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Quarterly report

on European electricity markets

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DG Energy

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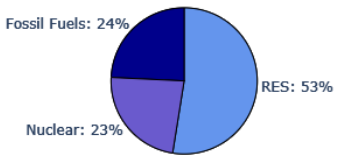
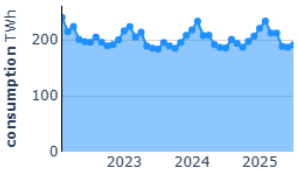
Key figures of the quarter (Q2 2025)

Electricity generation and consumption in Q2 2025 and year-on-year comparison



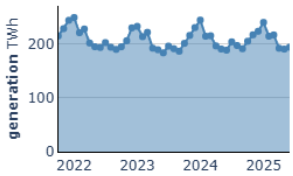
Electricity Mix



Electricity consumption

566 TWh

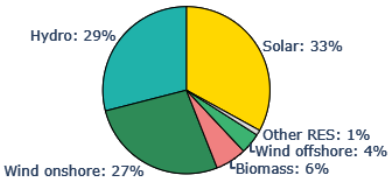
▲2 TWh



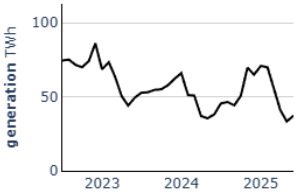
Electricity generation

575 TWh

▲1 TWh



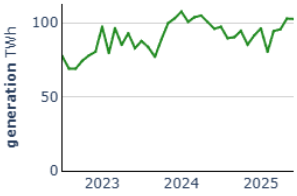
RES generation



Fossil fuel generation

141 TWh

▲5 TWh

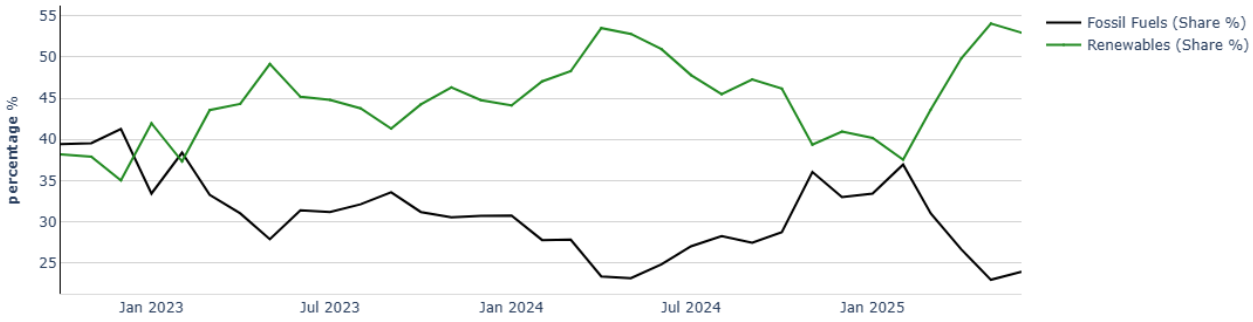


RES generation

301 TWh

-

Electricity Generation of Fossil Fuels vs Renewables: Quarterly Average and Y-o-Y Change



Average Generation Share of Fossil Fuels

25 %

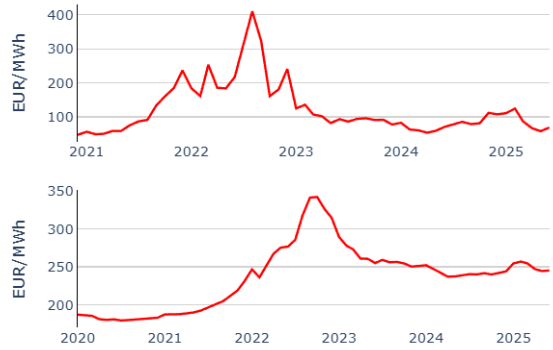
▲1 pp.

