



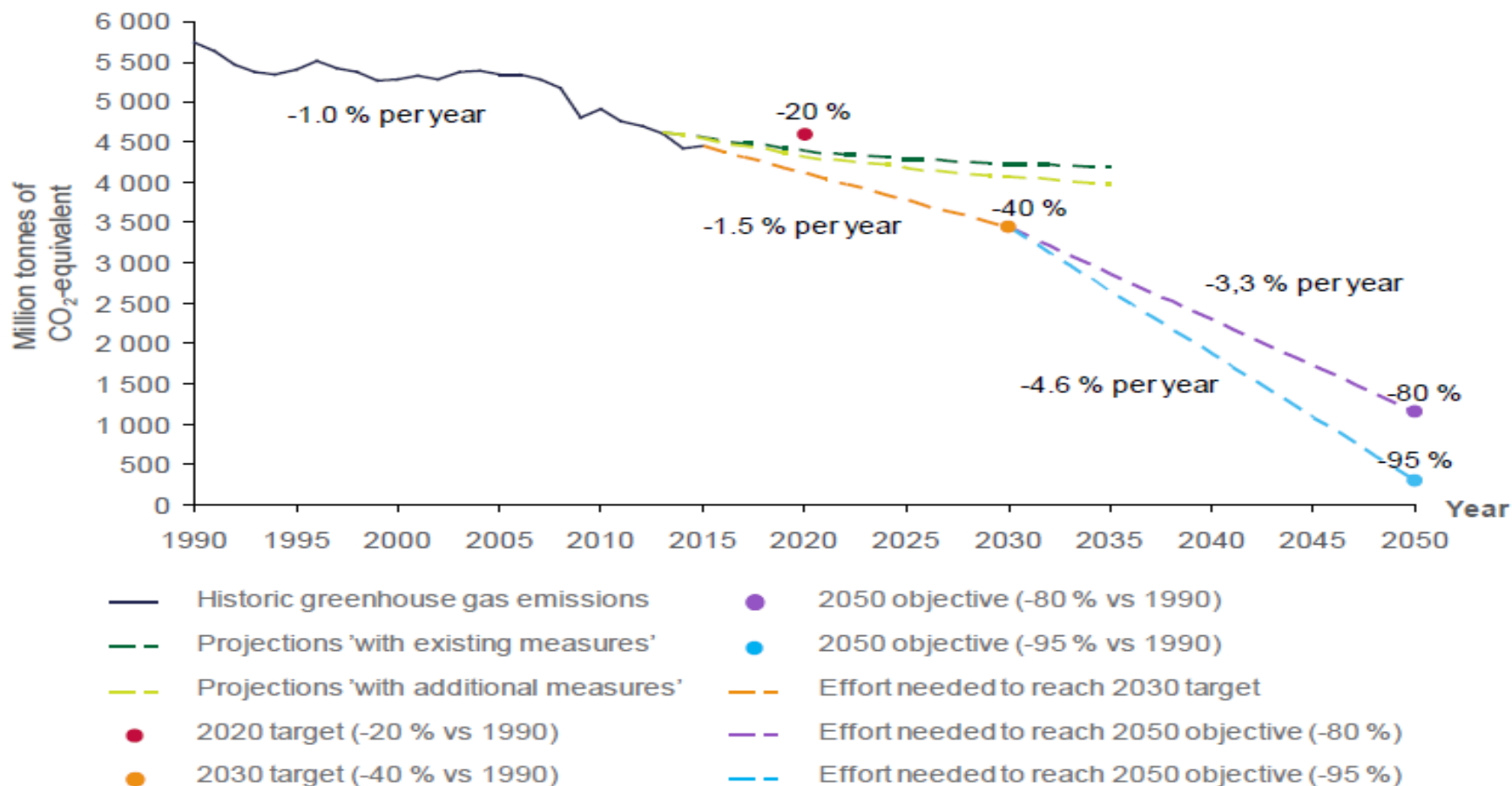
# **EU Climate and Energy Policy for 2030**

