



Road to Decarbonisation - Impact on Gas Demand

Is natural gas an important piece in the energy puzzle?

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We are living in interesting times ...

Global Economy



Global Conflicts



Brexit



Weather

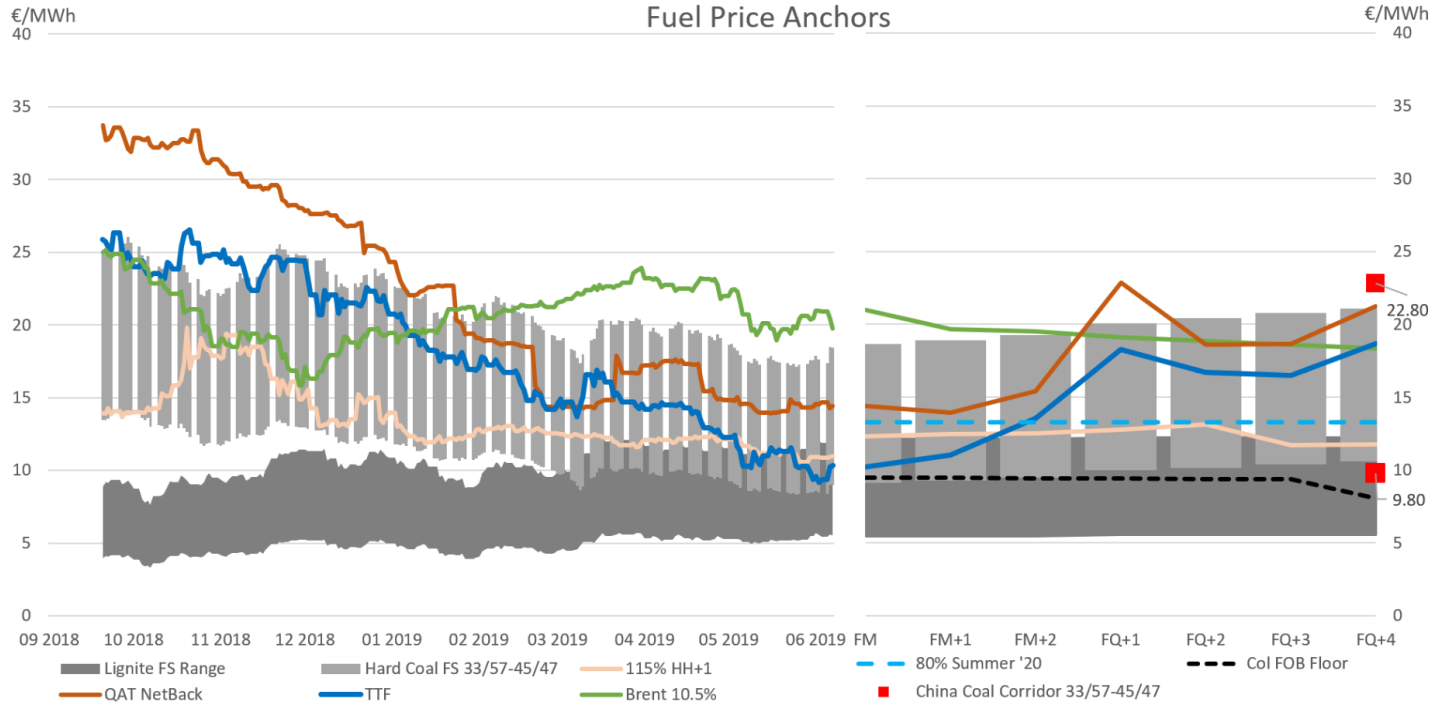


Decarbonization



- Oil influenced by Global dynamics: Middle East conflict and trade conflicts
- Coal: temporary (?) weakness
- Gas: temporary price race to the bottom
- Power: influenced by all other factors and carbon

In mid 2019, prompt gas prices have reached coal and finally lignite switching territory...

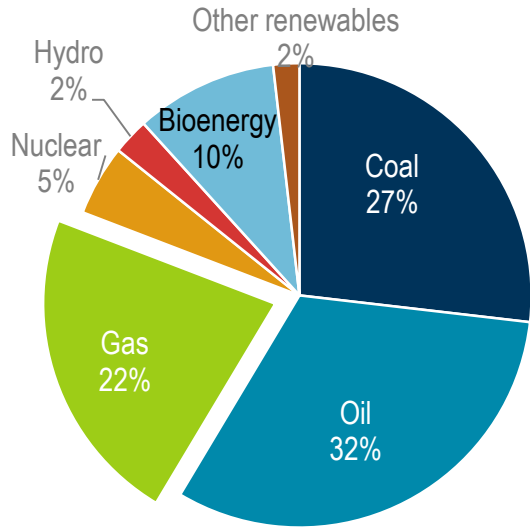


Coal consumption has suffered, how long will it continue?

