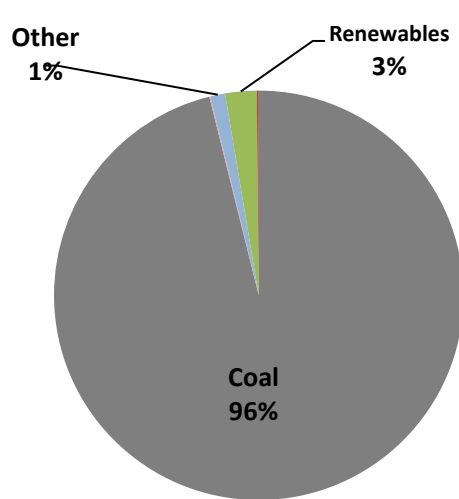
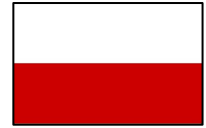


Situation in the mining sector in the face of resources and energy crisis and climate challenges related to the 'Fit for 55' package

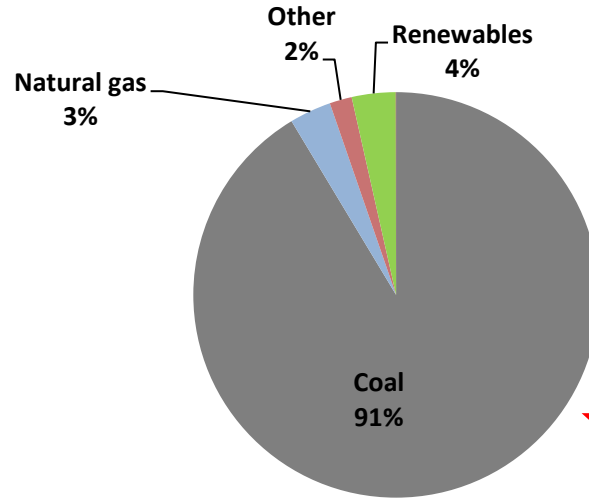
**Tomasz Rogala –
Chairman of the Board PGG
and Senior Vice President of EURACOAL**



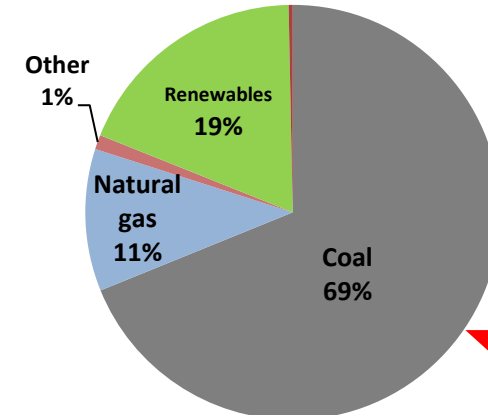
The structure of electricity production in Poland and EU



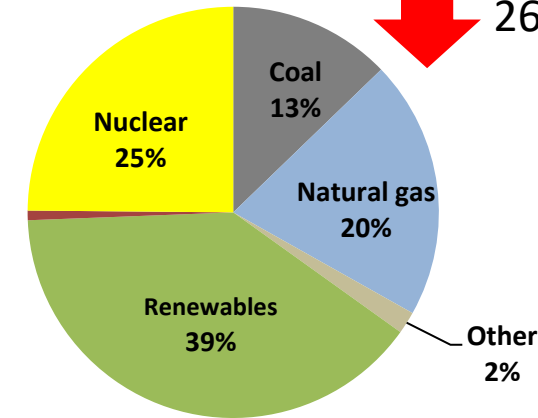
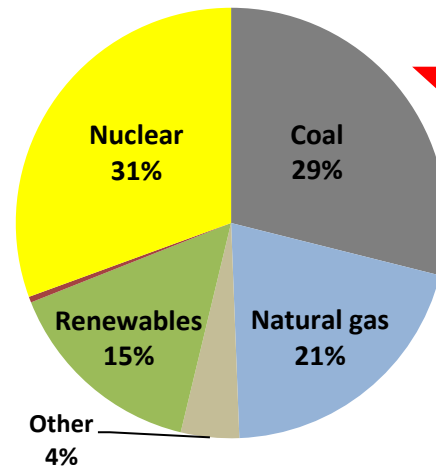
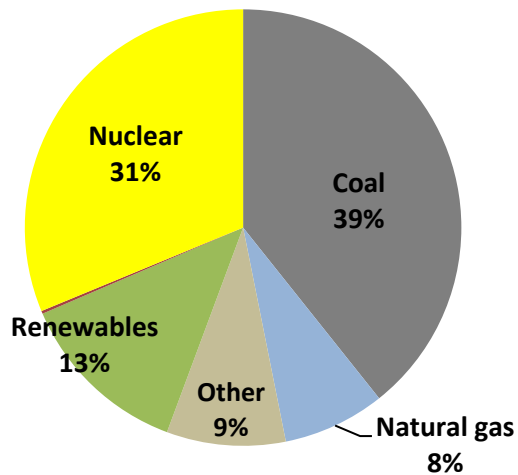
1990



