5 questions for a good start
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1. Are new generation capacities needed in Poland?

2. What kind of energy sources Poland needs?

3. What kind of energy generation technologies fit in with Polish needs?

6. How the potential of the Baltic Sea can help build Polish energy security?

5. What structure of the energy mix in 2030?
“Baltic Energy for Poland 2025” – programme assumptions

Question 1 – Does Poland need new generation capacities?

Facts about NPS*

- **Actual demand** for peak capacity:
  - Summer peak 22.7 GW
  - Winter peak 26.2 GW

- **Forecast of growth of demand** for peak capacity in 2030 + 25%:
  - Summer peak 32.7 GW
  - Winter peak 30.1 GW

- **5.6 GW** will be phased out until 2030, **13.9 GW JWCD** until 2030 (BAT modernisation scenario)

- **Forecast shortfall of overcapacity**, impossible to compensate by the operator can occur from 2023 (1 GW) and in 2035 may reach 13 GW

- **Vital increase in installed capacity 6.5 GW by 2030 and 15.8 GW by 2035**

*based on „Prognosis of peak demand for power in 2016-2035. PSE Operator 2016"
Question 2 – What kind of energy sources Poland needs?

Preferred features

- They can be put into service in the years 2020 - 2030
- Ensure security of supply up to 2060
  - National sources
  - Inexhaustible or renewable sources
  - Sources with a diversified and reliable delivery
- Will be competitively priced
- They will allow to meet emissions reduction goals
- Will allow the fulfilment of the objectives on the use of RES
- Their use will positively affect the development of the national economy
- Their use will not cause significant social and environmental conflicts
Preferred sources

- **Coal**
  - Own resources
  - Developed infrastructure
  - Economic impact

- **Gas**
  - Diversified sources
  - Fast construction
  - Low emission
  - Flexibility

- **Micro RES**
  - Own resources
  - No conflicts
  - Economic impact
  - Emission reduction
  - RES

- **Onshore wind**
  - Own resources
  - Emission reduction
  - RES

- **Offshore wind**
  - Own resources
  - No conflicts
  - Economic impact
  - Emission reduction
  - RES

**Development of 1 GW offshore wind energy**

- **Demand for 22,500 tons of steel**
- **6,800 tons of copper**
- **17,000 jobs in the construction phase and 500-1,000 in the operation phase**
- **4.7 Mt reduction of CO2 emission**

Forecast of demand (consumption) of the domestic market for hard coal in total up to 2030

**Baltic Energy for Poland 2025** – programme assumptions

**Question 3 – What kind of energy generation technologies fit in with Polish needs?**

**Coal**
- Own resources
- Developed infrastructure
- Economic impact

**Gas**
- Diversified sources
- Fast construction
- Low emission
- Flexibility

**Micro RES**
- Own resources
- No conflicts
- Economic impact
- Emission reduction
- RES

**Onshore wind**
- Own resources
- Emission reduction
- RES

**Offshore wind**
- Own resources
- No conflicts
- Economic impact
- Emission reduction
- RES
Question 4 – How the potential of the Baltic Sea can help build Polish energy security?

Baltic Energy

- **Diversification of gas supplies**
  - Expansion of the LNG terminal
  - Baltic Pipe
  - National resources
  - Warehouses

- **Offshore wind farms**
  - Energy potential 8 GW
  - Economic potential of 77,000 jobs

- **Offshore grid**
  - Fulfilling market integration goals
  - Redundancy of energy export from the OWF
  - Strengthening of the Polish Power System in northern Poland
  - The ability to balance energy
  - The ability to import energy at the peak
Question 5 – What structure of the energy mix in 2030?

**Power in the system**

- **53%** - Conventional
  - 28% - Hard coal
  - 13% - Brown coal
  - 12% - Gas

- **47%** - RES
  - 20% - Onshore wind
  - 13% - Offshore wind
  - 7% - Biogas, biomass
  - 5% - Micro RES
  - 2% - Hydroelectricity
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