IrBEA National Bioenergy Conference

Utilising Ireland's natural resource

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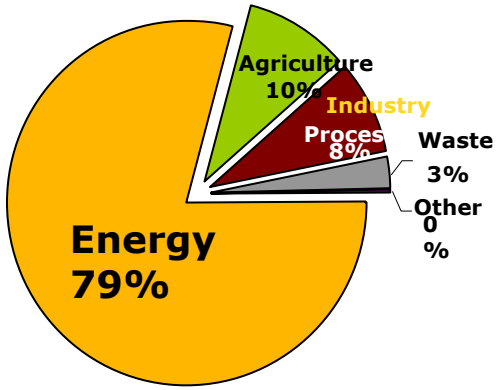
European Commission

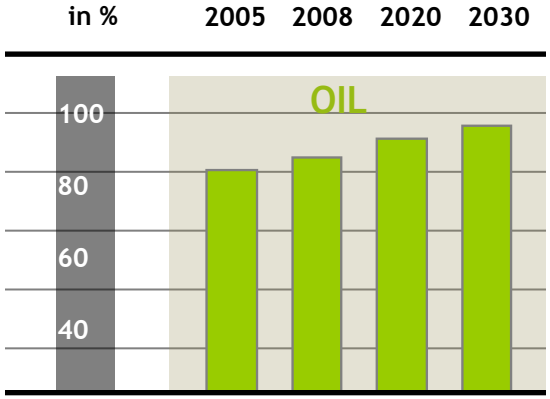


WHY CHANGE OUR ENERGY SYSTEM ?

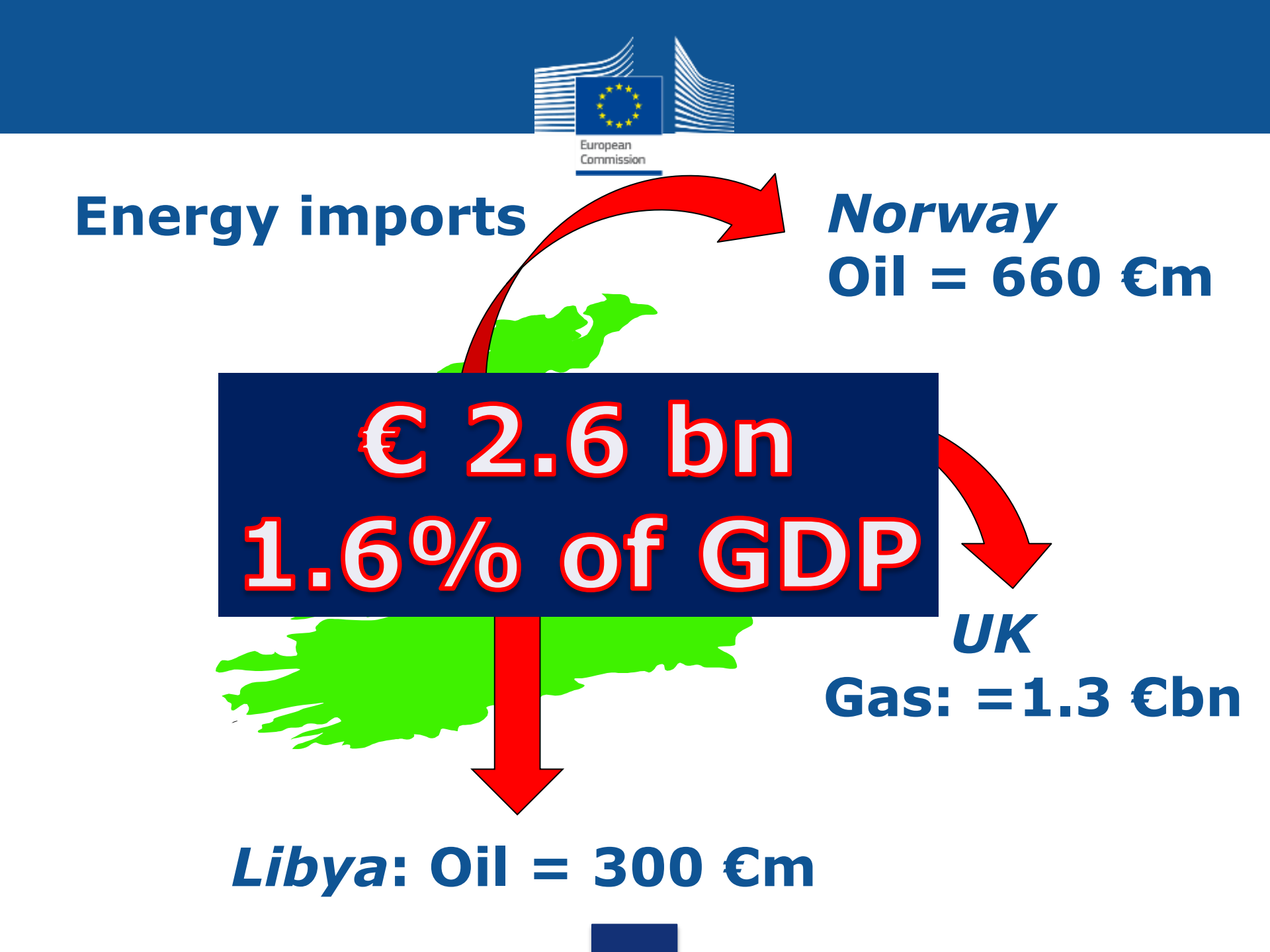
CO_2 emissions 2008



Oil import projections



- **Reduce imports / dependence**
- **Jobs and competitiveness**
- **Affordable energy prices**
- **Climate change**