2005



2020



↓ 5 p.p.

↓ 27 p.p.

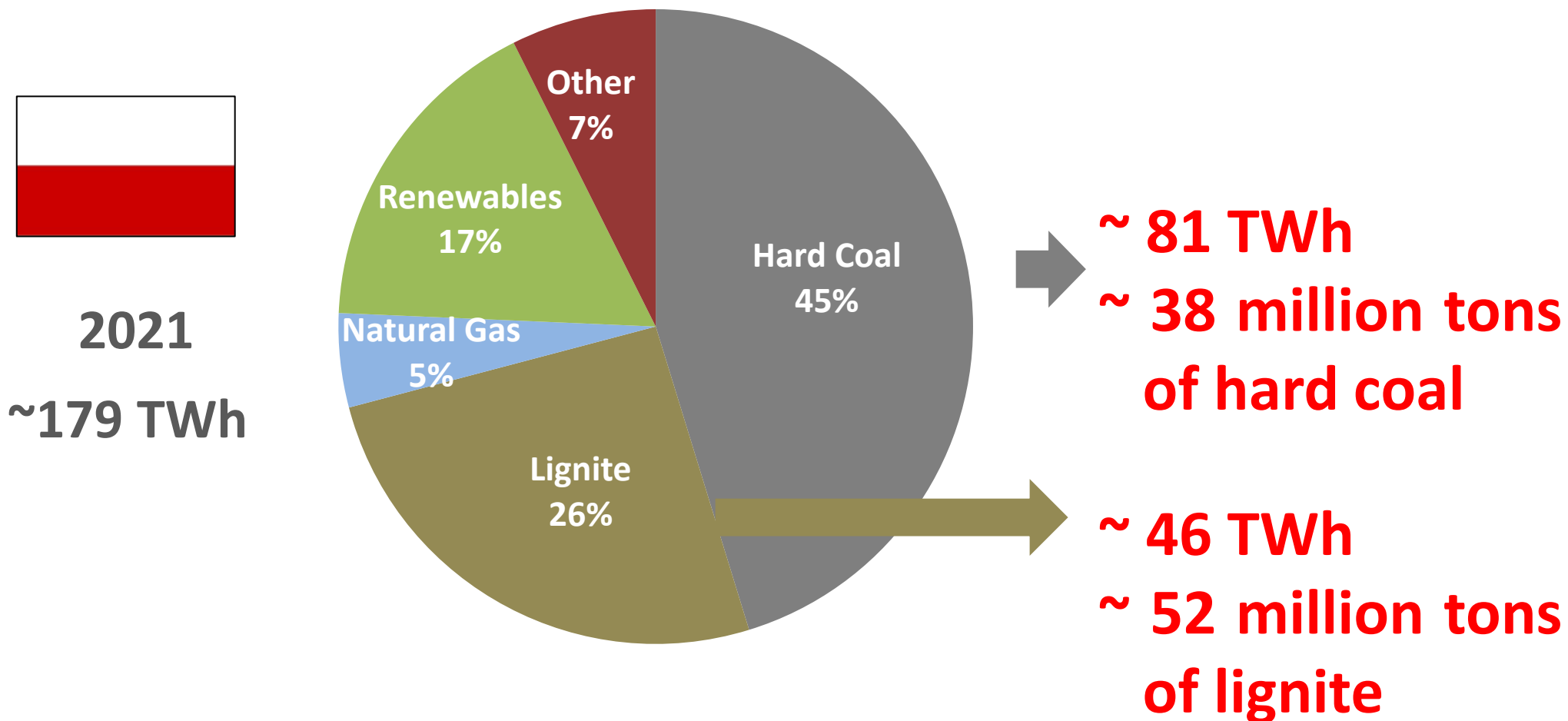
↓ 10 p.p.

