

# Energy and Climate Change

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**Vers la transition énergétique, 4 Octobre 2016**

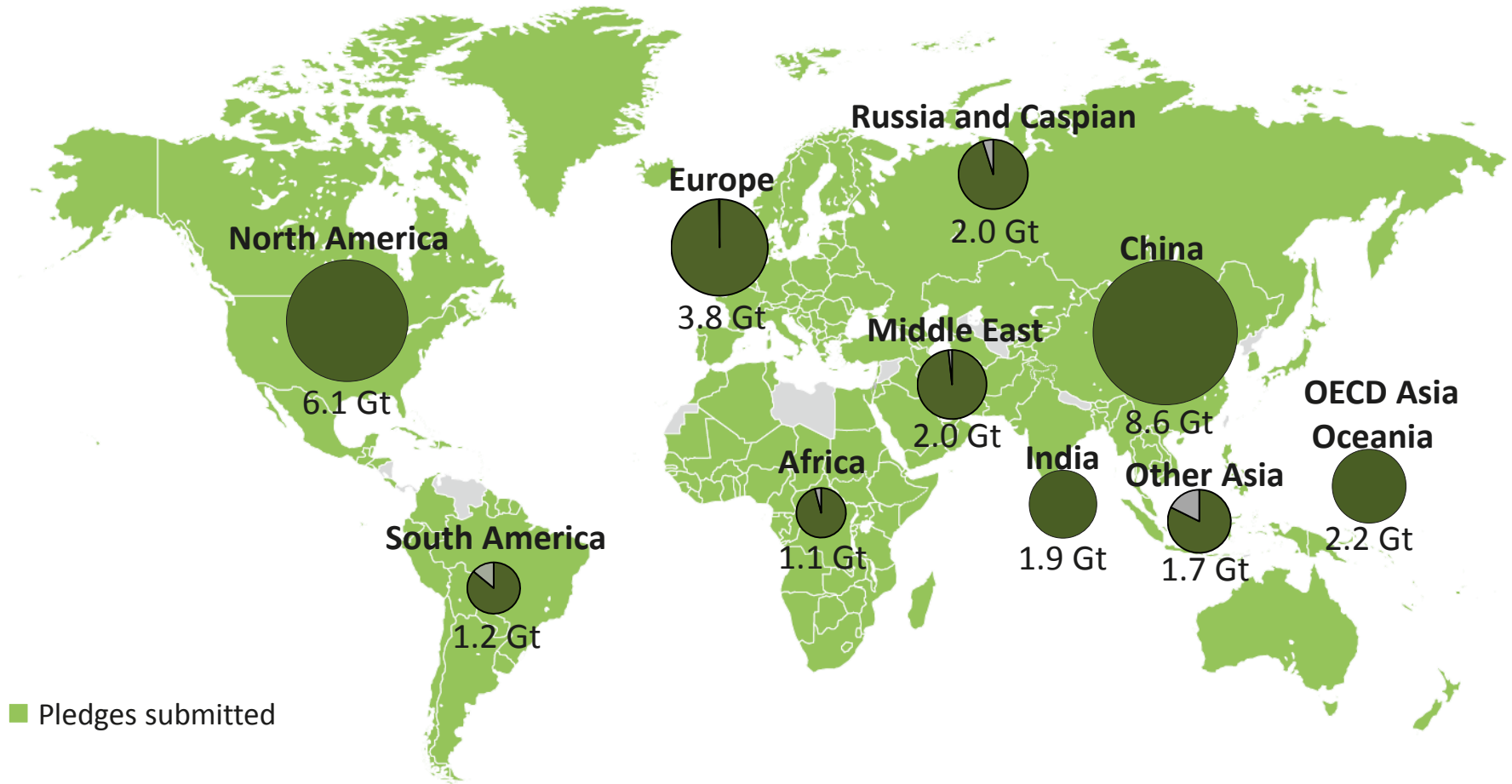
# The start of a new energy era?