**Belgian Plan Bureau  
Brussels, 17 May 2018**

**Jos DELBEKE, PhD**

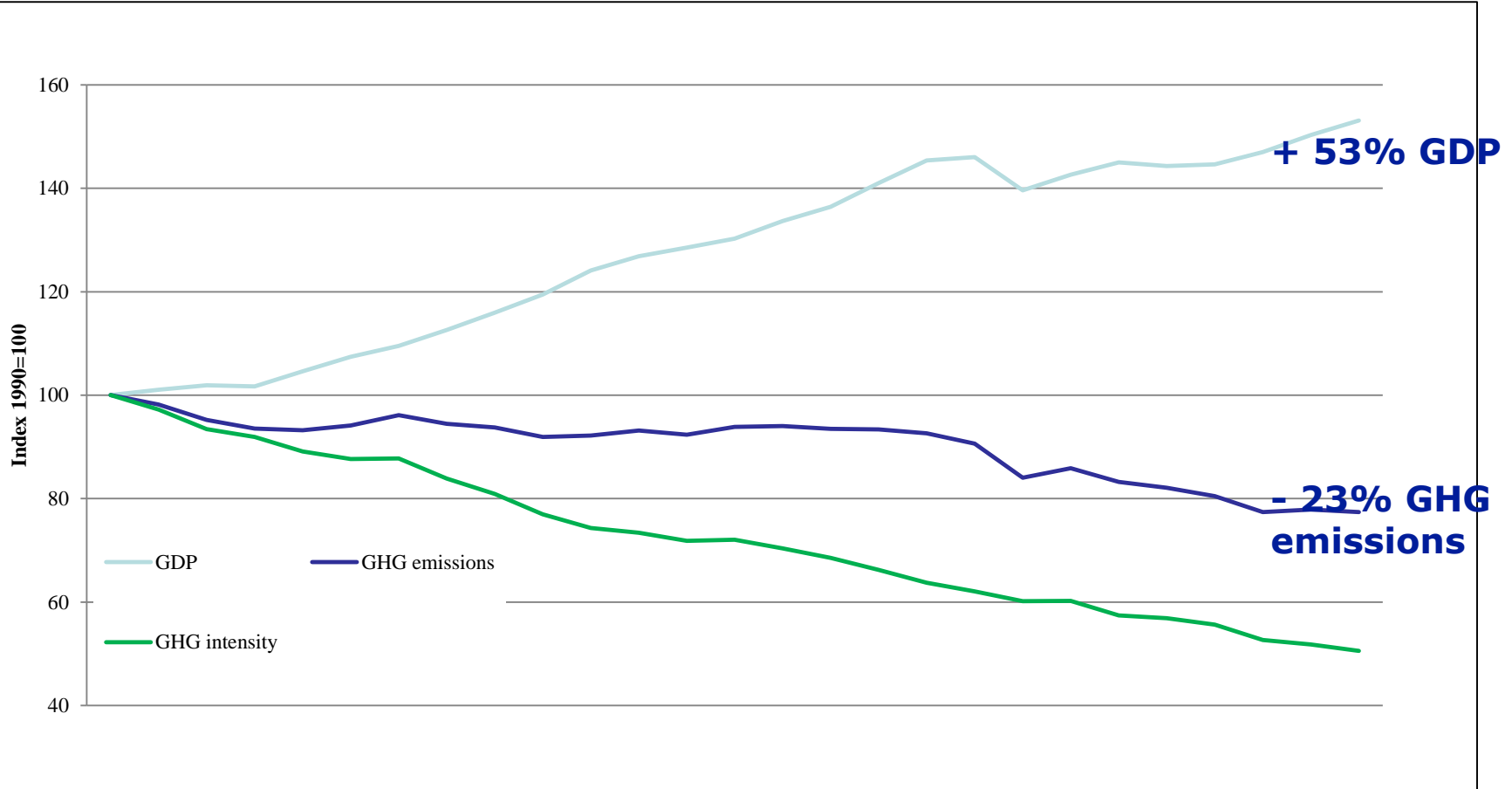
**European Policy Strategy Centre  
European Commission**

# EU greenhouse gas emissions



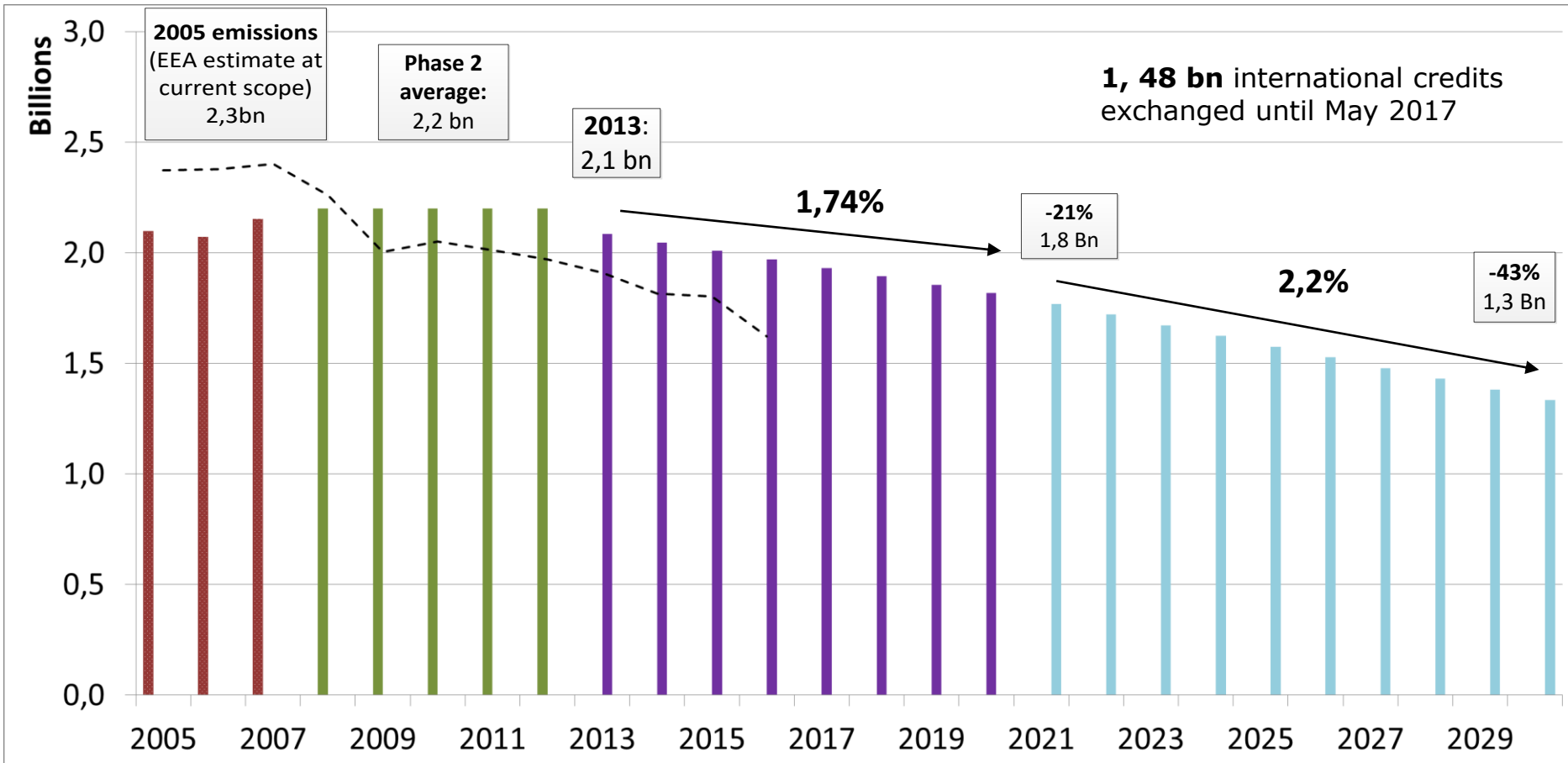
Source: EEA – Trends and projections in Europe 2016