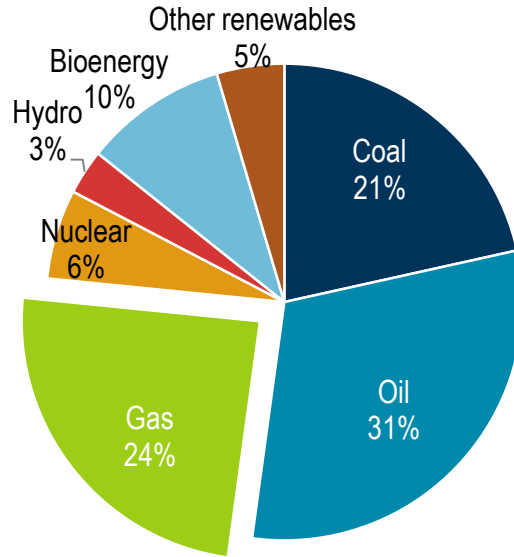


Gas becomes the largest fuel in the global energy mix

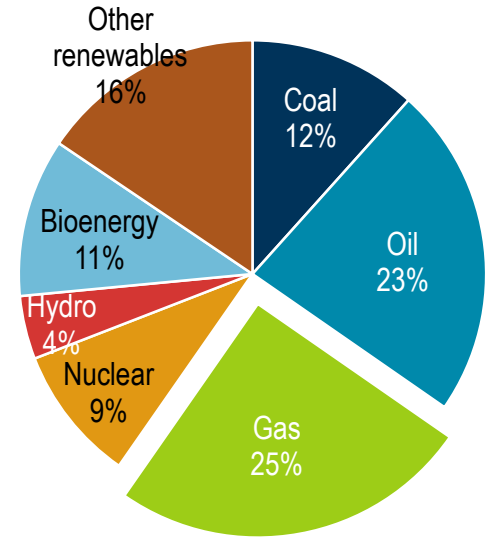
IEA WEO: Global TPED 2017



IEA WEO: Global TPED 2025

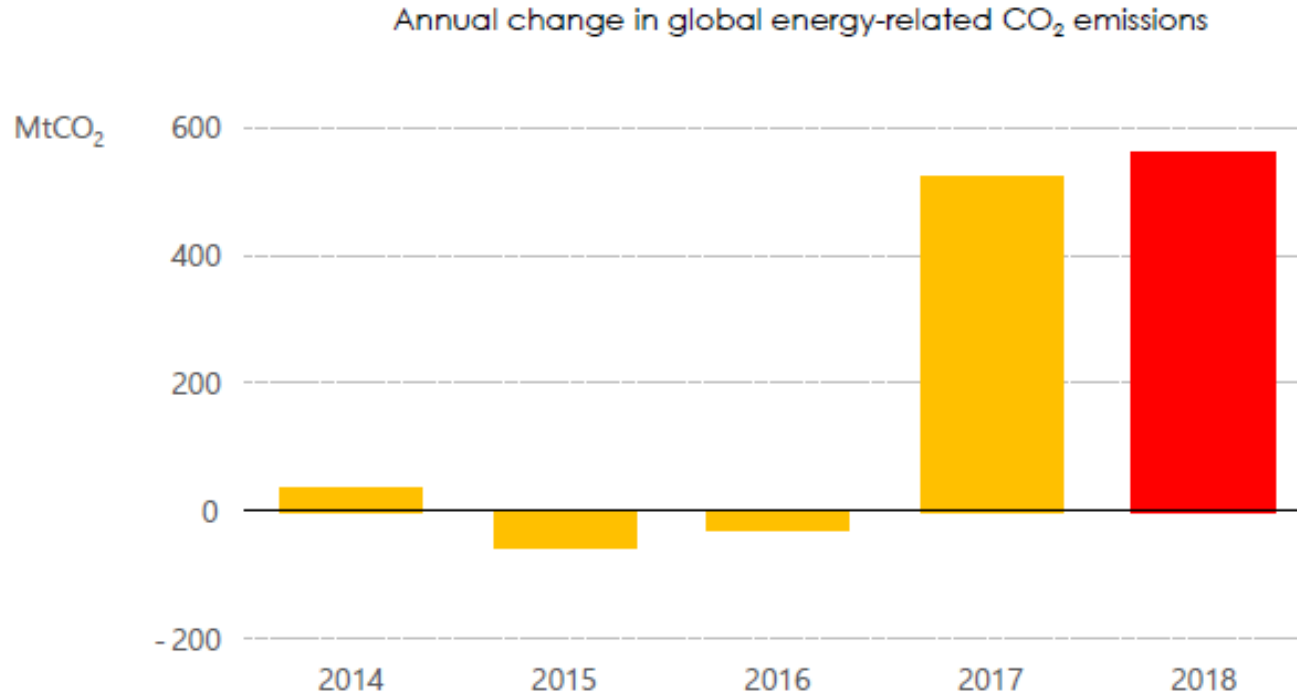


