

# **CEEPR/EPRG/EDF**

## **European Energy Policy Conference**

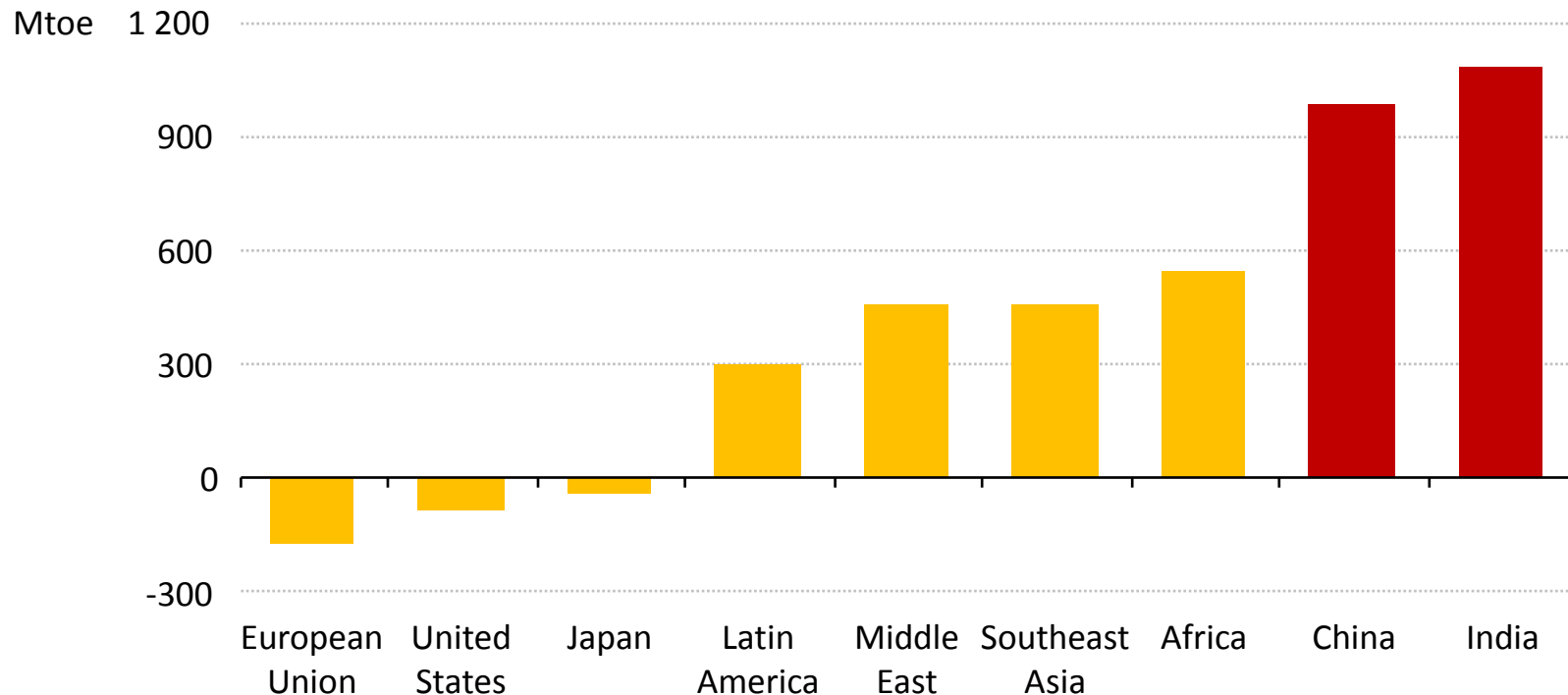
**Dr Fatih Birol**

**Executive Director, International Energy