↓ 26 p.p.

Europe's energy transition is a process that has been going on since the 1990s. The changes that follow are evolutionary but symptomatic. The share of energy from coal in the energy mix is clearly declining at the expense of the increase in the share of renewable energy sources.

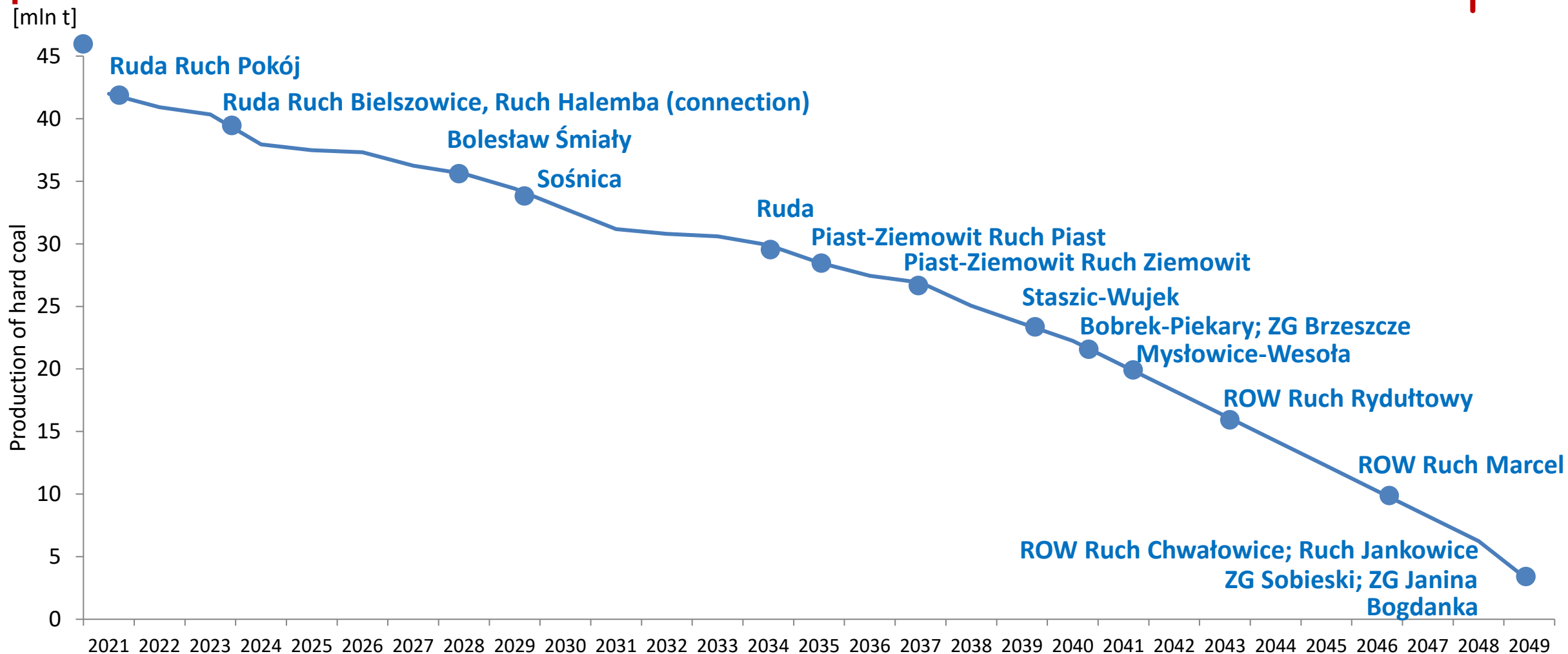
Source: own elaboration based on ARE,PSE, ENTSO-E data