Energy imports
Norway
Oil = 660 €m
€ 2.6 bn
1.6% of GDP
UK
Gas: =1.3 €bn
Libya: Oil = 300 €m

ENERGY EFFICIENCY HAS A VALUE

Meeting the 20% Energy efficiency target = **2.6 billion** = **193 billion EUR**

= **1 000 less coal power plants**

or

= **500 000 less wind turbines**

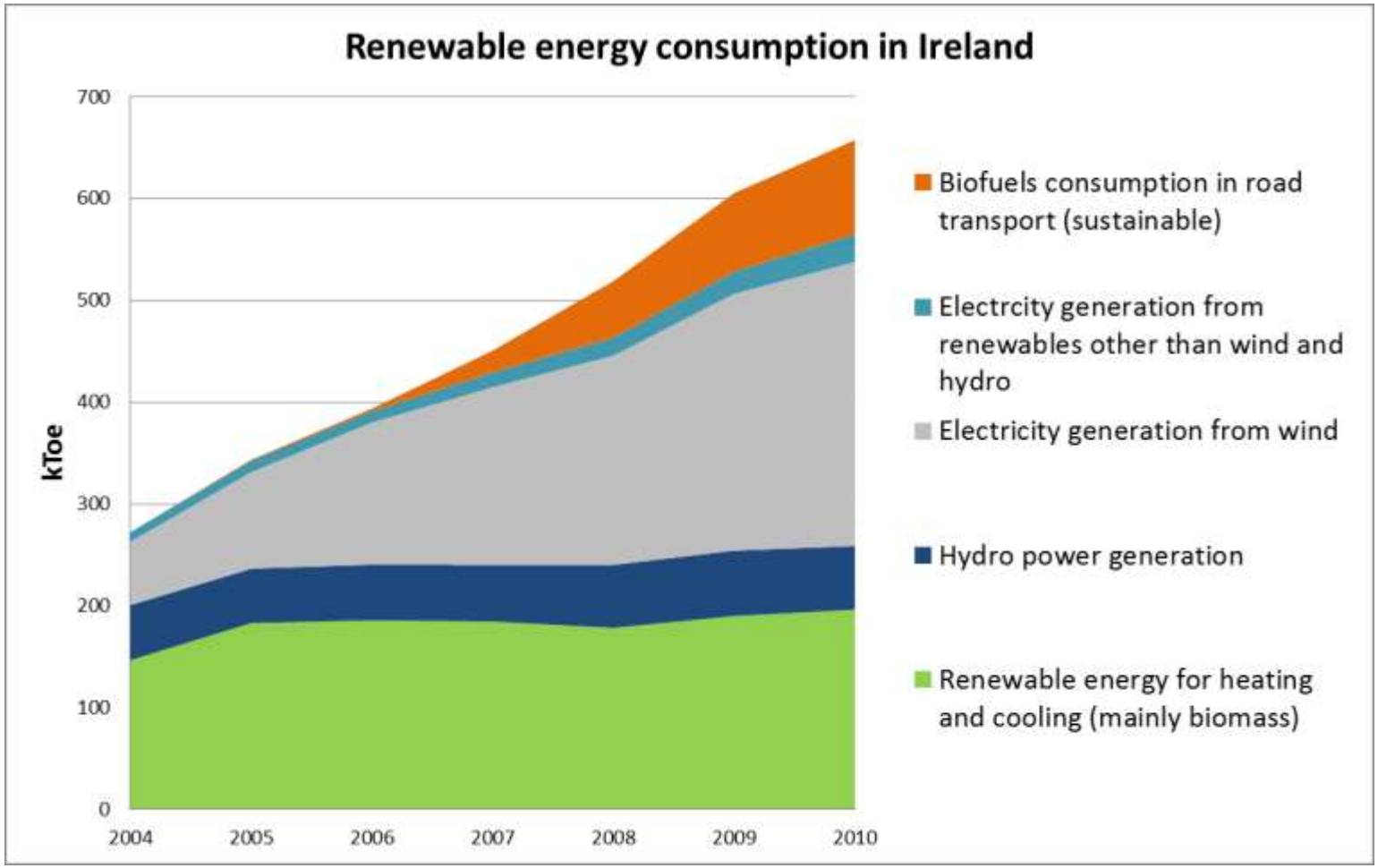
or