## ■ Energy sector turns green?

- *Paris agreement about to be ratified*
- *Energy - 2/3 of greenhouse gas emissions – at the center of most nationally determined contribution*
- *Renewables capacity additions at a record-high in 2014 in 2015*
- *Fossil-fuel subsidy reform, led by India & Indonesia, reduces the global subsidy bill below \$500 billion in 2014*
- *Carbon pricing covers 13% of global emissions, but China intention of trading system in 2017 will triple this share*

## ■ Multiple signs of change, but are they moving the energy system in the right direction?

# ...the global coverage of climate pledges is impressive

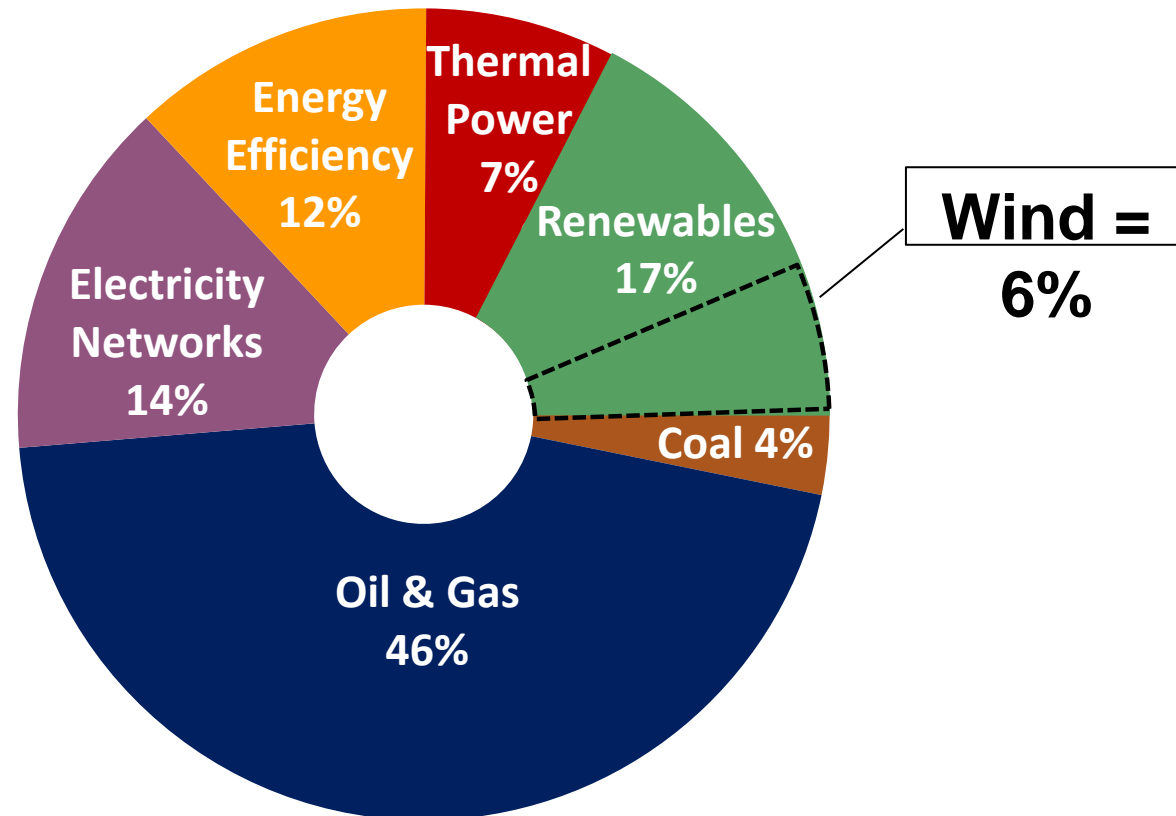


***Pledges from countries that account for 95% of global energy-related GHG emissions; their full implementation would be consistent with a temperature rise of 2.7 °C***

