



Energy Policy Review Belgium 2022

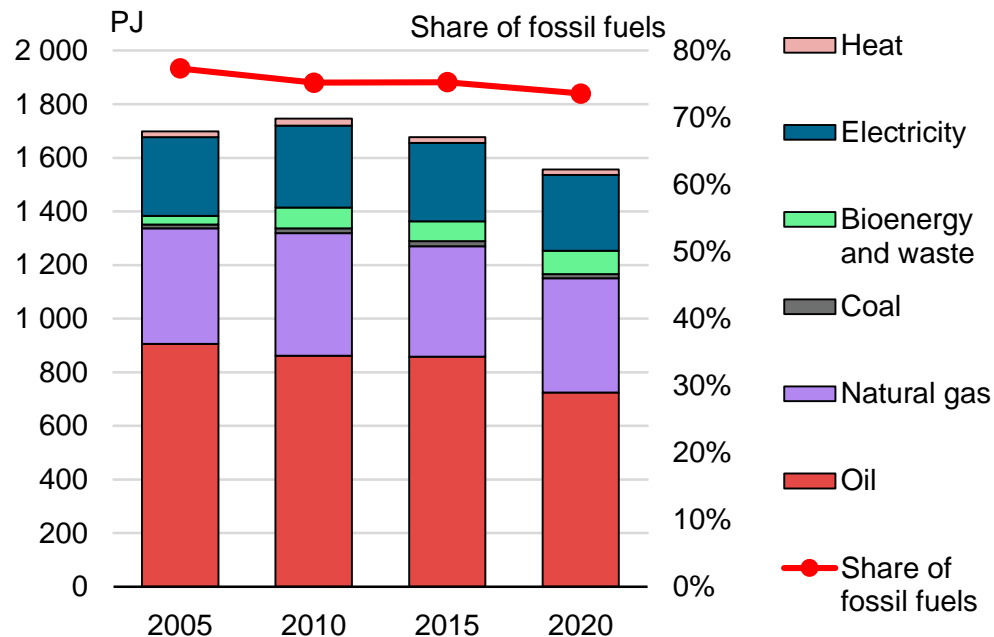
Energy and Climate Plan Committee
Flemish Parliament
20 May 2022



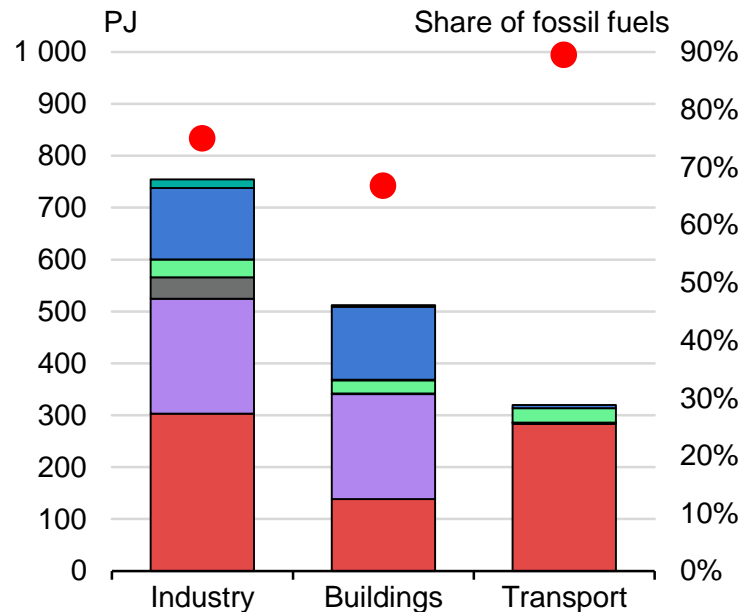
International
Energy Agency

Imported fossil fuels dominate energy demand

Energy demand by fuel and fossil fuel share, 2000-2020



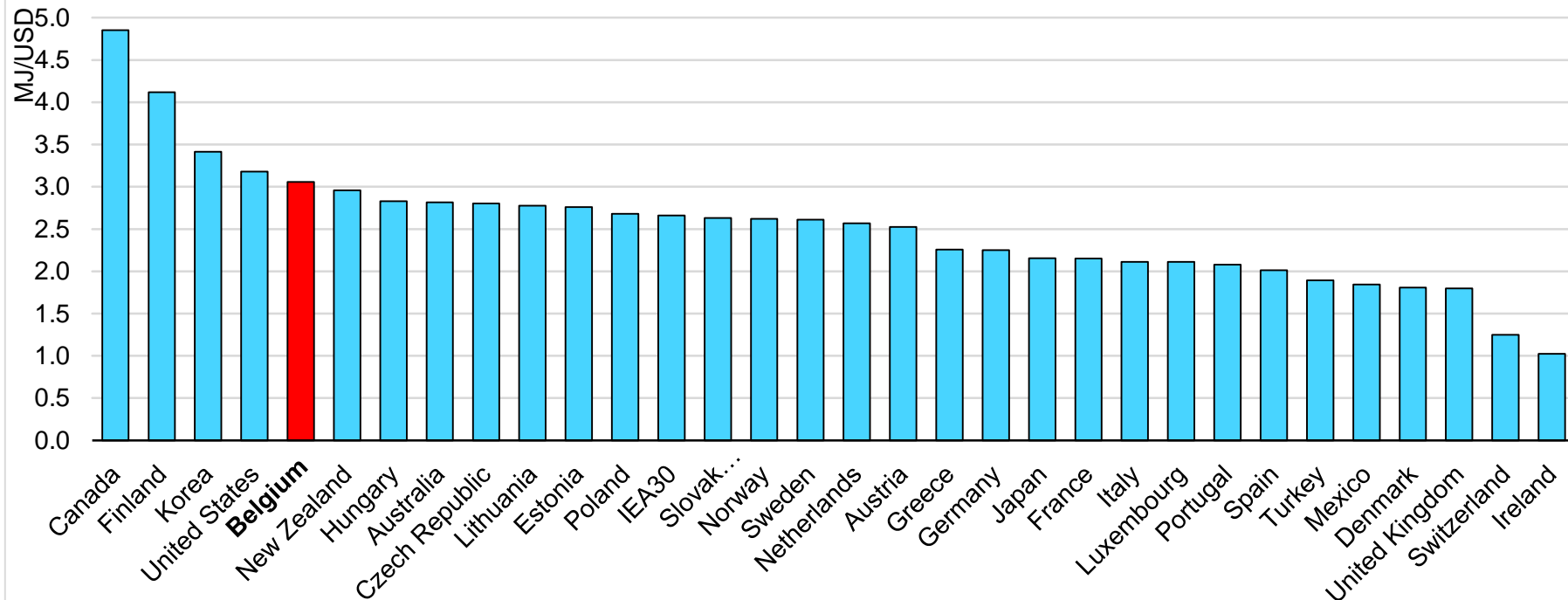
Energy demand by fuel and sector, 2020



Fossil fuels are dominant in all sectors and reliance on fossil fuels has decreased only slightly.

