

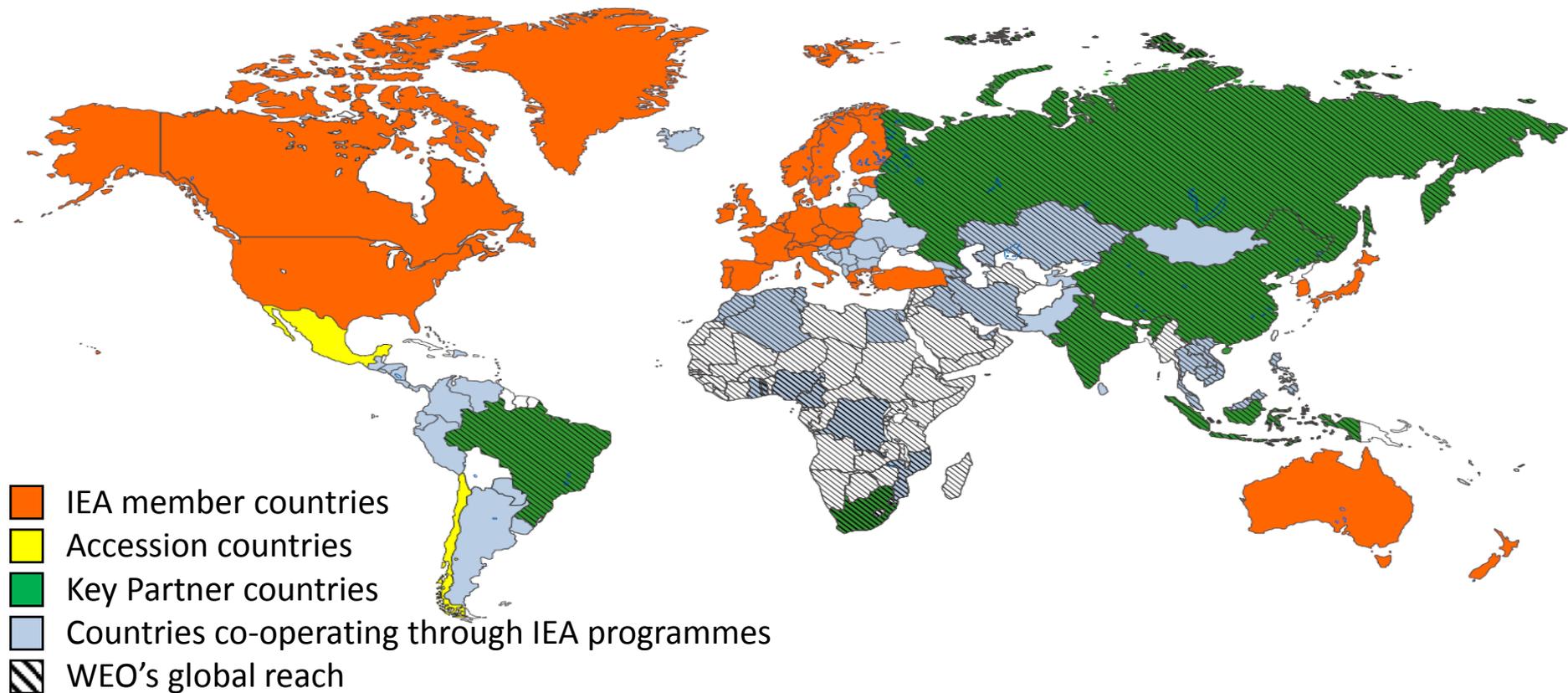
World Energy Outlook 2017

**Scenario analysis at
the IEA**

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- **Founded in the wake of the 1974 oil crisis to promote energy security, cooperation and stable markets**
- **World-class data, research and policy analysis to help governments and industry make good energy choices**
- **Numerous industry and scientific working groups, led by CEO-level Energy Business Council**
- **Key goals are**
 - *Energy security*
 - *Economic growth*
 - *Environmental protection*
 - *Engagement worldwide*