Average Generation Share of Renewables

52 %

▼0 pp.

Prices in Q2 2025 and year-on-year comparison



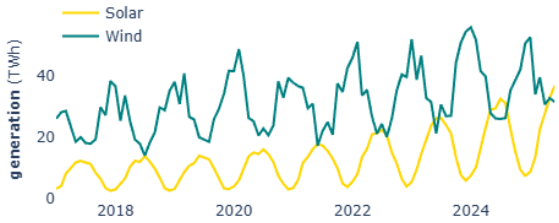
Wholesale prices
65 €/MWh

Change y-o-y
6%
▲6 €/MWh

Retail prices
246 €/MWh

Change y-o-y
3 %
▲3 €/MWh

Renewable energy generation and year-on-year comparison



Renewable energy generation: +0 %

Hydro
88 TWh
▼−18 TWh

Solar
98 TWh
▲16 TWh

Wind onshore
82 TWh
▲2 TWh

Wind offshore
12 TWh
▼−1 TWh

HIGHLIGHTS OF THE REPORT

- **The second quarter of 2025 saw a slight increase of prices compared to the previous year due to lower hydro generation, slightly reduced output from nuclear (despite another remarkable quarter for solar generation) and higher gas prices.** However, prices were much lower than in the first quarter of the year largely due to a relative decline in gas prices, indicating a positive trajectory for the upcoming months.
- **The EU Wholesale Price[1] averaged 65 €/MWh in Q2 2025, 6% higher than in Q2 2024, but 29% lower than in Q2 2023**. Prices ranged from a quarterly average of 28 €/MWh in Finland to 105 €/MWh in Ireland. The largest price decreases were observed in Finland (-30%), Estonia (-20%), Lithuania (-19%) and Latvia (-18%). Conversely, the largest increases occurred on the Iberian Peninsula with Portugal (+23%) and Spain (+16%) due to higher gas generation. Belgium also saw prices rise by 22%.
- **Electricity consumption in the EU stayed flat (0.4%) compared with Q2 2024**. On the national level, seventeen Member States, saw an increase in electricity consumption, while the remaining countries were stagnant or experienced a decline. Demand levels for Q2 2025 were still below the pre-crisis average (-6%, compared to the 2015-2019 range).
- **The share of renewables stayed stable at 52% in Q2 2025** (same as in Q2 2024), while **the share of fossil fuels rose slightly to 25%** (from 24% in Q2 2024).
- **Solar generation rose to a new record high for a second quarter, reaching 98 TWh (+20%). However, hydropower experienced a significant decline (-17%).** Wind onshore rose slightly (+3%) but this was balanced out by a decrease in wind offshore (-6%). Nuclear generation declined by slightly as well (-2%)
- **Fossil fuel quarterly generation increased by 5 TWh (+3%) in Q2 2025**, covering a slight decline in low-carbon generation. Due to lower gas prices, generation from gas increased by 7 TWh (+12%) whereas more CO2-intensive coal generation declined, with lignite decreasing by 13% and hard coal by 9%.
- **Carbon prices in Q2 2025 fluctuated between 60-75 €/tCO2**, almost falling below 60 €/tCO2 in April before rising again to prices slightly above 70 €/tCO2. The average spot price of CO2 in Q2 2025 (68 €/tCO2) remained unchanged compared to Q2 2024. Compared to the previous quarter (73 €/tCO2 in Q1 2025) prices fell slightly. Q2 also saw a slight decoupling of ETS Prices from the TTF with the latter decreasing at a considerably lower level in the second half of the quarter.
- **Retail electricity prices for households in EU capital cities rose marginally by 3% in Q2 2025 (246 €/MWh).** This is despite the energy component decreasing compared to last year's quarter as both taxes and network costs increased. Additionally, there was significant variation between Member States with several seeing double-digit percentage increases (e.g. Austria, Luxembourg, Poland) and others seeing large decreases in retail prices due to lower energy costs (e.g. Slovenia, Estonia, France).
- **A record high for the first quarter of over 720 thousand new electric vehicles (EVs) were sold in Q2 2025 in the passenger car segment in the EU,** a yearly increase of almost 30% compared with Q2 2024. This translates into a 23% EV share in the EU passenger car market, which is lower than the EV market share in China (57%), but more than two times the market share registered in the United States (10%). The largest share of new EV sales was recorded Sweden, where 62% of all cars sold in Q2 2025 were EVs. Sweden, as well as Denmark (60%), Finland (54%) and the Netherlands (52%) were among the markets where more than half of all passenger cars sold were Battery electric or Plug-in hybrid vehicles.
- **The number of hours with negative wholesale prices in Q2 2025 (4407) was 6% higher than in Q2 2024**. **%**. This rise was driven by a strong start to the quarter, with April recording 1,836 hours and May 2,177 hours, both exceeding the levels observed in the same months of 2024. In contrast, June 2025 experienced a substantial decline in negative-price hours, with 394 hours, compared with 1,302 hours in June 2024.Sweden led European countries with the highest occurrence of negative prices in Q2 2025. The increasing occurrence of negative prices signals the need for short term storage and flexibility, increased interconnectivity, and incentives for demand-side response.