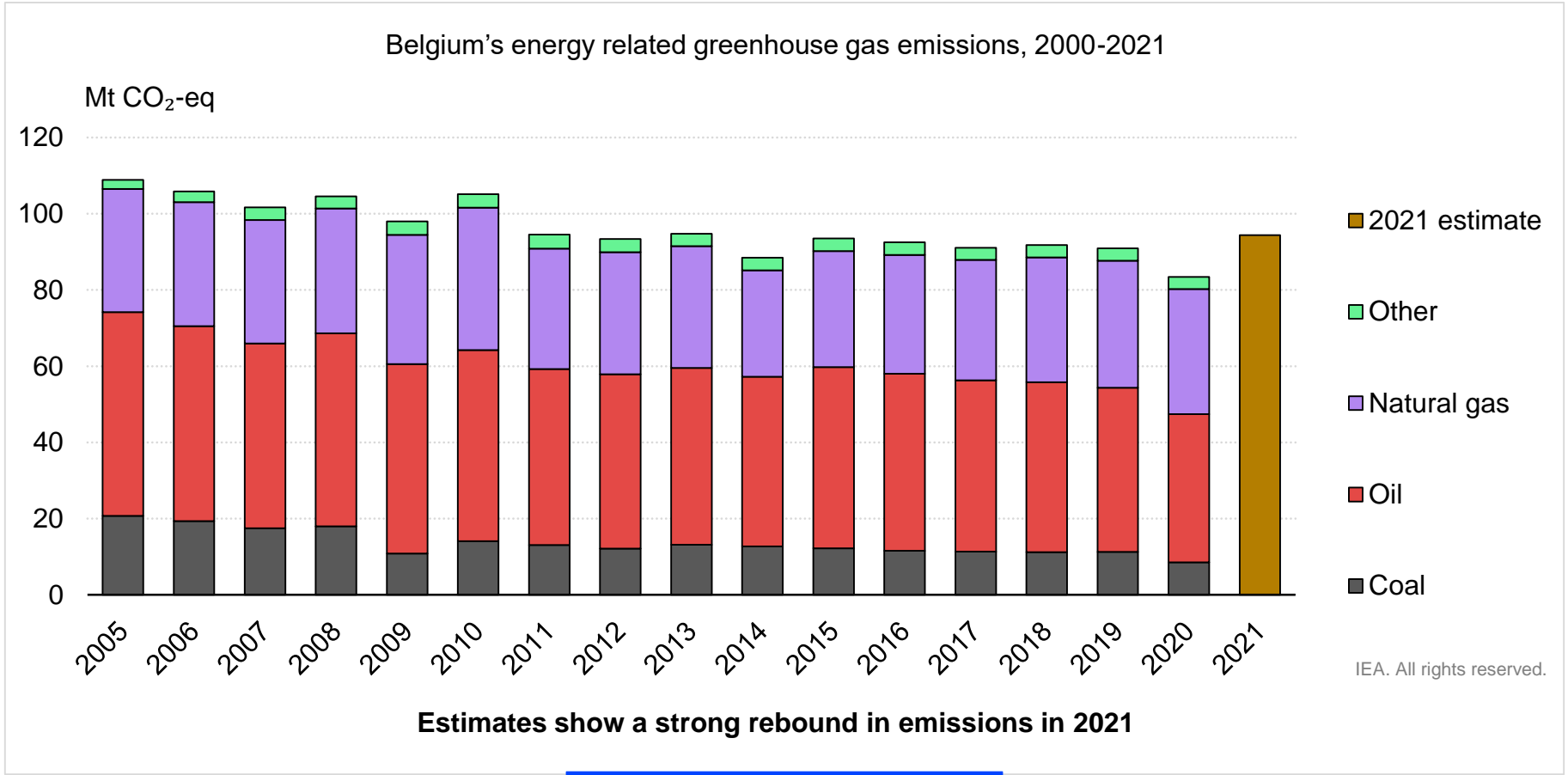
Belgium's economy ranks high for energy and carbon intensity

Energy intensity of the economy (TFC / GDP) in IEA countries, 2020

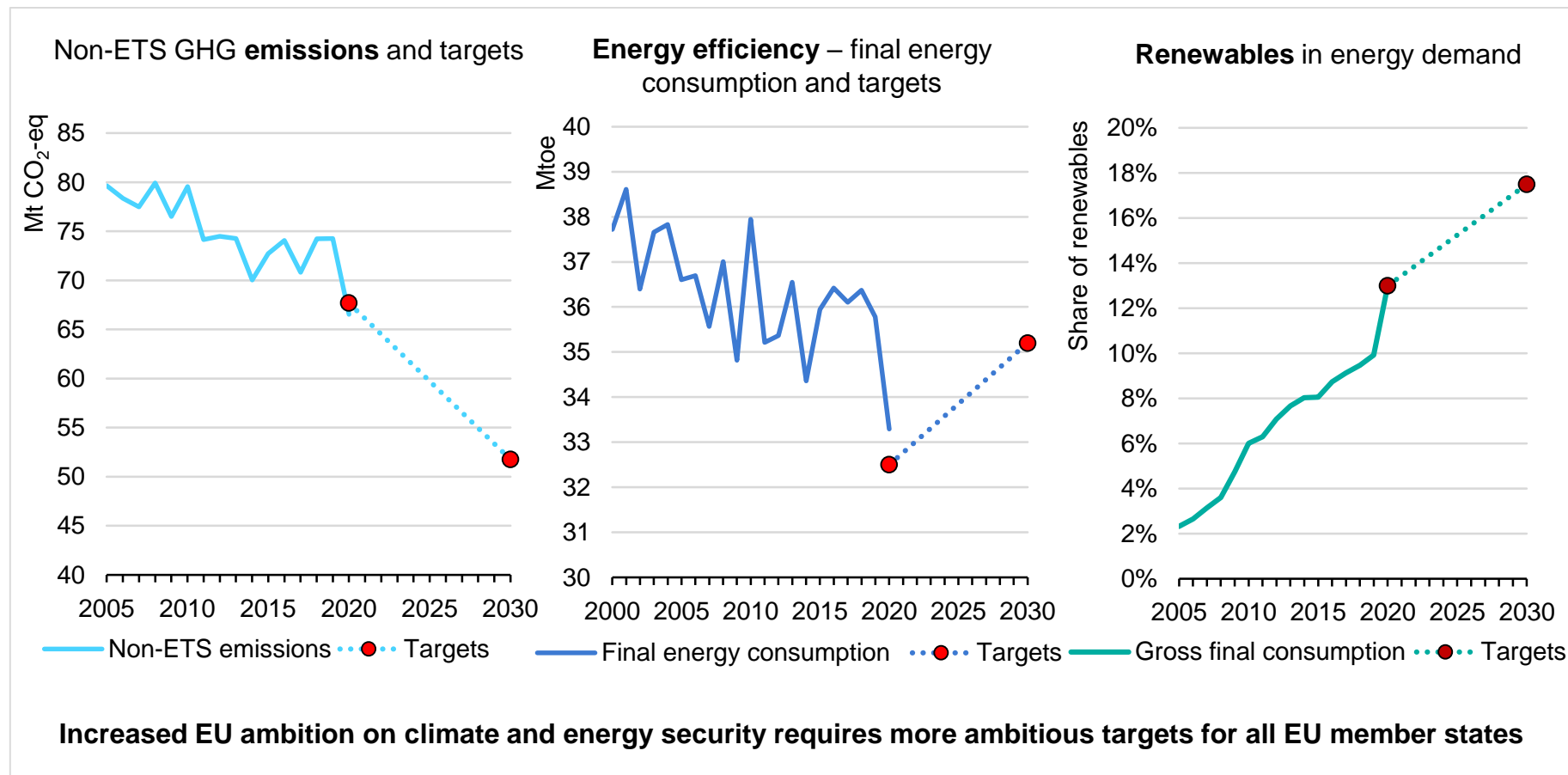


High energy and carbon intensity result from the concentration of heavy industry, notably chemical and petrochemical, with a large share of this activity in Flanders.

