



REJenerAXion

Energy  
transition in  
POLAND  
**Employment,  
skill needs,  
quality of  
work**



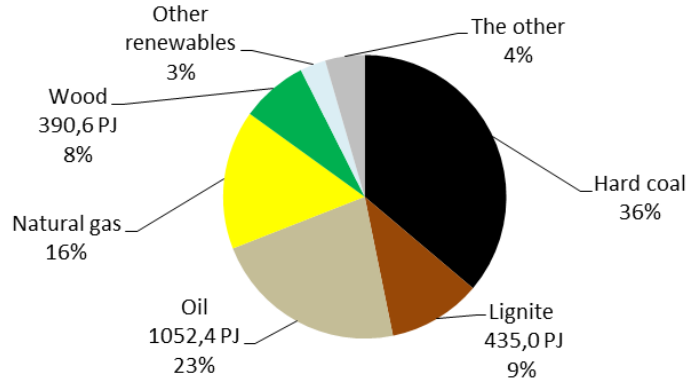
Co-funded by the European Union

[www.rejeneraxion.com](http://www.rejeneraxion.com)

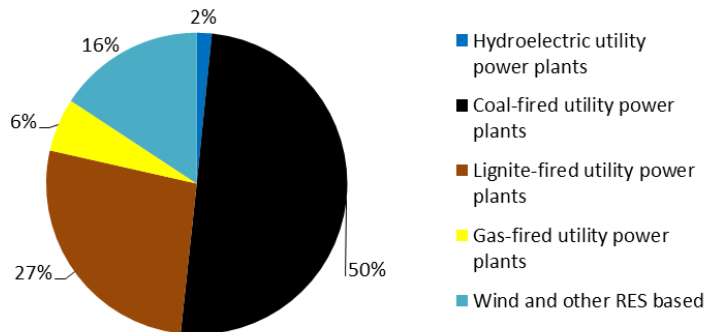
# Energy system REJenerAXion features

- Heavy reliance on (mainly domestic) hard coal and brown coal (77% for electricity generation)
- Dynamically growing share of RES (biomass, wind and solar).
- Strong import dependency for natural gas and oil

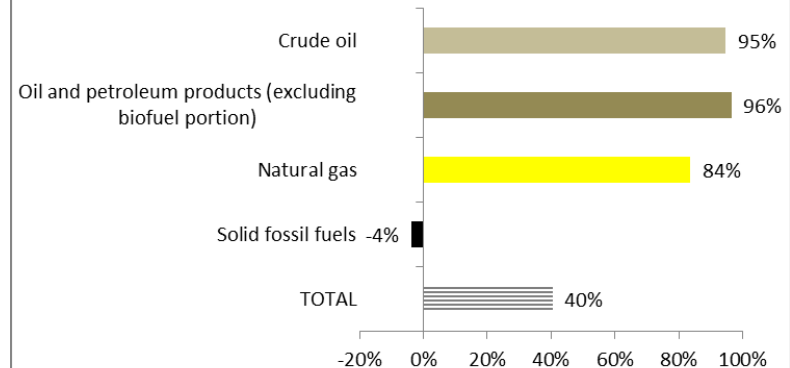
## Primary energy consumption mix 2022



## Electricity generation mix 2022



## Fossil fuel dependency 2021



# Country strategy

*not adjusted to „Fit for 55” or RePowerEU  
no date set for reaching climate neutrality*

- Gradual coal phase-out by 2049
- **RES** development (including off-shore wind)
- **Nuclear power** as a future stabilizer of energy system (1st NPP by 2033)
- **Natural gas** as a **transition fuel**
- Diversification of import directions
- **Energy efficiency** measures

## Targets for 2030:

GHG in non-ETS sectors ↓ 7% vs 2005

RES share:

- 23% in gross final energy consumption (↑ 1.1% annually)
- 32% in electricity generation
- 28% in heating
- 14% in transport

Coal share : 56% or less in electricity supply (28%-11% by 2040)