# Investment flows signal a reorientation of the global energy system

## Global Energy Investment, 2015

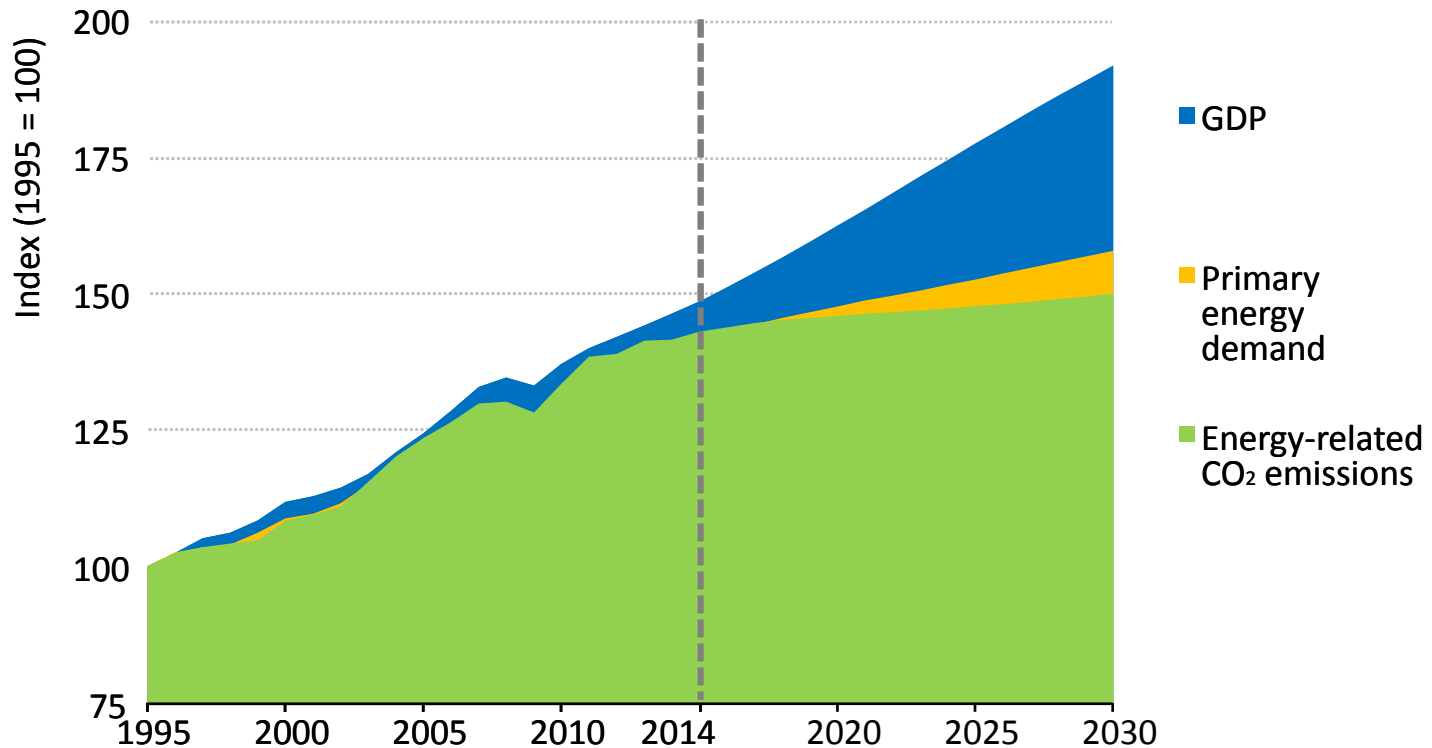
USD 1.8 trillion



*An 8% reduction in 2015 global energy investment results from a \$200 billion decline in fossil fuels, while the share of renewables, networks and efficiency expands*

