

MEDIUM-TERM
OIL & GAS
MARKETS

2011

Anne-Sophie Corbeau
Senior gas expert



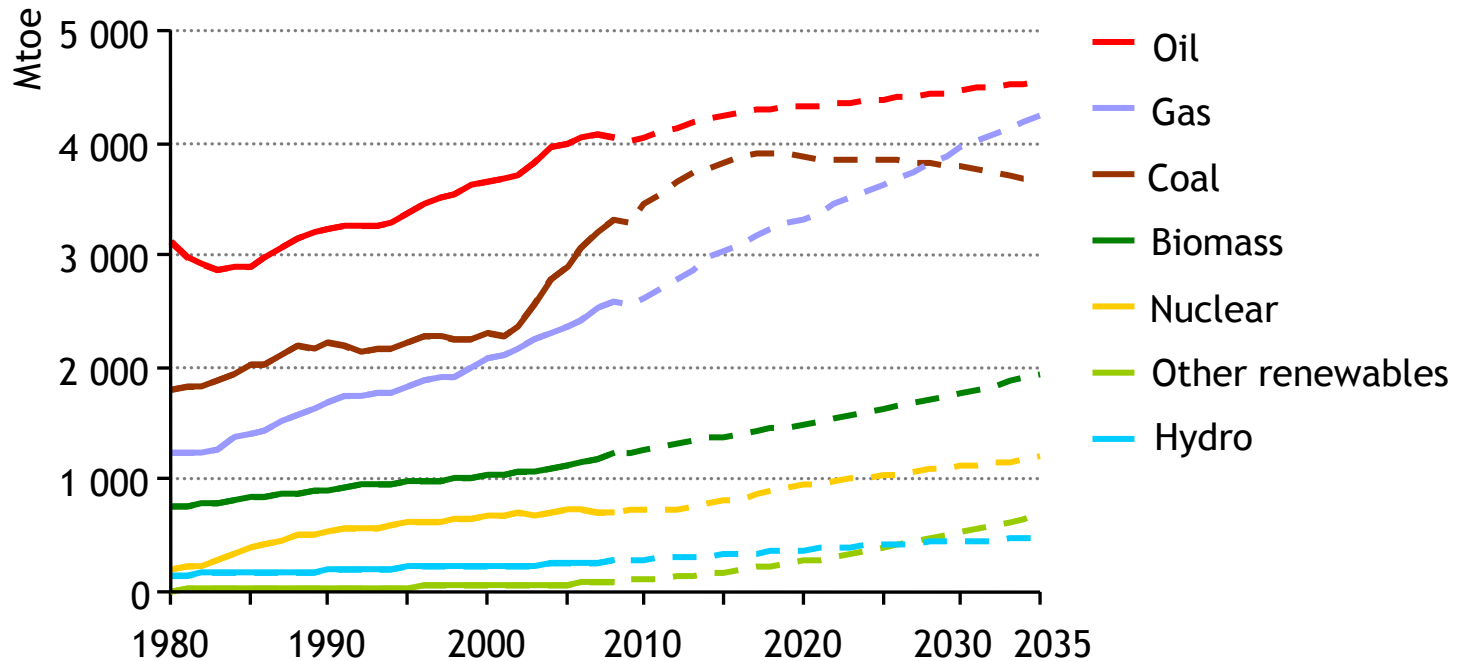
International
Energy Agency

What has changed for gas in the past two years?

- **Unconventional gas revolution in the United States has put the highlight on new gas resources**
 - Gas resources are estimated to be vast, with recoverable unconventional matching conventional gas resources
 - 250 years of current gas production
 - Cost of producing is estimated at around \$3-9/MBtu
- **Global LNG trade is growing fast**
 - Allows stranded resources to be developed
- **Nuclear renaissance?**
 - In a post Fukushima outlook, this seems more difficult
 - Especially in the OECD region

What would a Golden Age of Gas scenario look like?