[1] The EU Wholesale Price is calculated as the average price across all EU27 Member States (excl. Cyprus) weighted by their respective electricity consumption. Compared to previous editions it is now weighted by electricity consumption rather than traded volume to provide a more accurate overview.

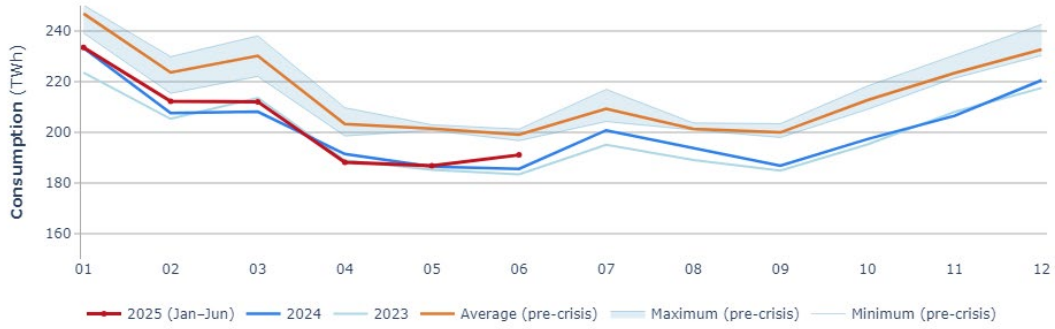
Electricity market fundamentals

1.1 Demand side factors

Electricity consumption *in Q2 2025, Q2 2024 and Q2 2023*

- In Q2 2025, the total electricity consumption in the EU stayed flat (+0%) compared with last year's levels, and it was 1% higher than in Q2 2024. Demand levels for Q2 2025 were still below the pre-crisis average (6%) (2015-2019 period).

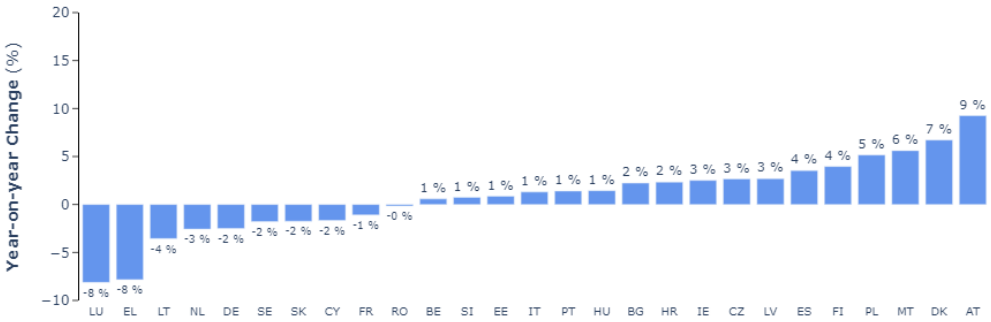
Figure 1 – Monthly EU consumption of electricity