# Post Paris: Energy sector starts to go its own way

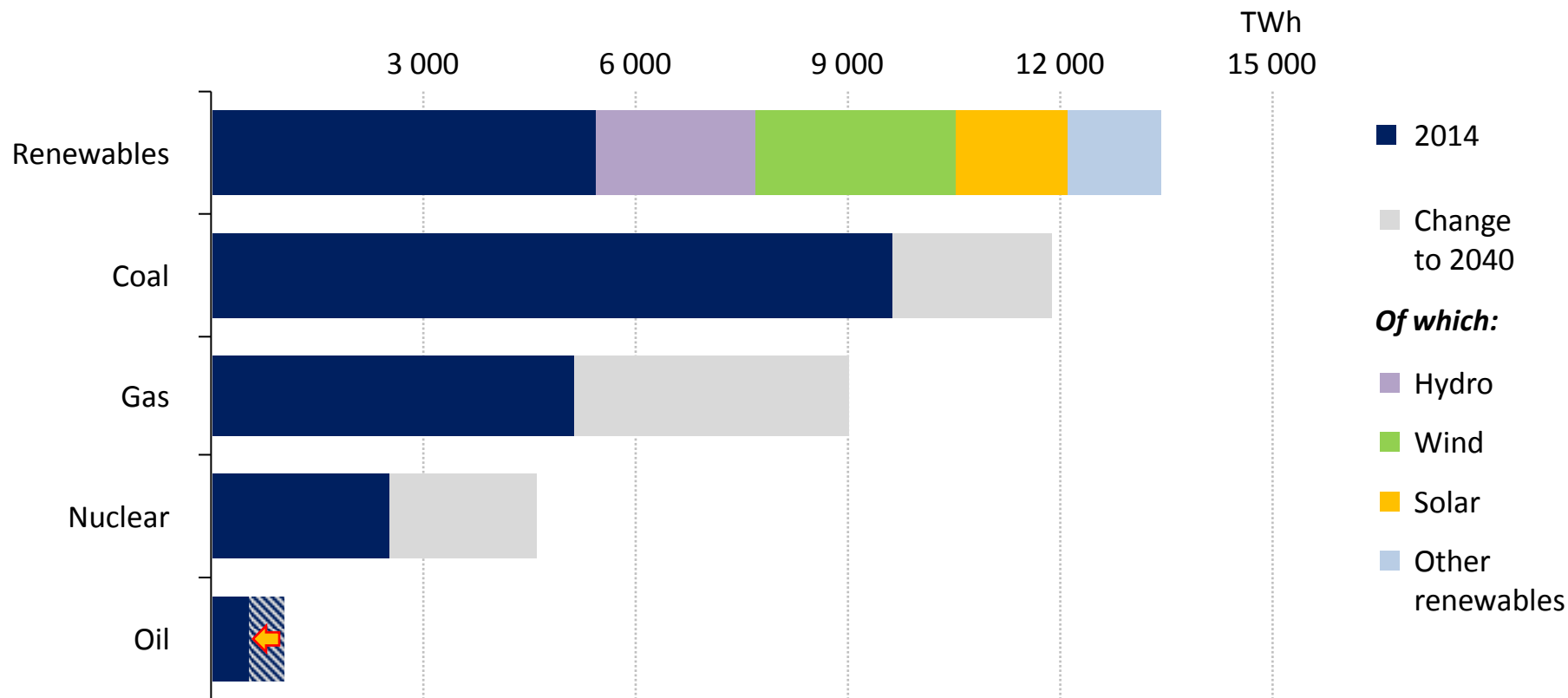
## Growth in the global economy, primary energy demand and related CO<sub>2</sub> emissions



***Growth in energy demand and emissions has tracked economic growth closely but decouples over time, with INDCs enabling a near halt in emissions by 2030***

