



EnergyAI Market Report - Q3 2025

Analysis of the National Power System, investment trends, and the position of the Polish system on the European market.

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Status as of September 30, 2025.

Histogram of the generating capacity of the Polish power system.

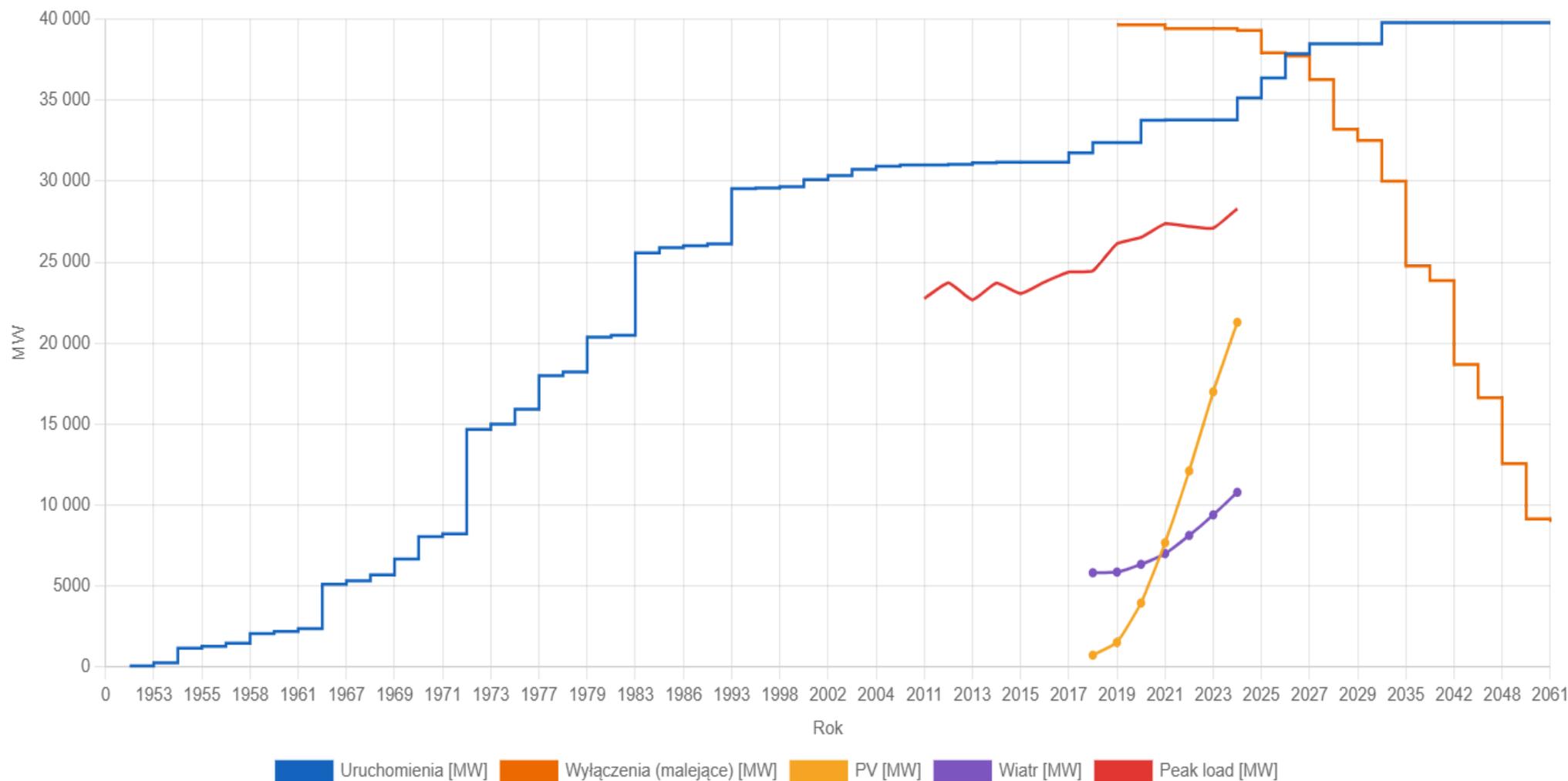


Figure 1. Poland: Commissioning and planned shutdowns of conventional units in the 20th and 21st centuries, peak load, installed PV and onshore capacity.

Source: ENTSO-E.

The above graph shows the increase in installed capacity of conventional units (blue curve) and the plan to reduce this capacity through shutdowns (orange curve). Additionally, the peak demand curve is shown in red. The graph is supplemented by the increase in installed photovoltaic capacity (orange curve) and the increase in installed wind power capacity (purple curve).

Domestic consumption and generation, peak and minimum momentary demand, import and export of energy in the 2013-2024 horizon.

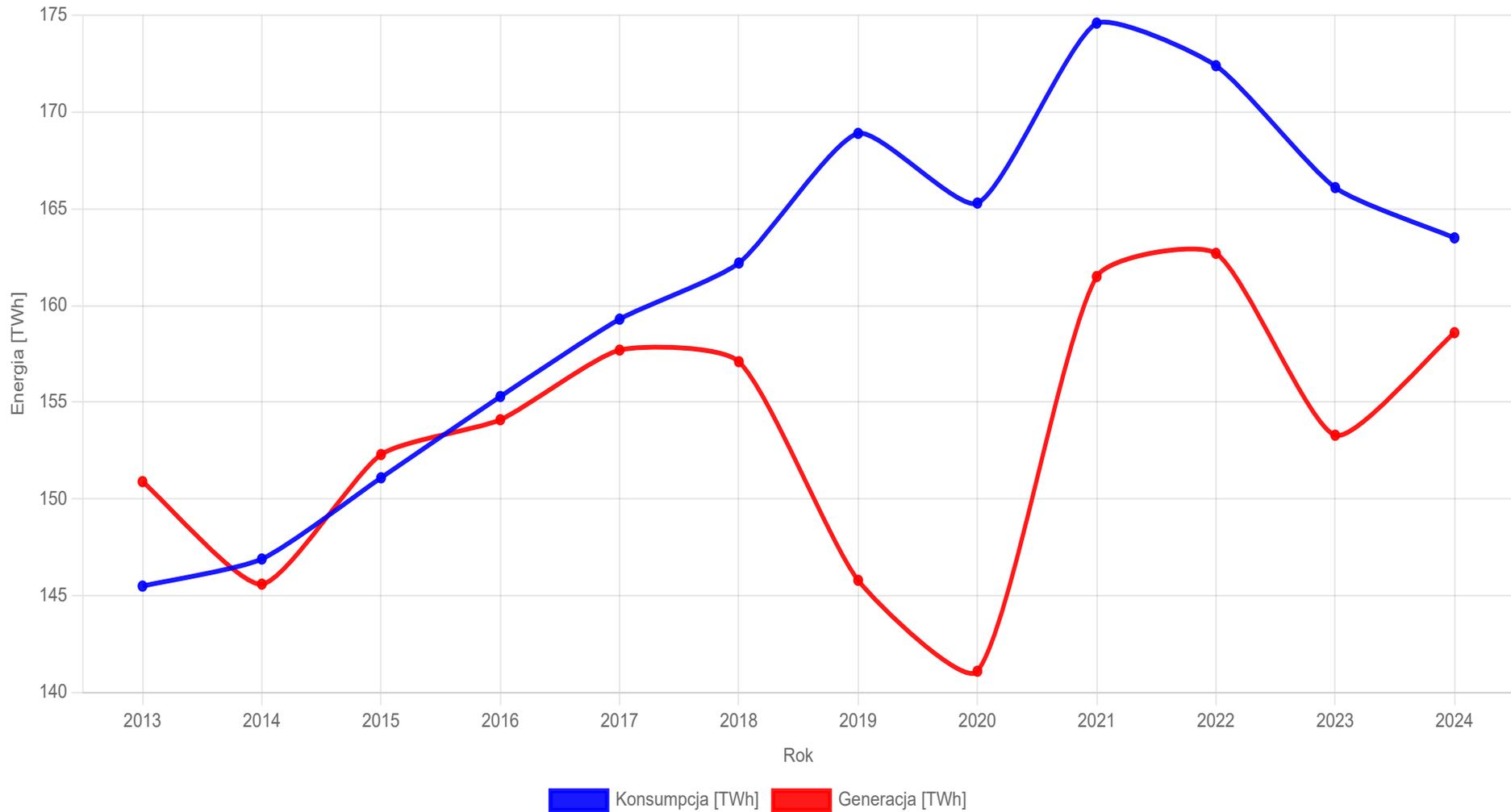


Figure 2. Poland: Consumption vs. Generation (2013–2024).

Source: ENTSO-E.

The above chart shows the country's electricity generation and consumption by year. A decline in electricity demand is noticeable from 2021 onwards. There is no discernible trend in energy generation.

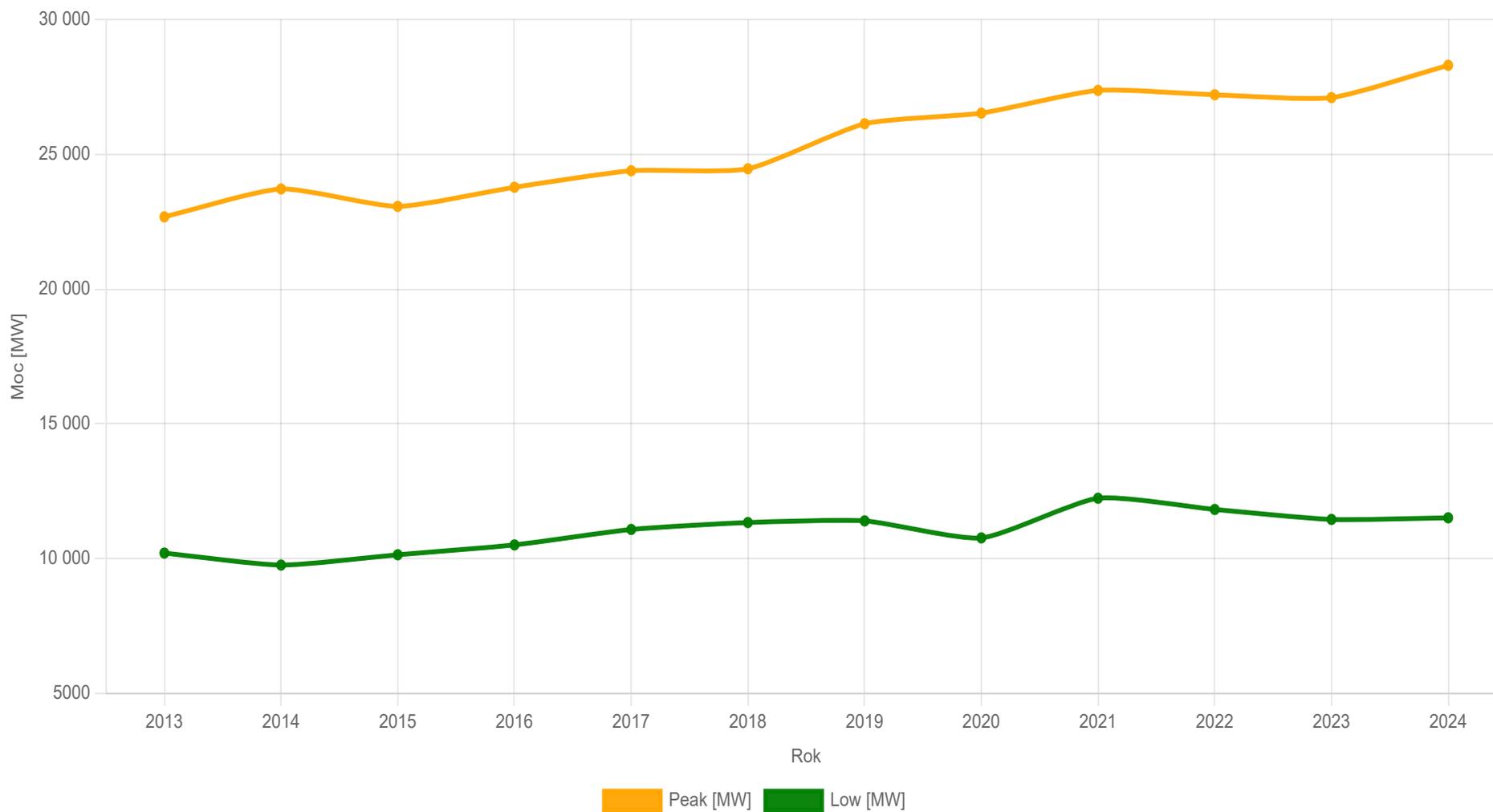


Figure 3. Poland: Peak and minimum demand (Low) (2013–2024).