IEA WEO: Global TPED 2040



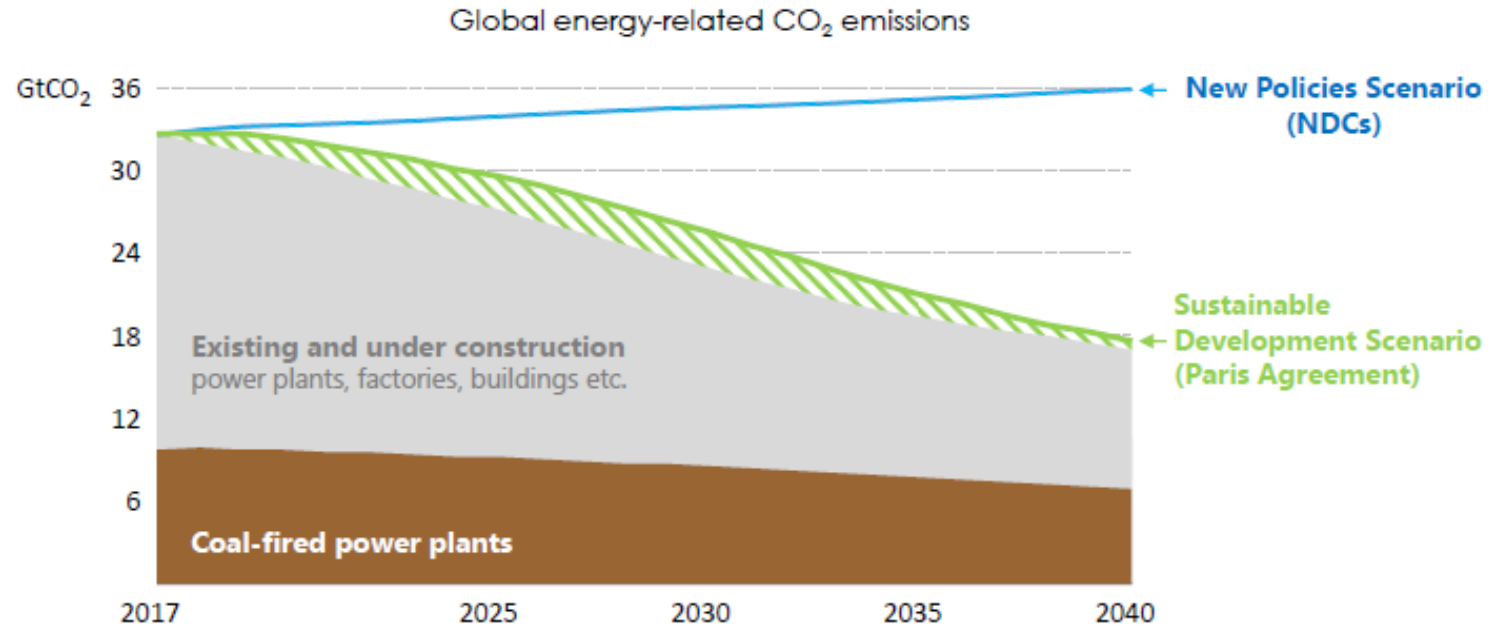
Note: TPED=Total Primary Energy Demand
Source: IEA World Energy Outlook 2018

But will it hold in the light of emissions?



Source: IEA, 2019

Room to maneuver is getting smaller ...