Reliance on fossil fuels is blocking needed GHG emissions reductions

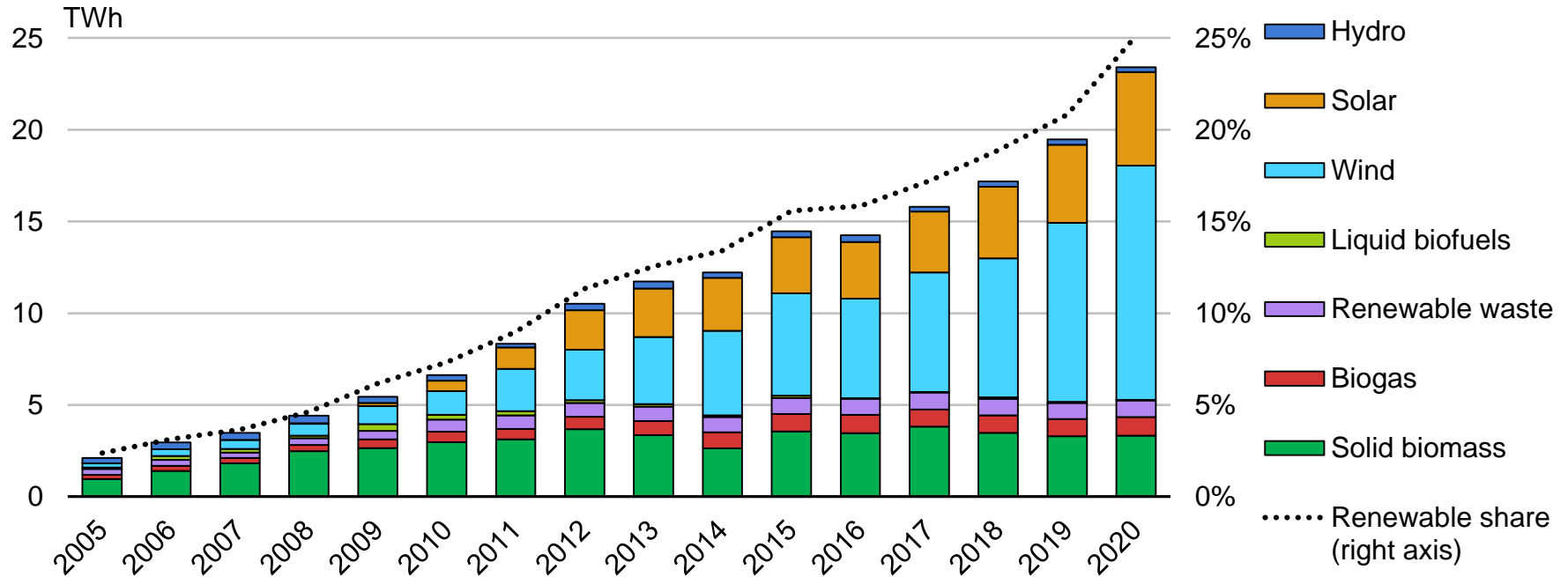


Mixed performance on 2020 targets, more ambition needed for 2030



Electricity sector: Strong growth in renewables

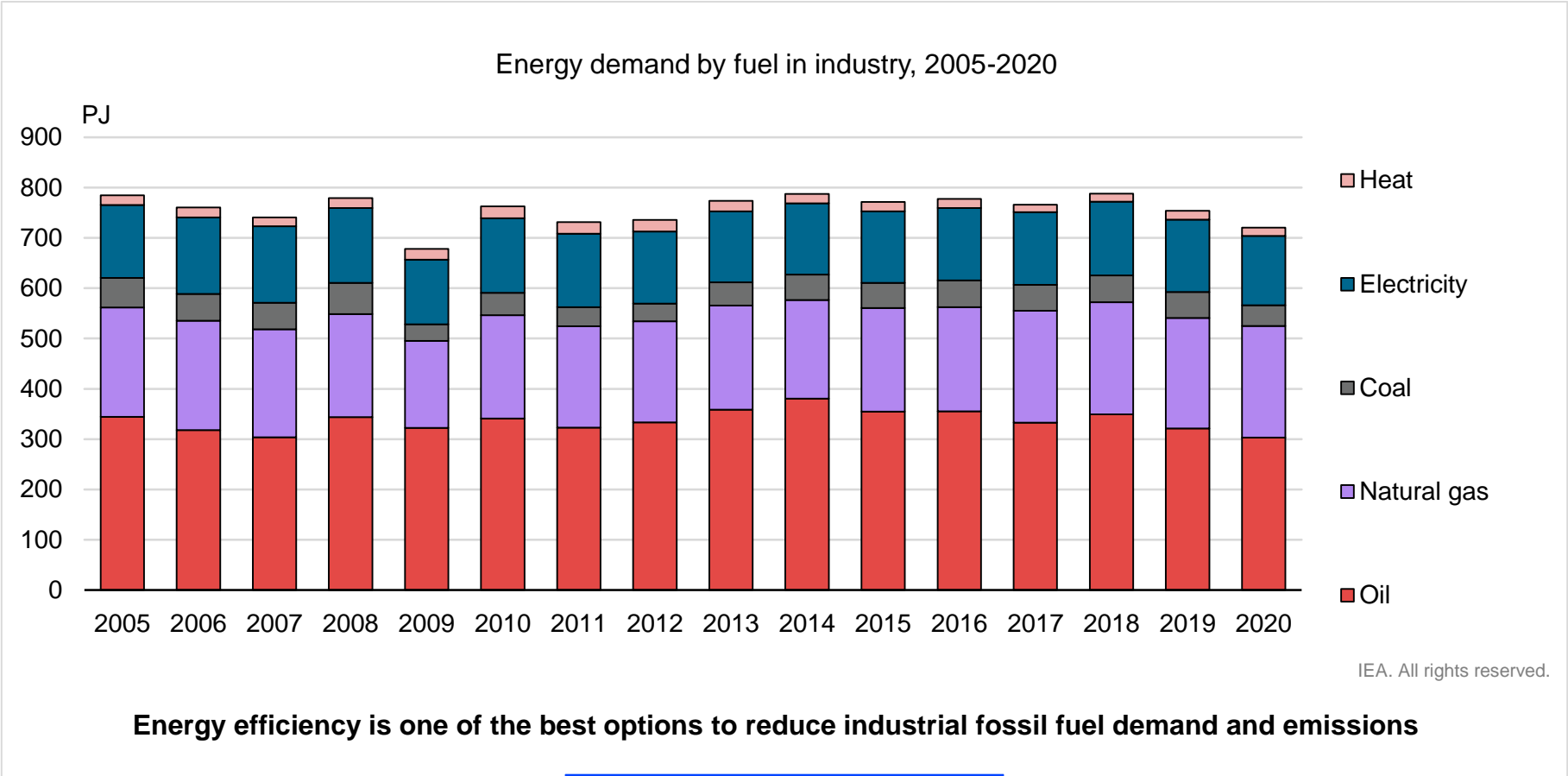
Renewable energy in electricity generation, 2005-2020



