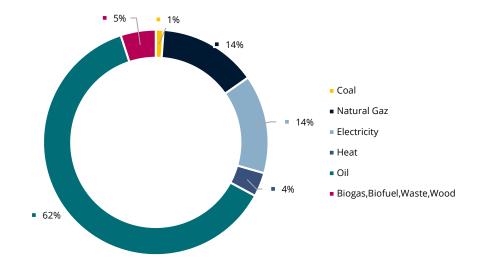
15/12 /23



# Luxembourg is still a high-carbon society, but one that is becoming less carbon-intensive

Petroleum products and natural gas are the two main sources of fossil fuels consumed in 2022. Renewable energies (including waste, biogas, biofuels and wood by-products) cover 5% of the country's energy needs. Final energy consumption was 156 PJ, the lowest final consumption in 20 years.

## **GRAPH 1: LUXEMBOURG SOCIETY IS STILL HIGHLY CARBON-INTENSIVE**



Source: STATEC DF\_A4100

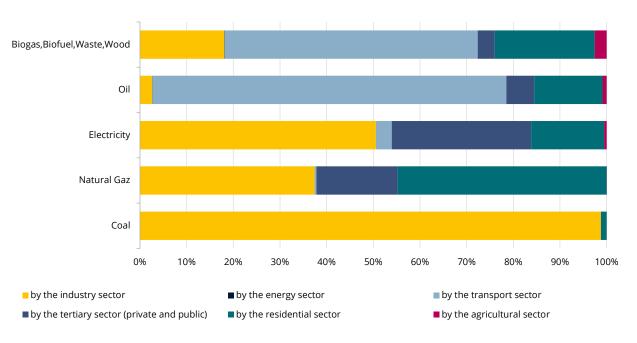
# Electrification of energy needs is still a long way off

By 2022, electricity will cover 48% of the energy needs of industry, an increase of 9 pp in 20 years. On the other hand, electricity accounts for only 17% of household needs, up 4 pp over the last 20 years. In the tertiary sector, electricity covers 35% of their needs, down 1 pp on 2002.

The use of electricity for transport is still modest. Rail accounts for just 2% of the country's electricity consumption, while road use is close to 1%. The main users of electricity are, in order of importance: industry, the tertiary sector and households.

Petroleum products are mainly used for transport and residential heating. Natural gas is mainly consumed by industry and households. Coal is used almost exclusively by the industrial sector.

### **GRAPH 2: OIL PRODUCTS IN TRANSPORT, COAL IN INDUSTRY**



Source: STATEC DF\_A4100

# The energy sector focuses on renewable energies

Renewable electricity production, from solar photovoltaic, wind, hydroelectric (excluding pumped storage) and renewable cogeneration, will account for 16% of the country's final electricity consumption in 2022. 20 years ago, this figure was just 3%.

# The war in Ukraine has turned Luxembourg's energy balance upside down

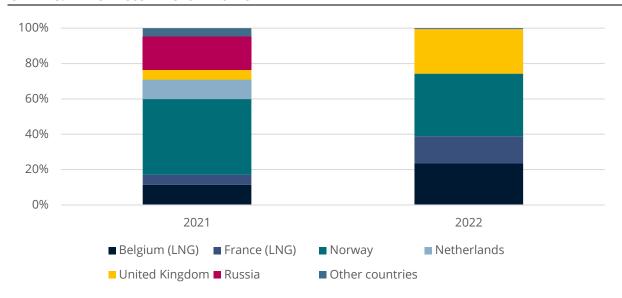
As Luxembourg is 88% dependent on foreign countries for its energy supplies, price rises on international markets have led businesses and households to limit their consumption of natural gas and heating oil. Industry and the tertiary sector cut their natural gas consumption by 29% and 26% respectively. Households also reduced their natural gas consumption by 11%.

Households that were able to do so also switched energy sources. Consumption of firewood and pellets rose by 53%.



The war in Ukraine has also reshaped the landscape of countries exporting natural gas to Europe and Luxembourg. In 2022, Luxembourg stopped importing Russian natural gas, which accounted for 19% of imports in 2021. It has been replaced by natural gas imports from the United Kingdom and LNG deliveries from Qatar (regasified in Belgium and France).

### **GRAPH 3: END OF RUSSIAN GAS IMPORTS**



Source: STATEC DF\_A4207

# To find out more

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This publication was produced by the MAC5 Unit under the direction of Olivier Thunus.

 ${\it STATEC}\ would\ like\ to\ thank\ all\ the\ contributors\ to\ this\ publication.$ 

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