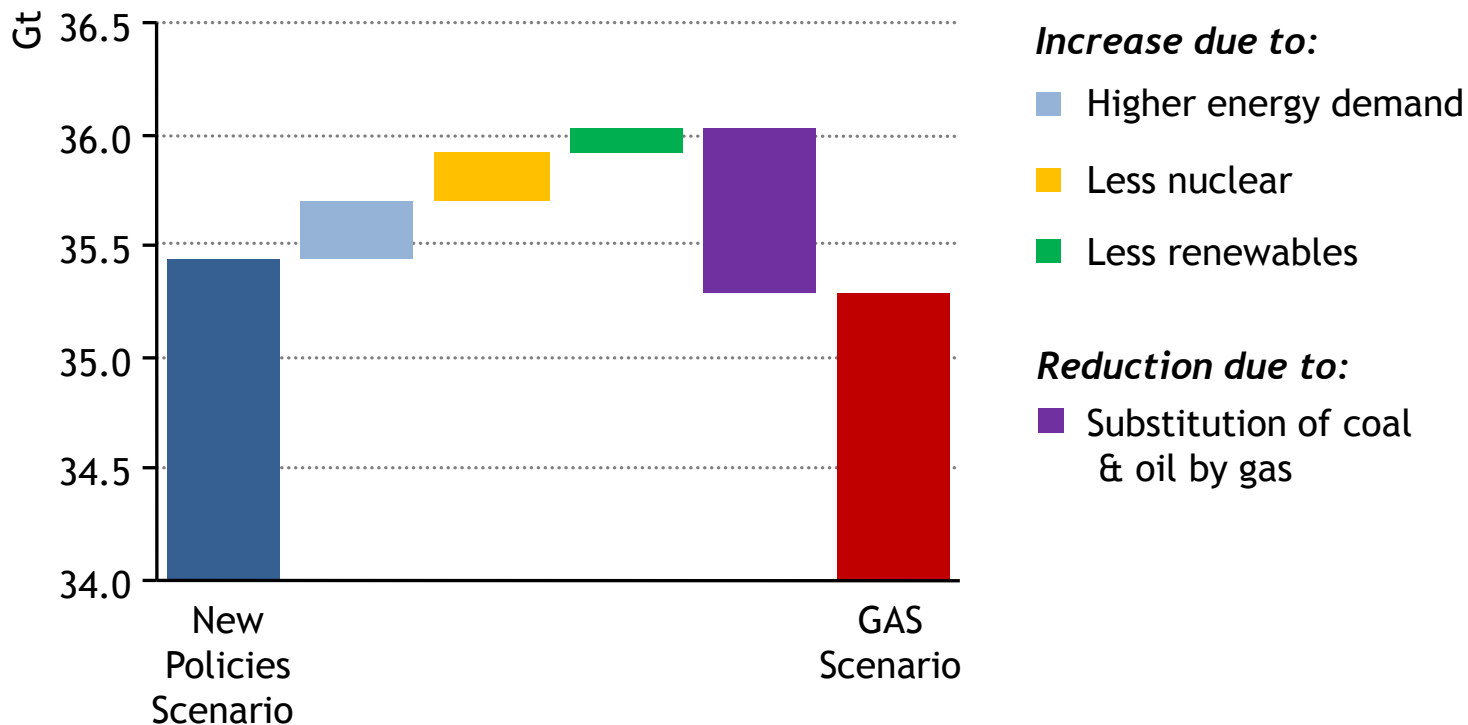
World primary energy demand by fuel in the GAS Scenario



- The Golden Age of Gas scenario is based on strong growth in China, lower nuclear, lower gas prices compared to our base case scenario
- Gas overtakes coal before 2030 and meets one quarter of global energy demand by 2035 – demand grows by 2% annually, compared with just 1.2% for total energy