Source: ENTSO-E

The average growth rate of peak electricity demand for the period 2013 - 2024 is **1.74%** .
 The average growth rate of minimum electricity demand for the period 2013 - 2024 is **1.64%** .

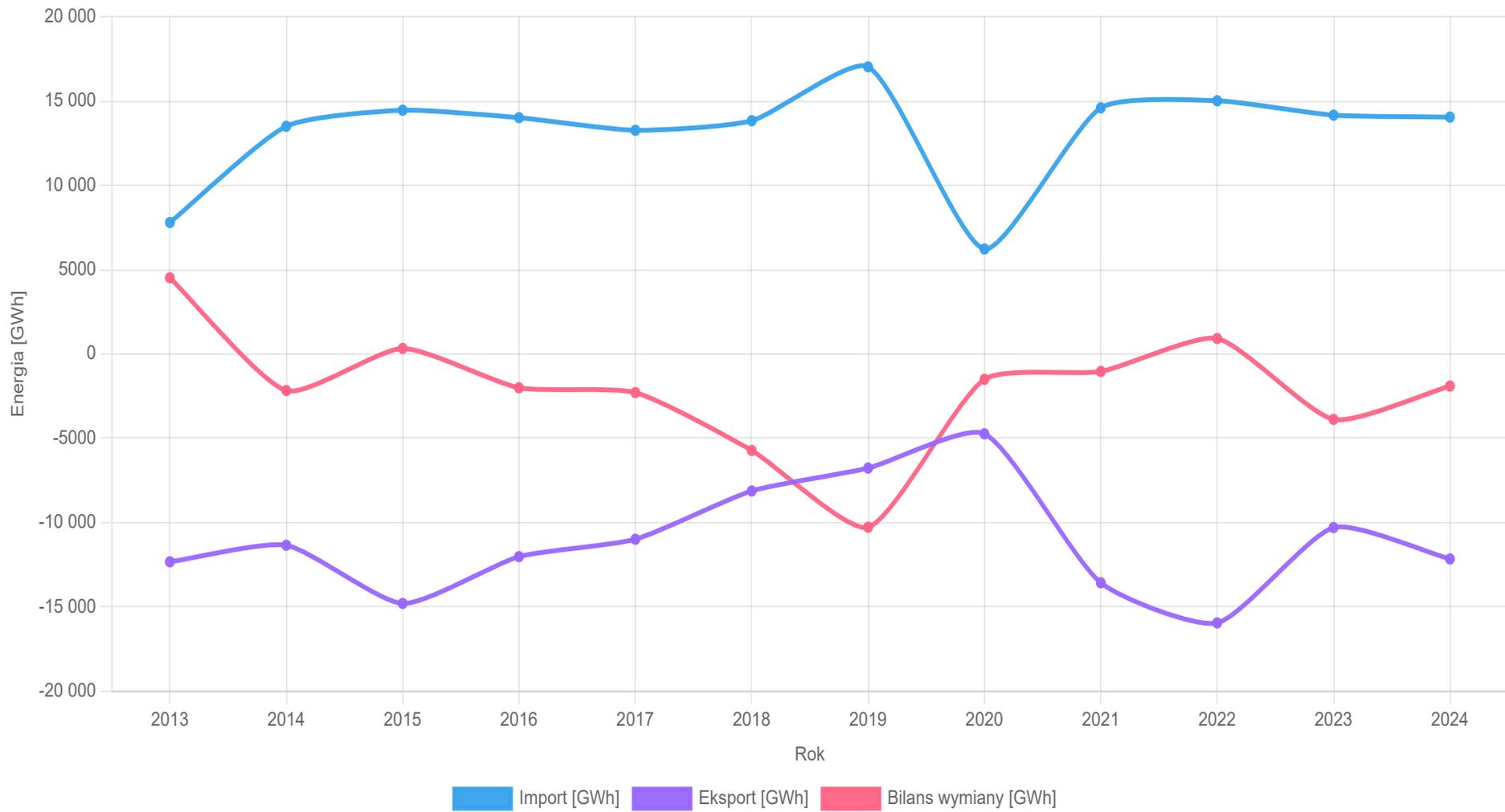


Figure 4. Poland: Energy imports and exports (2013–2024).

Source: ENTSO-E.

The exchange balance has not exceeded 1.5% of energy consumption since 2020.

Histogram of photovoltaic and wind energy generation capacity installations since 2019, and their distribution in individual voivodeships.

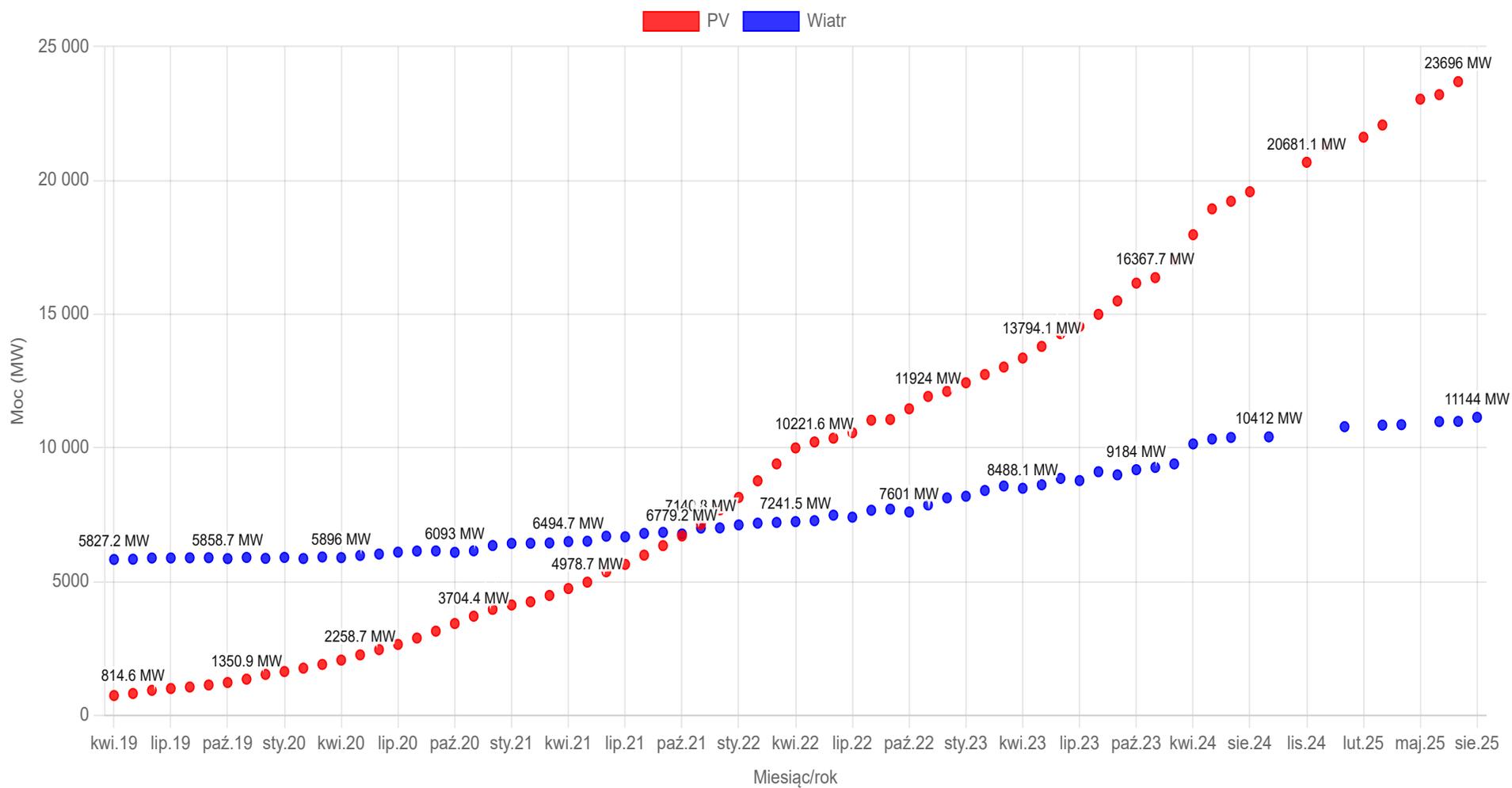


Chart 5. Total capacity of installed PV and wind generation sources.



© OpenStreetMap

Map 1. Installed wind farm capacity in individual voivodeships as of June 30, 2025.
Source: Energy Regulatory Office

