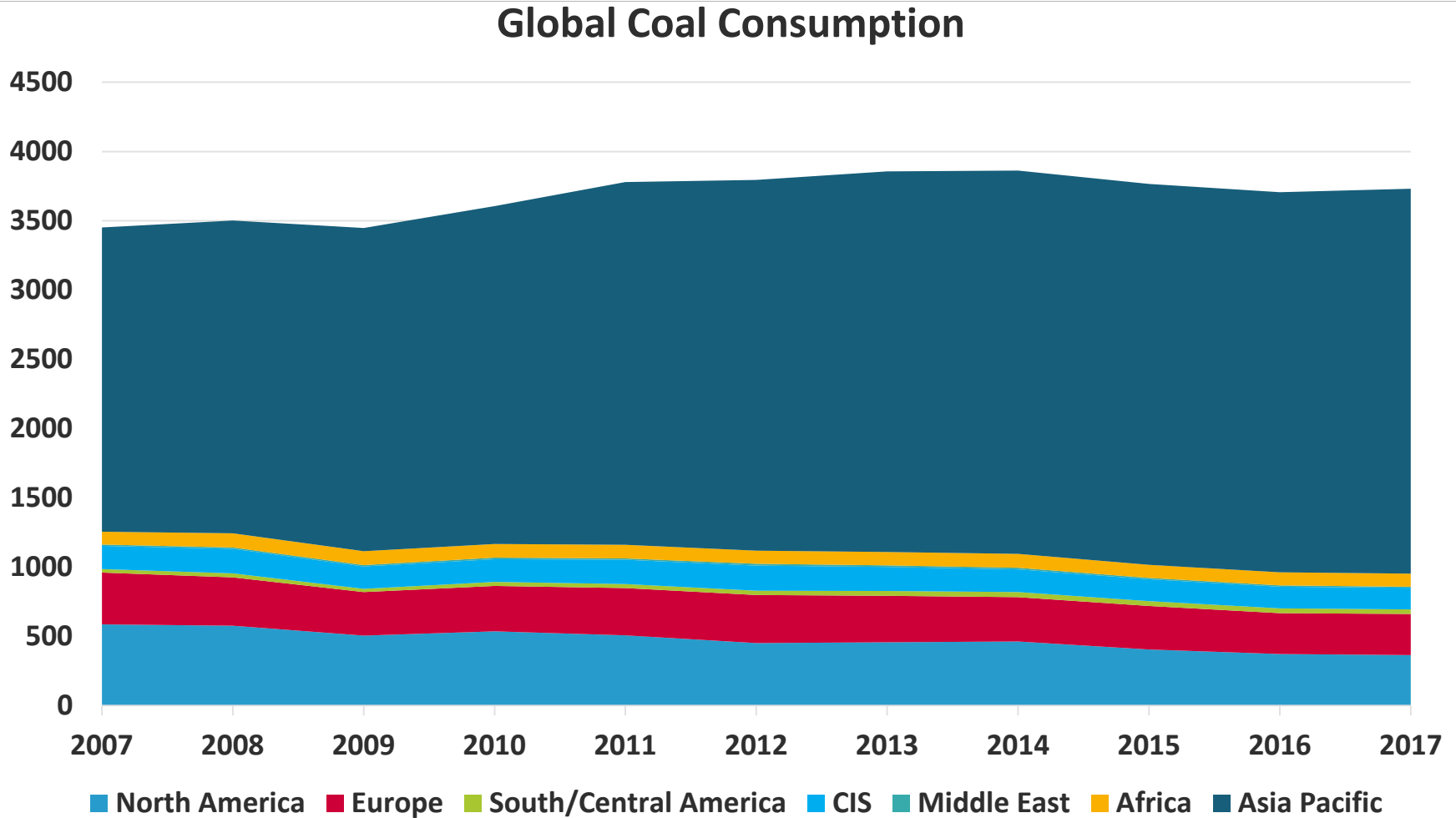
Secretary General, IEF Riyadh

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- **Current reality: Where we are today**
- **Global energy trends and projections**
- **Sustainable Solutions**
- **Three Key Challenges**