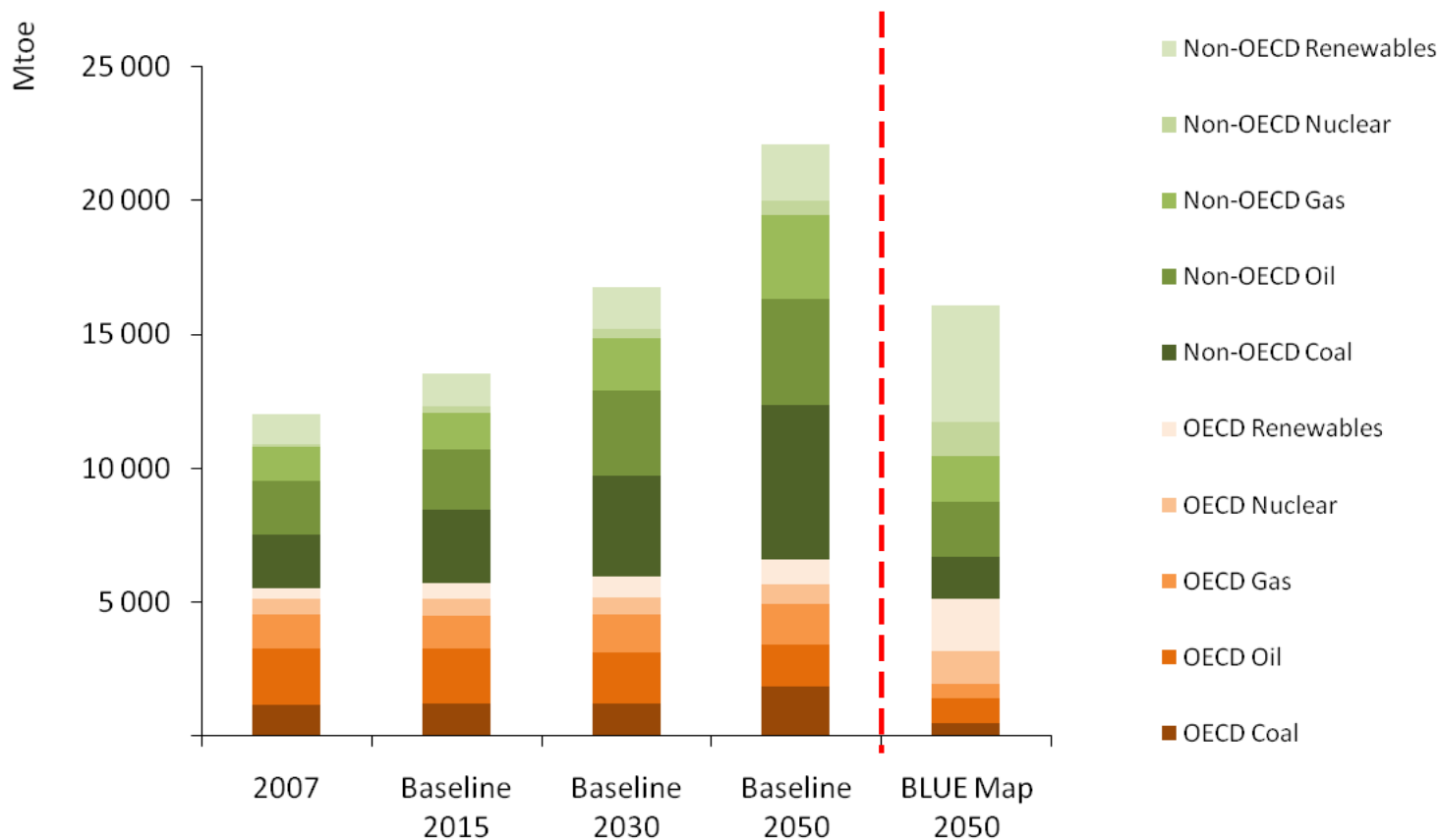
But in this scenario, gas does not quite solve the GHG emission issue

CO₂ emissions in the GAS Scenario compared with the New Policies Scenario, 2035



- CO₂ emissions are just 160 Mt lower than in the New Policies Scenario in 2035
- Substitution of coal & oil by gas cuts emissions by 740 Mt, but this is largely offset by other effects
- There is need for energy efficiency, CCS and more renewables