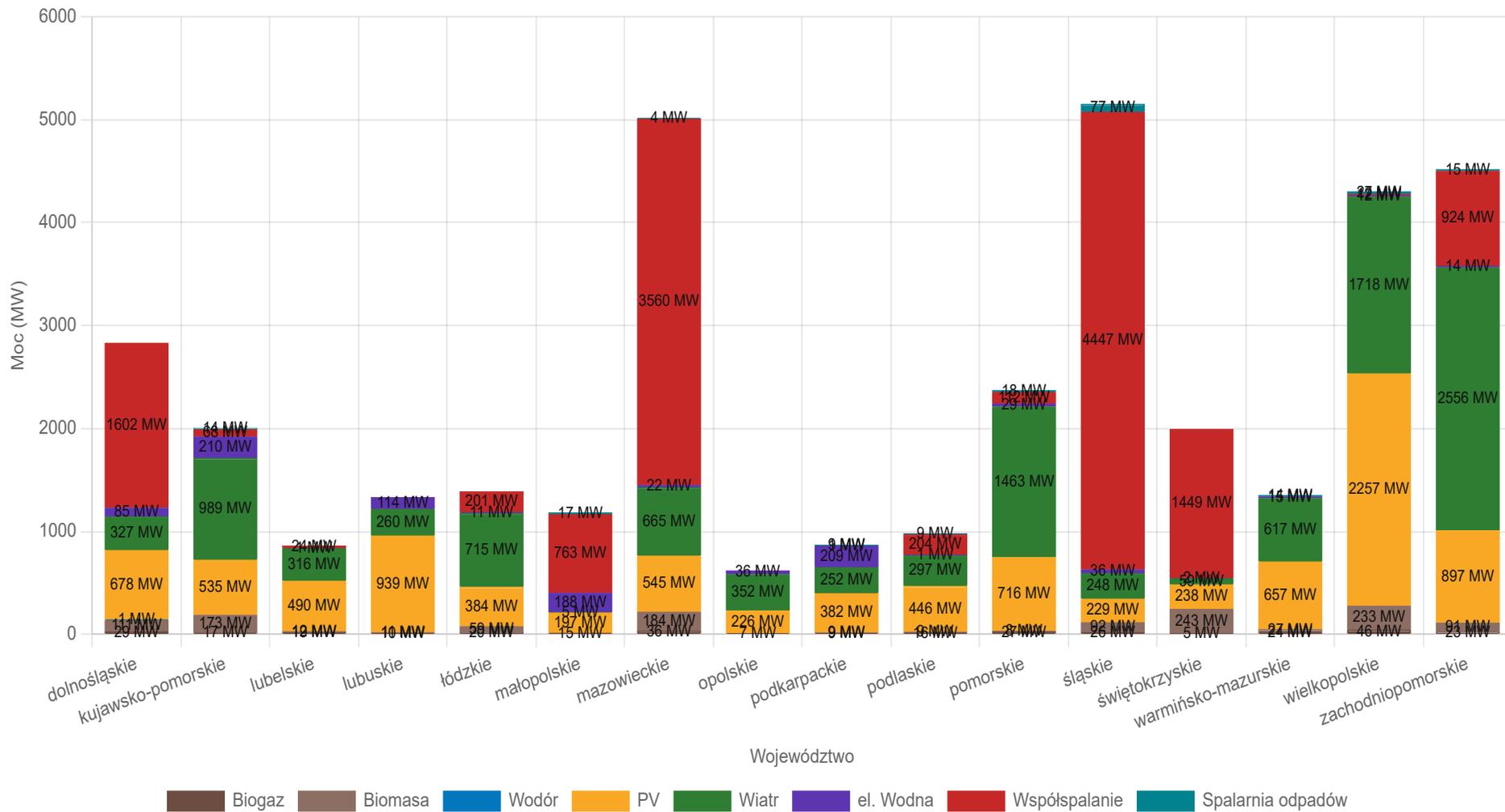


Chart 6. Installed capacity by technology, divided into voivodeships (cumulative bars).

Source: Energy Regulatory Office

Analysis of the power of facilities connected to the national power system by individual operators.

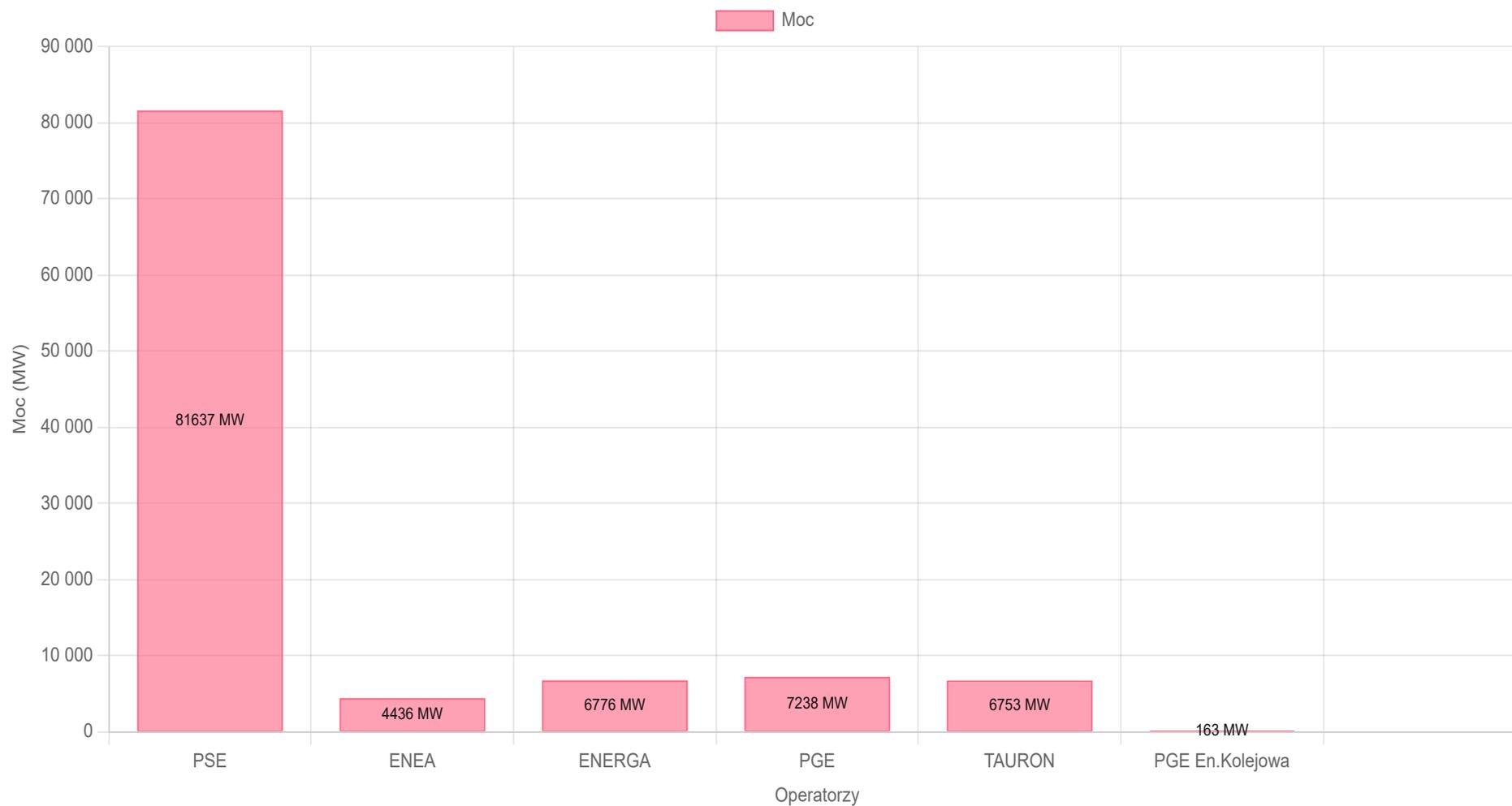


Chart 7. Total capacity of connection conditions issued by operators.

PSE SA is undoubtedly the leader in connecting new facilities, while PGE Energetyka Kolejowa boasts the smallest volume of connection capacity.

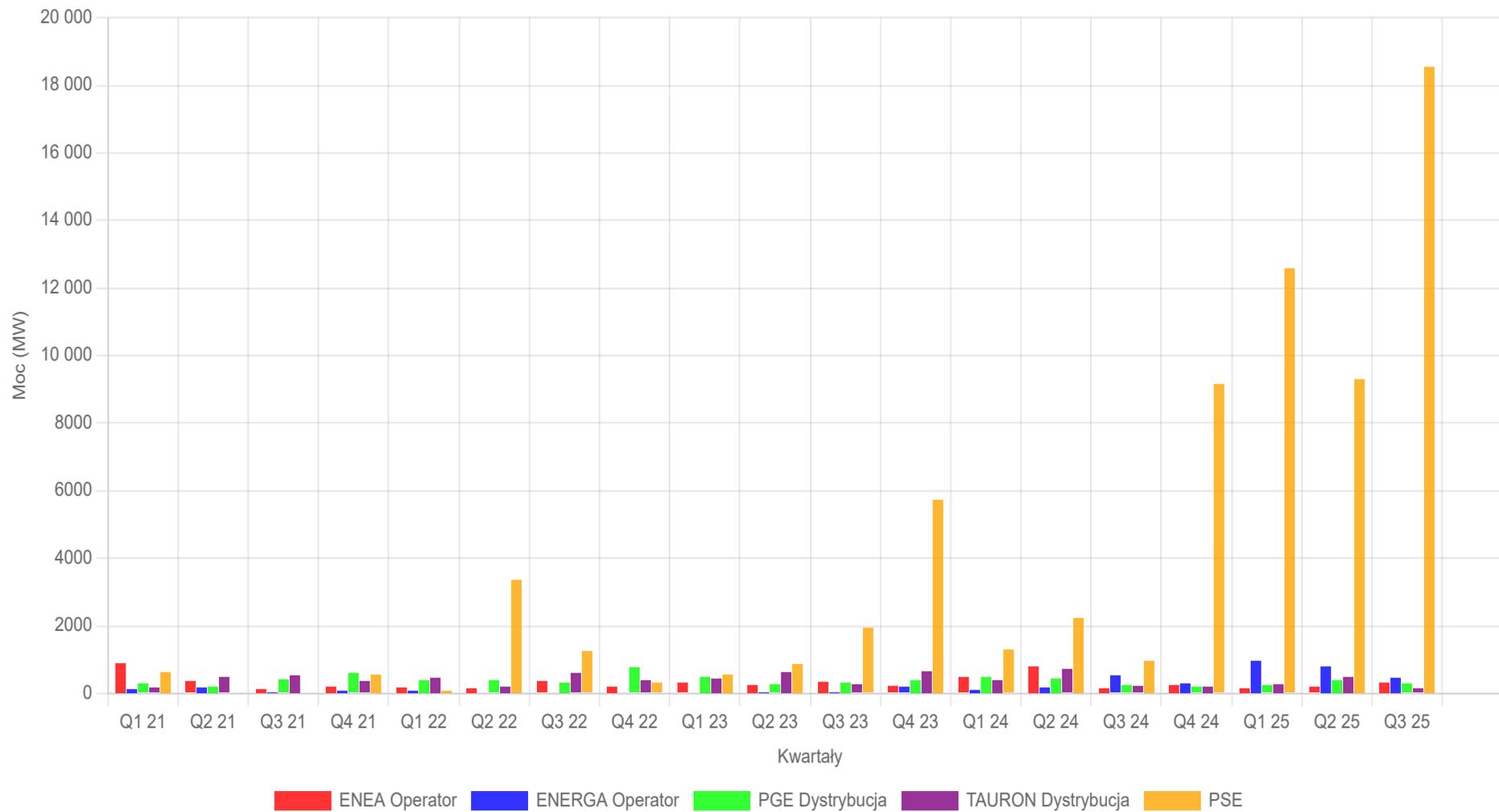


Chart 8. Total power of connection conditions issued by operators on a quarterly basis, from Q1 2021.