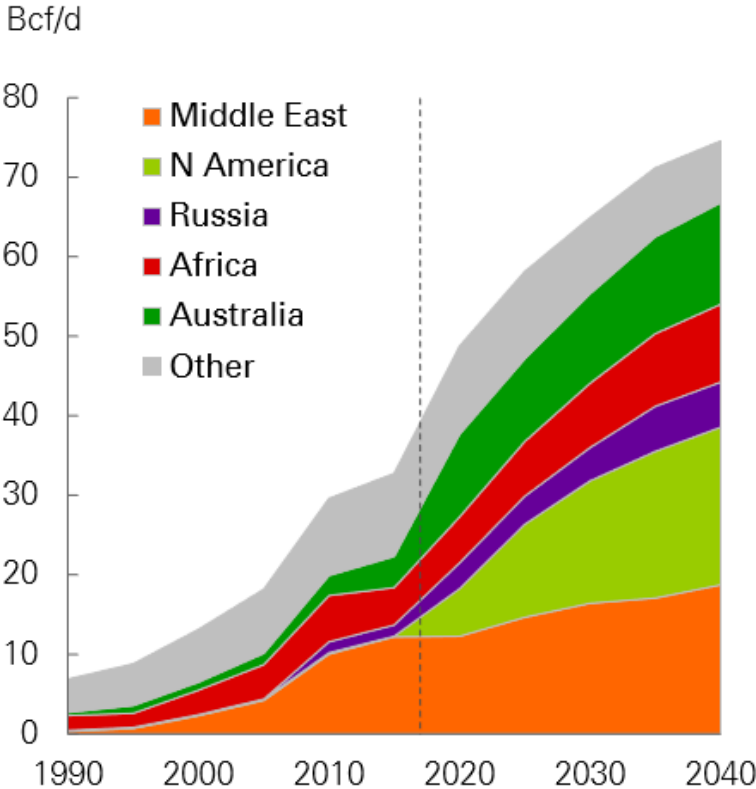
Global Coal Consumption 2007-2017



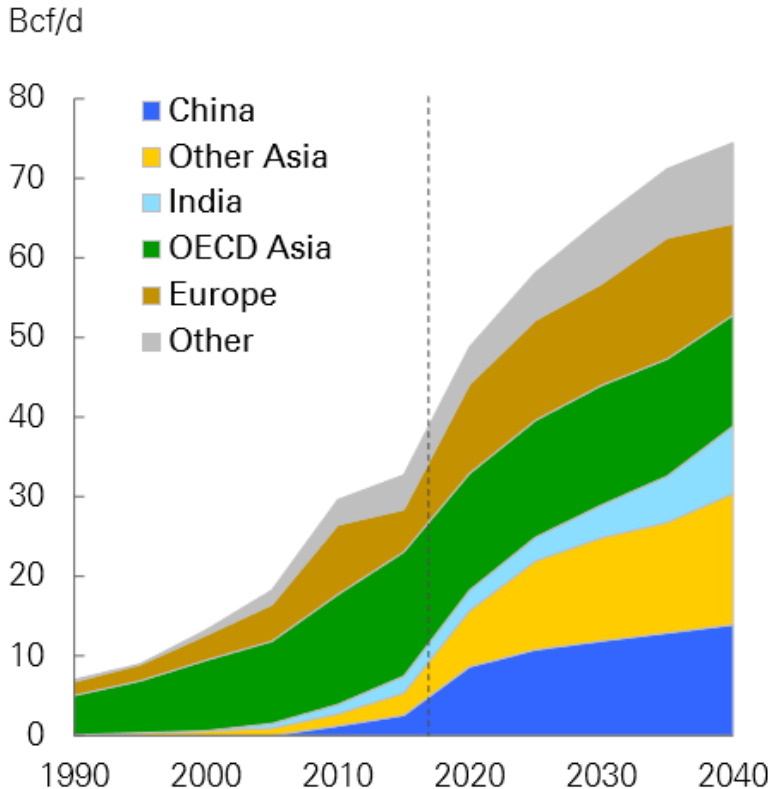
Source: BP Statistical Review of World Energy 2018