Agency**

**Paris, 7 July 2016**

# Demand growth in Asia – the sequel

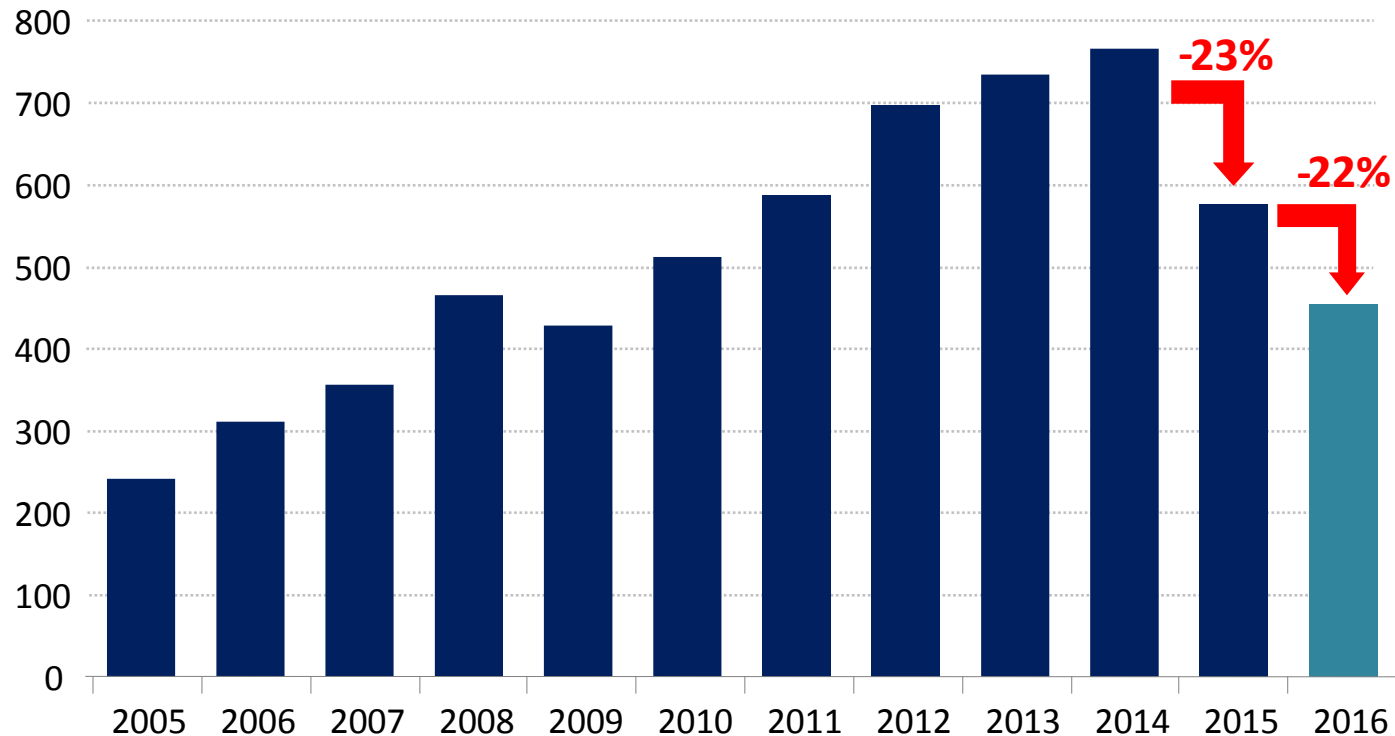
## Change in energy demand in selected regions, 2014-2040