= **GDP of Portugal**

Barrels of oil imports saved

Money saved 73 EUR/barrel per year

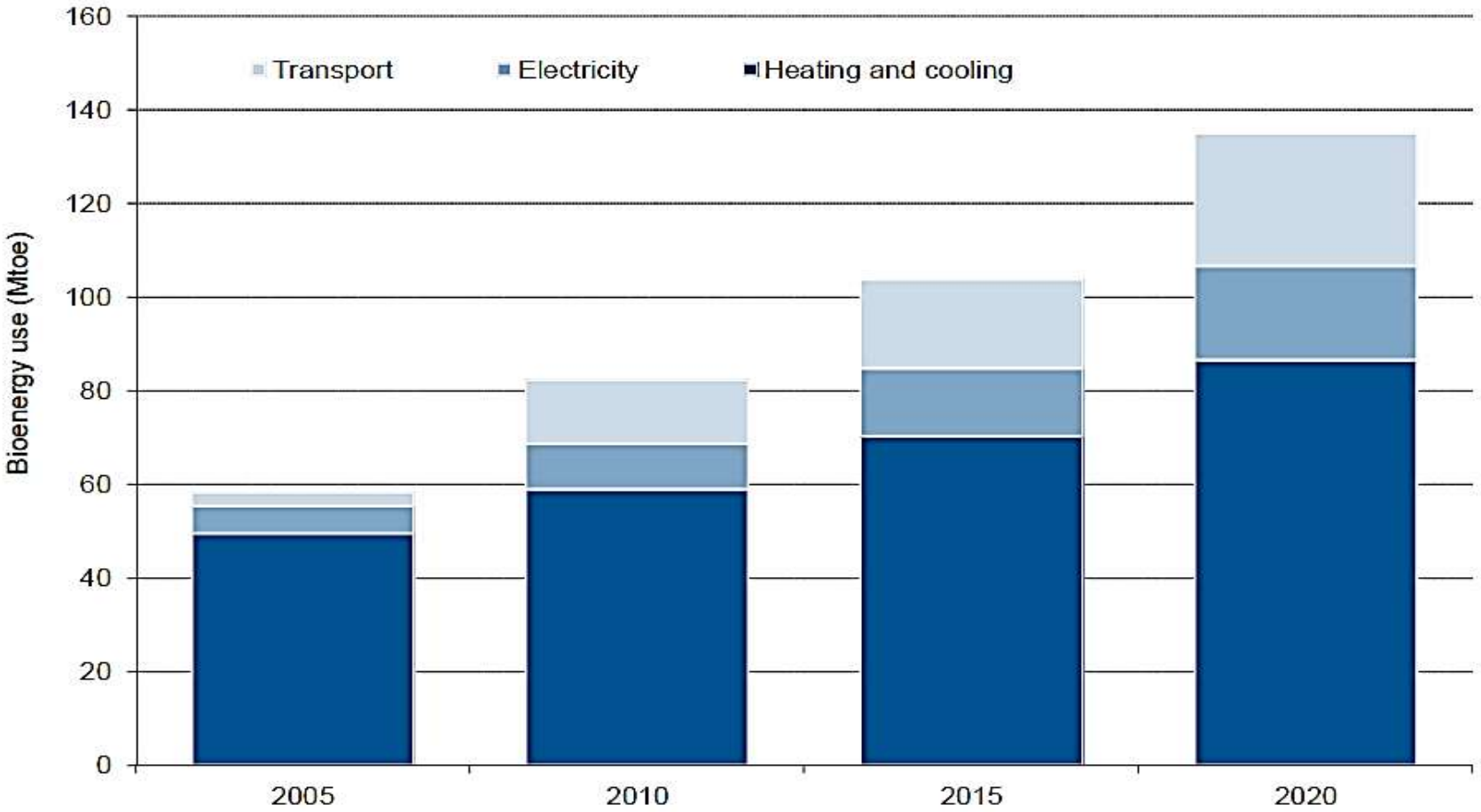
5.8% in 2010 – 16% needed by 2020!



Source: Eurostat

EU bioenergy consumption outlook

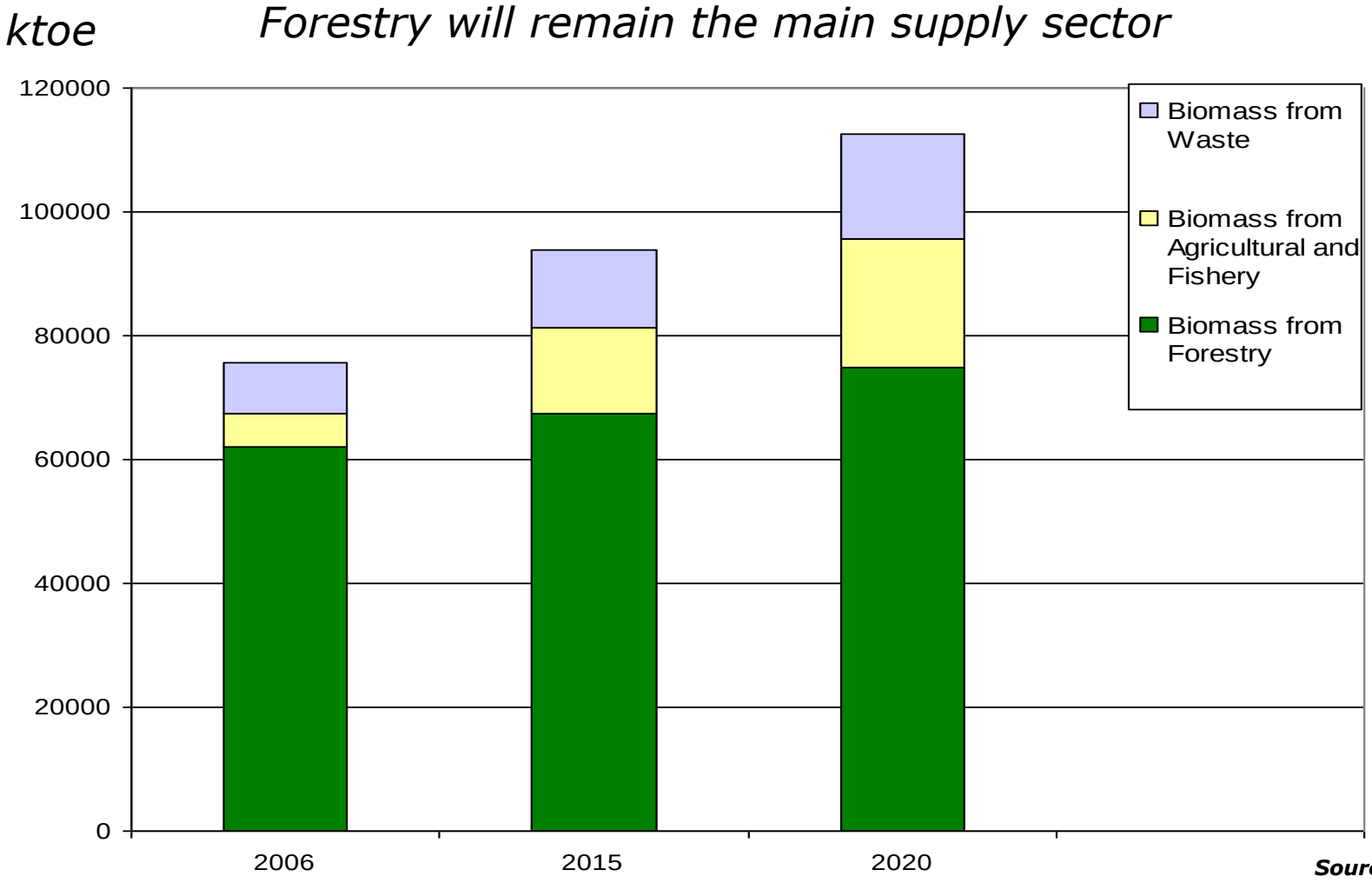
Bioenergy = over 10% of EU total final energy consumption by 2020