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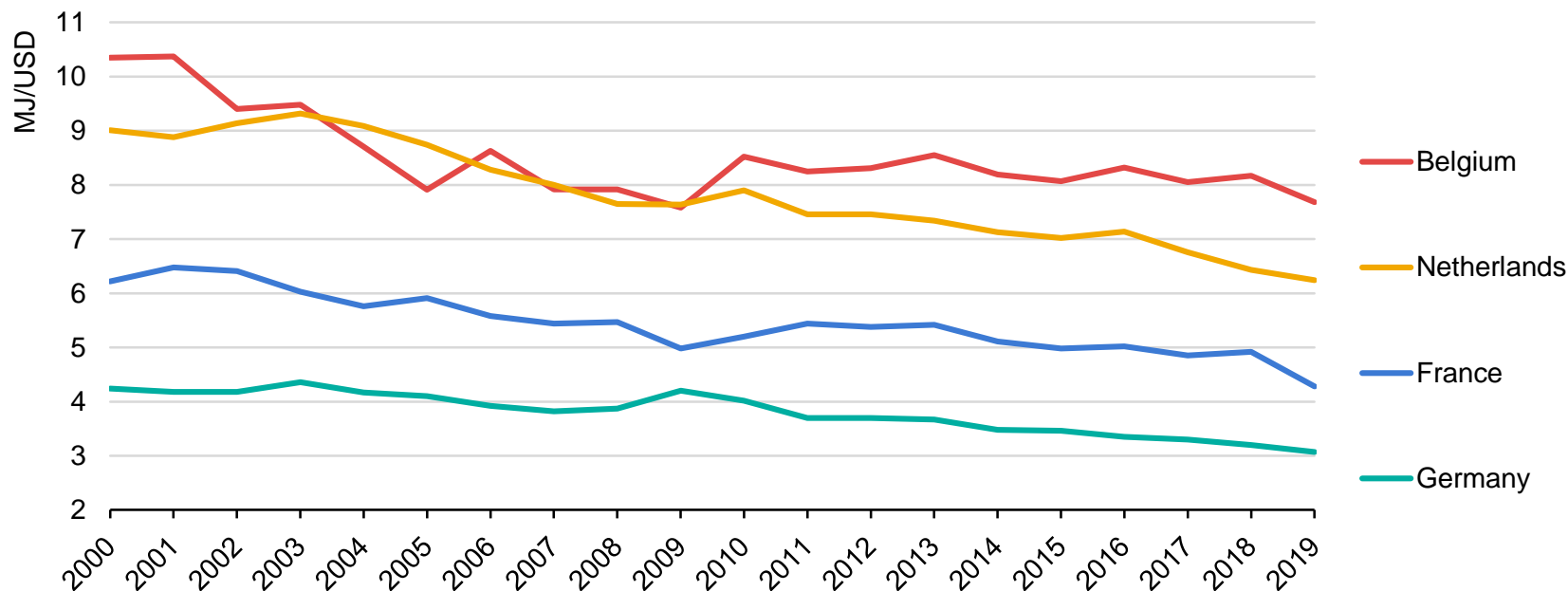
Policy success in driving wind and PV deployment, but Belgium is still lagging behind most IEA countries

Industry: Largest source of fossil fuels demand and GHG emissions



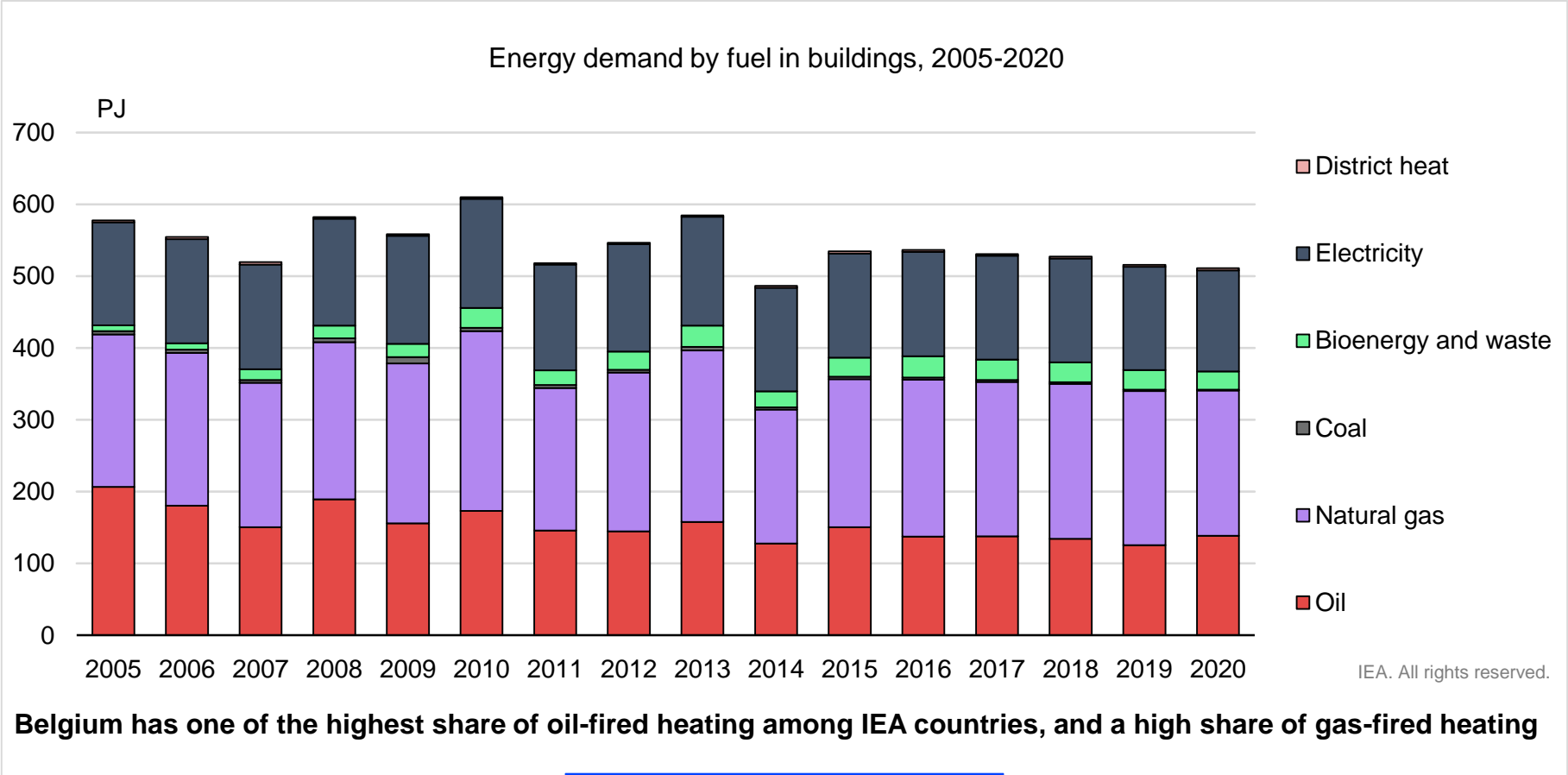
More effort needed to improve industry energy efficiency

Energy intensity of manufacturing in Belgium and neighbouring countries, 2000-2019