# EU : Decoupling growth from emissions (1990-2016)



Source: European Commission based on data compiled by EEA

# 1. EU ETS



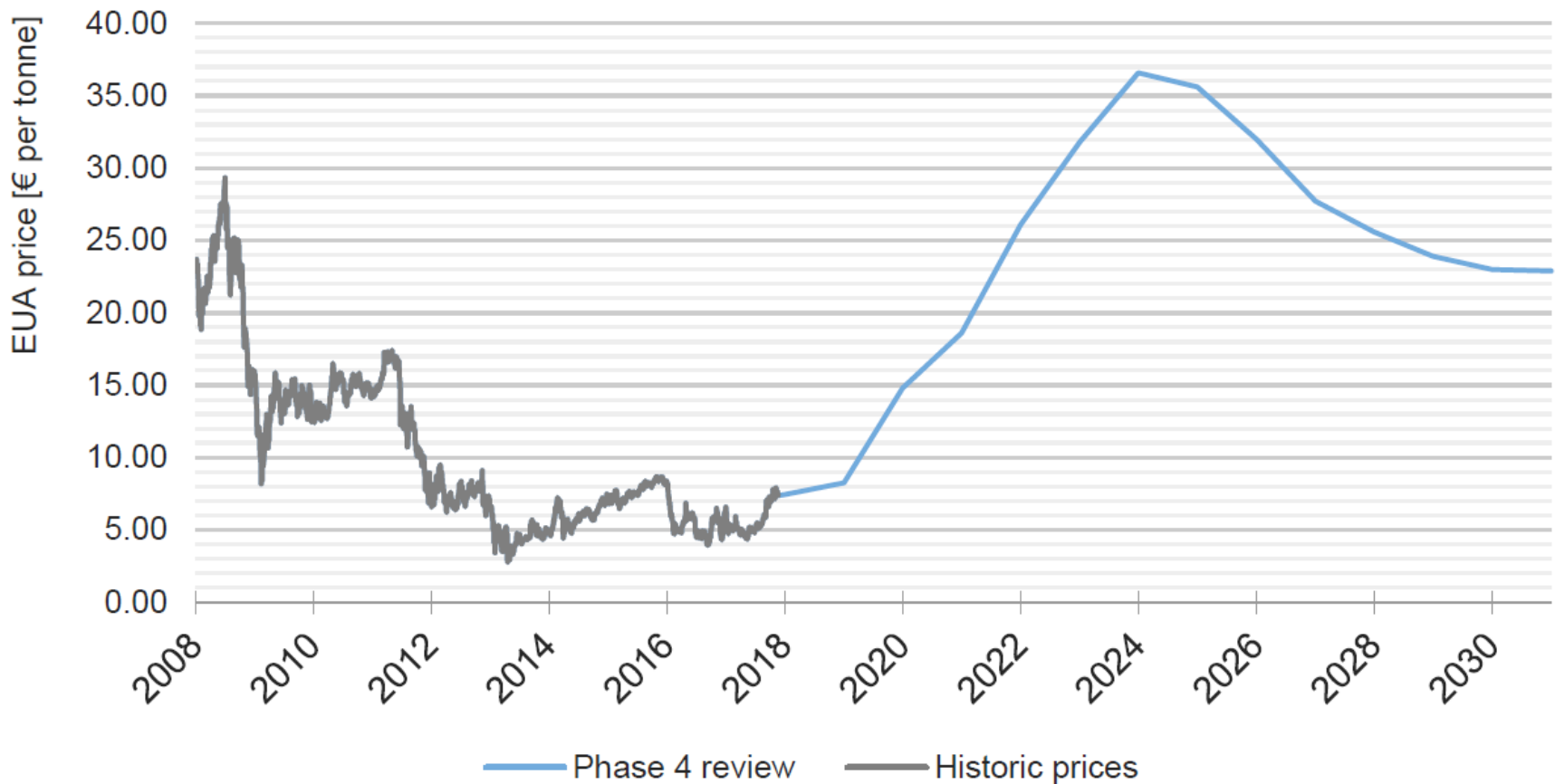
**Note:** emissions for phases 1 and 2 are EEA estimates for historic emissions, at the current scope of the ETS.