Source: IEA, 2019

The energy world in times of tackling climate change

IEA WEO New Policies Scenario

- The **New Policies Scenario** (NPS) is the central scenario of the WEO, and aims to provide a sense of the direction in which the most recent policy ambitions could take the energy sector.
- In addition to incorporating policies and measures that governments around the world have already put in place, it also takes into account the effects of announced policies, as expressed in official targets and plans.
- “New Policies” are by definition not yet fully reflected in legislation or regulation, so prospects & timing for full realisation are based on IEA assessment of the relevant constraints.

IEA WEO Sustainable Development Scenario

- The **Sustainable Development Scenario** (SDS) starts with a set of desired outcomes, as defined by the relevant Sustainable Development Goals (SDGs)
- It then works back to show how the energy sector would need to change to achieve those goals in an integrated and
- E.g. SDG 13 “Take urgent action to combat climate” → Outcome SDS: Energy-related CO₂ emissions peak and then decline, fully in line with the objectives of the Paris Agreement. The CO₂ emissions trajectory to 2040 is consistent with a long-term global average temperature rise of 1.7-1.8 °C above pre-industrial levels.

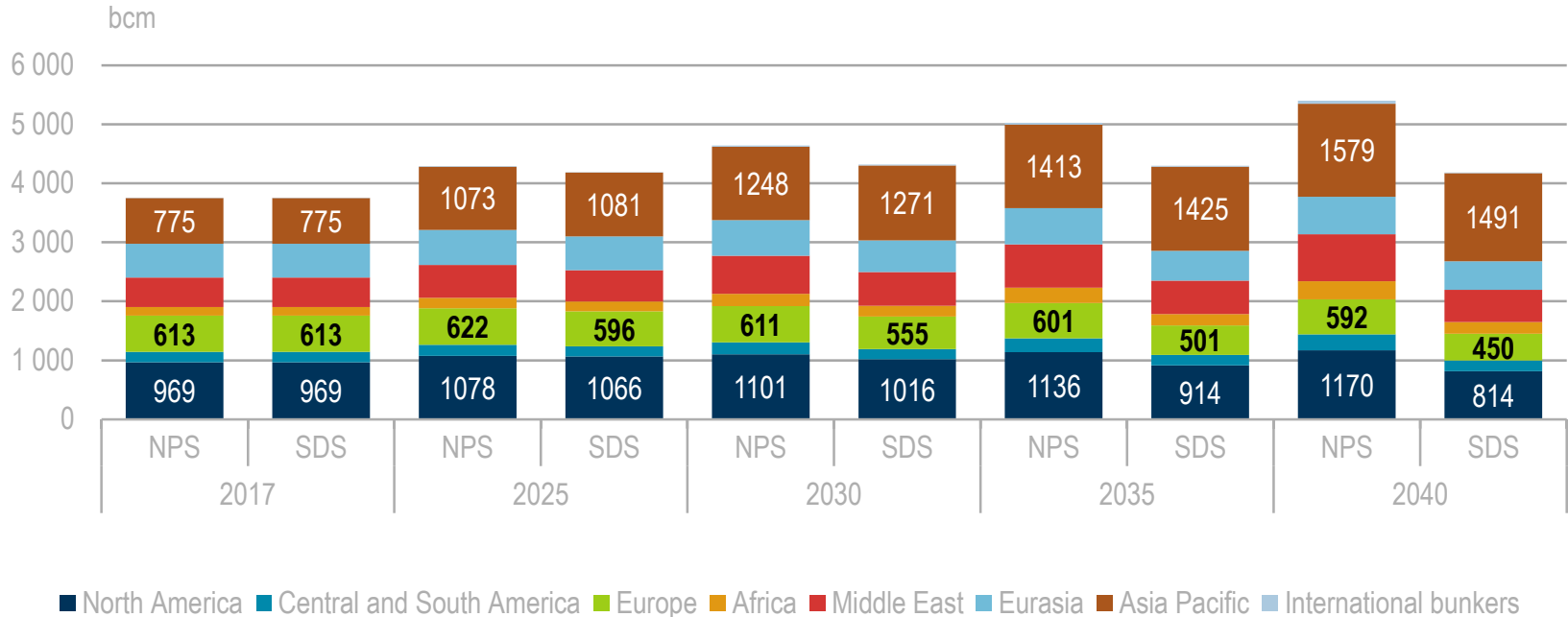
The role of natural gas changes in IEA's Sustainable Development Scenario