Source: Eurostat

- **Figure 2** sums up changes in electricity consumption over Q2 2025, compared to Q2 2024. During the reference quarter, EU electricity consumption rose in seventeen Member States. The largest increase was registered in Austria (+9%), followed by Denmark (+7%) and Malta (+6%) while Luxemburg and Greece (-8%) reported reductions.

Figure 2 – Yearly changes in electricity consumption by Member State in Q2 2025 compared with Q2 2024

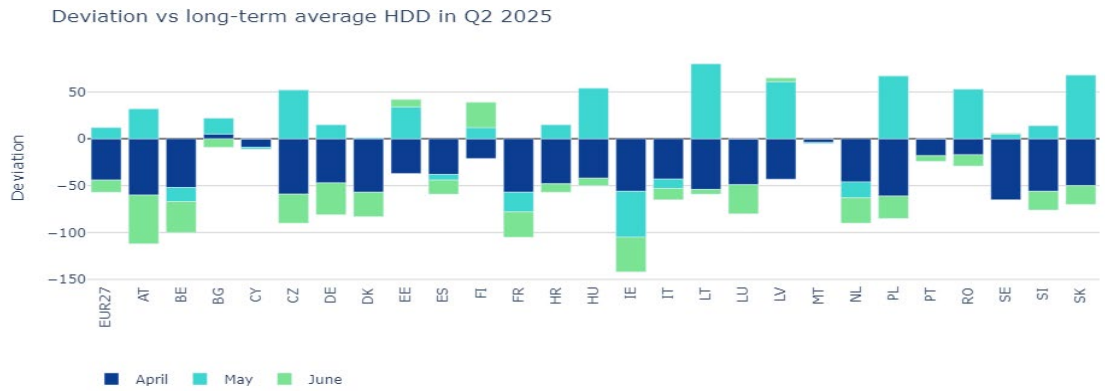


Source: Eurostat

Figure 3 illustrates the monthly deviation of actual Heating Degree Days (HDDs) from the long-term average (period between 1979 and the last completed calendar year) in Q2 2025. EU-wide, the reference quarter was warmer than the historical range. April was particularly warmer than the historical average, while May was colder than usual in

some regions, particularly in Eastern and South-Eastern Europe. Overall, Q2 2025 registered –52 HDDs below the long-term average.

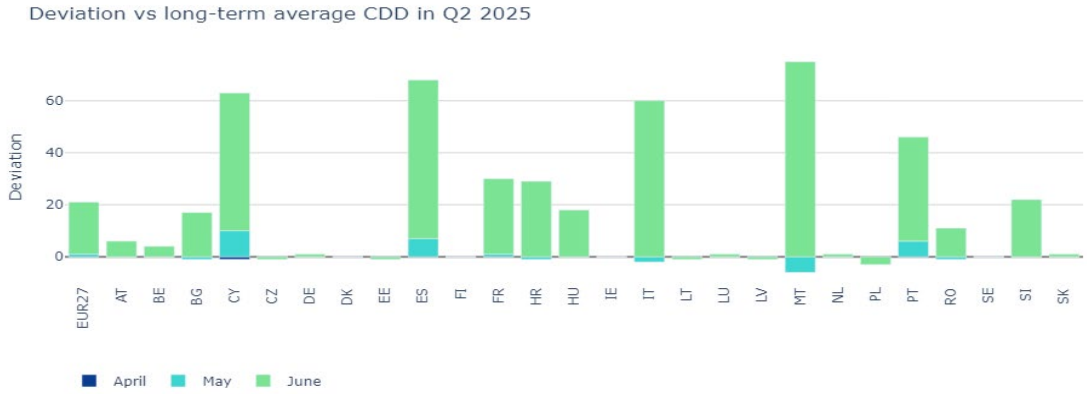
Figure 3 - Deviation of actual heating days from the long-term average in April – June 2025