# The European carbon price



Source: ICE

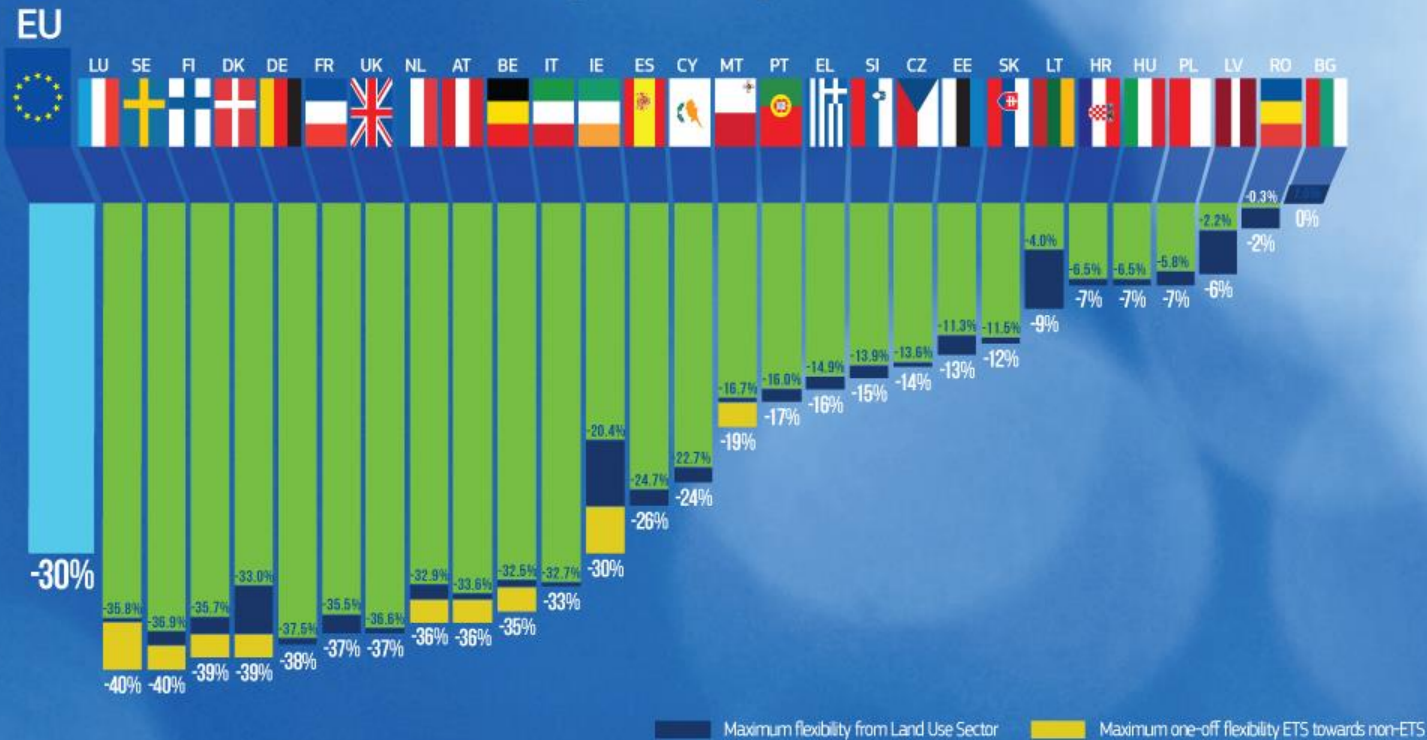
## Historic prices and (one) forecast



Source: ICIS November 2017

## 2. EFFORT SHARING REGULATION

Member States' specific emission reduction targets by 2030 compared to 2005 for sectors outside of the EU Emissions Trading System and new flexibilities for reaching those targets.