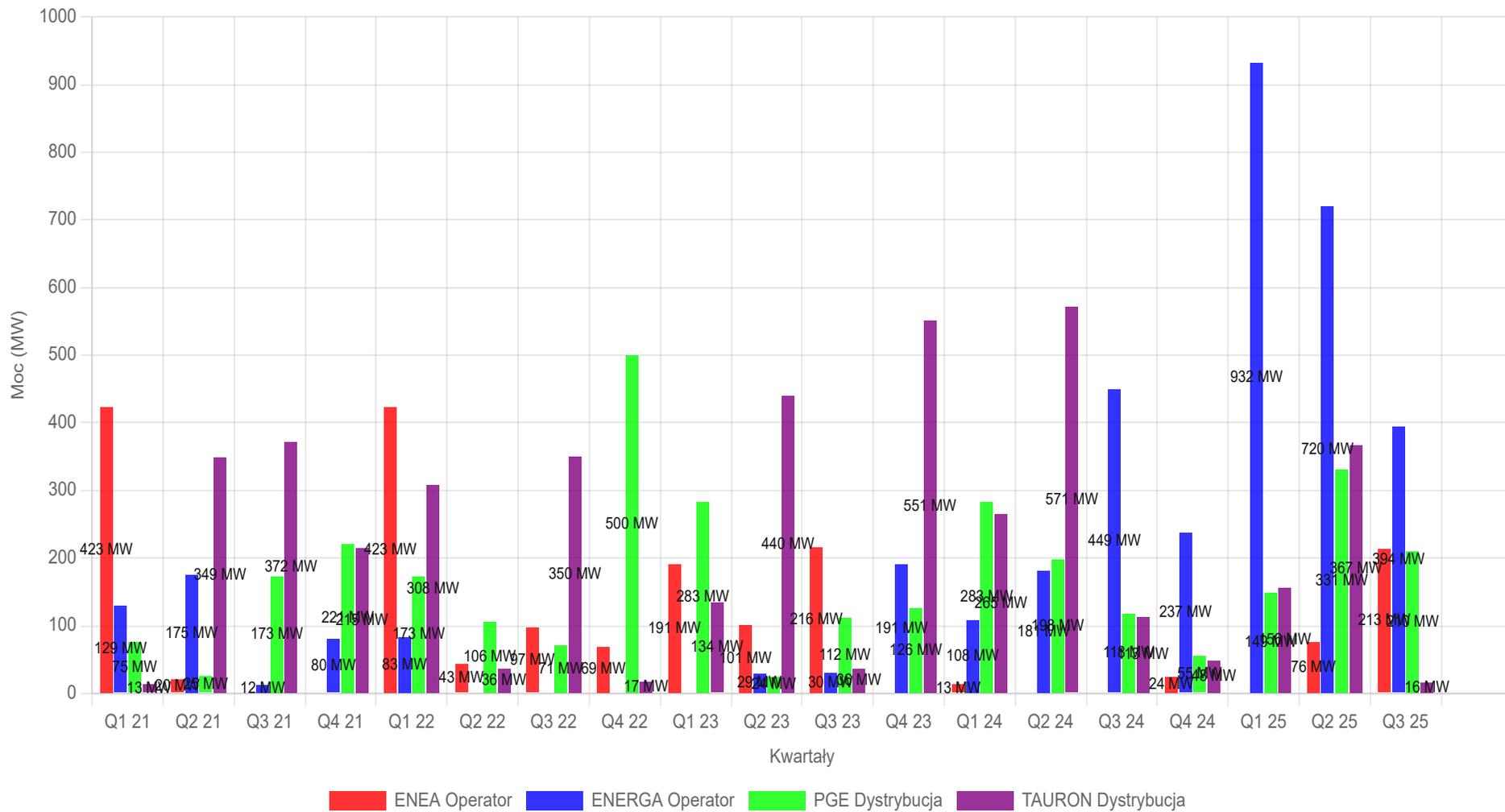


Chart 9. Total power of connection conditions issued by operators at 110kV voltage on a quarterly basis, from Q1 2021.

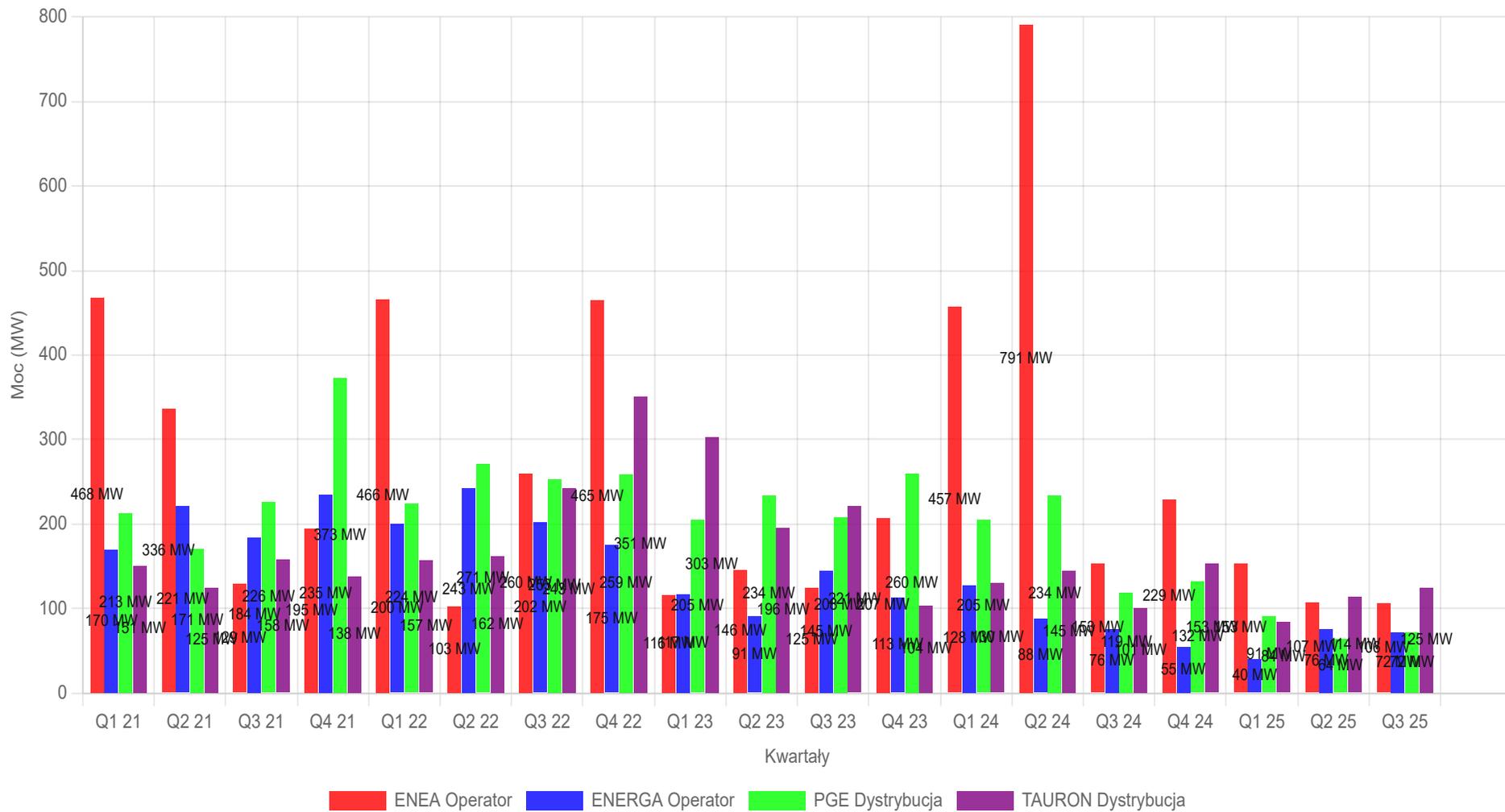


Chart 10. Total power of connection conditions issued by operators at MV voltage on a quarterly basis, from Q1 2021.

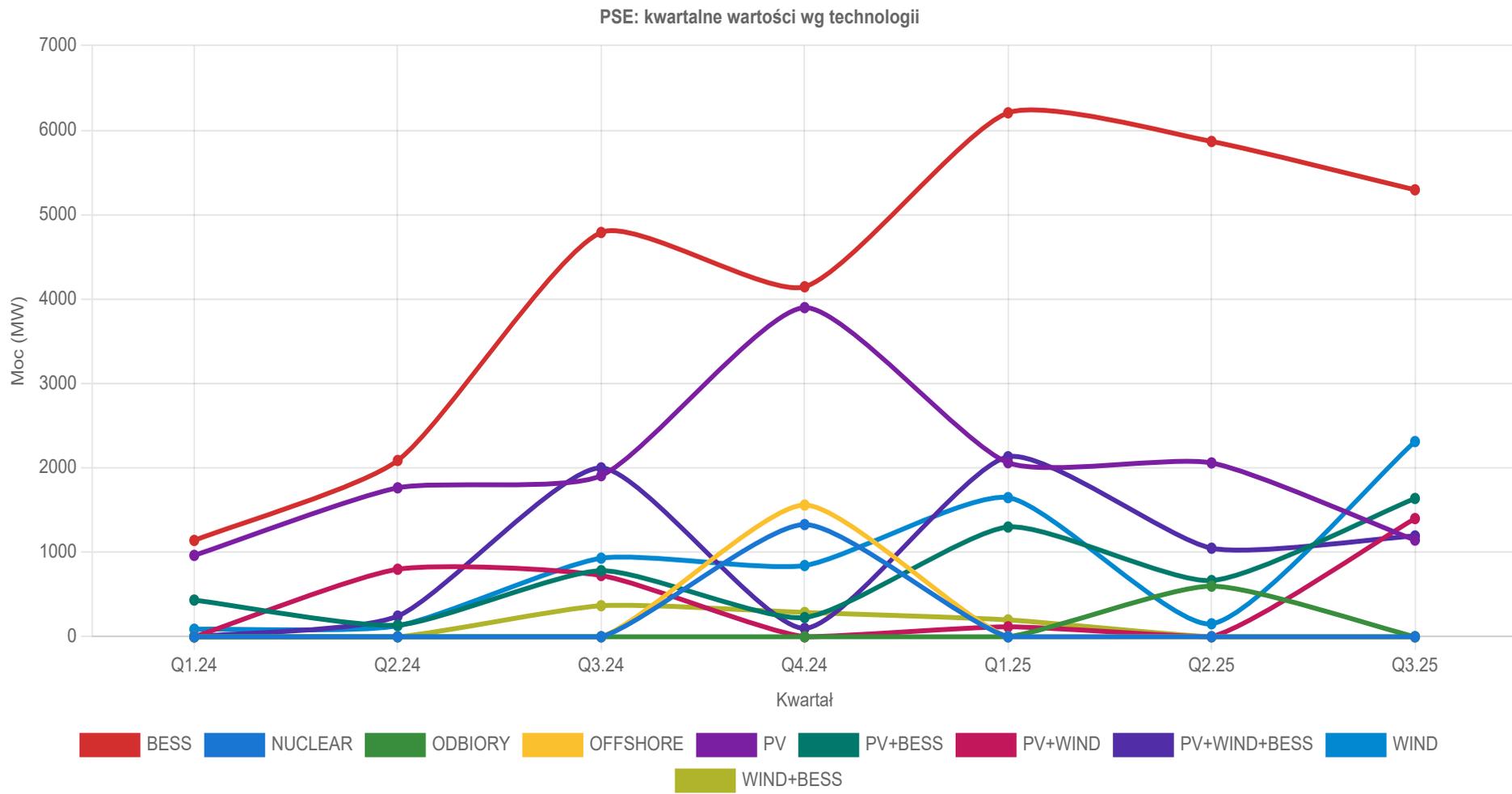


Figure 11. Share of technologies in the total capacity of connection conditions to the PSE SA grid, quarterly.

The dominant technology type is BESS, while a rebound for wind energy is visible in Q3 2025.