***Energy use worldwide grows by one third to 2040, driven by Asia; EU energy demand declines by 15% over the period***

# Upstream oil and gas investment continues to fall

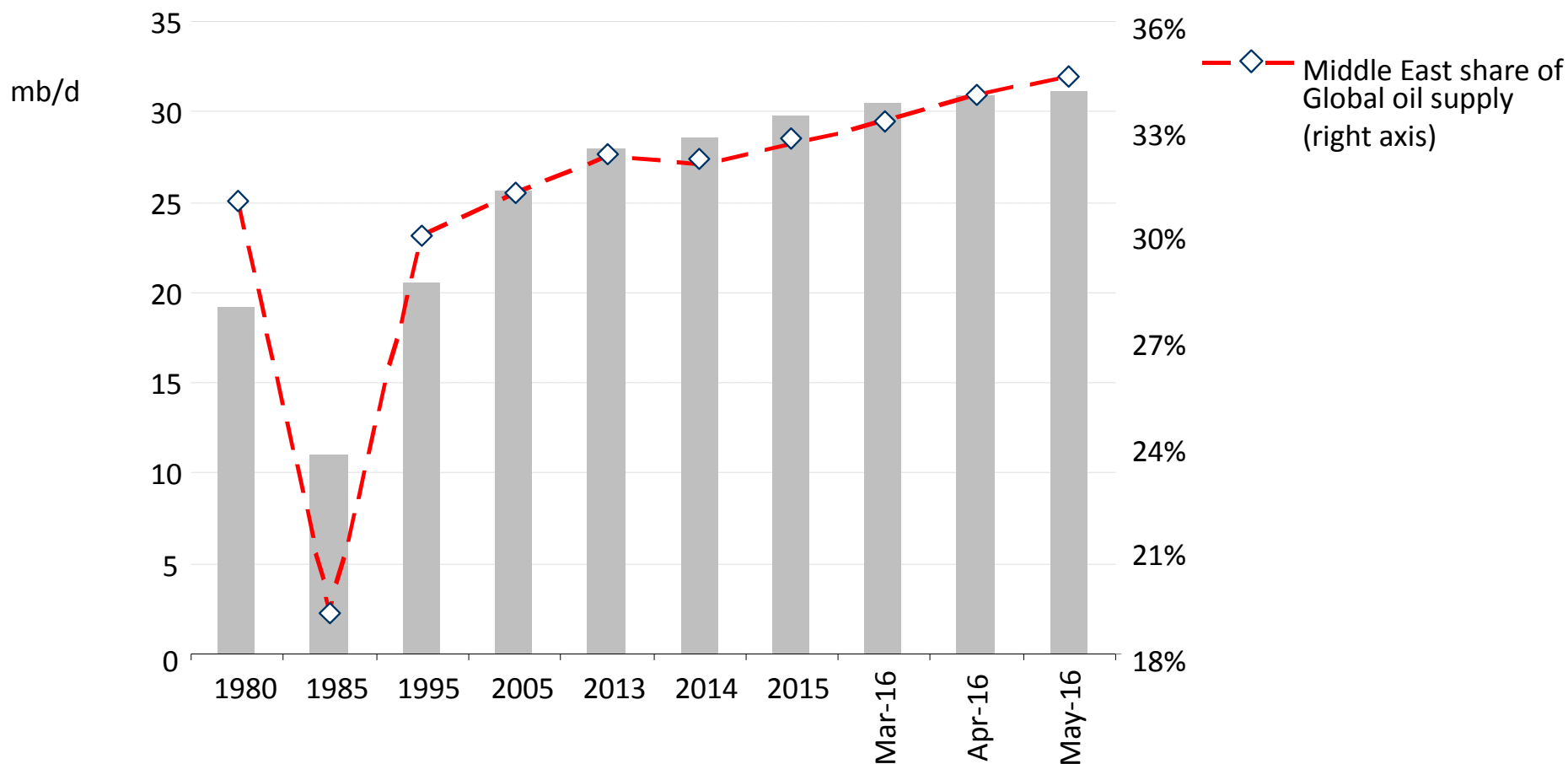
## Upstream oil and gas investment



***Upstream oil and gas investment continues to fall, particularly in high-cost regions; this raises the prospect of price volatility & greater reliance on the Middle East in the future***