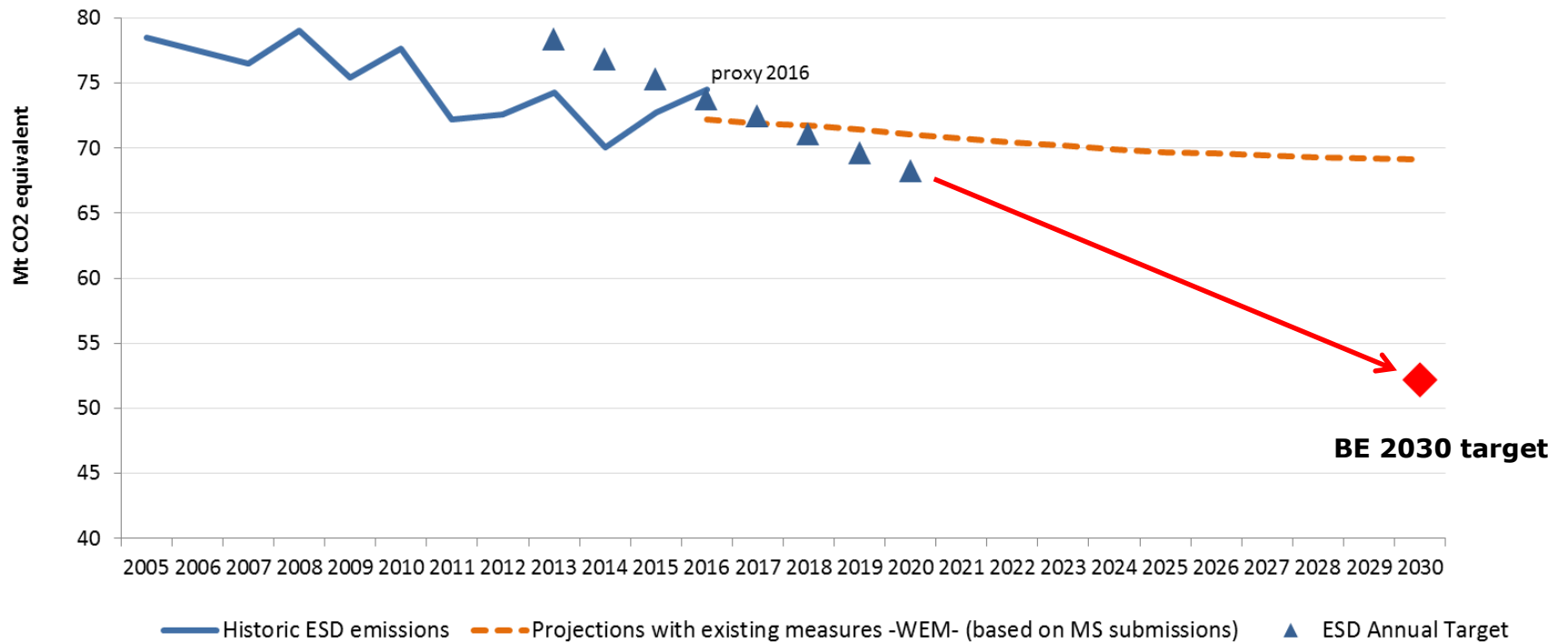


## Belgium

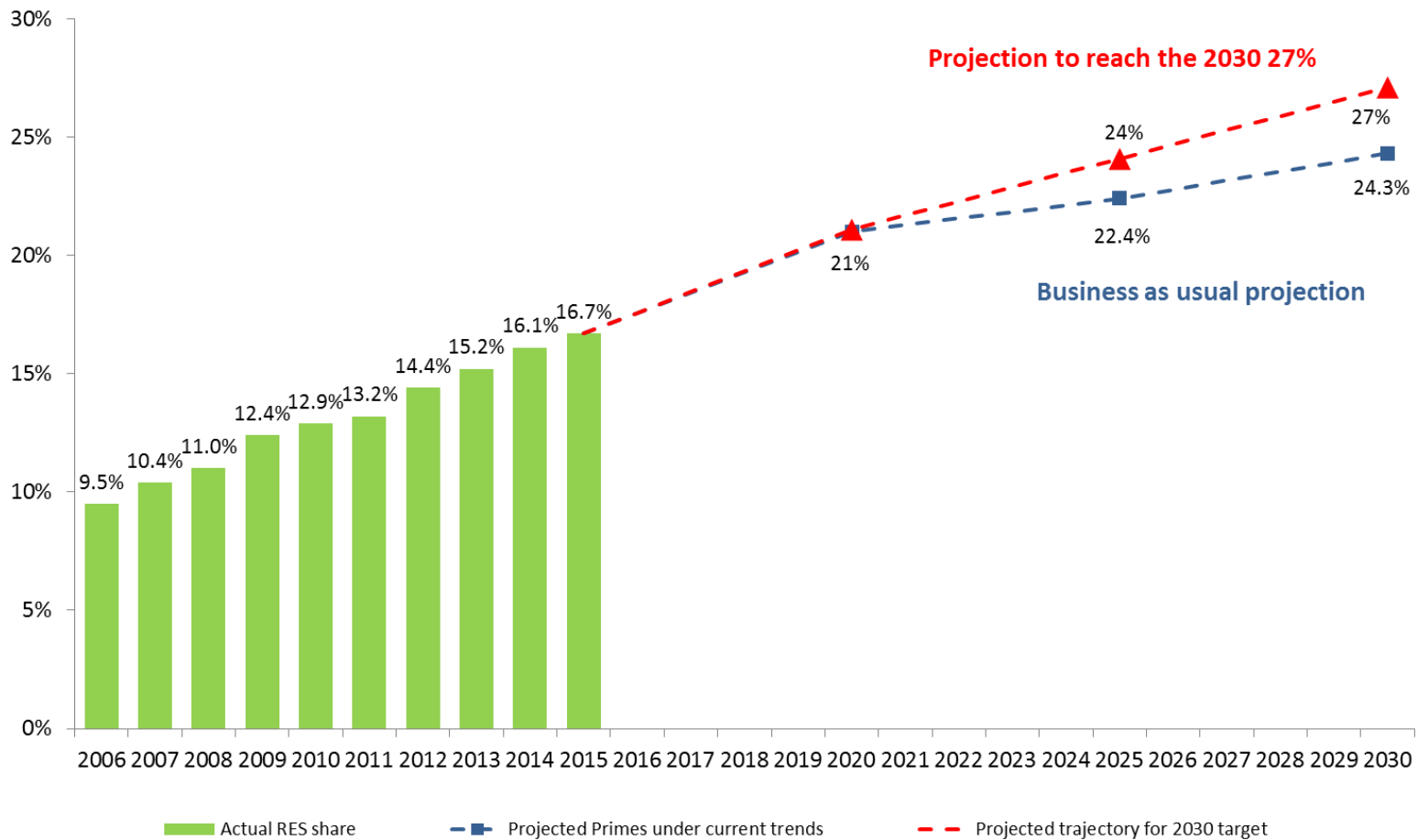
	Greenhouse gas emission reduction in 2030 (compared to 2005)
Based on GDP/capita	-38.0%
Adjustment for cost-efficiency	+3.0%
<b>Legal commitment</b>	<b>-35.0 %</b>
Allowances from EU ETS	+2.0%
Credits from land-use and forestry	+0.5%
<b>Minimum reduction</b>	<b>-32.5%</b>
2020 target	-15%