The structure of electricity production in Poland



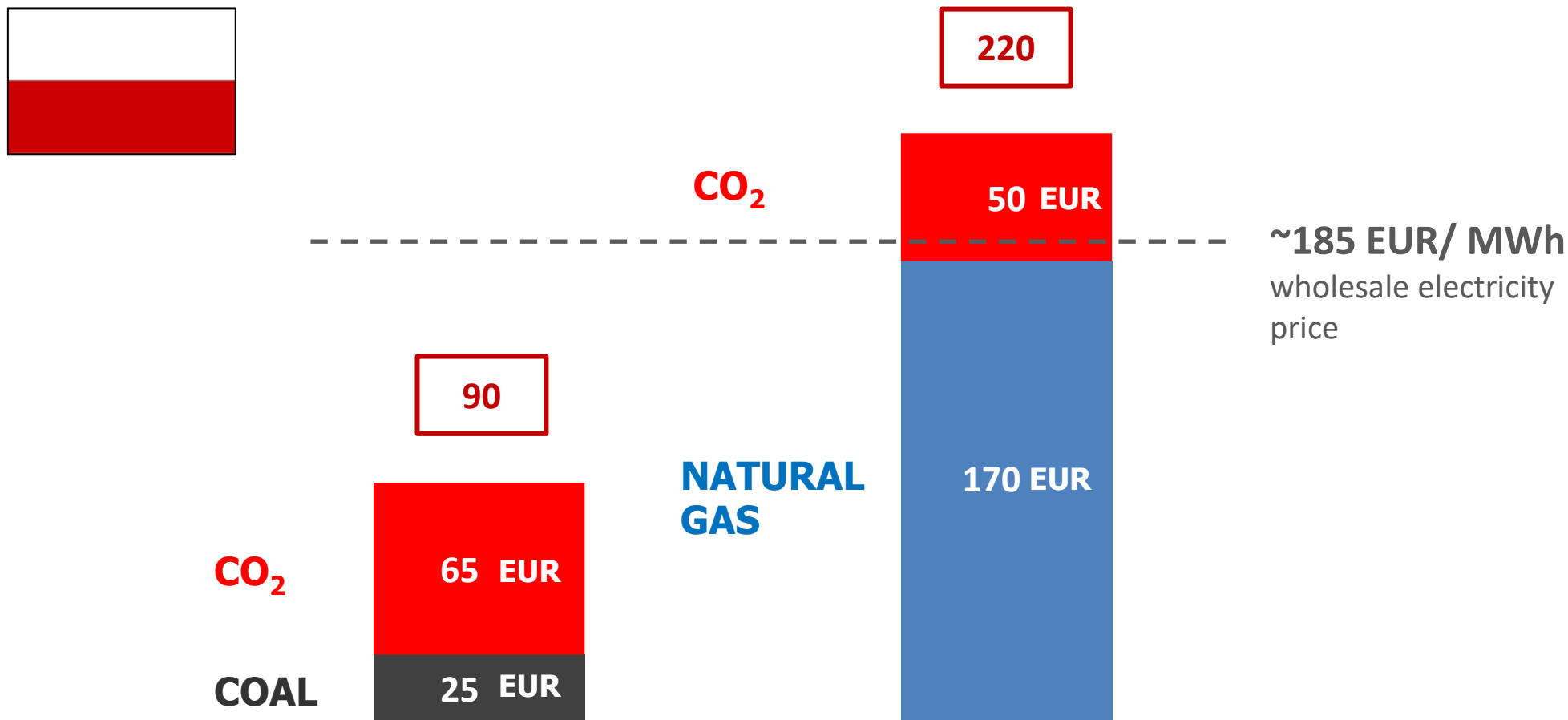
The structure of electricity production in the first half of 2022 is almost the same as in 2021, so similar data should also be expected this year.

Schedule of closing hard coal mines



On the basis of the Social Agreement, a gradual phasing out of domestic power hard coal mines was agreed. The last mines are to stop mining in 2049.