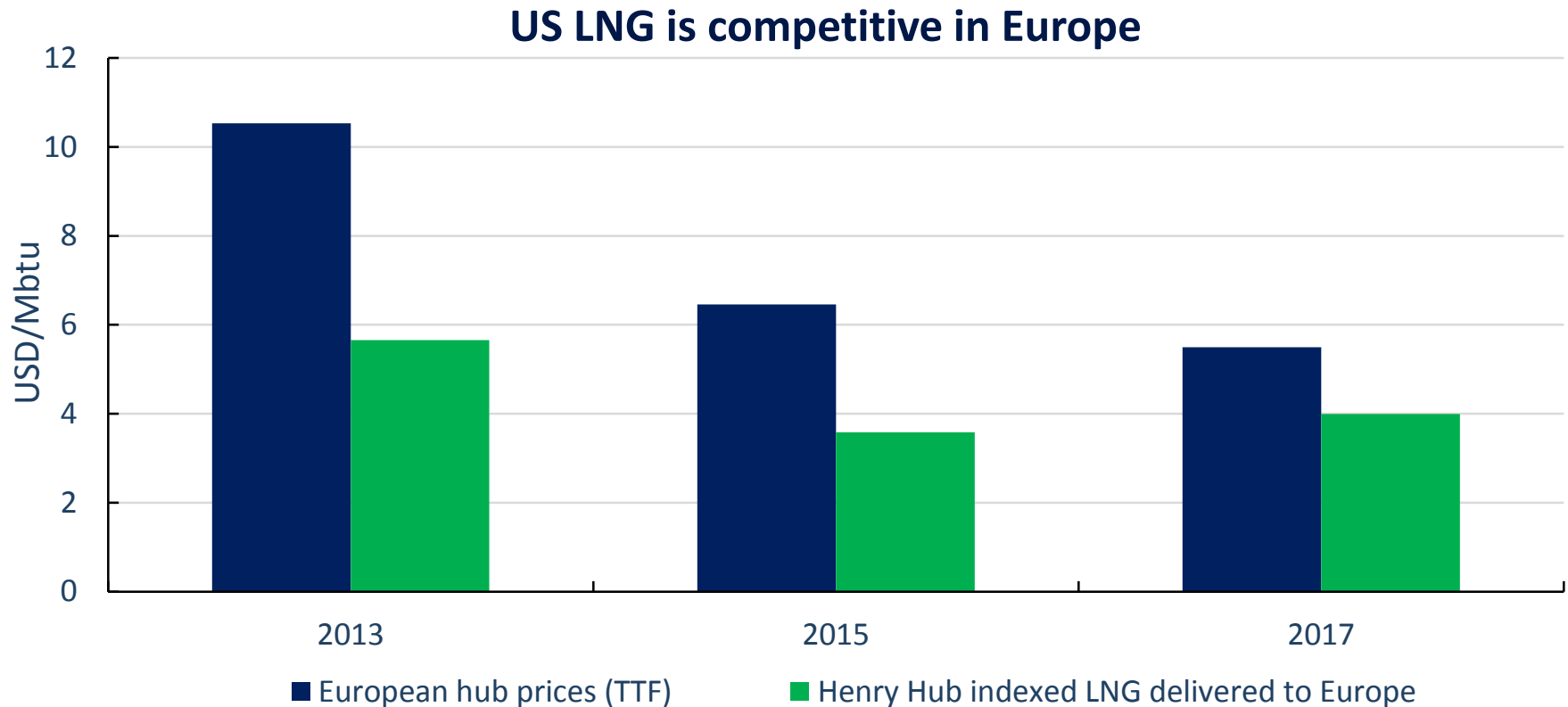
# The Middle East takes back centre stage