Source: NREAP

EU solid biomass supply outlook for 2020

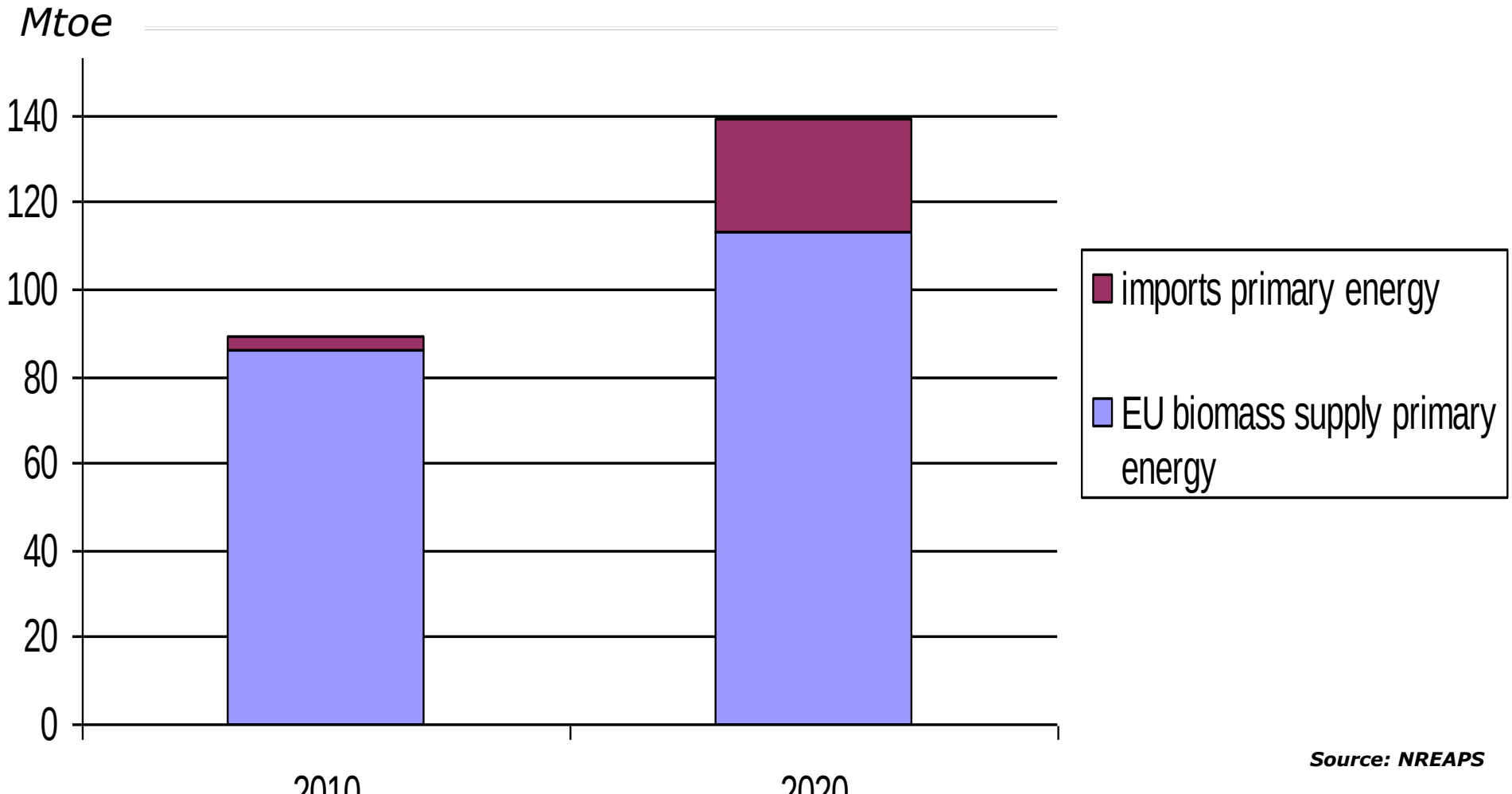
Forestry will remain the main supply sector