LNG Producer & Consumer Trends

LNG exports



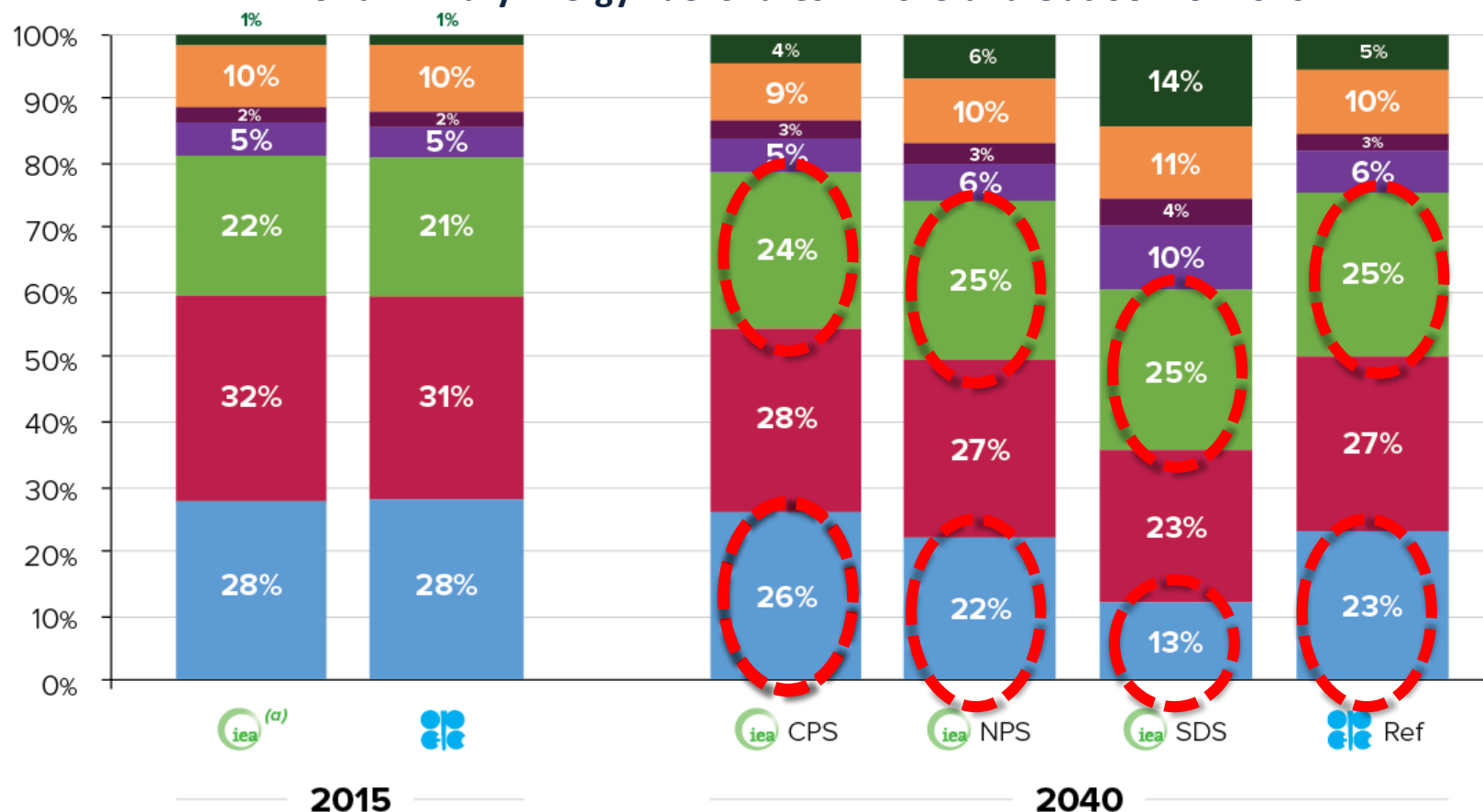
LNG imports



Source: BP Outlook, 2018

Coal and Natural Gas Remain Relevant in 2040 in main IEA and OPEC 2016 outlooks

World Primary Energy Fuel Shares in 2015 and Outlook for 2040



Coal Oil Gas Nuclear Hydro Biomass Other renewables

Sustainable Solutions - Coal



Sustainable Solutions - Coal

Key Technologies

Coal
“Washing”
Efficiency
Measures

Gasification
(IGCC)