## Middle East oil production, 1980-2016



***Reliance on Middle East oil is rising sharply, with big increases in supply in Saudi Arabia, Iraq & Iran***

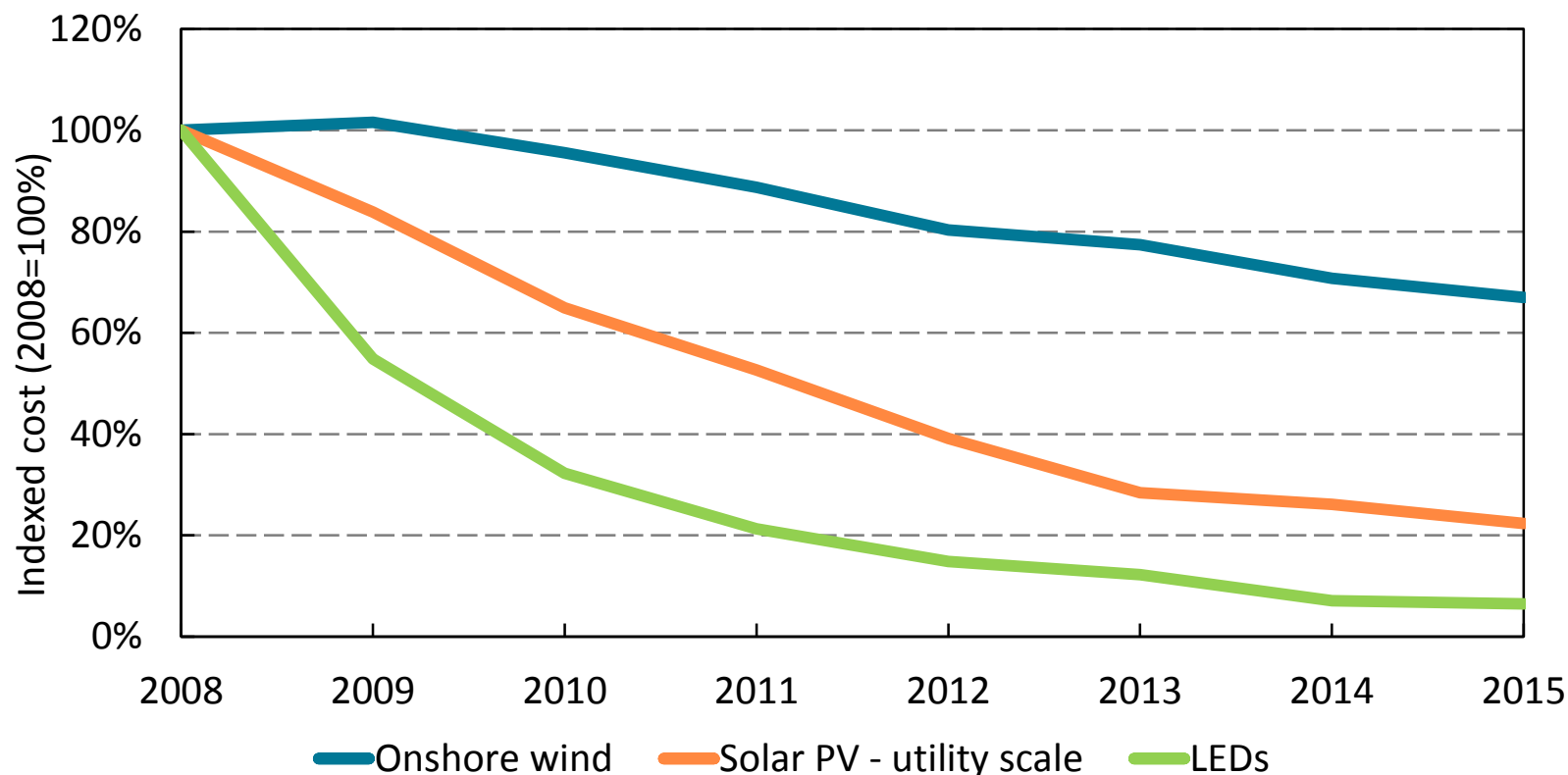
# Greater competition is coming to the European gas market



***Oversupply in global LNG markets will intensify competition; flexible US LNG volumes are well-placed to compete in Europe***