Source: NREAPS

EU solid biomass imports outlook for 2020

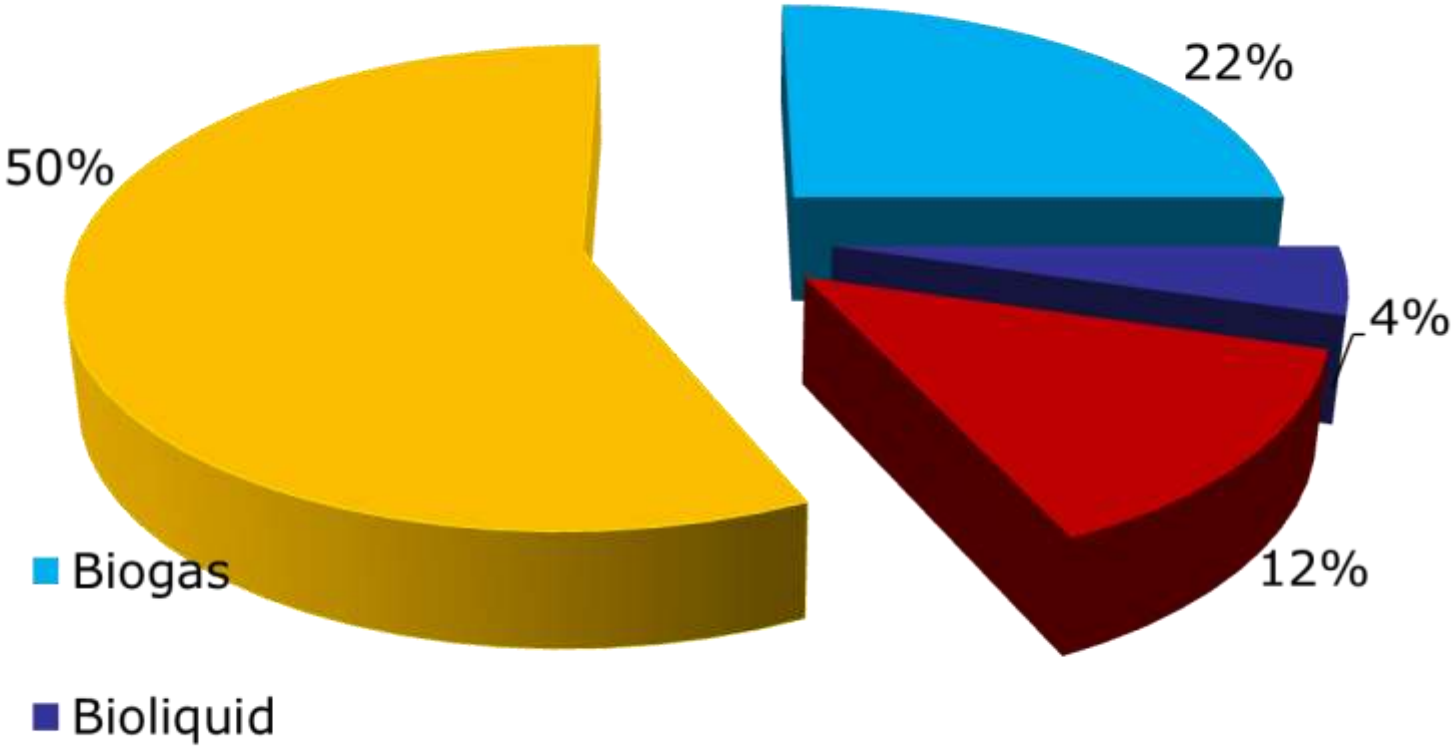
Solid biomass imports are set to increase significantly