IEA WEO Sustainable Development Scenario

- In the Sustainable Development Scenario, gas demand continues to grow to 2025 before flattening out at around 4.2 trillion cubic metres (tcm).
- Gas is the only fossil fuel for which demand in 2040 is higher than today, and it becomes the largest fuel in the global energy mix.
- Gas demand for power generation declines as gas increasingly provides peaking and balancing power rather than baseload generation. Instead, gas increases its share in the industry and transport sectors, where there is a strong impetus to curb the use of more emissions-intensive fuels.
- In more carbon-intensive systems where there is ample scope to displace coal, such as India, gas demand is higher than in the New Policies Scenario.
- In Europe and North America, demand remains stable to 2025, but declines after that reflecting improved efficiency in buildings and industry, and more rapid decarbonisation of power.

Natural gas plays a crucial role, particularly in Asia Pacific

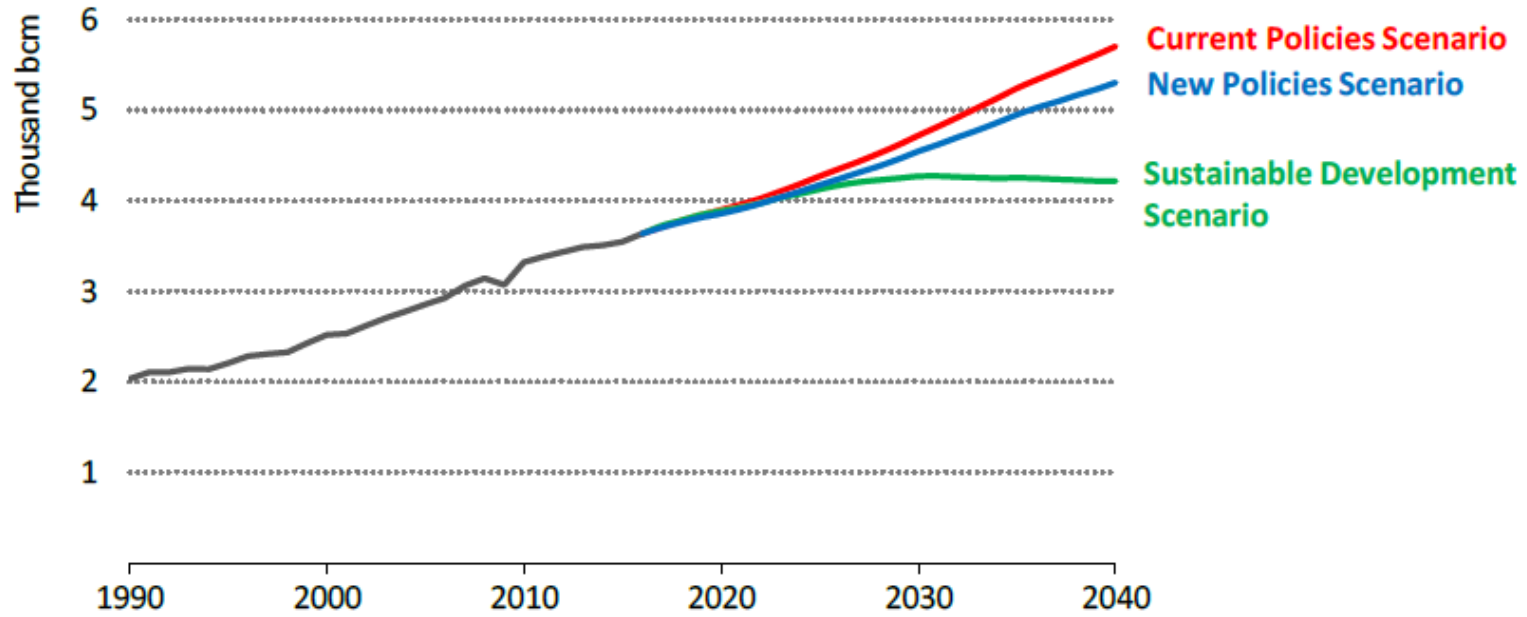
IEA WEO 2018: New Policies versus Sustainable Development Scenario