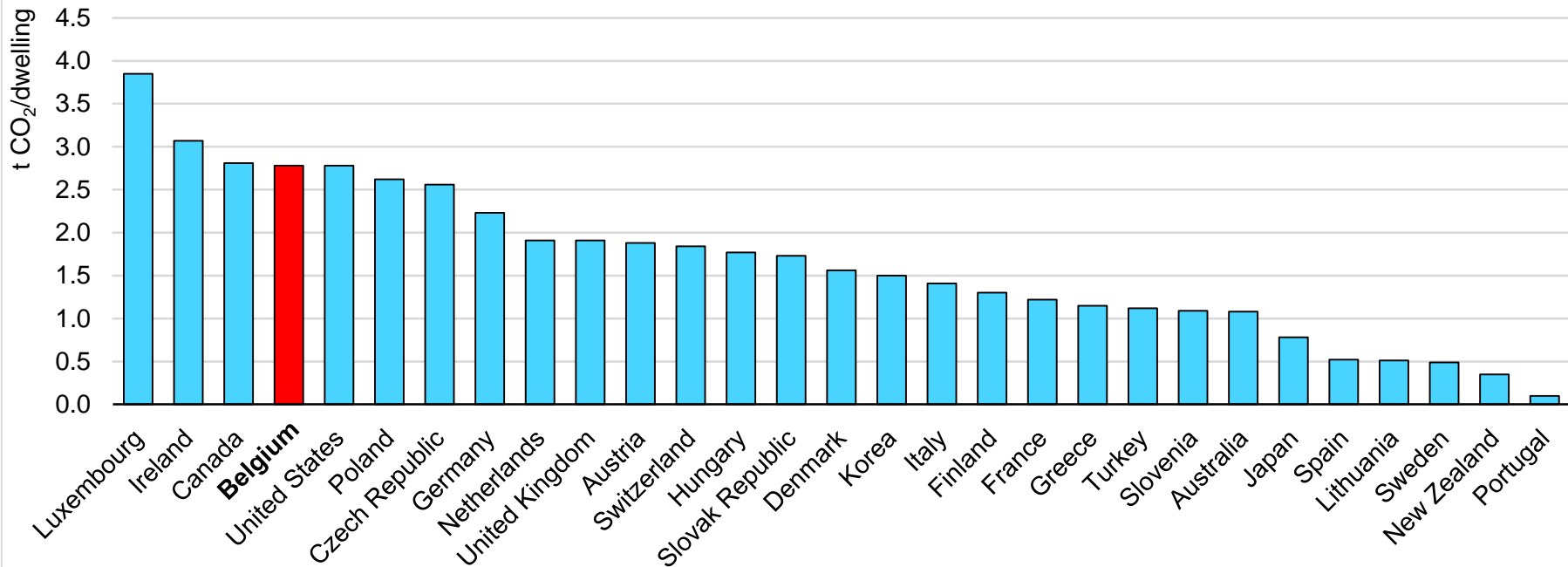
Belgian industry has struggled to achieve consistent improvements in energy efficiency and its energy intensity remains notably higher than industry in neighbouring countries

Buildings: High share of fossil fuels demand compared to IEA average



Belgium buildings have one of the highest carbon intensities

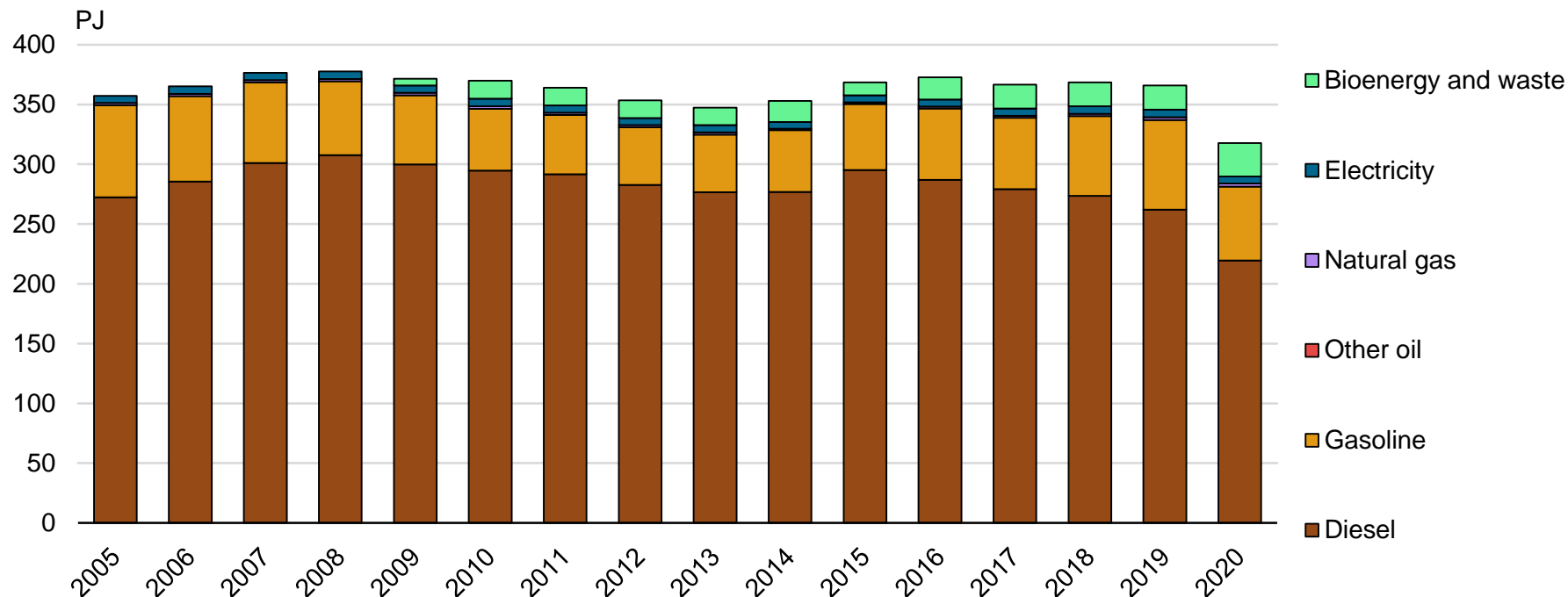
Carbon intensity of residential space heating per dwelling, 2019



The reliance on fossil fuel heating, especially oil, gives Belgian buildings a high carbon intensity

Transport: Dominated by fossil fuel powered road vehicles

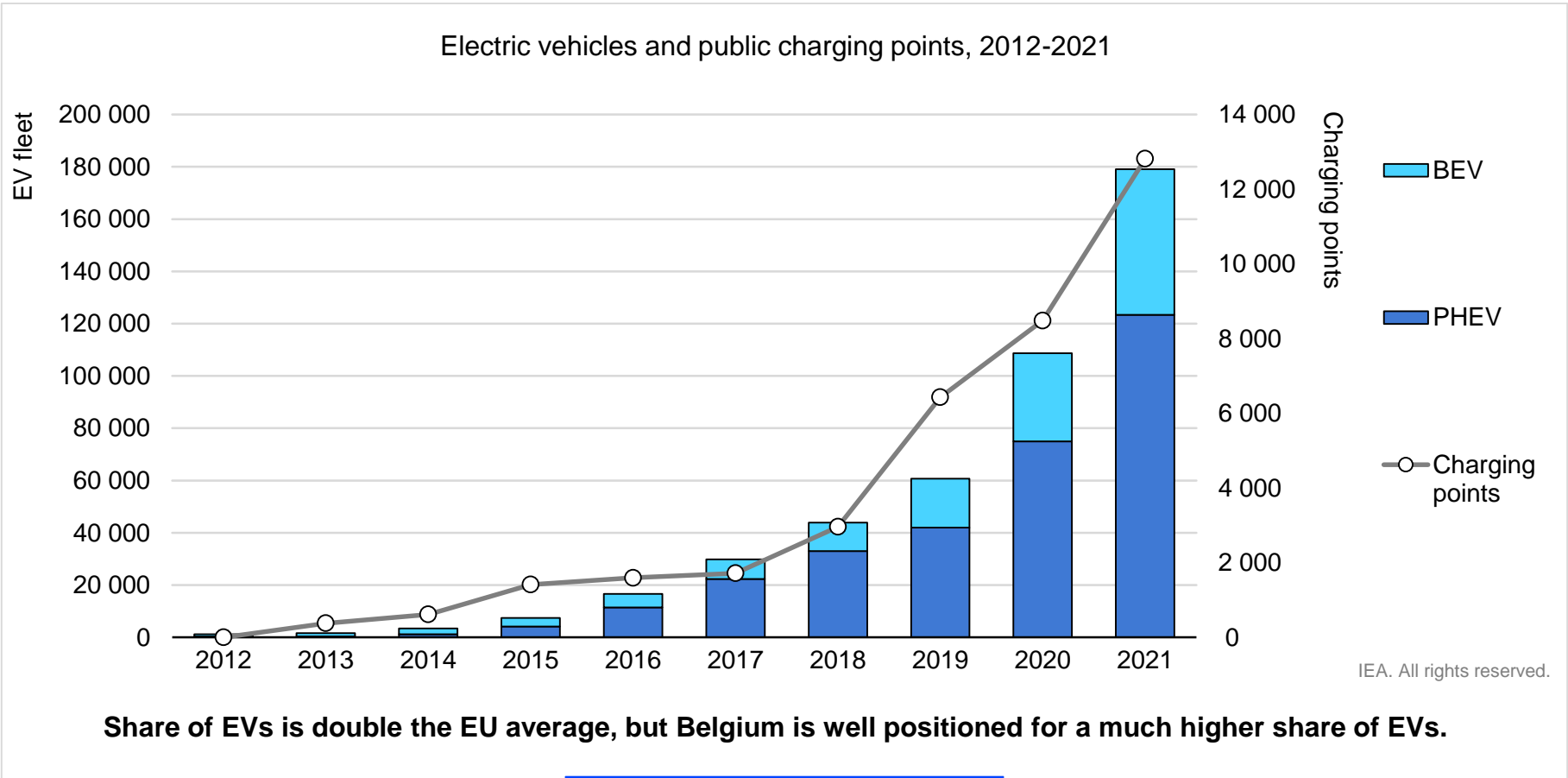
Energy demand by fuel in transport, 2005-2020