Source: NREAPS

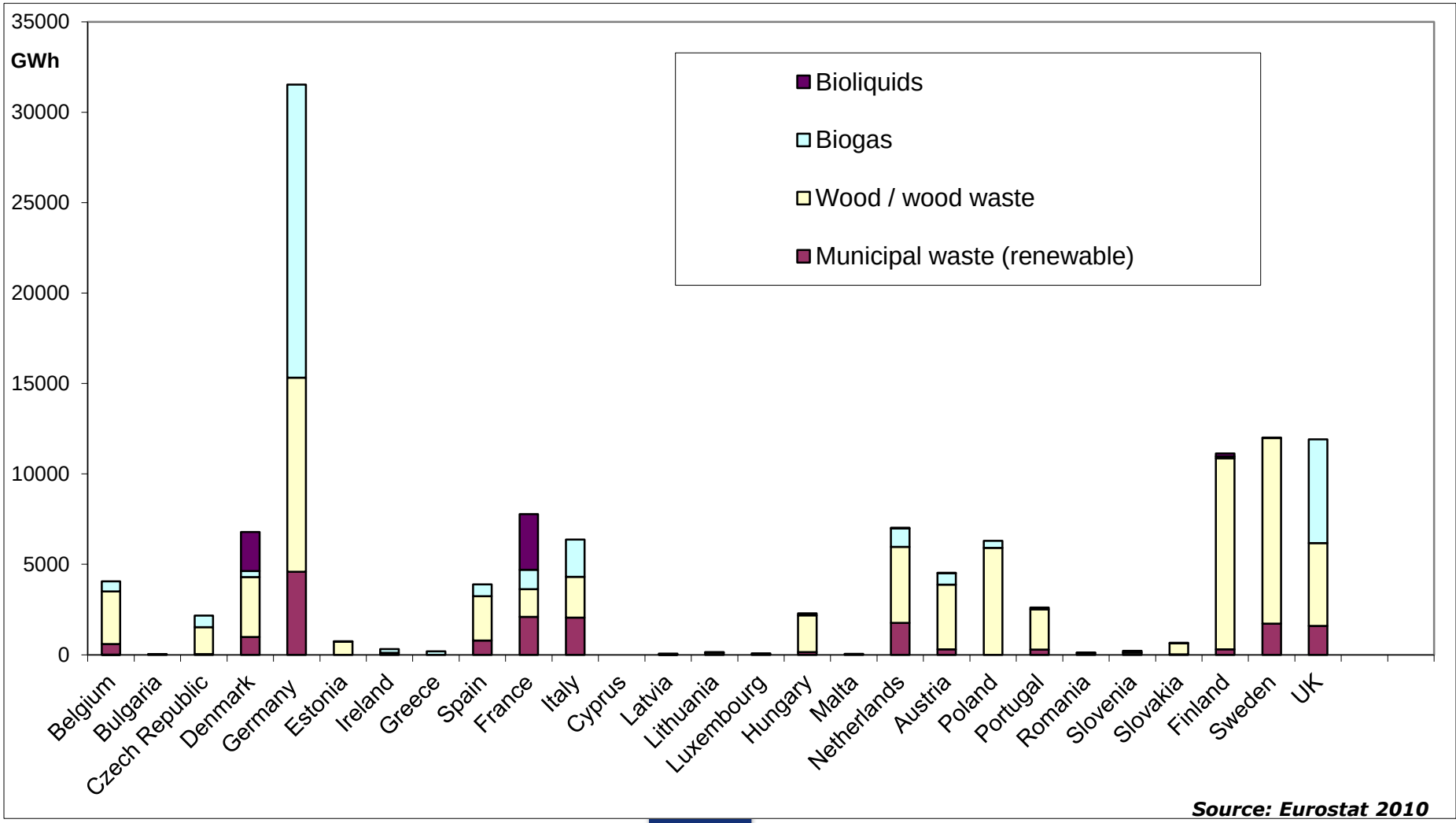
Sources of bioelectricity in the EU (%, 2010)

Forestry will remain the main supply sector



Source: Eurostat 2010

Bioelectricity generation by country (GW, 2010)