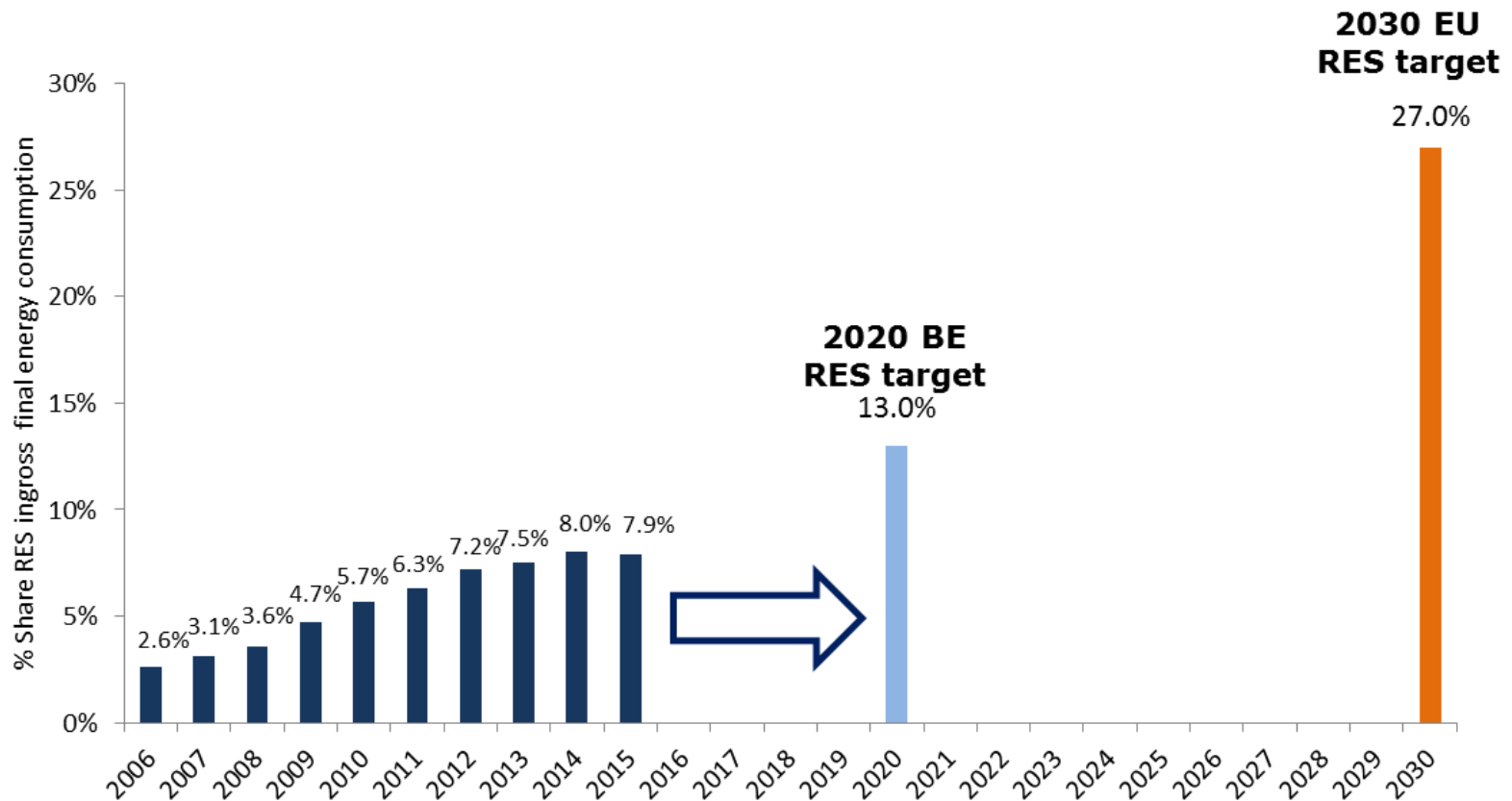
## Belgium's progress – Effort Sharing



# 3. Renewable Energy

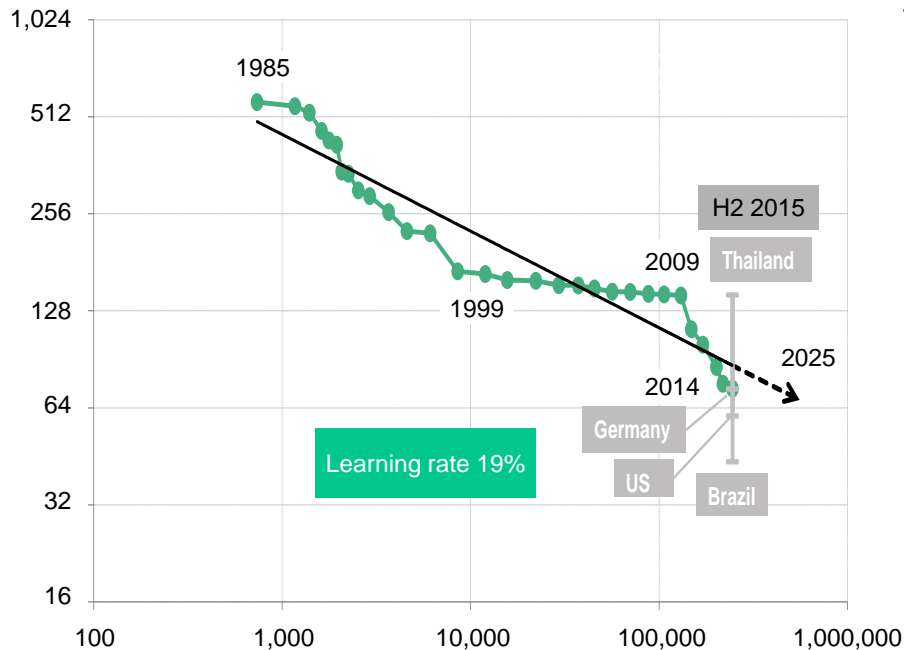


# Belgium has to do more to reach its 2020 target



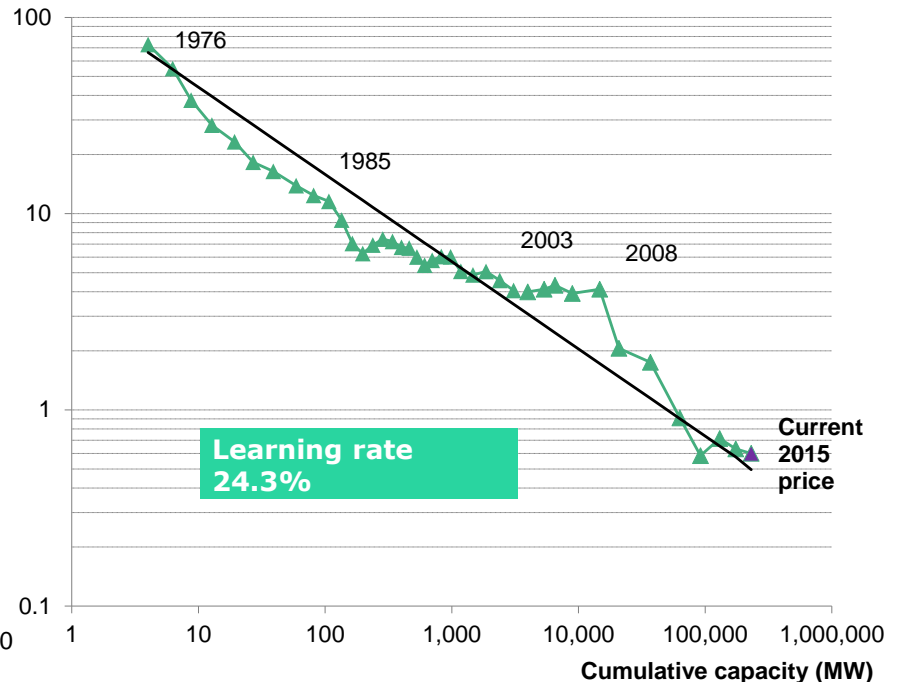
# Renewables policies contribute to reduce technology cost