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**Road transport dominates, with a high share of freight.
There have been only limited improvements in road transport efficiency**

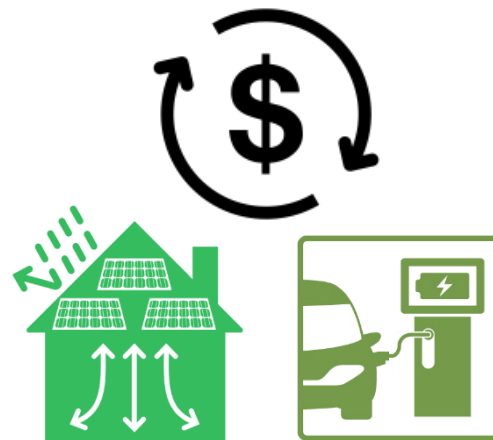
Transport: Notable growth in electric vehicles



Fossil fuels



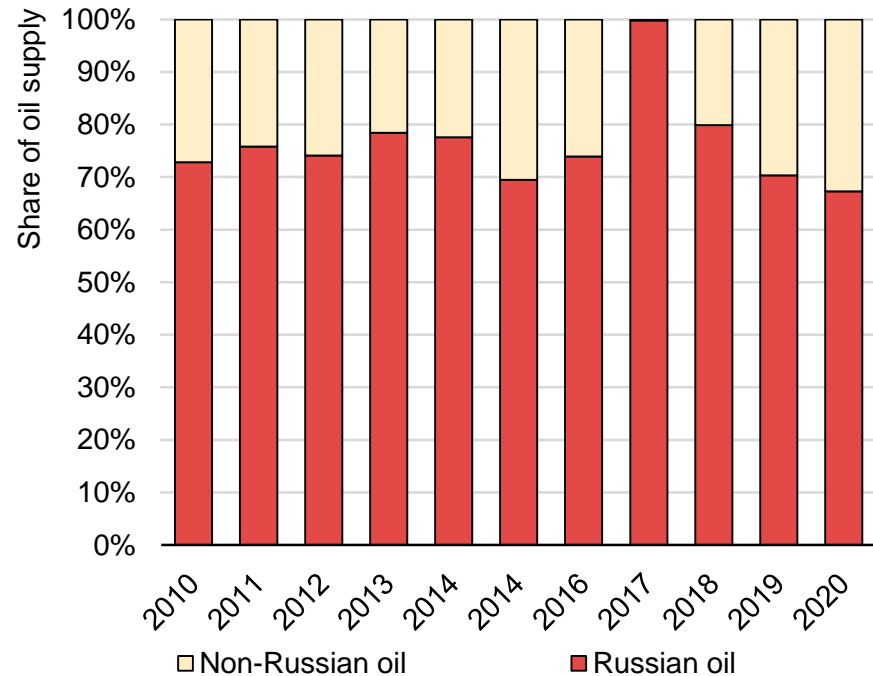
Electricity



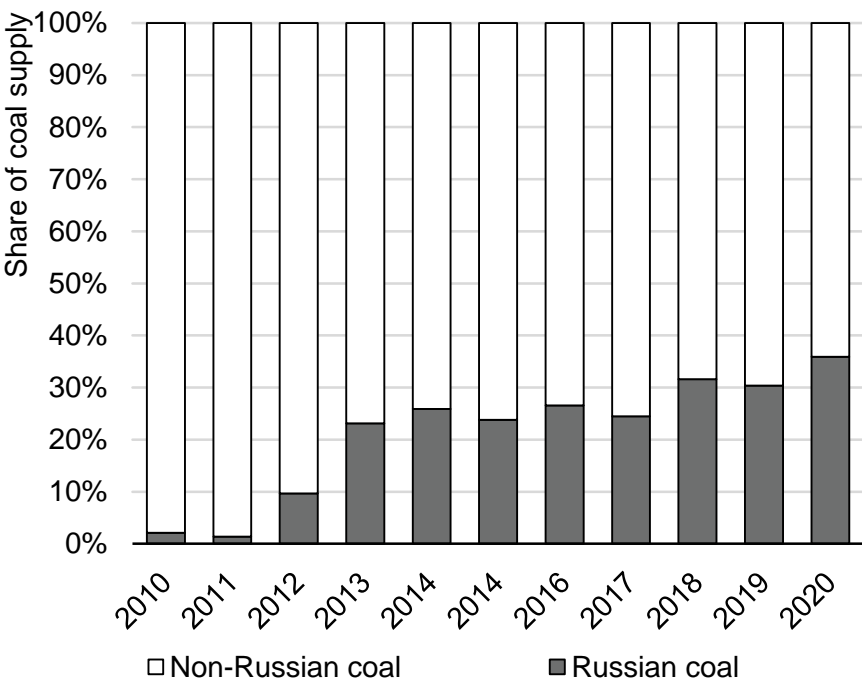
**Better price signals are needed to drive electrification, especially for mobility and heat demand.
Grid investments are also needed to ensure more energy demand is covered by renewable electricity**

Belgium's dependence on Russian fossil fuels

Dependence on Russian oil, 2010-2020



Dependence on Russian coal, 2010-2020



**Belgium is notably reliant on crude oil and oil products from Russia.
Reliance on Russian coal and gas was increasing until 2020**

A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas

Measures implemented this year could **bring down gas imports from Russia by over one-third**, with additional temporary options to deepen these cuts to **well over half while still lowering emissions**.

Action 1



No new gas supply contracts with Russia

Impact: Taking advantage of expiring long-term contracts with Russia will reduce the contractual minimum take-or-pay levels for Russian imports and enable greater diversity of supply.

Action 2



Replace Russian supplies with gas from alternative sources

Impact: Around 30 bcm in additional gas supply from non-Russian sources.