Primary energy consumption ↓ 23%\*

Final energy consumption ↓ 21.5%\*

\* vs PRIMES forecast of 2007

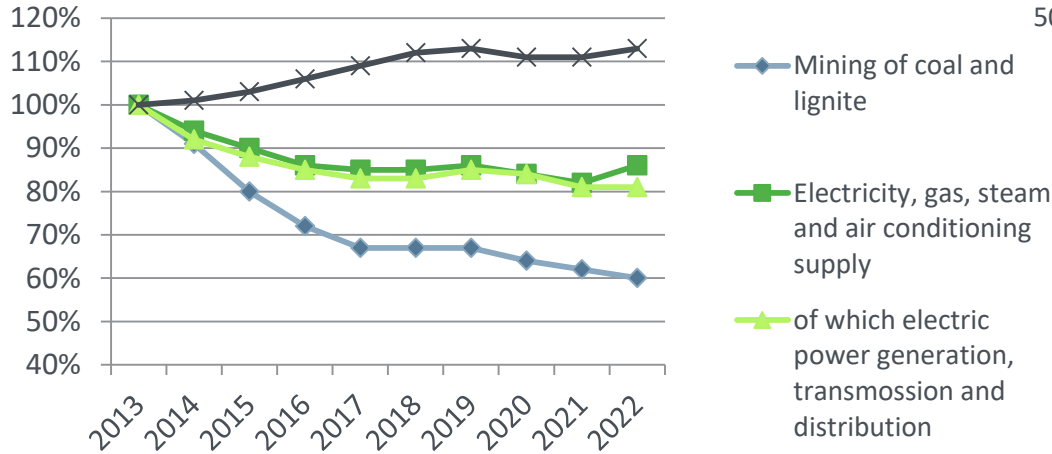
*NECP (of 2019)*

*Poland's Energy Policy until 2040  
(of Feb'21)*



# Employment trends

Average employment in enterprises 50+ energy sections versus industry as a whole



Employed in energy sectors [LFSA]



# Employment impact

- **Strong regional/local factor** (concentration of coal-based activities)
- **Moderate impact so far:** low unemployment rate (national average: 5.9-5.1%), transition slow enough for labour market to absorb those leaving the coal-based sector; deficit of workers; pressure on domestic coal extraction since sanctions on Russian imports have been imposed
- **HOWEVER situation differs among the coal regions** and within the regions – vulnerable communities (Bełchatów)

Energy transition affected jobs:

Direct (76.400):

- Mining extraction companies (all fossil fuels) - jobs (2021)

Indirect ( upto 400,000):

- Mining related services and suppliers
- Other dependent businesses whose clients are the employees of coal-based industry and their families



# Quality of work



Challenges to safety and health in coal and lignite mines:

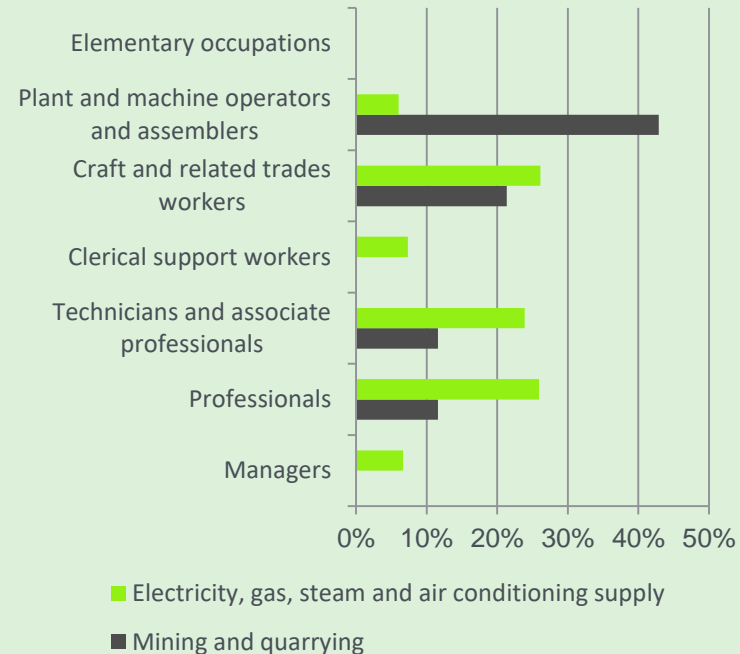
- halted investment in coal assets (maintenance or upgrade)
- reduced staffing
- deficit of candidates educated for mining (shrinking vocational education in mining related occupations)

Better safety and health prospects anywhere outside mining

# Skill needs

- **Transversal skills:** coal-related workers on similar level to national average, the lowest displayed by miners
- **Skillset market demand factors:** ability of **local** economies to diversify, and **digital** revolution -> limited predictability;
- Important: **skills supporting life-long learning**
- **Skillset overlap** in job transition paths (examples):
  - *low: a technician of open cast mining to a technician of RES systems: 0.26*
  - *high: driver of mining hosting machine to driver of specialised railway cranes;*
  - *potentially higher: for non-sector-specific workers (e.g. electricians)*
- **Target sectors:** construction, transport and logistics, RES
- **Choice factors:** pay, sustainability, need to commute/relocate

Occupations in *mining and quarrying* and in *electricity and heating supply*



# Employment supporting measures



- Statutory policy measures are **reactive** as they are oriented on those who are already unemployed, with a focus on 30- and 50+
- Special (non-statutory) training (re-skilling) programmes financed from public sources (domestic/EU) – are **not flexible enough** to adjust to dynamically changing situation;



# Social dialogue

Sector **dominated by State-controlled companies**

**Three sectoral processes at national level** run in parallel to and not co-ordinated with regional stakeholder dialogue (TPJTs)

1. **Hard coal** miners – State-controlled mines (social contract signed)
2. **Lignite and coal&lignite generation** workers of NABE holding and private entities (social contract signed)
3. (Non-NABE) **energy workers** (negotiation stage)

**NABE** a holding to be set up with **lignite and coal & lignite generation** assets transferred from State-controlled companies.

- Focus on measures to retain employment (re-location), pre-retirement 80% paid leaves, and severance pay;
- Re-skilling with only **marginal** focus
- Run in parallel to and **not co-ordinated with regional stakeholder dialogue** (TJTPs)





Thank you