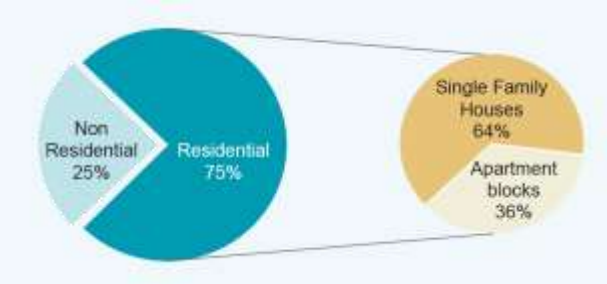


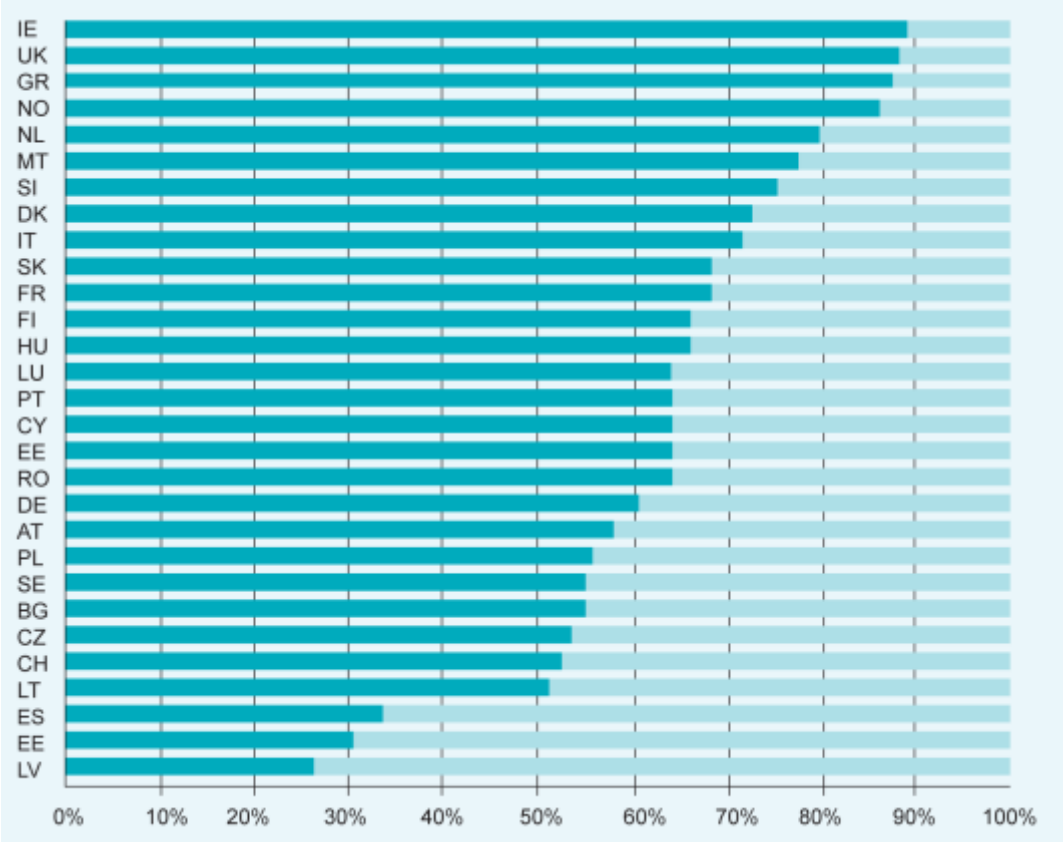
Source: Eurostat 2010

Floor area share

- Proportion of floor areas for single family houses is highest in Greece, Ireland, Norway and the UK

- Proportion of floor areas for apartments is highest in Estonia, Latvia and Spain





Floor area share for residential buildings

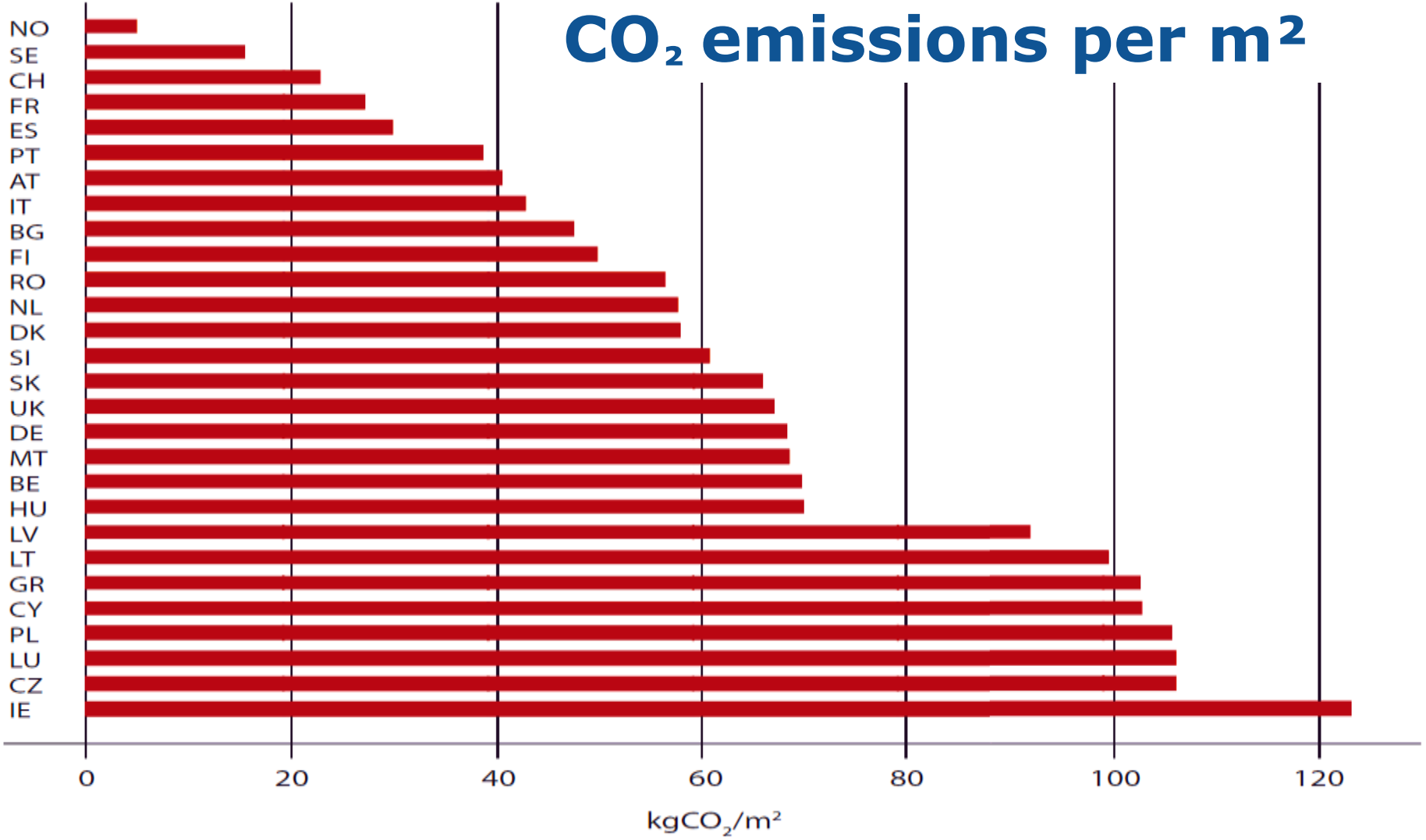
Residential energy mix

Share of heating consumption in terms of final energy use in residential buildings with corresponding energy mix