## Onshore Wind Levelised Cost (\$/MWh)



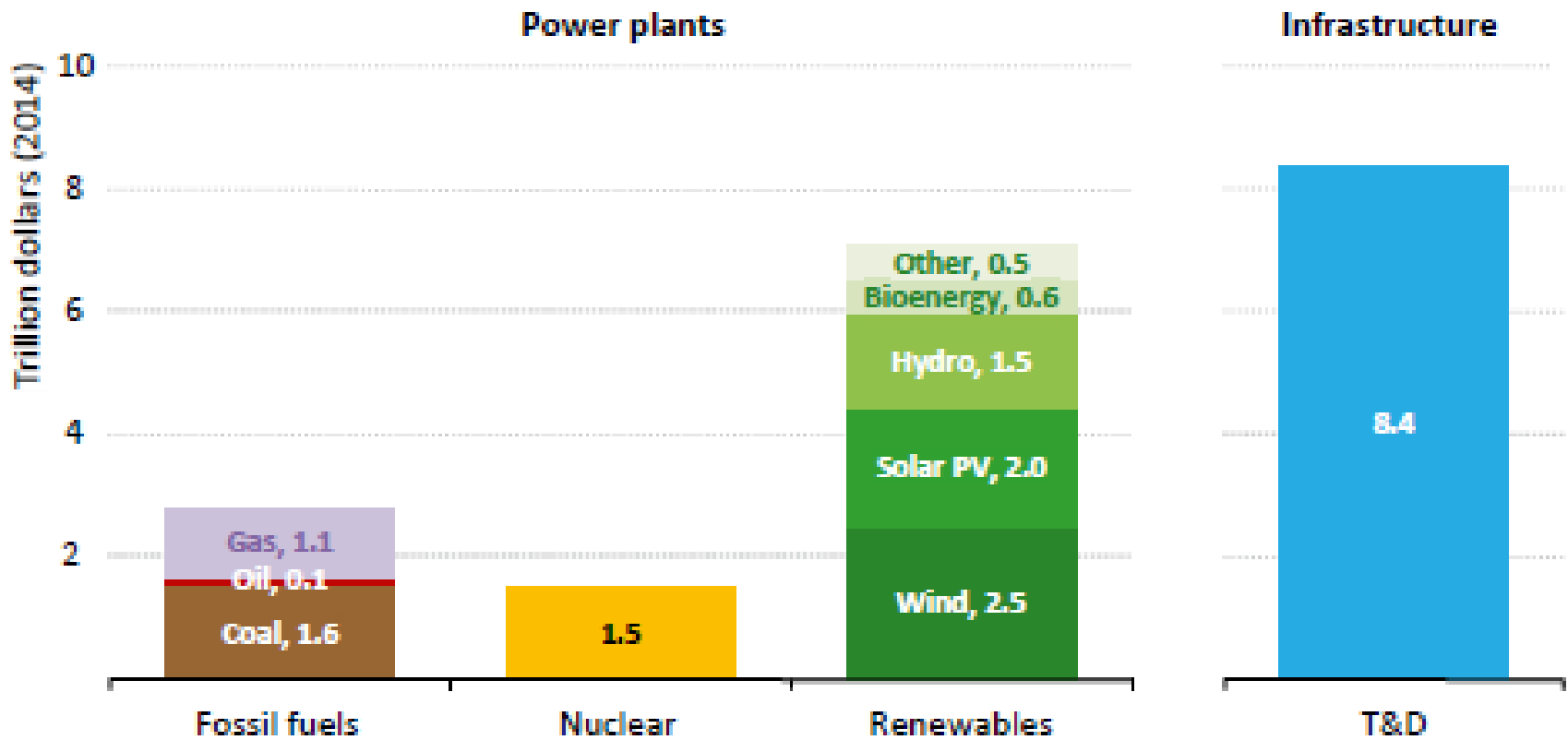
Note: Pricing data has been inflation corrected to 2014. It is assumed the debt ratio of 70%, cost of debt (bps to LIBOR) of 175, cost of equity of 8% Source: Bloomberg New Energy Finance

## Solar PV Module Cost (\$/W)



Note: Prices are in real (2015) USD. 'Current price' is \$0.61/W Source: Bloomberg New Energy Finance, Maycock

# Global cumulative investment in the power sector with INDCs 2015 – 2040 (IEA WEO2015)



## 4 – A flexible European Electricity Market



Boost wholesale market **flexibility** and provide **clear price signals** to facilitate the continuing penetration of renewable energies and ensure investments