Action 3



Introduce minimum gas storage obligations to enhance market resilience

Impact: Enhances the resilience of the gas system, although higher injection requirements to refill storage in 2022 will add to gas demand and prop up gas prices.

Action 4



Accelerate the deployment of new wind and solar projects

Impact: An additional 35 TWh of generation from new renewable projects over the next year, over and above the already anticipated growth from these sources, bringing down gas use by 6 bcm.

Action 5



Maximise generation from existing dispatchable low-emissions sources: bioenergy and nuclear

Impact: An additional 70 TWh of power generation from existing dispatchable low emissions sources, reducing gas use for electricity by 13 bcm.

Action 6



Enact short-term measures to shelter vulnerable electricity consumers from high prices

Impact: Brings down energy bills for consumers even when natural gas prices remain high, making available up to EUR 200 billion to cushion impacts on vulnerable groups.

Action 7



Speed up the replacement of gas boilers with heat pumps

Impact: Reduces gas use for heating by an additional 2 bcm in one year.

Action 8



Accelerate energy efficiency improvements in buildings and industry

Impact: Reduces gas consumption for heat by close to an additional 2 bcm within a year, lowering energy bills, enhancing comfort and boosting industrial competitiveness.

Action 9



Encourage a temporary thermostat adjustment by consumers

Impact: Turning down the thermostat for buildings' heating by 1°C would reduce gas demand by some 10 bcm a year.

Action 10



Step up efforts to diversify and decarbonise sources of power system flexibility

Impact: A major near-term push on innovation can, over time, loosen the strong links between natural gas supply and Europe's electricity security. Real-time electricity price signals can unlock more flexible demand, in turn reducing expensive and gas-intensive peak supply needs.

A 10-Point Plan to Cut Oil Use

Immediate actions in advanced economies can cut oil demand by 2.7 million barrels a day in the next 4 months.

Action 1



Reduce speed limits on highways by at least 10 km/h

Impact: Saves around 290 kb/d of oil use from cars, and an additional 140 kb/d from trucks.

Action 2



Work from home up to three days a week where possible

Impact: One day a week saves around 170 kb/d; three days saves around 500 kb/d.

Action 3



Car-free Sundays in cities

Impact: Every Sunday saves around 380 kb/d; one Sunday a month saves 95 kb/d.

Action 4



Make the use of public transport cheaper and incentivise micro-mobility, walking and cycling

Impact: Saves around 330 kb/d.

Action 5



Alternate private car access to roads in large cities

Impact: Saves around 210 kb/d.

Action 6



Increase car sharing and adopt practices to reduce fuel use

Impact: Saves around 470 kb/d.

Action 7



Promote efficient driving for freight trucks and delivery of goods

Impact: Saves around 320 kb/d.

Action 8



Using high-speed and night trains instead of planes where possible

Impact: Saves around 40 kb/d.

Action 9



Avoid business air travel where alternative options exist

Impact: Saves around 260 kb/d.

