

**Interreg
Europe**



Co-funded by
the European Union

EXPRESS

EXPRESS THEMATIC SEMINAR REGIONAL ENERGY SECTOR ANALYSIS

Karolina Krukowska
Project Coordinator
kkrukowska@rarr.rzeszow.pl

February 26th 2024 | Online format



RARR
RZESZOWSKA AGENCJA
REGIONALNA

About Podkarpackie Region



Localization



GDP - 3,7%



Key sectors of economy

- engineering industry,
- chemical industry,
- aviation industry,
- car industry,
- food industry.

Podkarpackie Region energy sector

The current functioning

Regional Energy Policy

- ❑ dependant on UE and national level energy policies
- ❑ in accordance with the documents:
 - „Energy Policy for Poland 2040”
 - „The Strategy of Voivodeship Development - Podkarpackie Region2030”.



Sources of Energy

The Region is not self-sufficient.
Energy production is based both on non-renewable as well as renewable sources

Non-renewable sources: coal and natural gas

Renewable sources: solar power, wind power, hydro power

Podkarpackie Region energy sector

The current functioning

The use of RES

Share of RES in the electricity production of PR: 49,5% = 568,8 GWh in 2022
568,8 GWh = 2,63% of energy production from RES in the country



Potential for RES investments

Potencial for RES infrastructure

Challenges:

- protected areas,
- scattered development and farms
- legal issues (beaurocracy)

Podkarpackie Region energy sector

The current functioning

Energy security

The energy producers and providers are decentralized



Natural environment

Contamination: 2,67% of the country's contamination

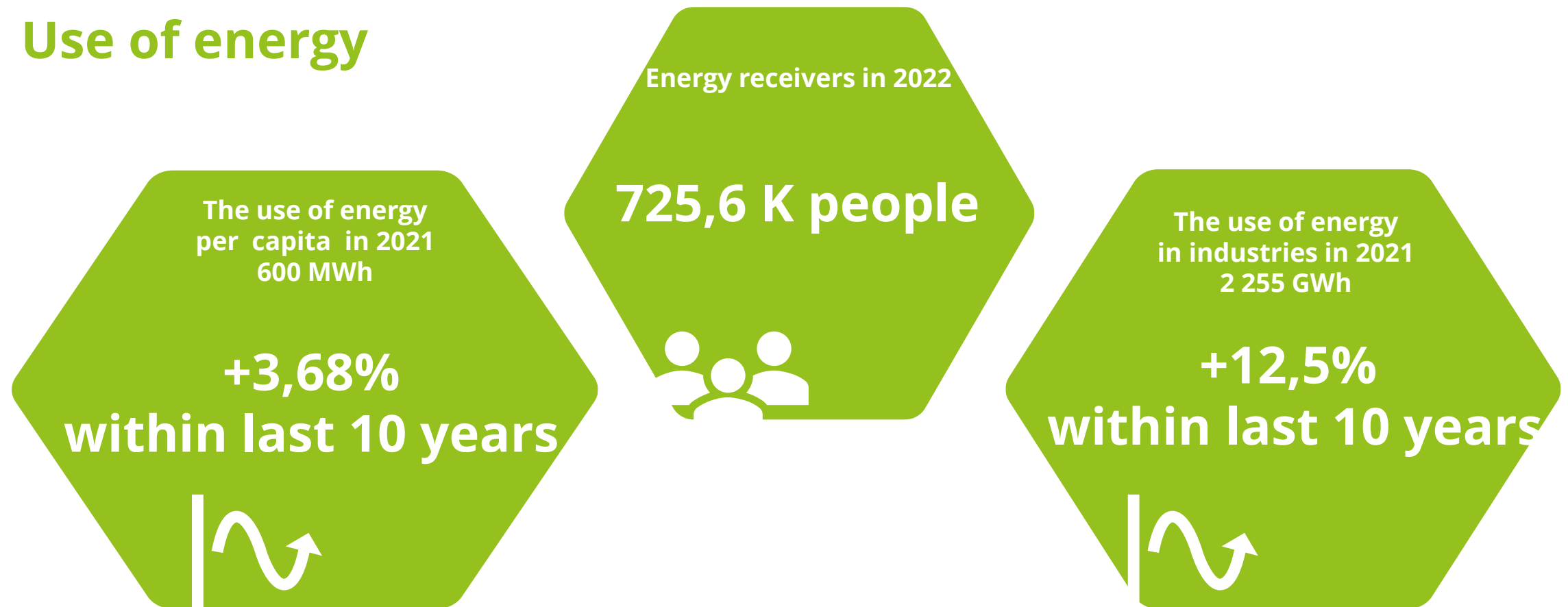
CO2 emissions: 3,65% of on national scale