IEA members and partners



The IEA's *World Energy Outlook*

- **The *World Energy Outlook (WEO)* is the IEA's annual flagship publication, widely used by policy makers, investors and others**
 - *Peer reviewed by 200+ experts*
- ***WEO* uses latest available energy and emissions data for its analysis of medium- and long-term energy and climate trends**
- ***WEO* analysis is conducted using three core scenarios:**
 - *Where do existing policies take us (“Current Policies Scenario”)?*
 - *What is the impact of announced policies (“New Policies Scenario”)?*
 - *What is required for the energy sector to achieve sustainability goals (“Sustainable Development Scenario”)?*

■ Time horizon to 2040 with annual data

- *Complete update every year (e.g. WEO 2017 uses 2016 data)*
- *Data inputs and outputs: capacities installed & under construction, vehicle stocks & sales, household floor space, steel production...*
- *Model is calibrated to reflect market trends for the next 5 years*

■ Regional resolution: 25 demand models; 120 supply models

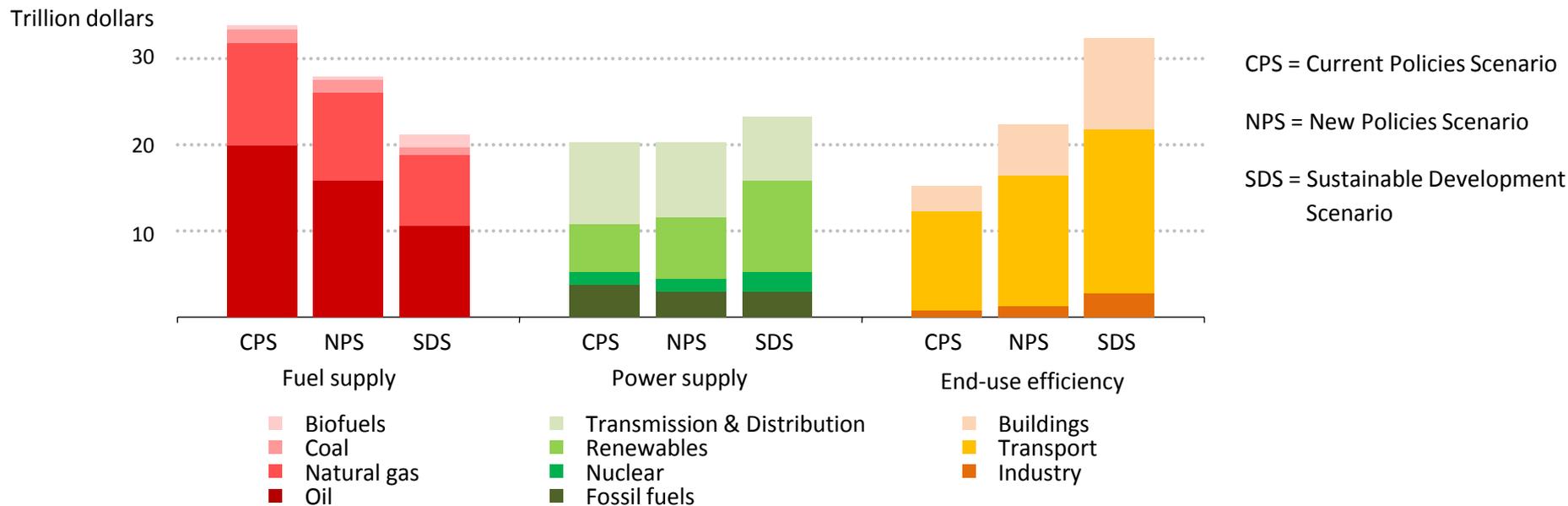
- *12 country demand models (including e.g. US, China, India, Russia...).*
- *Regional models are further broken up for specific projects (e.g. Africa Outlook in 2014)*

Why do we produce scenarios?

- **Energy and climate scenarios enable decision makers to consider multiple futures, the key drivers and implications**
 - *Scenarios are used extensively by policy makers and an increasing number of companies*
 - *Independent, transparent scenarios enable comparison & evaluation*
- **Embed the achievement of climate and other environmental goals into policy and investment strategies**
 - *Help undertake an audit of climate risks to existing business models*
 - *Use scenarios as a tool to help integrate climate considerations into future business decisions*

Investments needed to mitigate climate change

Cumulative world energy sector investment by sector & scenario, 2015-2040



Overall investment costs are similar across scenarios, but policies change the direction of flows across fuels and sectors, and across supply and demand