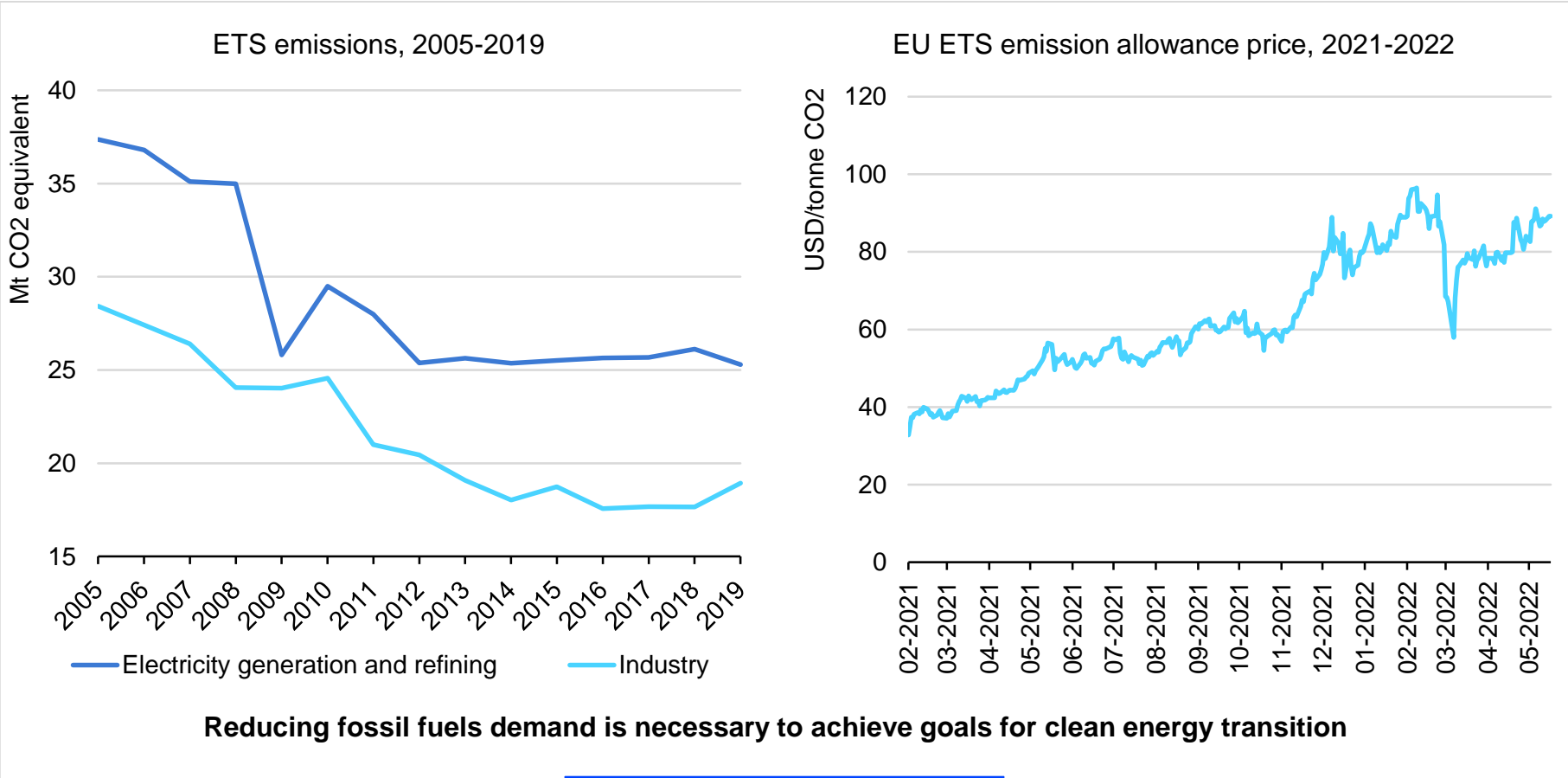
Action 10



Reinforce the adoption of electric and more efficient vehicles

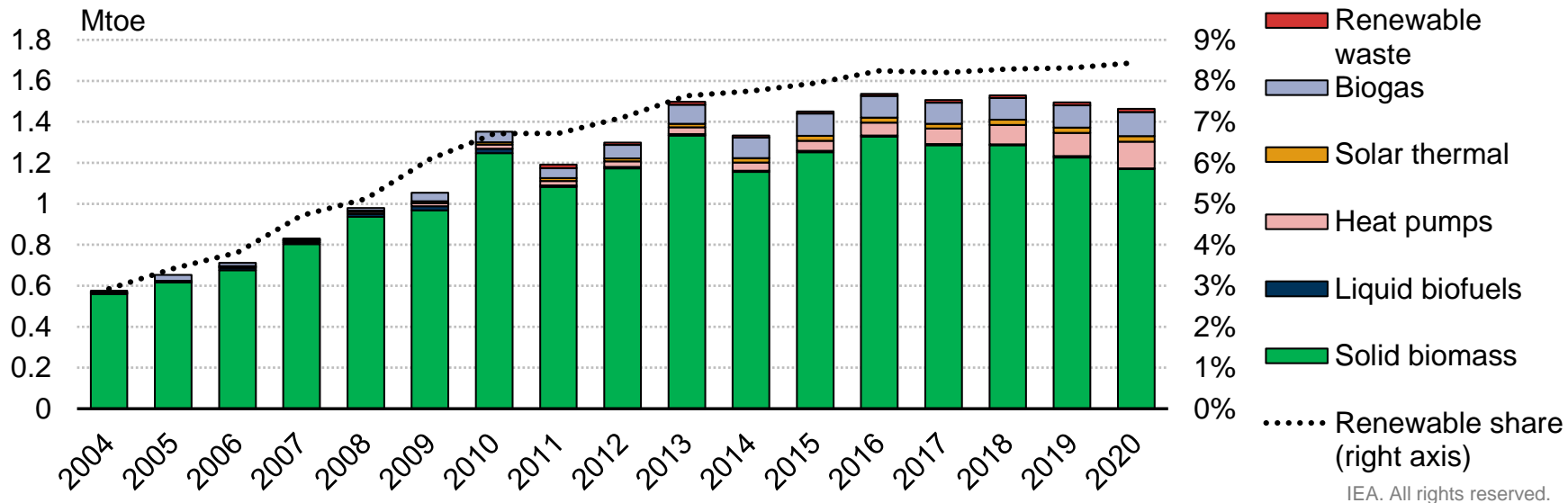
Impact: Saves around 100 kb/d.





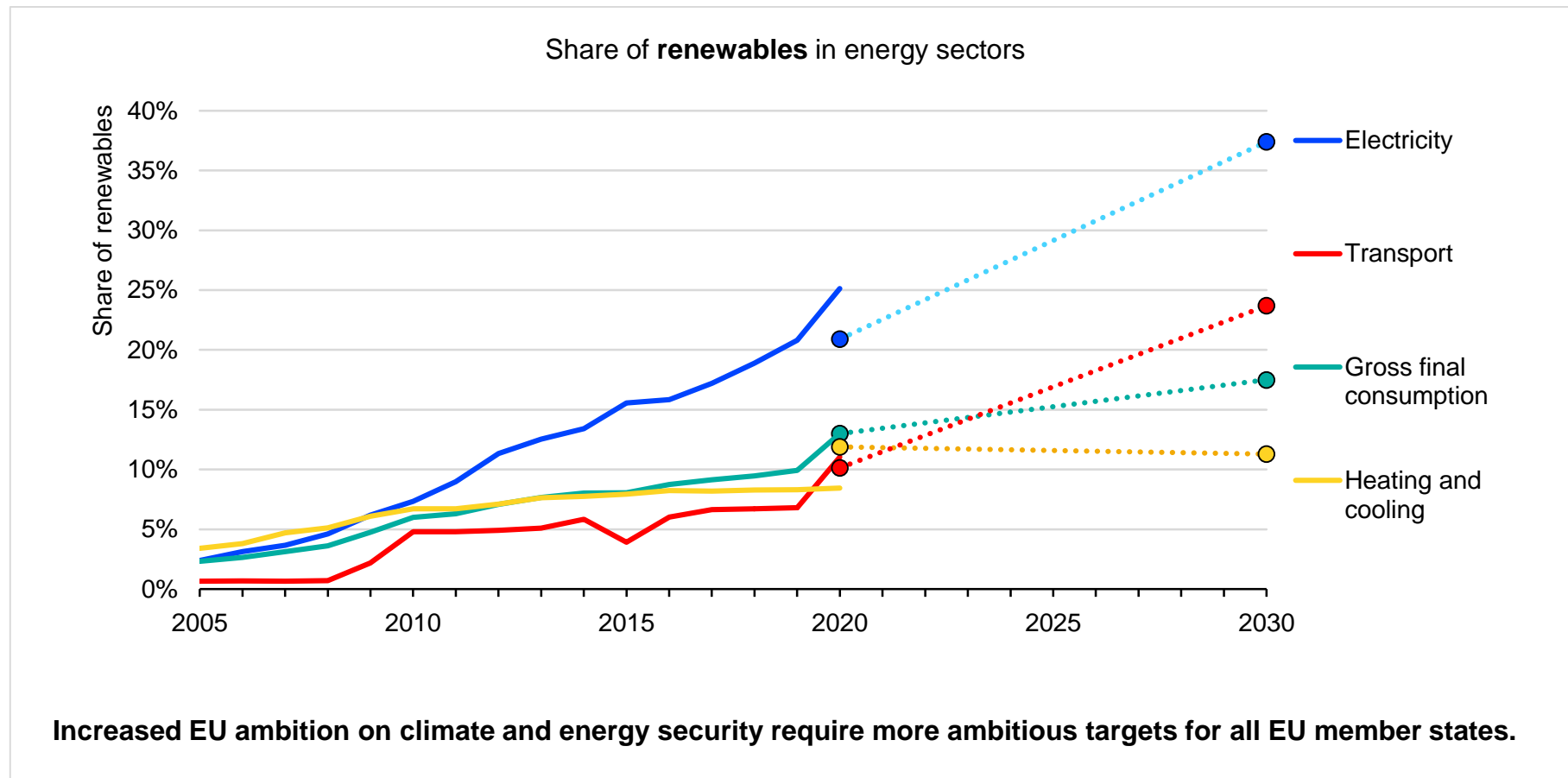
Progress on energy transition: Growth in renewables

Renewable energy in electricity generation, 2000 to 2020



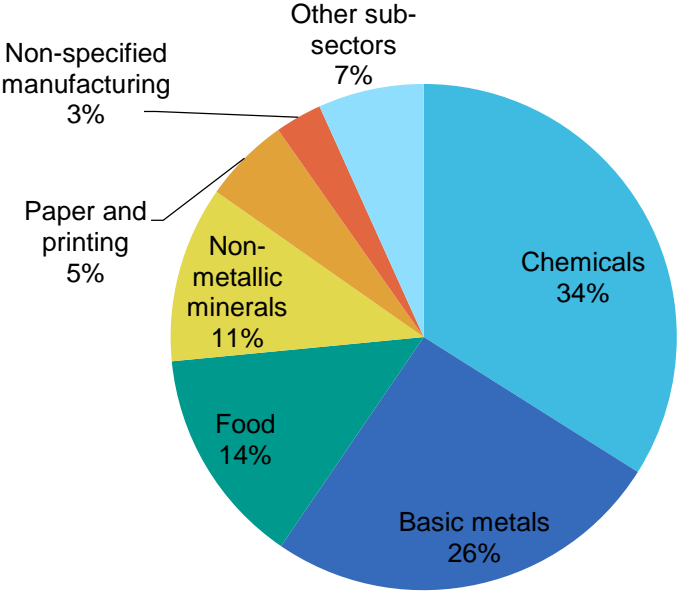
Notable growth in renewables, especially for electricity, but Belgium is still lagging behind most IEA countries

Mixed preformed on 2020 targets, more ambition needed for 2030



Industry EE? Structure, EE trends, hard to decarbonise hydrogen, electrification

Manufacturing energy consumption by subsector, 2019, Belgium



Manufacturing subsectors' energy consumption by source, 2011-2019, Belgium