Dust: 3,75% on the national scale

The Podkarpackie Region energy sector

Current functioning

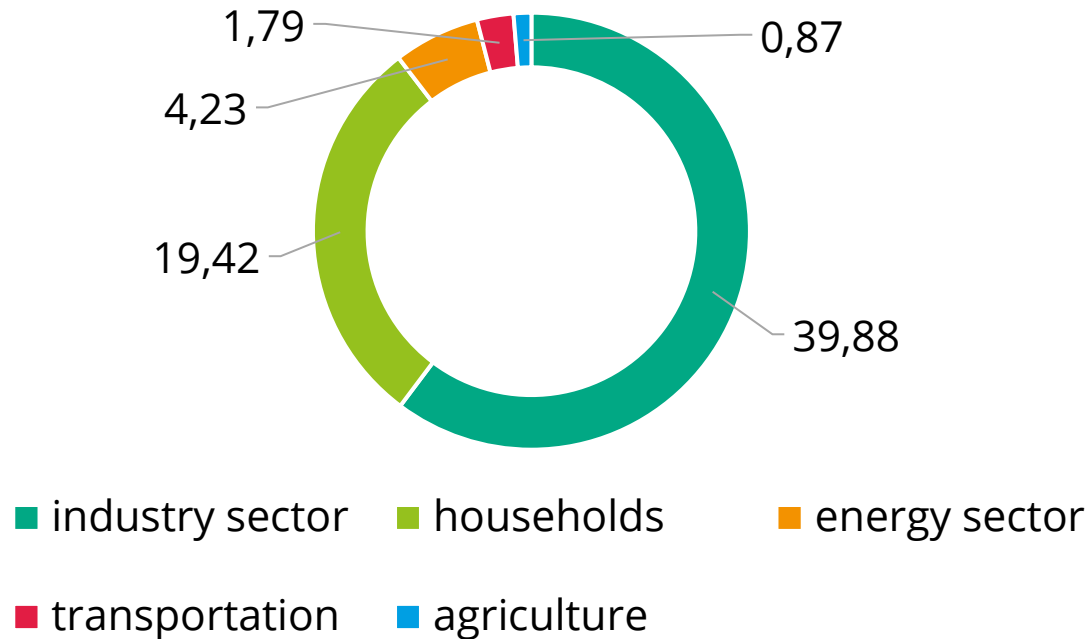
Use of energy



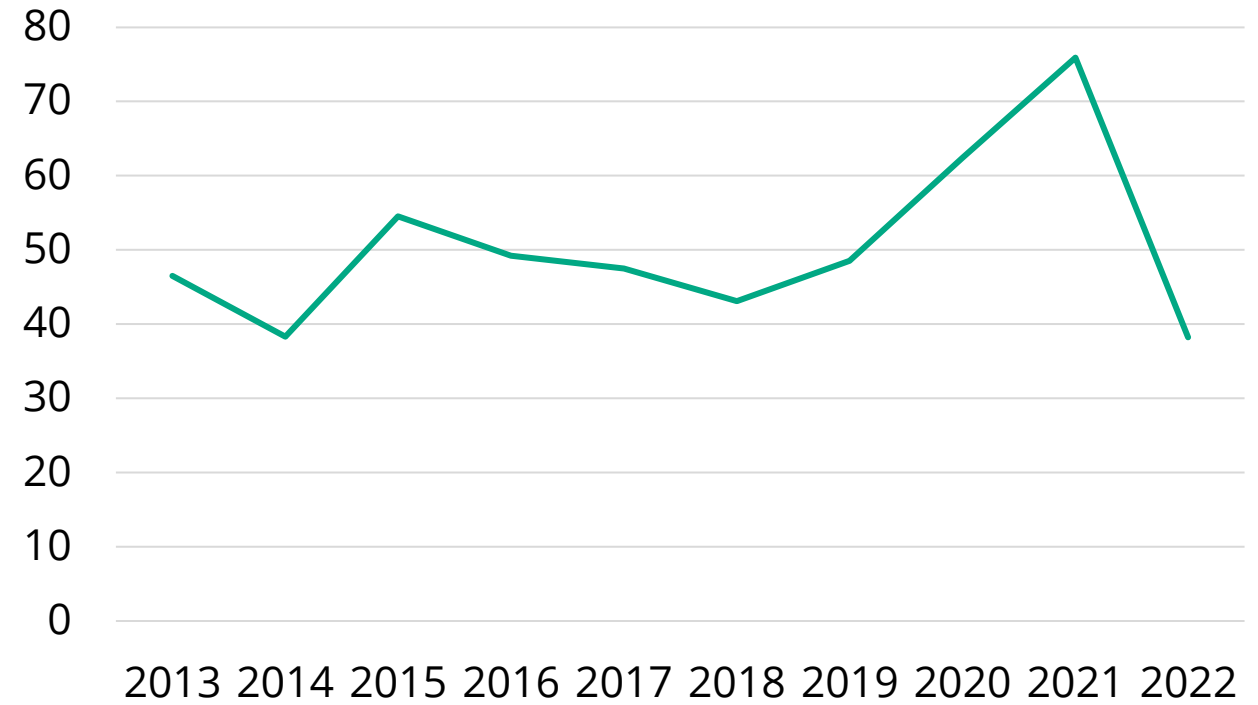
The Podkarpackie Region energy sector

Current functioning

Electricity consumption based on the receiver type (%)