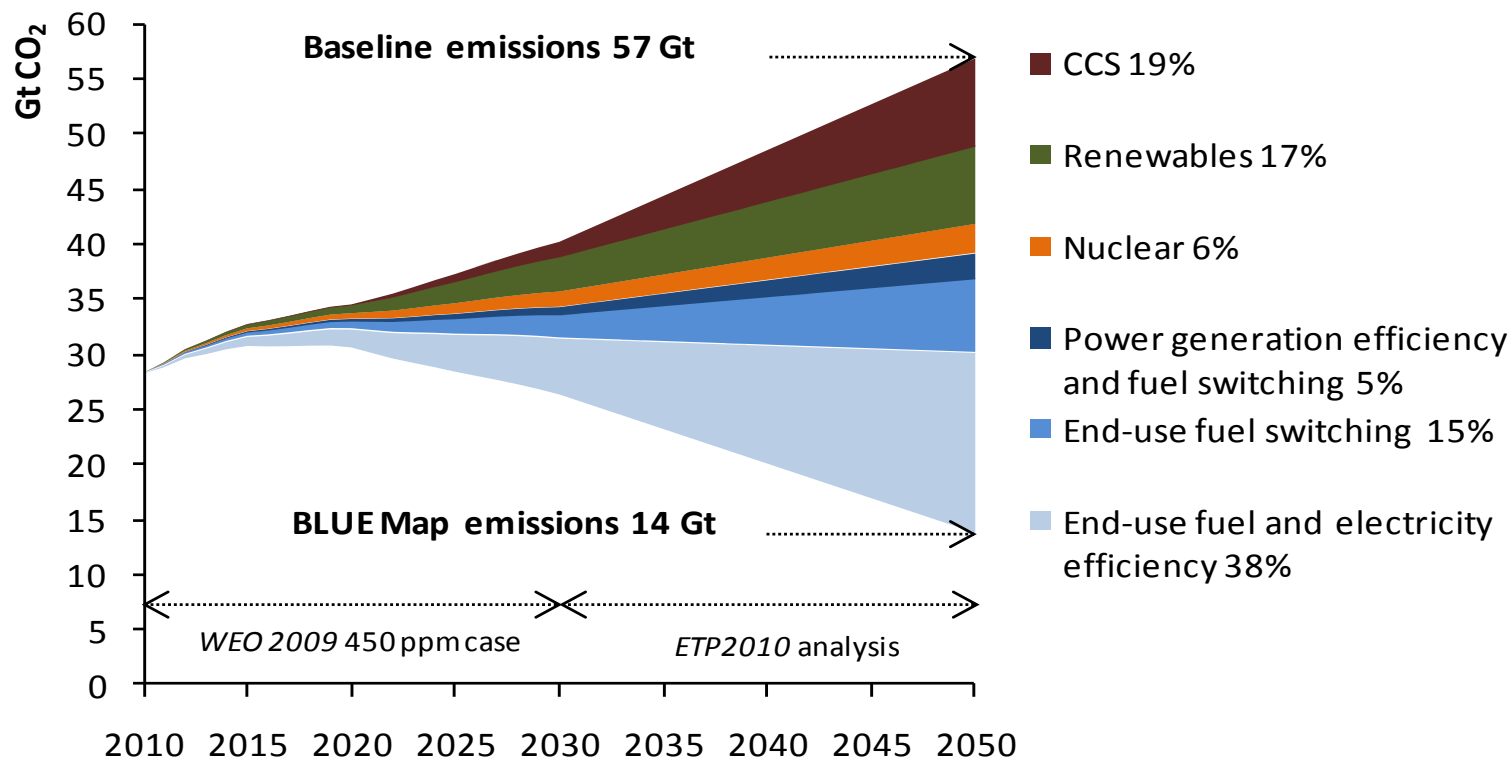
OECD and non-OECD primary energy demand



Primary energy demand in non-OECD countries is projected to increase much faster than in OECD countries