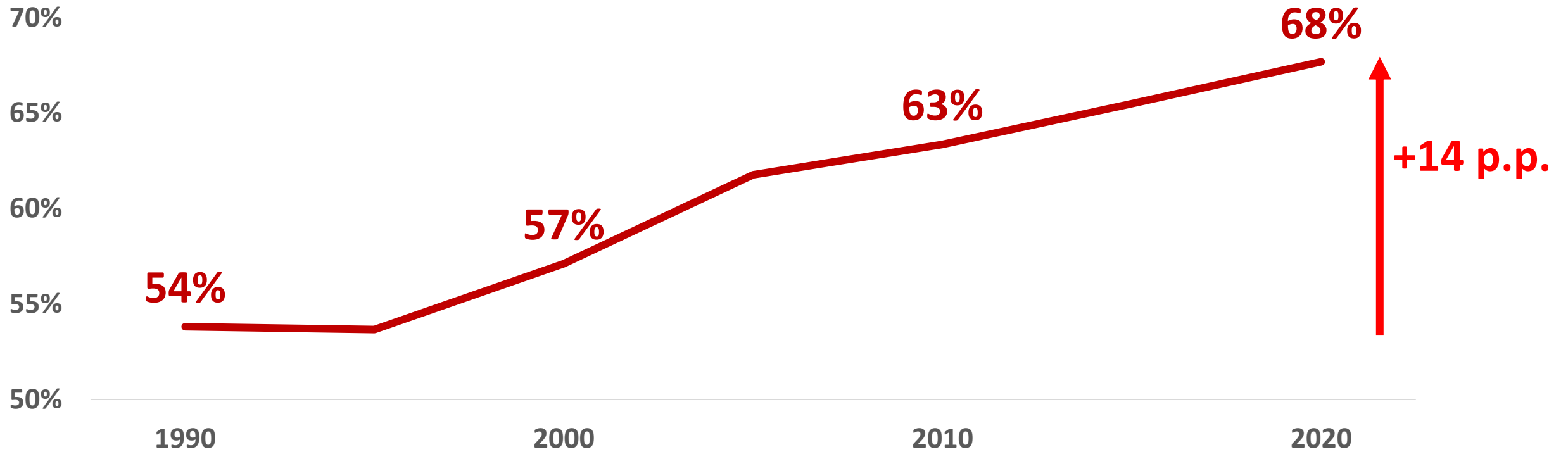
Fuel costs and CO₂ emission allowances per 1 MWh of electricity



Coal is still the cheapest fuel for energy production.

The cost of generating electricity from gas is more than twice as high as from coal.