ENEA: kwartalne wartości wg technologii

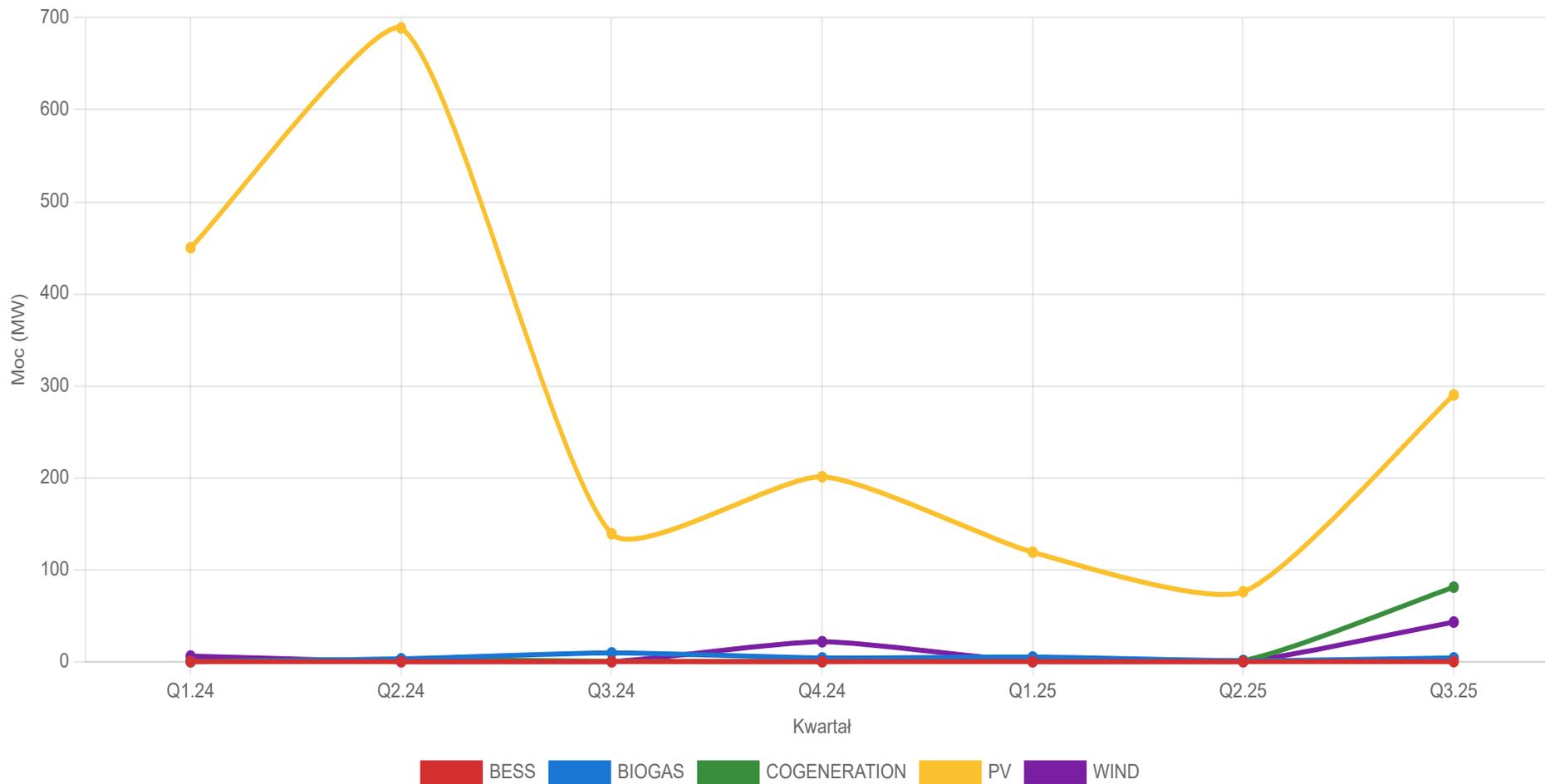


Chart 12. Share of technologies in the total power requirements for connection to the ENEA Operator grid, quarterly.

Photovoltaics will remain the dominant technology from 2024.

ENERGA: kwartalne wartości wg technologii

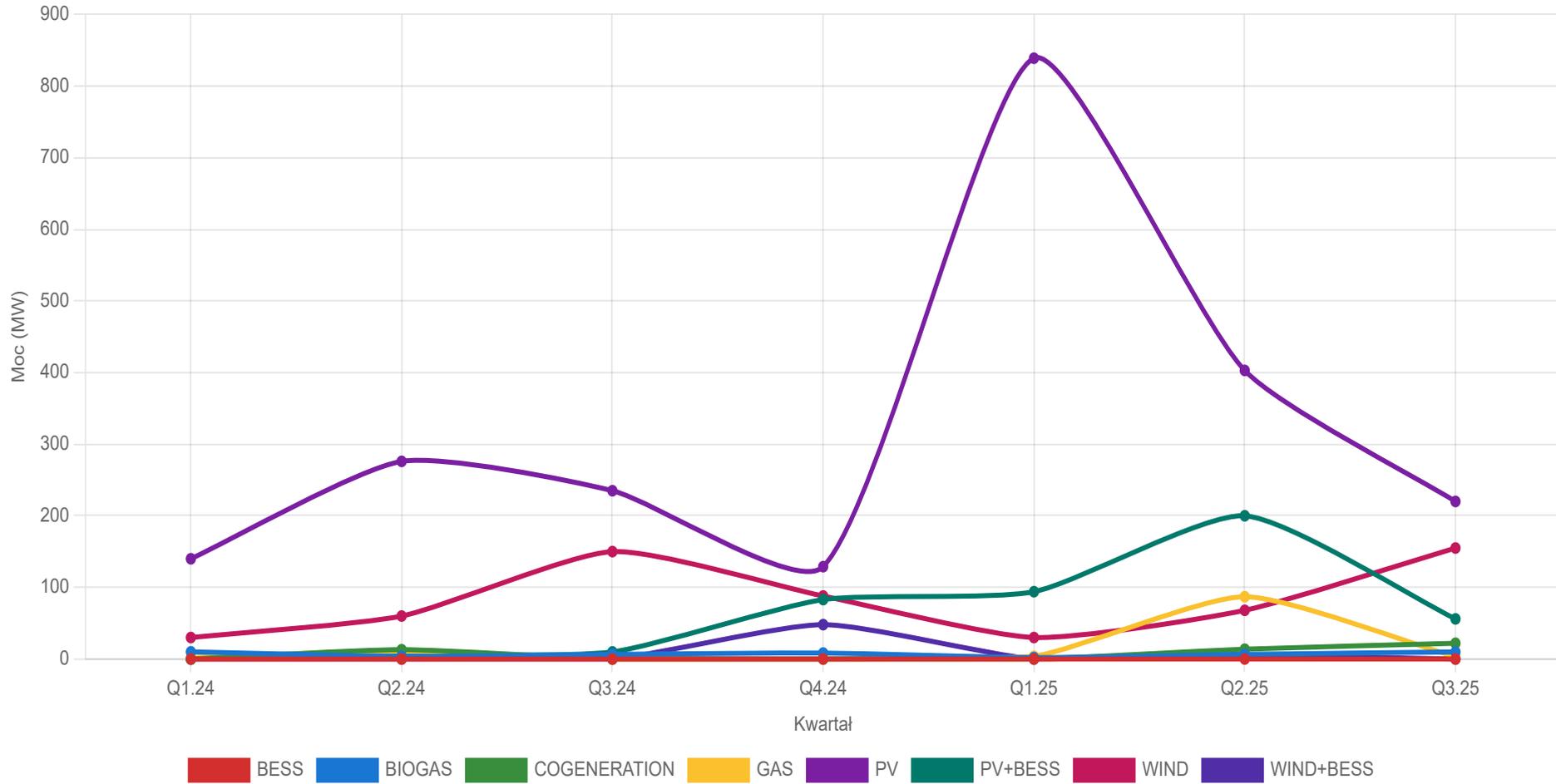


Chart 13. Share of technologies in the total capacity of the considered connection conditions to the ENERGA Operator grid on a quarterly basis.

PGE: kwartalne wartości wg technologii

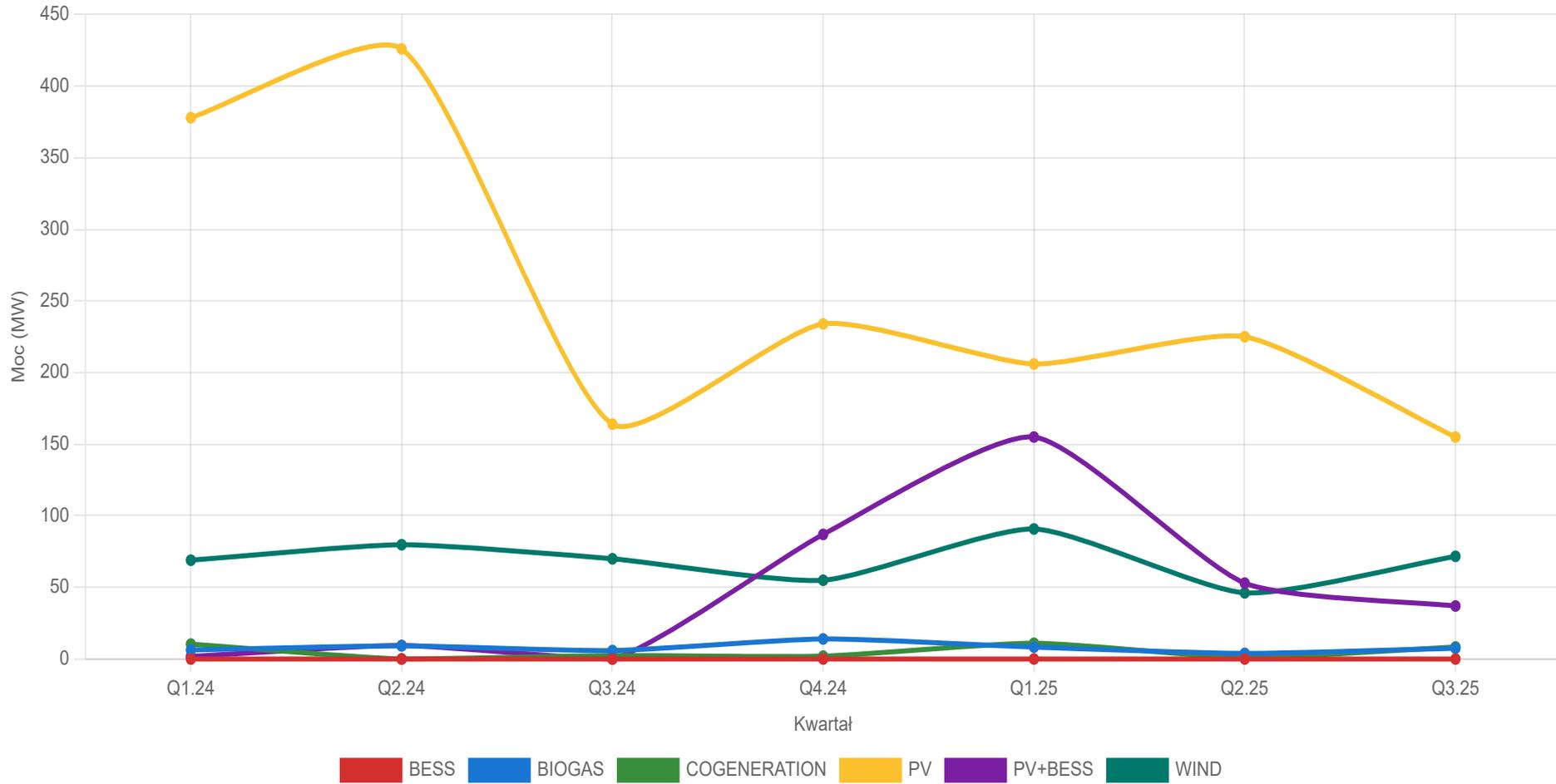


Chart 14. Share of technologies in the total capacity of the considered connection conditions to the PGE Dystrybucja network on a quarterly basis.