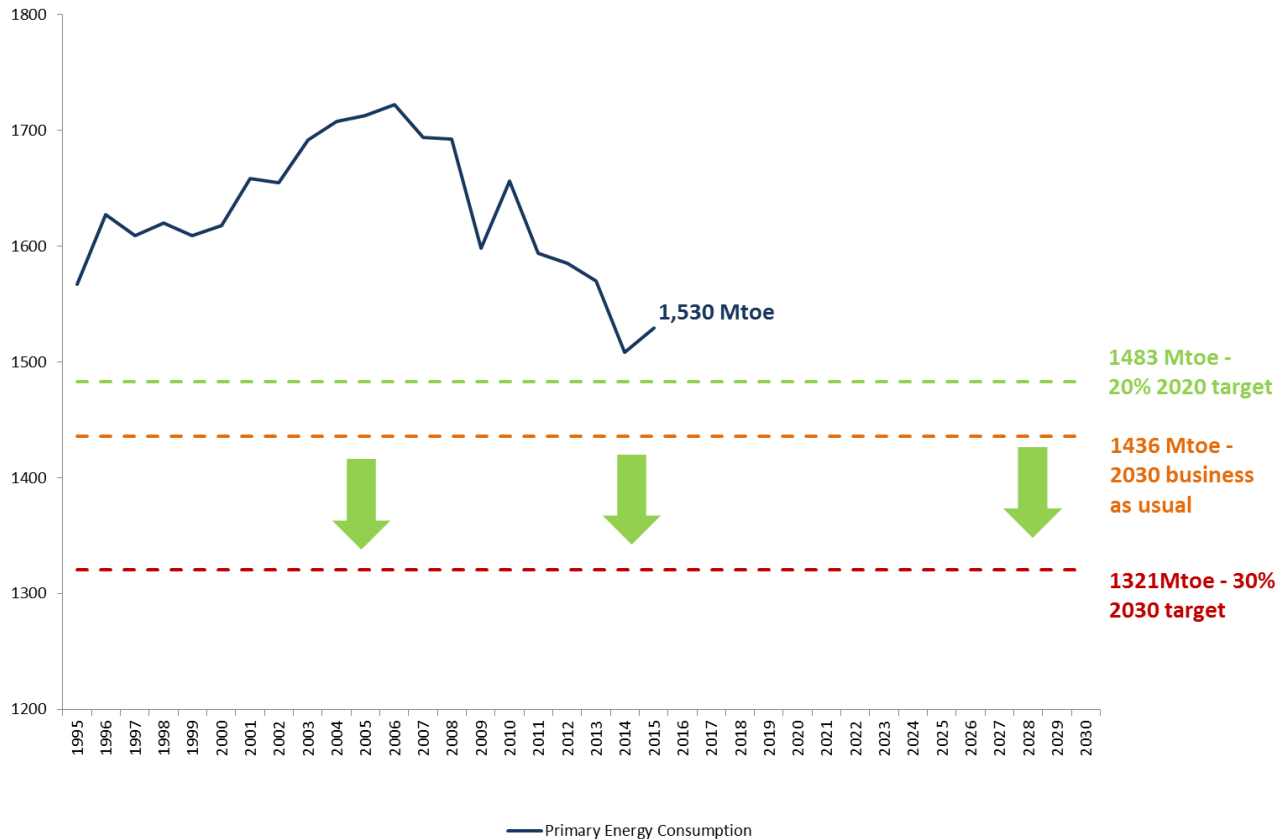


Enable **active consumer participation** and ensure that **consumers are protected and benefit** from progress in energy technologies



Promote **regional cooperation** and provide a true **European dimension to security of supply**

## 5 - Energy Efficiency improvements



- Comprehensive policy framework (EED, EPBD, Eco-design,...)
- CO<sub>2</sub>&cars (130g/km in 2015, 95g/km in 2021, +/- 67g/km in 2030)
- Energy efficiency standards (light bulbs, appliances, electric motors...) & energy labelling (domestic appliances)
- Circular economy

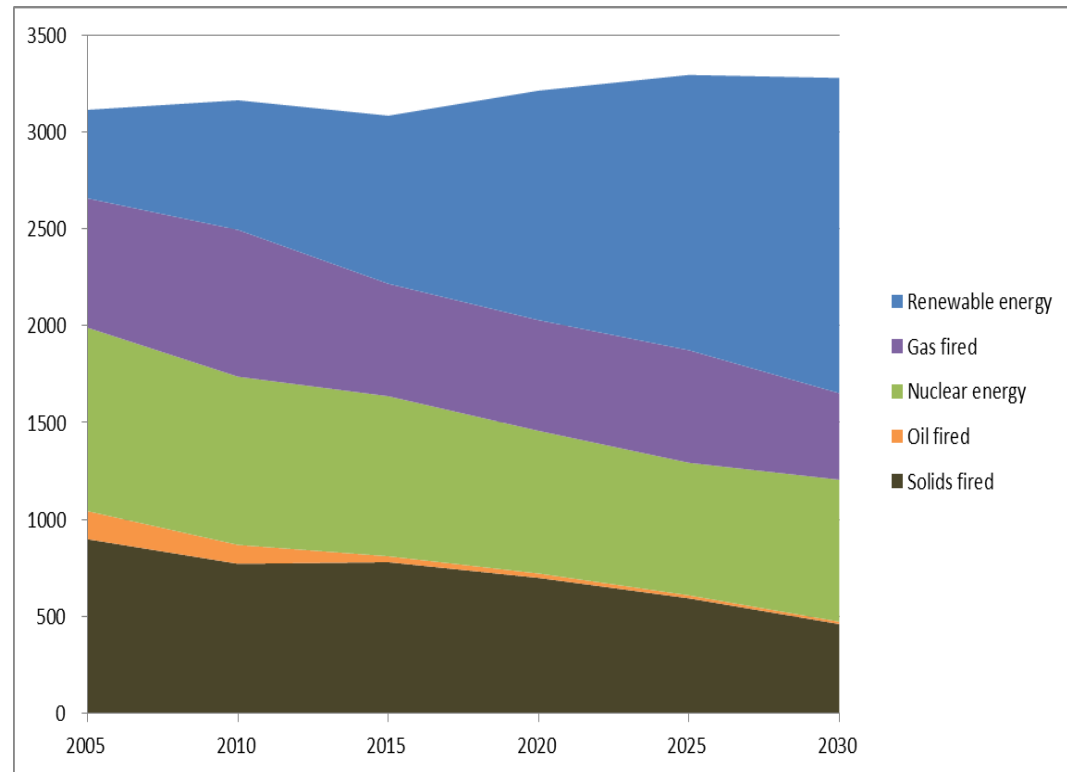
## Role of the EU Energy Union Governance

- **To meet the Energy Union targets, notably on EE and RES**
  - *Robust review process to add up national contribution and check on progress on delivery*
  - *Process to take further actions at EU or national level if needed*
- **To enhance coherence and transparency through integrated plans by Member States**
  - *Provide information on Member State policies*
  - *Facilitate regional cooperation*
  - *Improved investment planning*
- **To ensure compliance with the EU's international climate commitments**
  - *Facilitative Dialogue in 2018 and global stocktakings thereafter*



## Towards 2030: the EU power generation mix changes, in favour of renewables

- Significant development of renewable energy (mostly solar and wind), reaching up to 50% share
- Decline of electricity generation from solid fuels
- Gas-fired generation decreases until 2020, but increases thereafter



EU power generation (net) by fuel (Twh)

Source: PRIMES modelling, NTUA, E3M-Lab