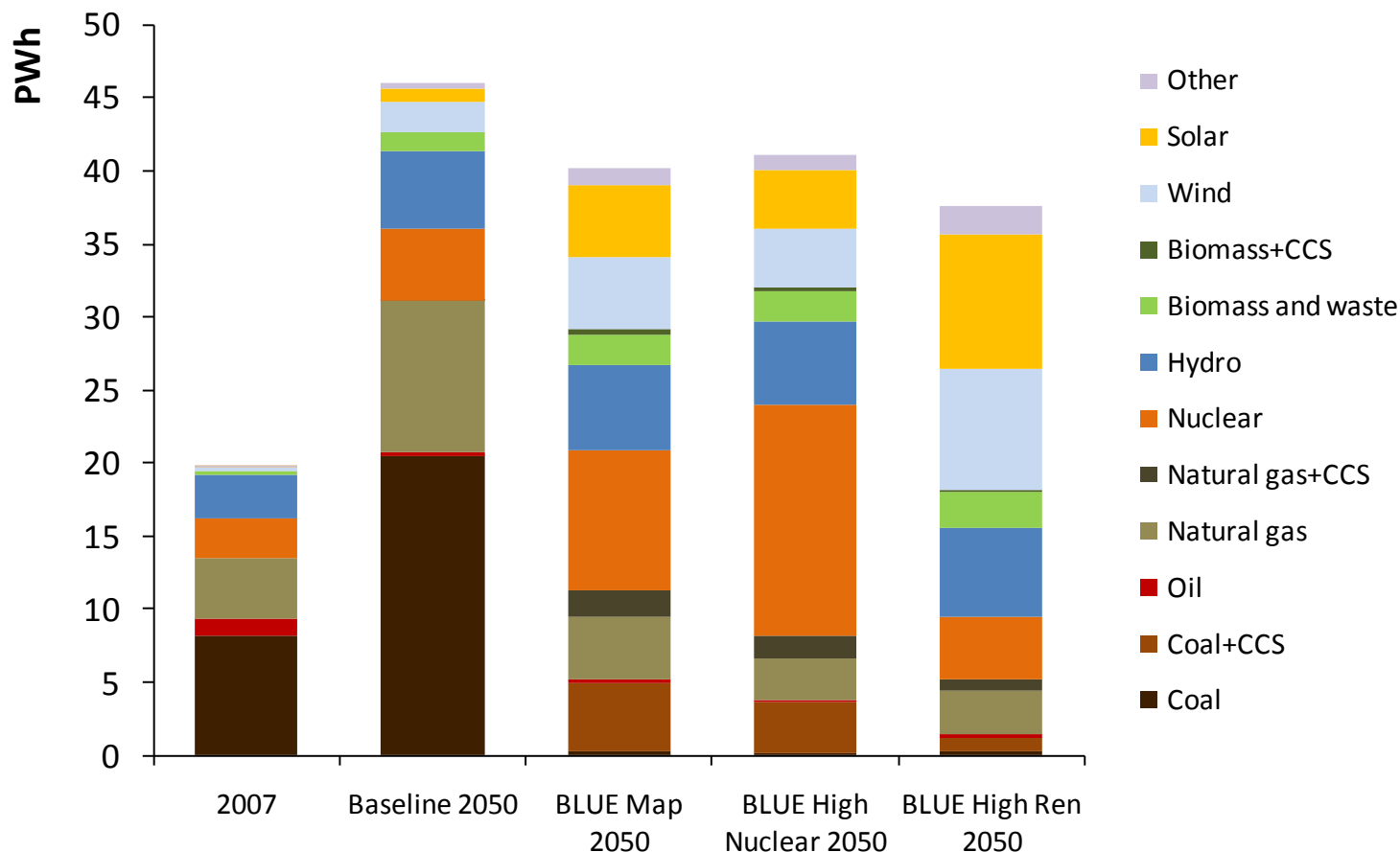
This is not sustainable: energy demand increase must slow down in the non-OECD and decline in the OECD

Key technologies for reducing global CO₂ emissions



A wide range of technologies will be necessary to reduce energy-related CO₂ emissions substantially

Decarbonising the power sector – a new age of electrification?



A mix of renewables, nuclear and fossil-fuels with CCS will be needed to decarbonise the electricity sector

2011

Thank you for your attention
Anne-Sophie.corbeau@iea.org