TAURON: kwartalne wartości wg technologii

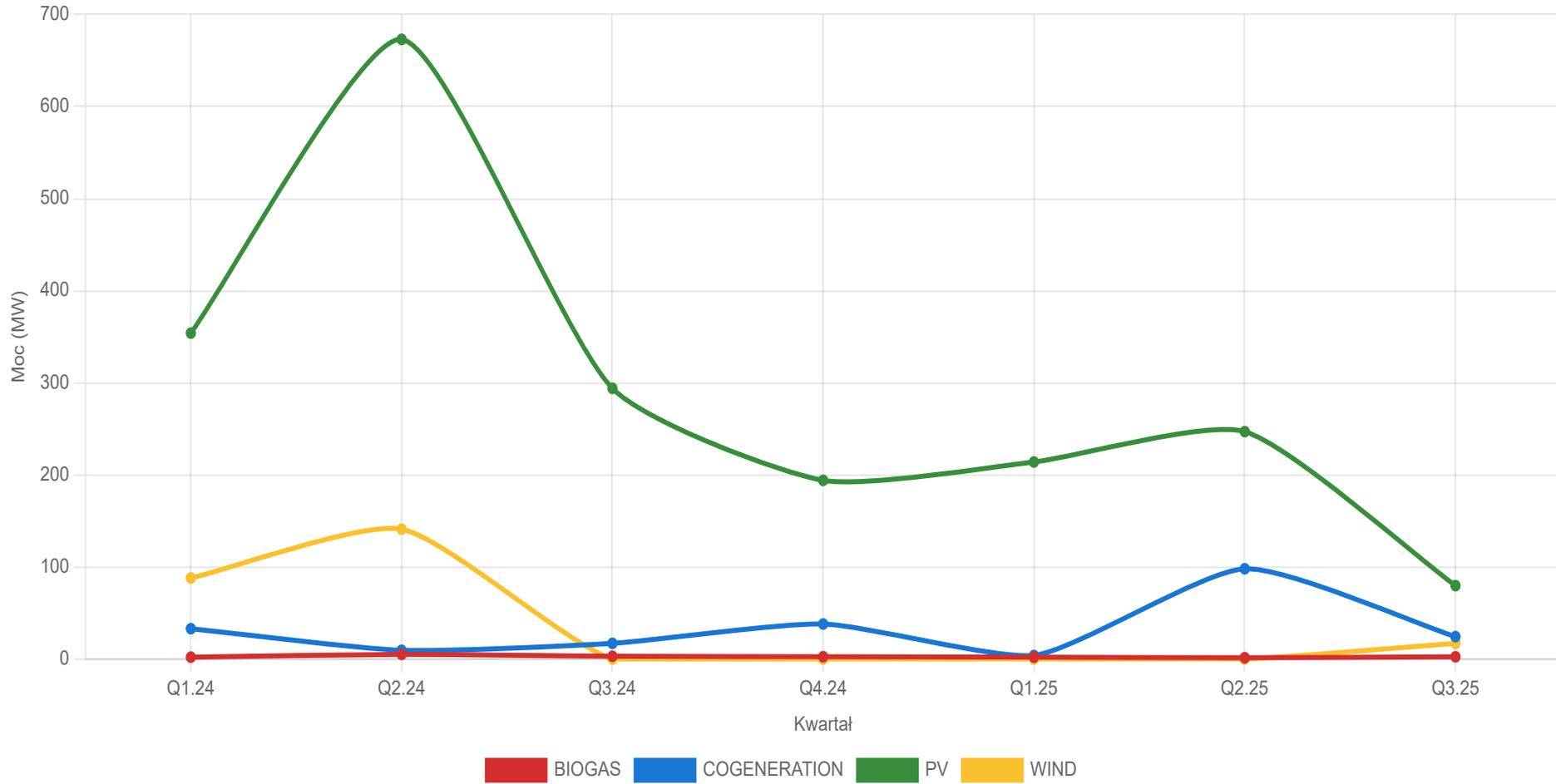


Chart 15. Share of technologies in the total capacity of the considered connection conditions to the TAURON Dystrybucja grid on a quarterly basis.

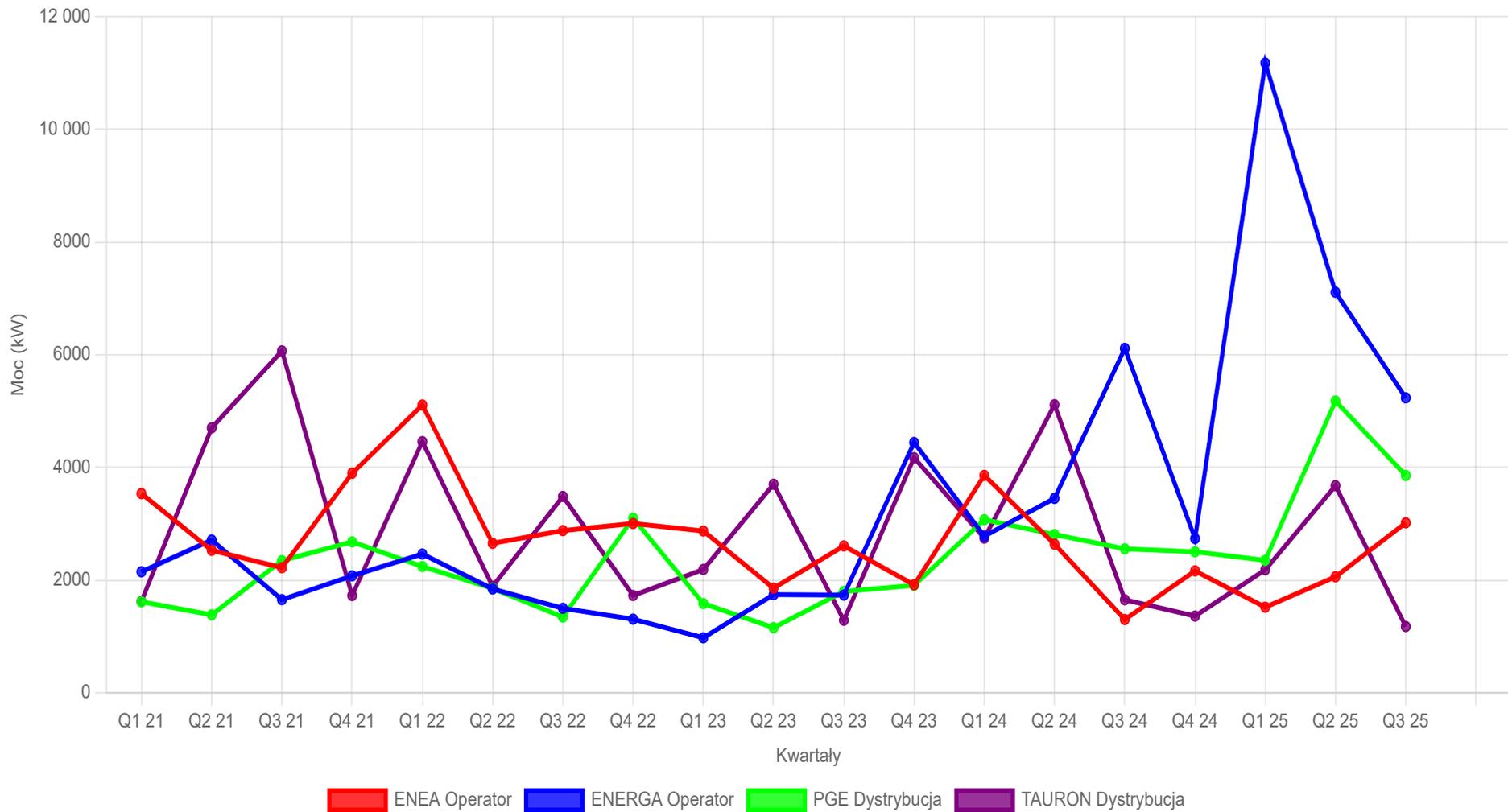


Chart 16. Average power of connection conditions issued by DSOs on a quarterly basis.

It is worth noting that the average power of connection conditions issued by distribution system operators is approximately 2.5 MW.

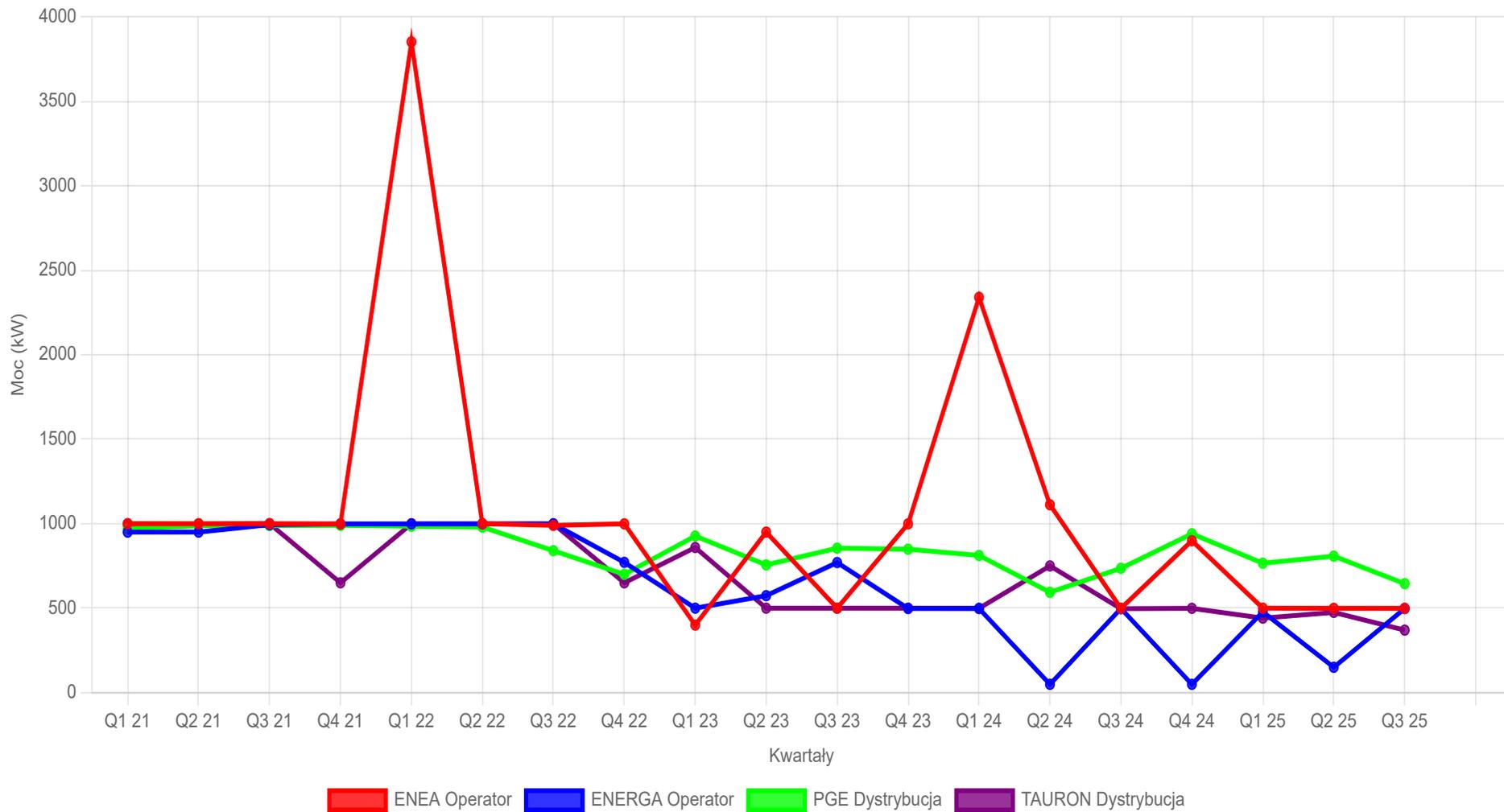


Figure 17. Median power of connection conditions issued by DSOs on a quarterly basis.

The median power of issued connection conditions, which remained at 1 MW at the beginning of 2023, dropped to 0.5 MW.