Source: JRC. The colder the weather, the higher the number of HDDs. The warmer the weather, the higher the number of CDDs

Figure 4 illustrates the monthly deviation of actual Cooling Degree Days (CDDs) from the long-term average (period between 1979 and the last completed calendar year) in Q2 2025. June was warmer than average in Southern Europe especially. Overall, Q2 2025 registered +21 CDDs above the long-term average.

Figure 4 - Deviation of actual heating days from the long-term average in April – June 2025

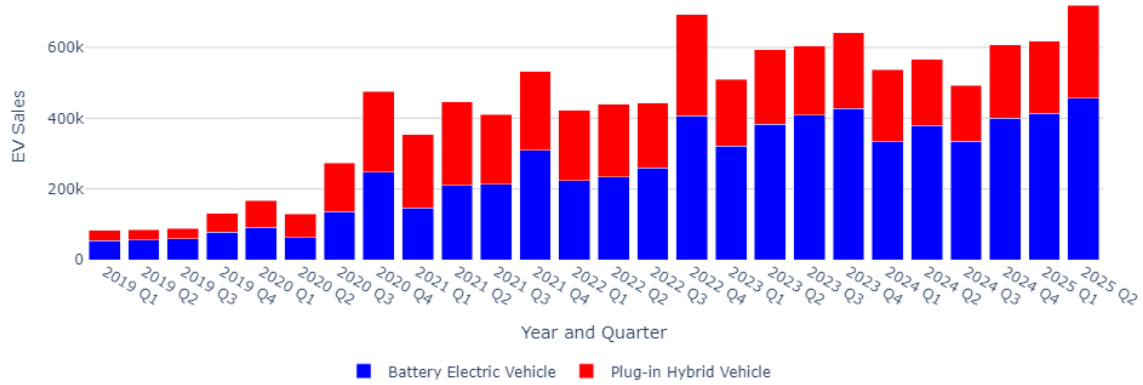


Source: JRC. The colder the weather, the higher the number of HDDs. The warmer the weather, the higher the number of CDDs

- **Figure 5** shows that over 720,000 new EVs (battery electric vehicles and plug-in hybrids) were registered in the EU in Q2 2025 (+27% compared with Q2 2024). This figure represents the highest total for any quarter on record. It translates into a 23% market share which is lower than the EV market share in China (57%), but more than two times the market share registered in the United States (10%).