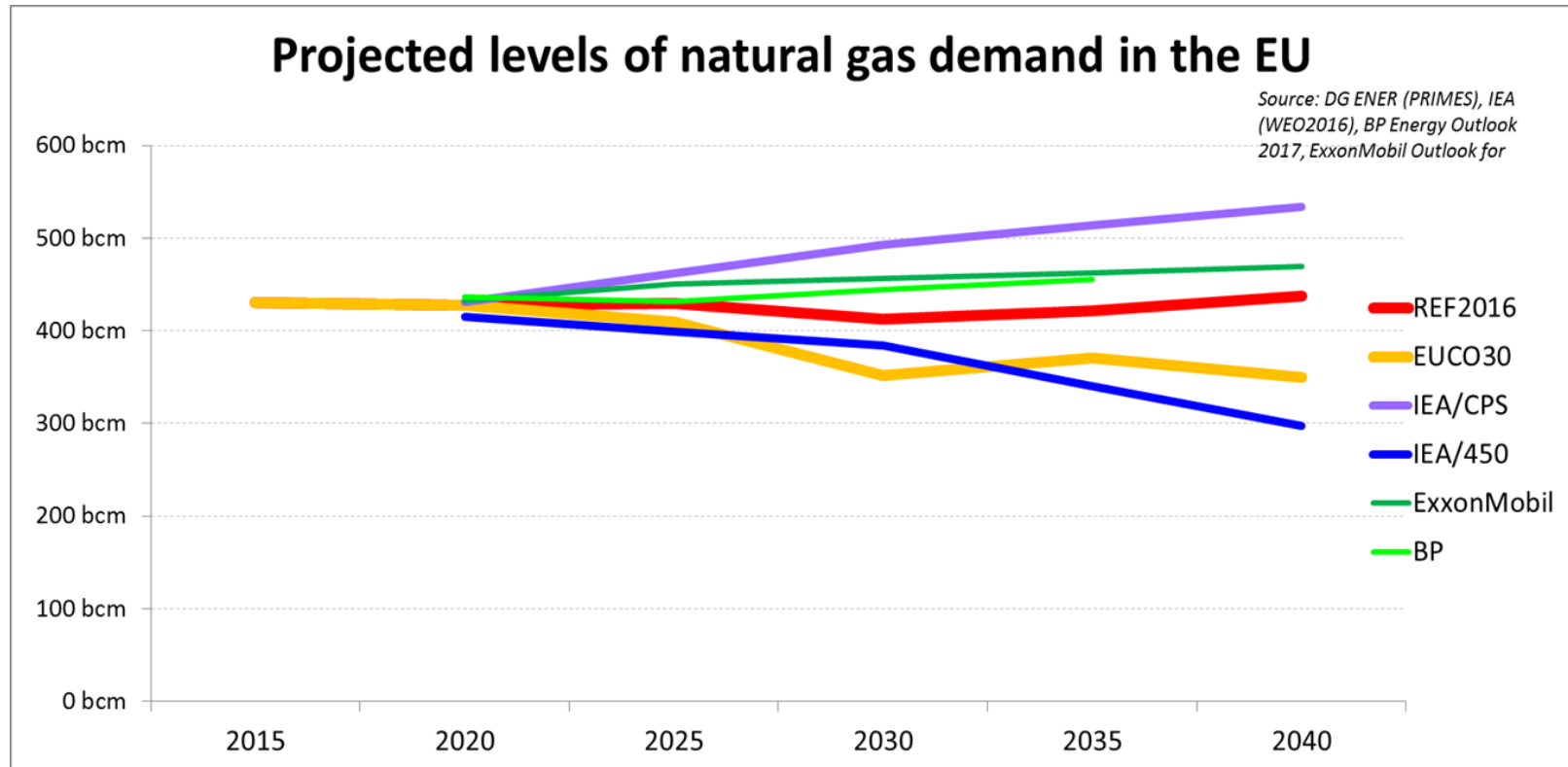
Note: NPS=New Policies Scenario, SDS=Sustainable Development Scenario
 Source: IEA World Energy Outlook 2018

The energy world in times of tackling climate change

World natural gas demand by scenario



A word of caution: EU has other ideas in mind...



Road to decarbonization: impact on gas demand

1

Gas is seen to be the only fossil fuel for which demand in 2040 is higher than today, and it becomes the largest fuel in the global energy mix.

2

Demand for power generation declines, but increases its share in industry and transport sectors.

3

But in Europe, EU has pursued more aggressive strategies. Germany in turn has opened up to see gas as an important pillar of energy transition.

4

We continue to present gas as part of the sustainable future, but decarbonisation of gas and avoiding leakage will be top of the agenda.

Speaker

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