Increase of the EU's dependence on imported energy resources



Russia



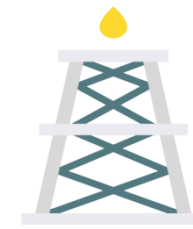
Hard coal

46%



Natural
gas

40%



Crude oil

27%

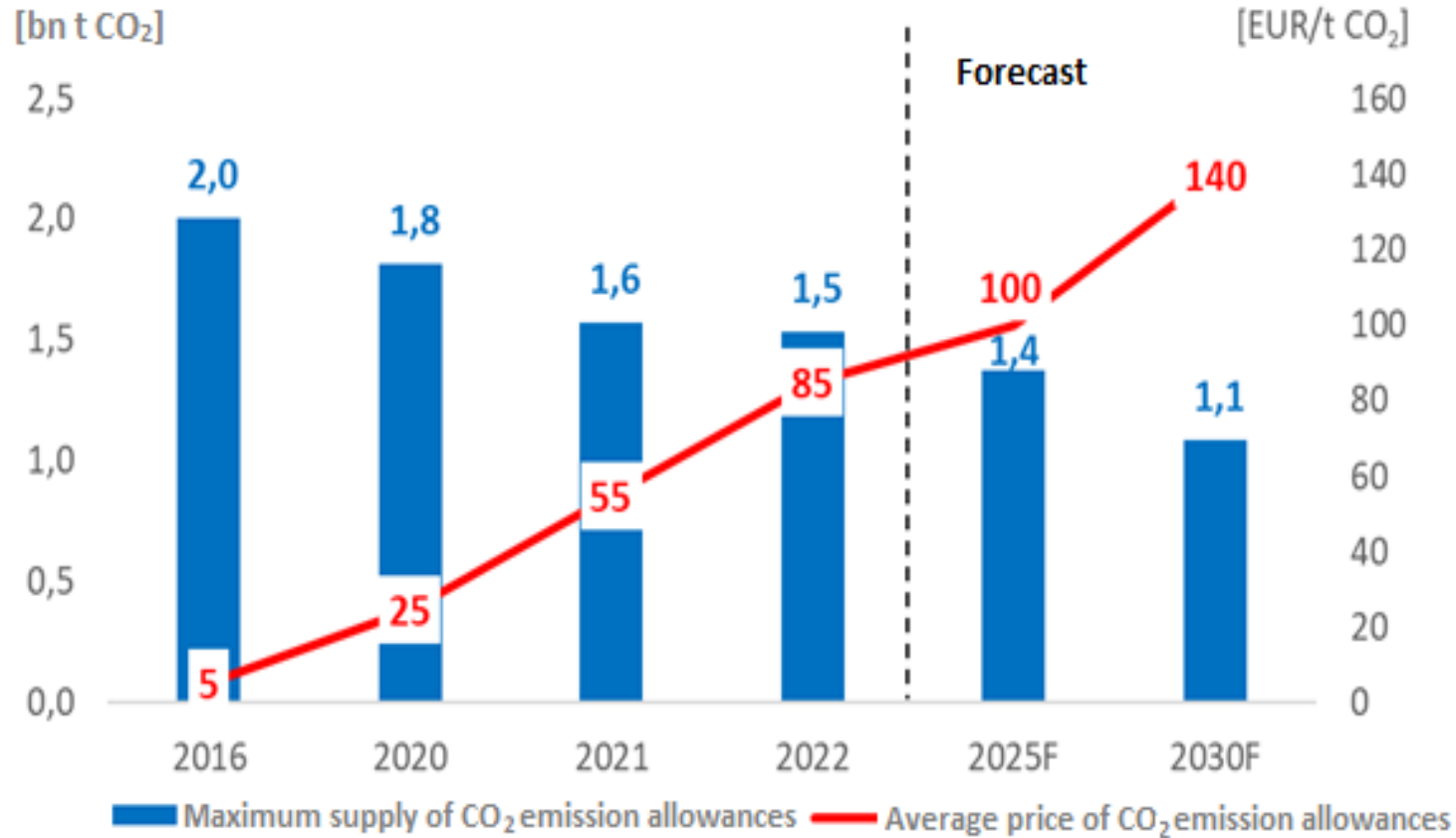
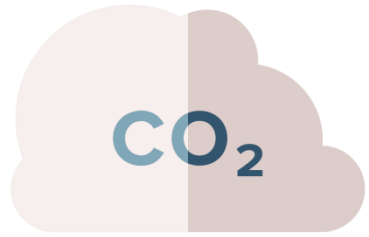
Impact of the Fit for 55 package on emission allowances

- Remove financial institutions from the ETS market;
Positive effect (*reduction of speculative CO₂ emission allowance price increases*).
- Reduction in global emissions by about 63% in 2030 compared to 2005;
Negative effect (*pressure on the price of CO₂ emission allowances due to reduced supply*).
- Gradual increase to 4.6% of the annual linear reduction factor in 2030;
Negative effect (*pressure on the increase in prices of CO₂ emission allowances*).
- Delayed by a year, but faster withdrawal of free allowances;
Negative effect from 2027 (*pressure on the increase in prices of CO₂ emission allowances*).



As a result of these changes, it is estimated that the supply of CO₂ emission allowances will decline from 1,5 bn tonnes in 2022 to 1,1 bn tonnes in 2030.

Effect of the reform of the EU Emissions Trading System



**140 EUR/t CO₂
will increase
energy costs
by 48%**

As a result of the adopted solutions, it should be expected that the pressure on a further increase in the prices of energy produced in the EU will continue and the pace of displacement of controllable, mainly coal-fired generation sources will be increased.



POLSKA GRUPA
GÓRNICZA

Thank you for attention

**Tomasz Rogala –
Chairman of the Board PGG
and Senior Vice President of EURACOAL**



July 2022