EVs sold in Q2 2025, Q2 2024 and Q2 2023

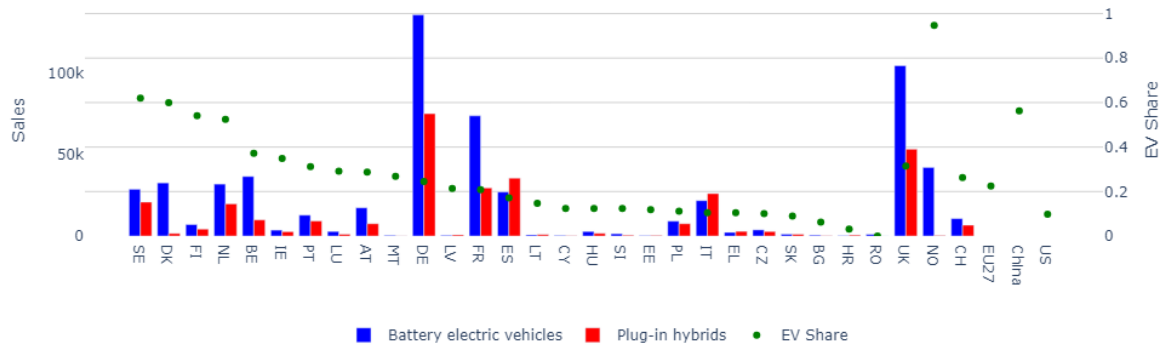
Figure 5 – Quarterly EV sales in the EU



Source: ACEA

- The largest share of new EV sales was recorded Sweden, where 62% of all cars sold in Q2 2025 were EVs. Sweden, as well as Denmark (60%), Finland (54%) and the Netherlands (52%) were among the markets where more than half of all passenger cars sold were Battery electric or Plug-in hybrid vehicles. Germany retained the position of the largest individual market in the EU (more than 210,000 EV sales in Q2 2025) followed by France, where sales amounted to more than 104,000 new EVs in the reference quarter. Noteworthy, in Norway, 98 % of all cars sold were EVs.

Figure 6 – Electrically chargeable passenger vehicle (EV) sales in selected countries in Q2 2025



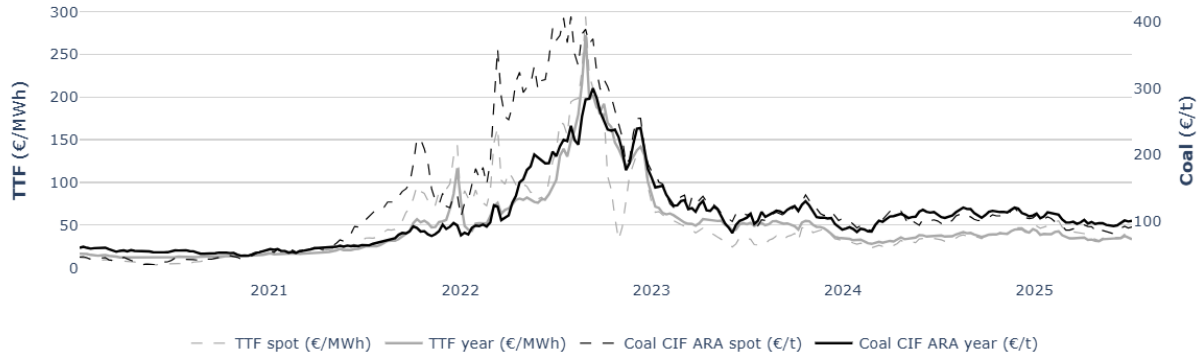
Source: ACEA, CPCA, US BEA, ANL

1.2 Supply side factors

- **Figure 7** reports on developments in European coal and gas prices. Spot prices for coal and gas both saw a decline in Q2 2025 reversing the upward trend observed during the second half of 2024. In Q2 2025, spot gas prices averaged 35 €/MWh, 12% higher than in Q2 2024 (but 24% lower than in Q1 2025). TTF spot prices remained at premium to TTF forward contracts (year ahead) during most of Q2 2025, indicating that markets expect a price decline in the future. Year-ahead prices averaged 34 €/MWh in Q2 2025, 5% lower than in Q2 2024 and 10% lower than in Q1 2025.

- Thermal coal spot prices, represented by the CIF ARA contract, fell to 88 €/t in Q2 2025 (from 103 €/t recorded in Q2 2024). The year-ahead CIF ARA contract rose to 97 €/t in Q2 2025 (from 111 €/t observed in Q2 2024). Coal prices roughly followed a downward trend throughout the quarter.