# Power is leading the transformation of the energy system

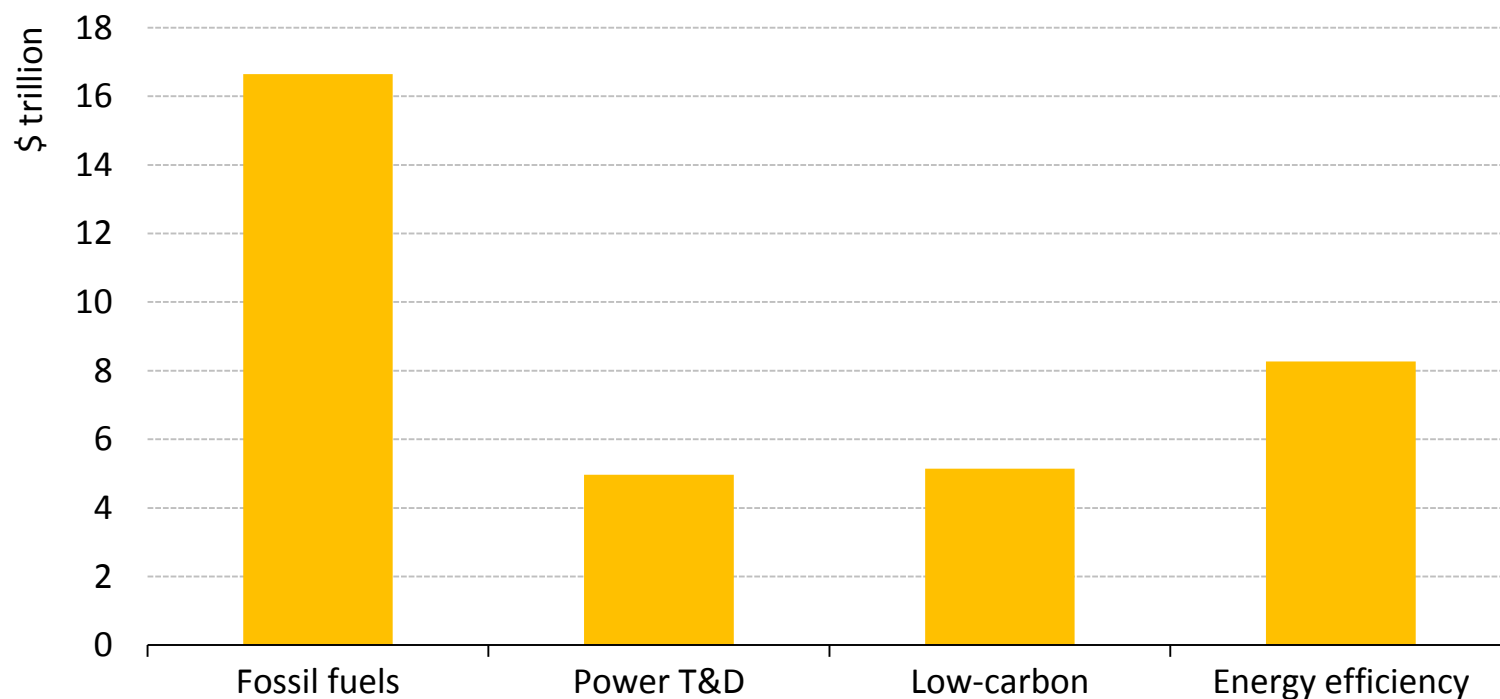
## Global electricity generation by source



***Driven by continued policy support, renewables account for half of additional global generation, overtaking coal around 2030 to become the largest power source***