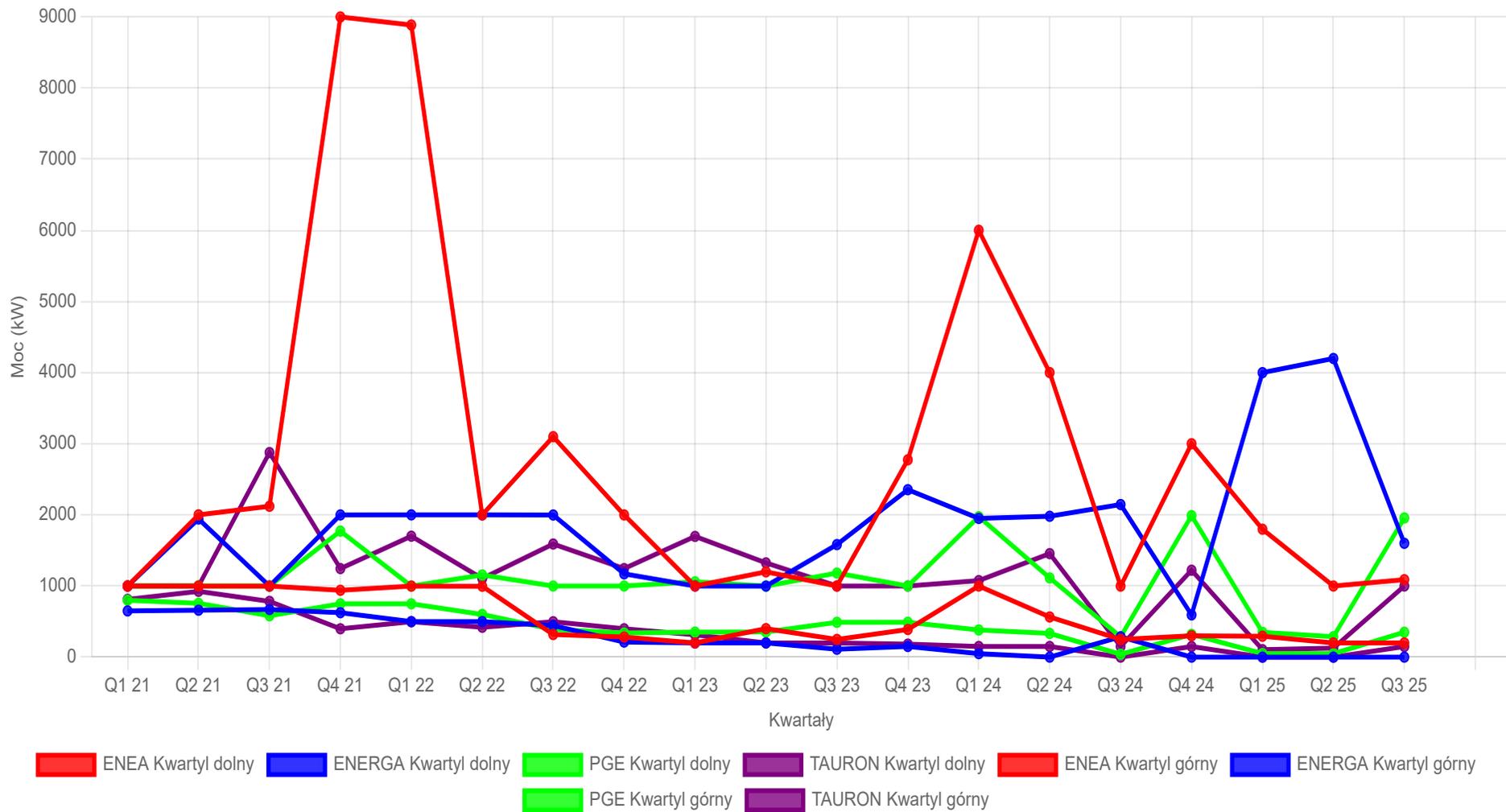


Chart 18. Upper and lower quartiles of the power of connection conditions issued by DSOs on a quarterly basis.

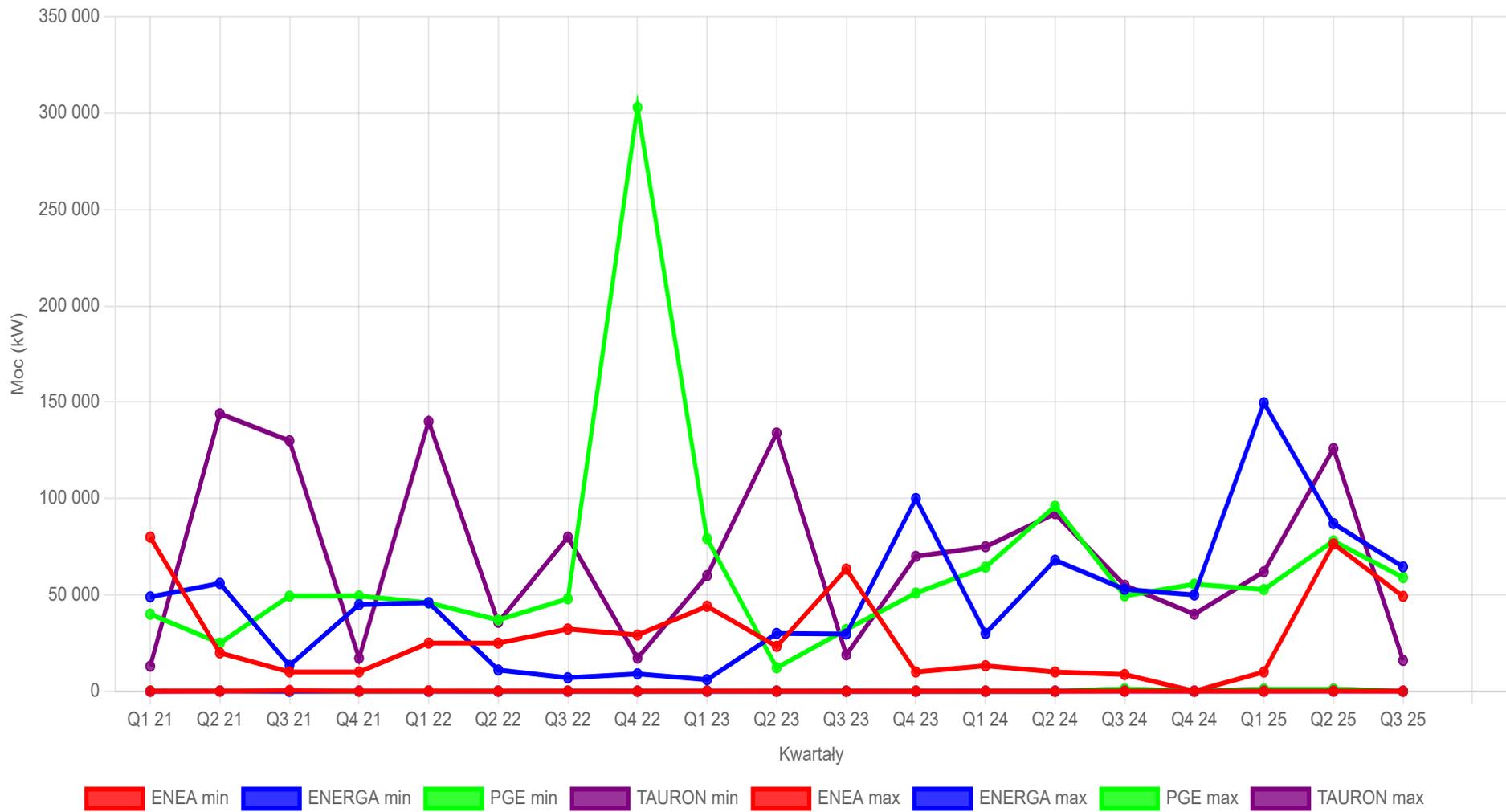


Chart 19. Maximum and minimum power values of connection conditions issued by DSOs on a quarterly basis.

Polish energy sector compared to European countries.

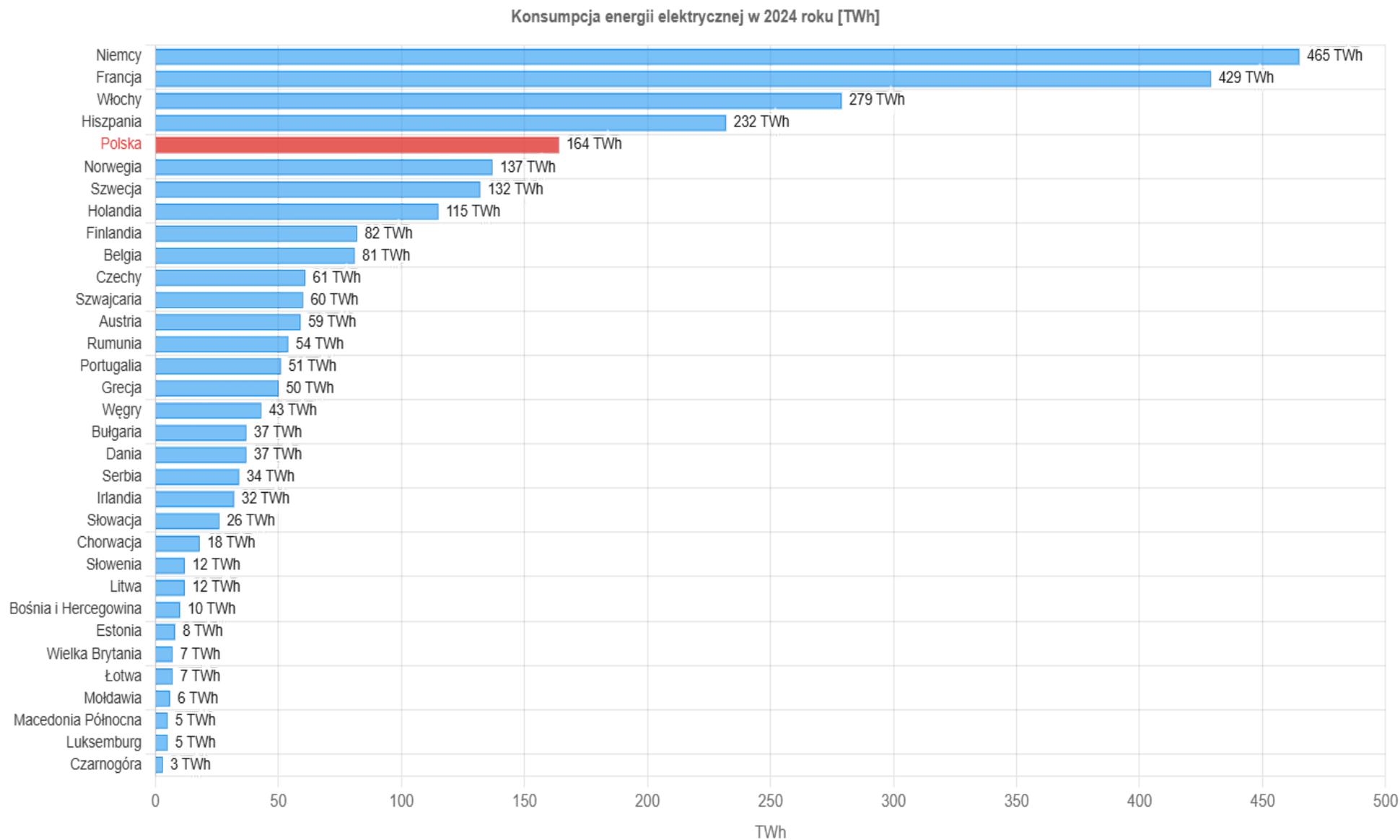


Chart 20. Electricity consumption in 2024 (Europe).