Ratio of energy production to its usage (%)



The use of RES according to energy source

Parts of the region with the biggest RES installations



Solar power



Water power



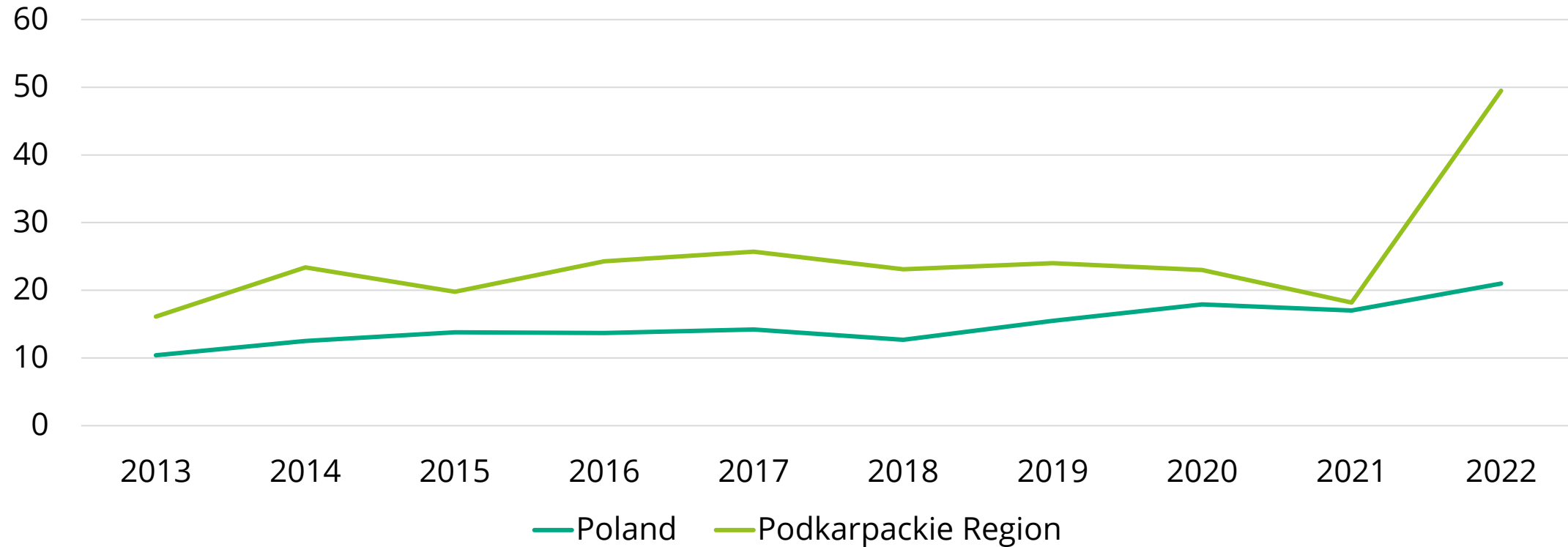
Wind power



Bio gas

The use of RES

Share of RES in the country's overall electricity production (%)



Perspectives and trends

The development of RES

The cover of **energy demand** by 2030 - over 32%

The key energy installations: solar pannels, wind farms, hydroelectric power plants



Dynamic changes

Dynamic changes in energy sector

Increase in **energy demand** within the last 10 years

Consumers – 3,68%

Industry sector – 12,5%

RES vs. NON-RES

The decrease in the use of NON-RES despite still existing national resources

Challenges in achieving total RES transformation

Political and institutional

Complicated lawmaking and bureaucracy. Compliance with public tender procedure



Transformation costs

The development of new technology and infrastructure for RES energy production and storage

The existing and new infrastructure

The need for modernization/reconstruction of non-RES-based infrastructures
Necessity of complex infrastructure modernization and development



The areas of intrests for energy sector

Future goals

32% of energy production by 2030
Currently: 22% - energy produced in Poland .

NON-RES-oriented energy production stopped by 2049
Currently: 68% - energy production from non-RES sources in Poland



Biomass use

Biomass use estimations: potential to cover 25-28% of electricity use

Good practices

Solar panels instalations

Higher School of Law and Administration in Rzeszów

200sq meters solar panel instalations + heat pump

Purpose: to heat the school buildings in winter and cool tchem in summer

The use of heat and electricity: reducted by 10% (from city grid network)

Co-financed from Regional Operational Programme of Podkarpackie Region (85%)



Regional Subsidy Programmes

Purpose: carry out investments in RES instalations (solar pannels, heat pumps, biomass caldrons/furnaces)

Beneficiaries: individual housholds

Single subsidy: up to 40% of incurred costs

Programmes co-financed from UE funds.

**Interreg
Europe**



Co-funded by
the European Union

EXPRESS

THANK YOU !!!

The project EXPRESS is implemented in the framework of the Interreg Europe programme and co-financed by the European Union.

www.interregeurope.eu