# The cost of clean energy continues to fall

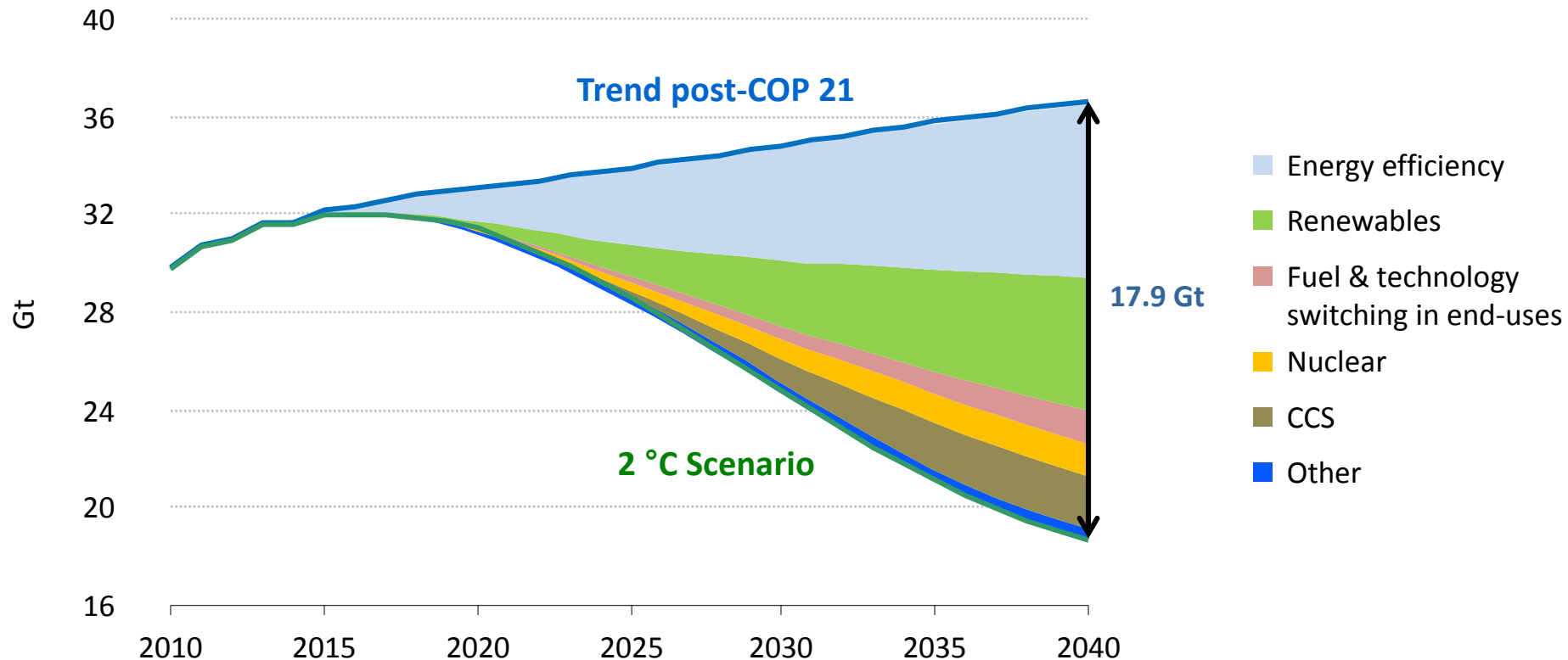
## Indexed cost of onshore wind, utility scale PV and LED lighting



***The falling cost of clean energies opens new opportunities and provides scope for support mechanisms to be reviewed***