CCUS

Sustainable Solutions - Gas

Key Technologies

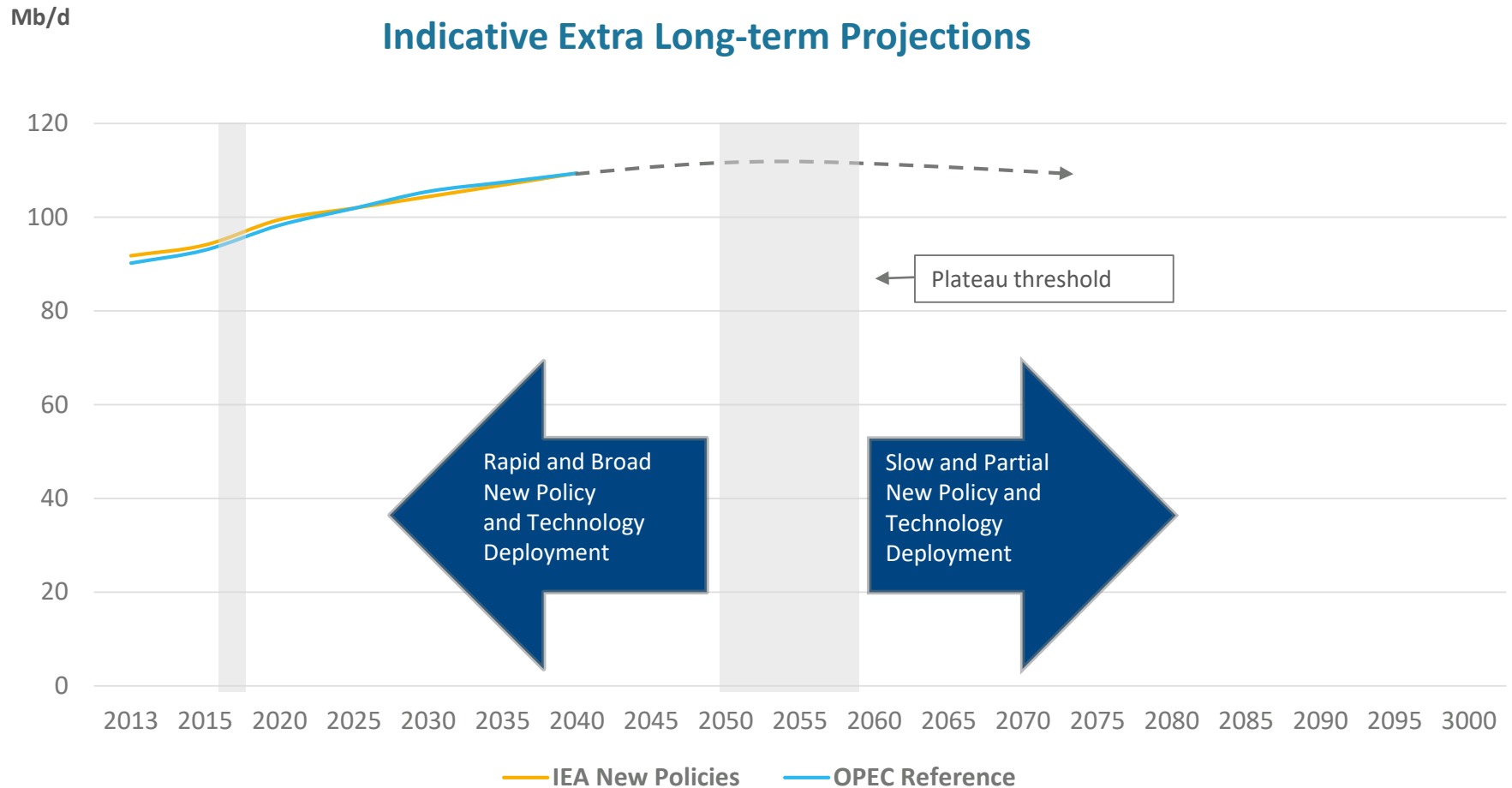
Innovative
Emissions
Detection

Low Carbon
Liquefaction

Power to
Gas
Technology

Policy and Technology Cooperation is key

Depth and breadth of dialogue and cooperation decide pace of change



Based on extrapolation of 2017 IEA, OPEC Long-Term Projections

3 Key Challenges

1. High Capital Costs
2. Slowing Transition
3. Overcoming Technology Plateau



Key Dialogue Meetings

- 1. The 6th IEF-IGU Ministerial Gas Forum on 21-22 November 2018 in Barcelona, Spain**
- 2. The 9th IEA-IEF-OPEC Symposium on Energy Outlooks on 27 February 2019 in Riyadh, Saudi Arabia**
- 3. The 8th Asian Ministerial Energy Roundtable on 9-10 September 2019 in Abu Dhabi, UAE and**
- 4. The 17th IEF Ministerial Meeting in China in 2020**



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