- **Space heating is the most energy intense end-use in EU homes.**
- **Heating share is typically lower in warmer climates.**
- **The energy mix for heating varies significantly from country to country**
- **While Spain relies mostly on oil to fulfill its heating needs, Poland relies mainly on coal and France on gas.**

European Commission

CO_2 emissions per m^2



EU criteria for biofuel sustainability

GHG emissions savings criteria	• At least 35% lifecycle savings (50%-60% from 2017/18) compared to fossil fuel
Land use criteria	• No conversion of land with high carbon stock ✓ Densely forested areas, wetlands, peatlands • No raw material from land with high biodiversity value ✓ Primary forest, nature protection areas, highly biodiverse grasslands
Agri-env. criteria	• EU feedstock to comply with cross-compliance rules (Regulation 73/2009)
Implementation	• Compliance with criteria mandatory to: ✓ Count toward the national renewable energy targets ✓ Count toward supplier obligations ✓ Be eligible for financial support

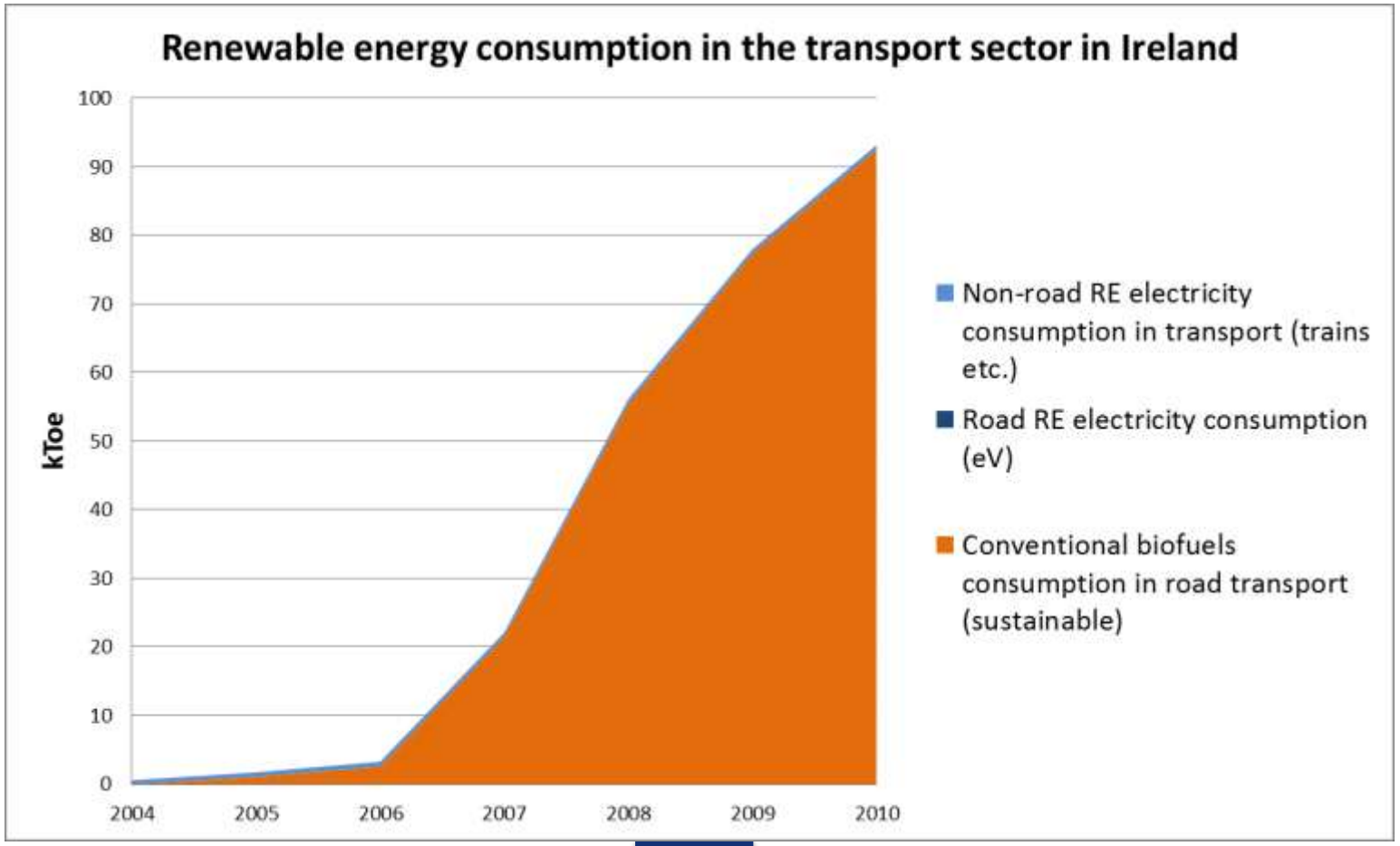
Thank you

Material on the Renewable Energy Directive:
http://ec.europa.eu/energy/renewables/targets_en.htm

*Material on the **sustainability criteria** including the GHG methodology is available here:*
http://ec.europa.eu/energy/renewables/biofuels/sustainability_criteria_en.htm

*The **ILUC proposal** and **Impact Assessment** underpinning it are available here:*
http://ec.europa.eu/energy/renewables/biofuels/land_use_change_en.htm

Focus on RE in transport: 2.4% in 2010 – 10% needed by 2020



Source: Eurostat