# A 2 °C pathway requires more technological innovation, investment & policy ambition

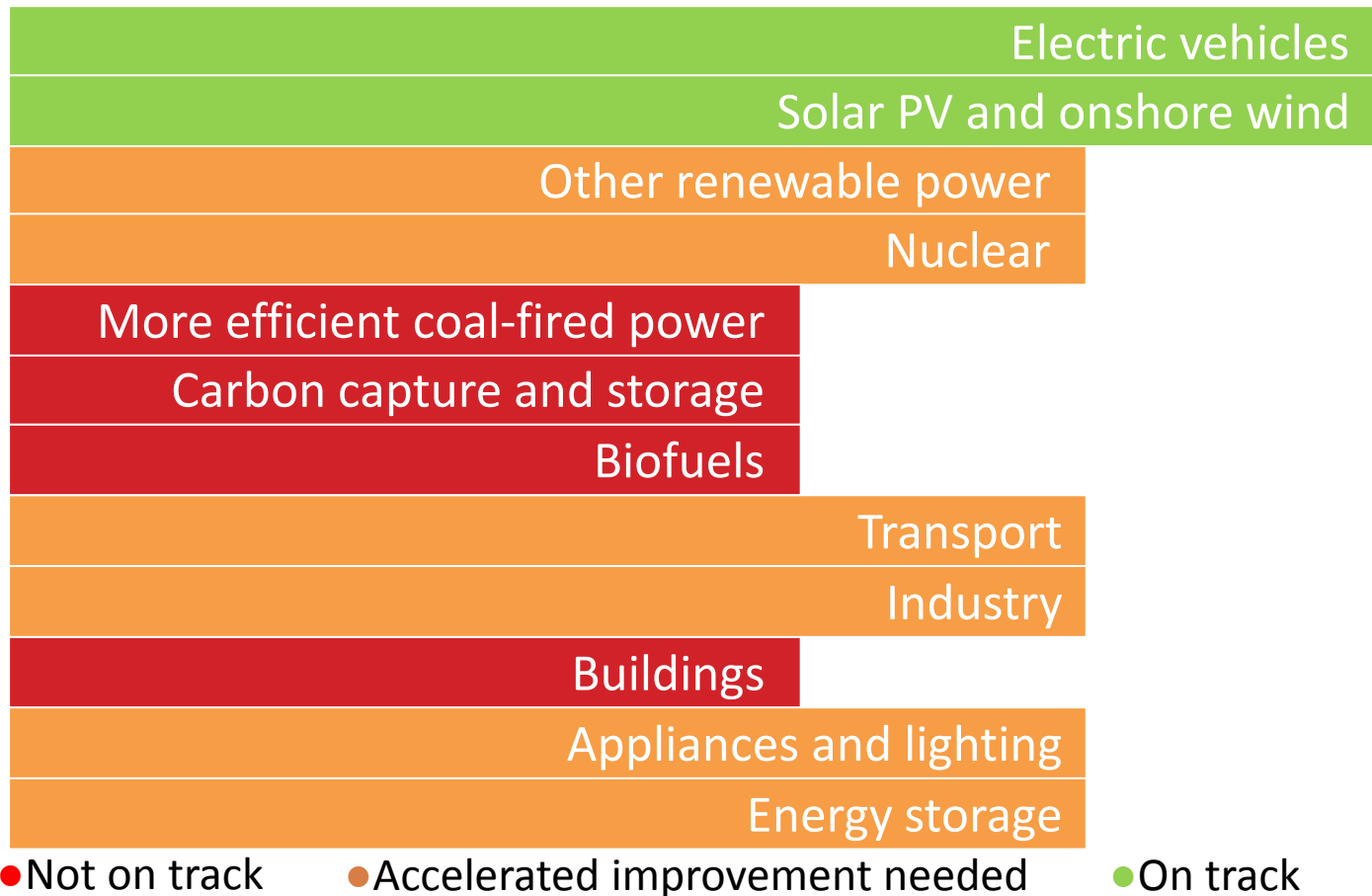
## CO<sub>2</sub> emissions in a post COP 21 world



***Even greater efforts in efficiency, renewables, nuclear power and other low carbon technologies would be required to get close to a 1.5 °C pathway***

# Costs continue to fall, but global progress in clean energy still needs to accelerate

Technology Status today against 2DS targets



**Global clean energy deployment is still overall behind what is required to meet the 2°C goal, but recent progress on electric vehicles, solar PV and wind is promising**



# Priorities in moving to a sustainable energy future

- Be wary of cuts in upstream oil and gas investment - they pose threats to energy security and could lead to greater price volatility
- COP21 was historic and a catalyst for more innovation, research and investment in clean energy technologies
- 2015 saw progress in solar PV, wind and electric vehicles, but other areas such as CCS and biofuels are lagging behind
- International collaboration is crucial to respond to energy security & environmental challenges; IEA is pursuing modernization efforts:
  - I. *“Opening its doors” to the emerging economies*
  - II. *Taking on a new role to safeguard natural gas security*
  - III. *Becoming a global Clean Energy Hub*