Source: ENTSO-E

Generacja energii elektrycznej w 2024 roku [TWh]

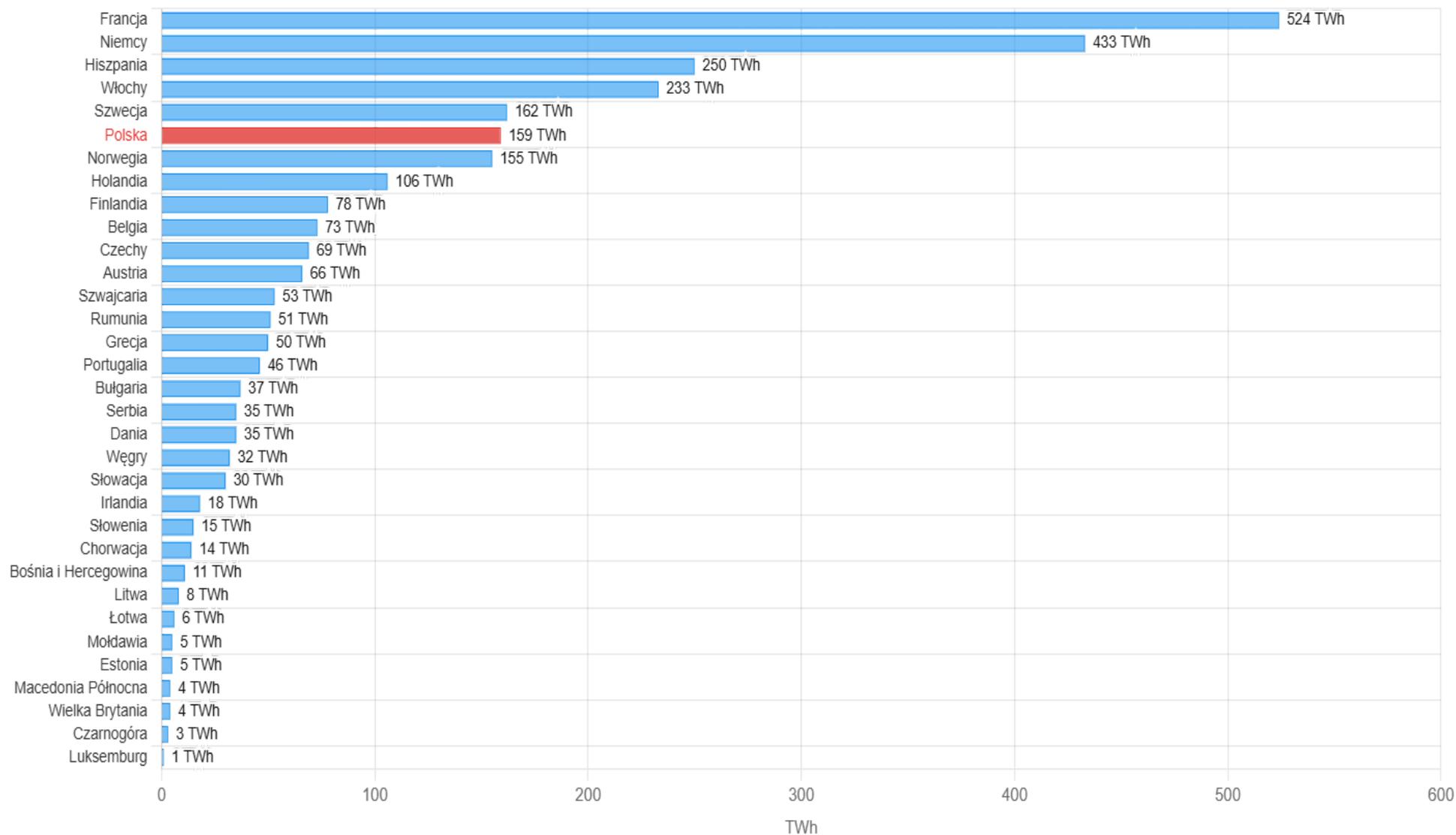
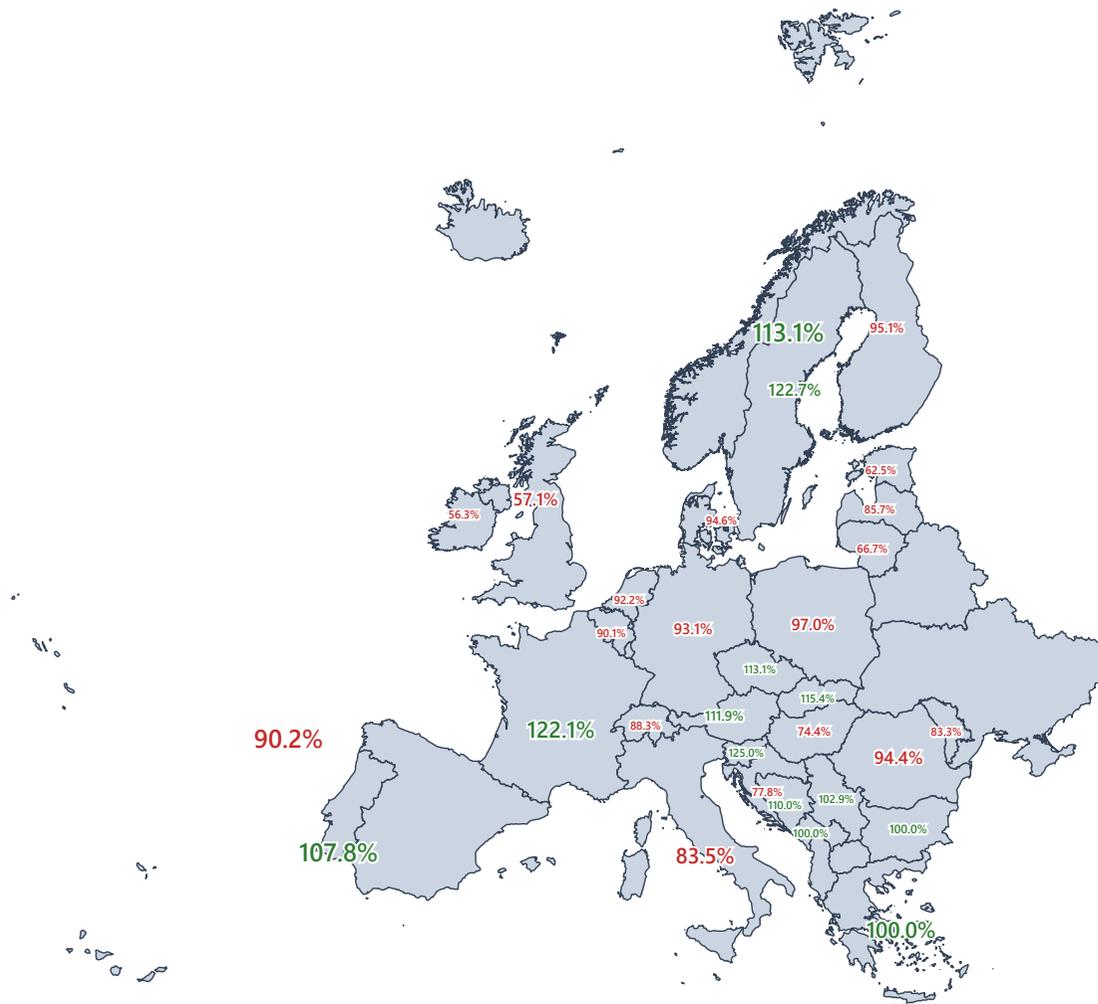


Figure 21. Electricity generation in Europe in 2024. Source: ENTSO-E



Map 2. Domestic generation in relation to domestic electricity consumption of European countries in 2024.

Source: ENTSO-E.

Energy importers are marked in red. Energy exporters are marked in green.

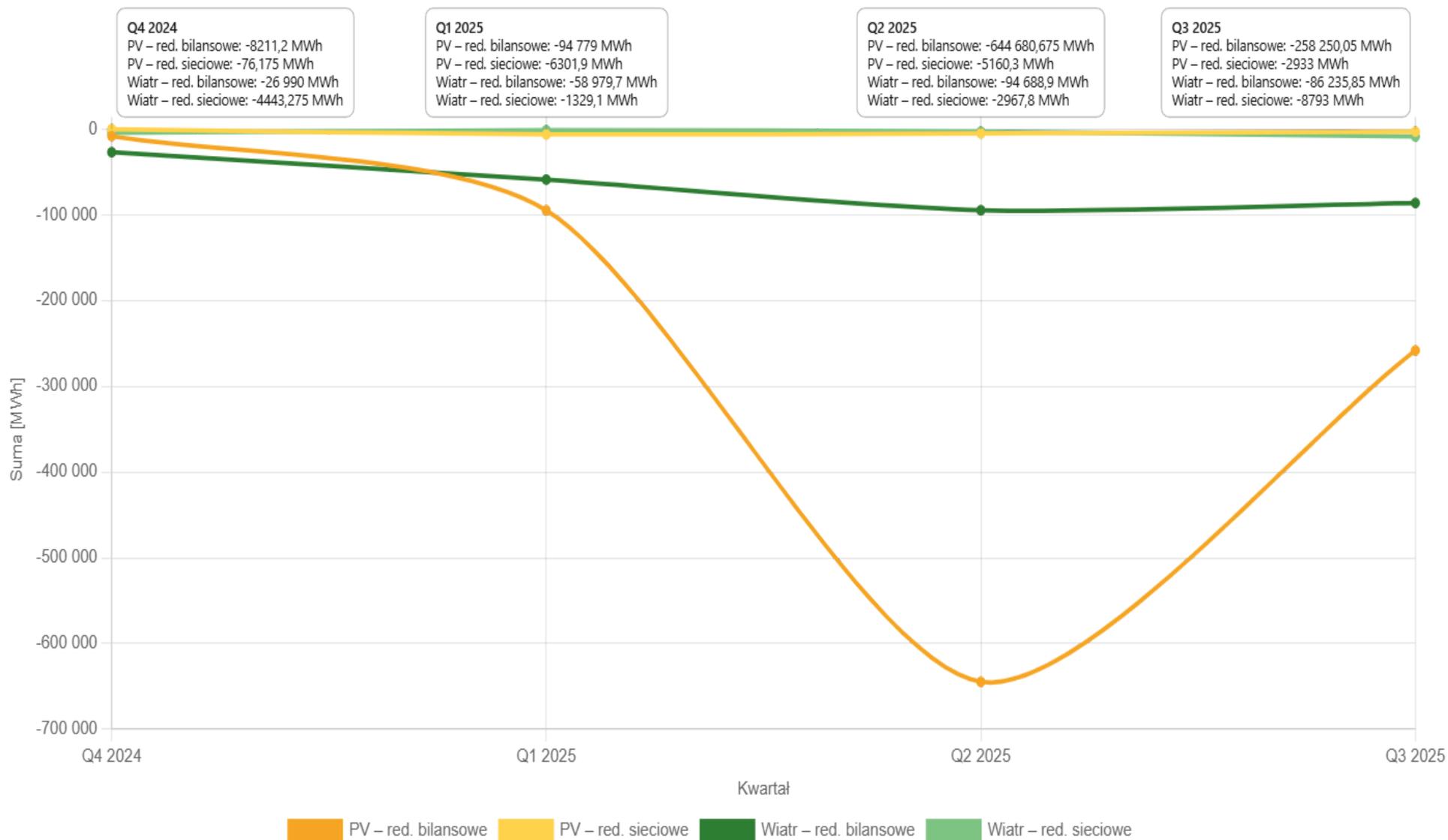


Figure 22. Non-market redispatching of renewable energy sources.

Source: Polskie Sieci Elektroenergetyczne

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