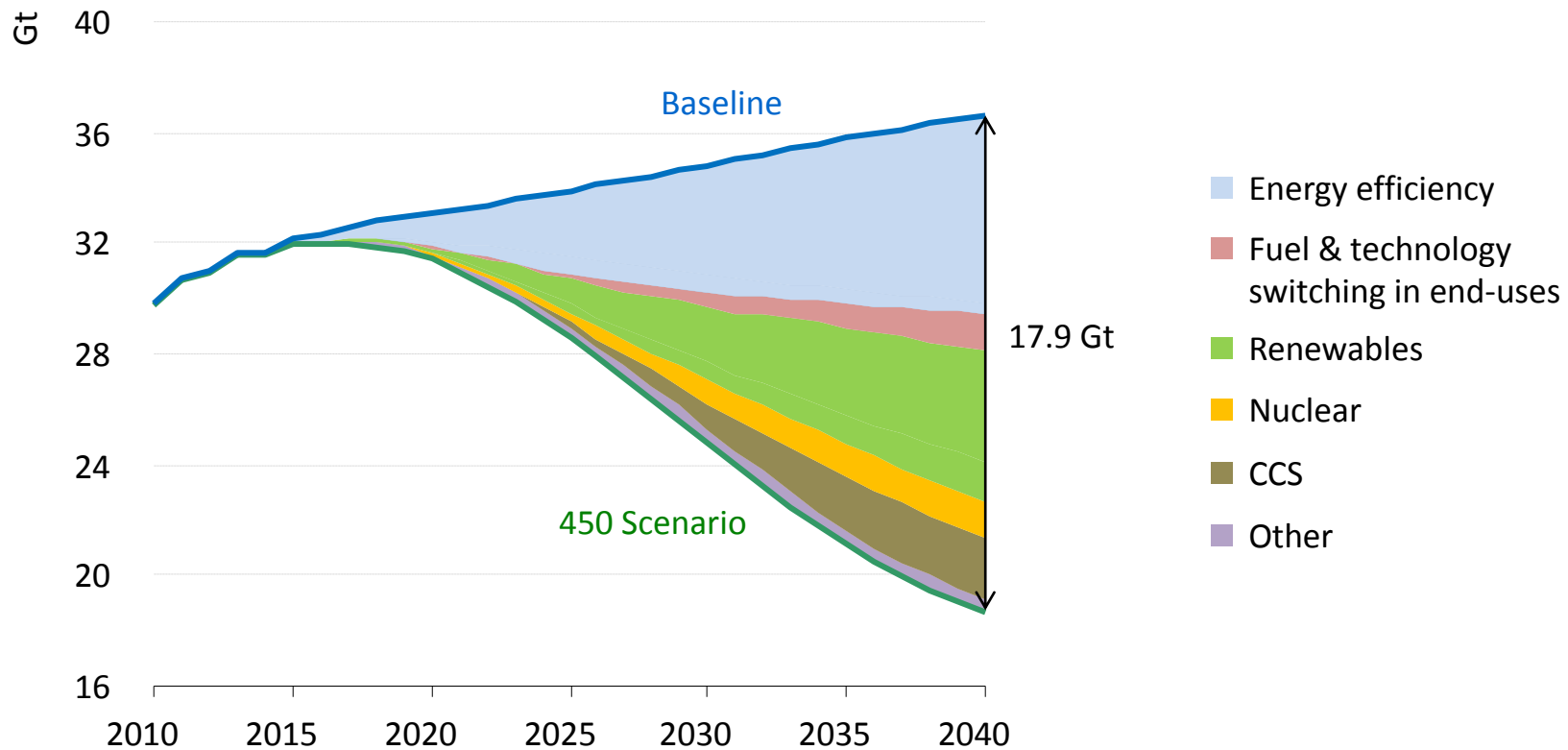
# Investments are progressively shifting to clean technologies

## Cumulative world energy sector investment in the INDC scenario, 2015-2030



***Energy efficiency and low-carbon technologies represent almost 40% of total energy sector investment from 2015 to 2030.***

# A 2 °C pathway is still some further efforts away



***A peak in emissions by around 2020 is possible using existing policies & technologies; technology innovation and RD&D will be key to achieving the longer-term goal.***





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# World Energy Outlook 2015

WEO 2016 release date 16 November  
[www.worldenergyoutlook.org](http://www.worldenergyoutlook.org)