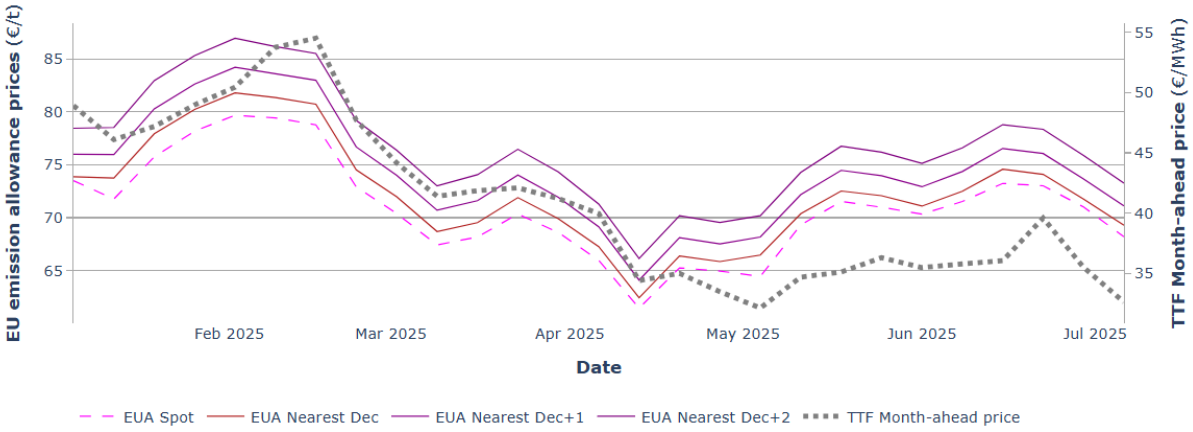
Figure 7 – Weekly evolution of spot and year-ahead coal and gas prices



Source: S&P Global Platts

- The European market for emission allowances, fell in April but rose again throughout the remainder of Q2 2025. The EUA Spot prices also showed first signs of decoupling from the TTF market for gas which stayed flat for the second half of the quarter (**Figure 8**).

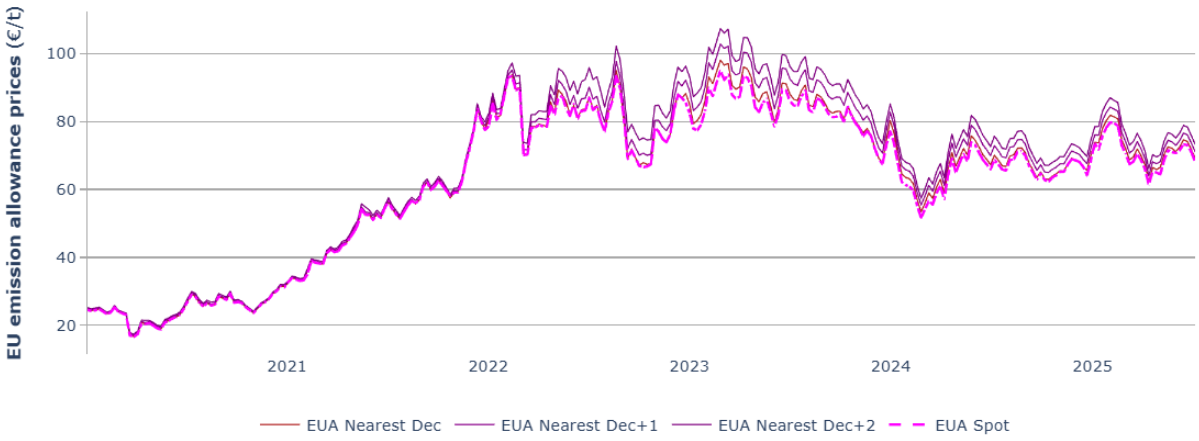
Figure 8 - Evolution of EU emission allowance spot and future prices and TTF month-ahead prices in 2025



Source: S&P Global Platts

- EUA Spot prices fluctuated between 60-75 €/tCO_2, almost falling below 60 €/tCO2 in April before rising again to prices slightly above 70 €/tCO_2. The average spot price of CO_2 in Q2 2025 (68 €/tCO_2) unchanged compared to Q2 2024. Compared to the previous quarter (73 €/tCO_2 in Q1 2025) prices fell slightly.

Figure 9 – Evolution of EU emission allowance spot and future prices from 2020



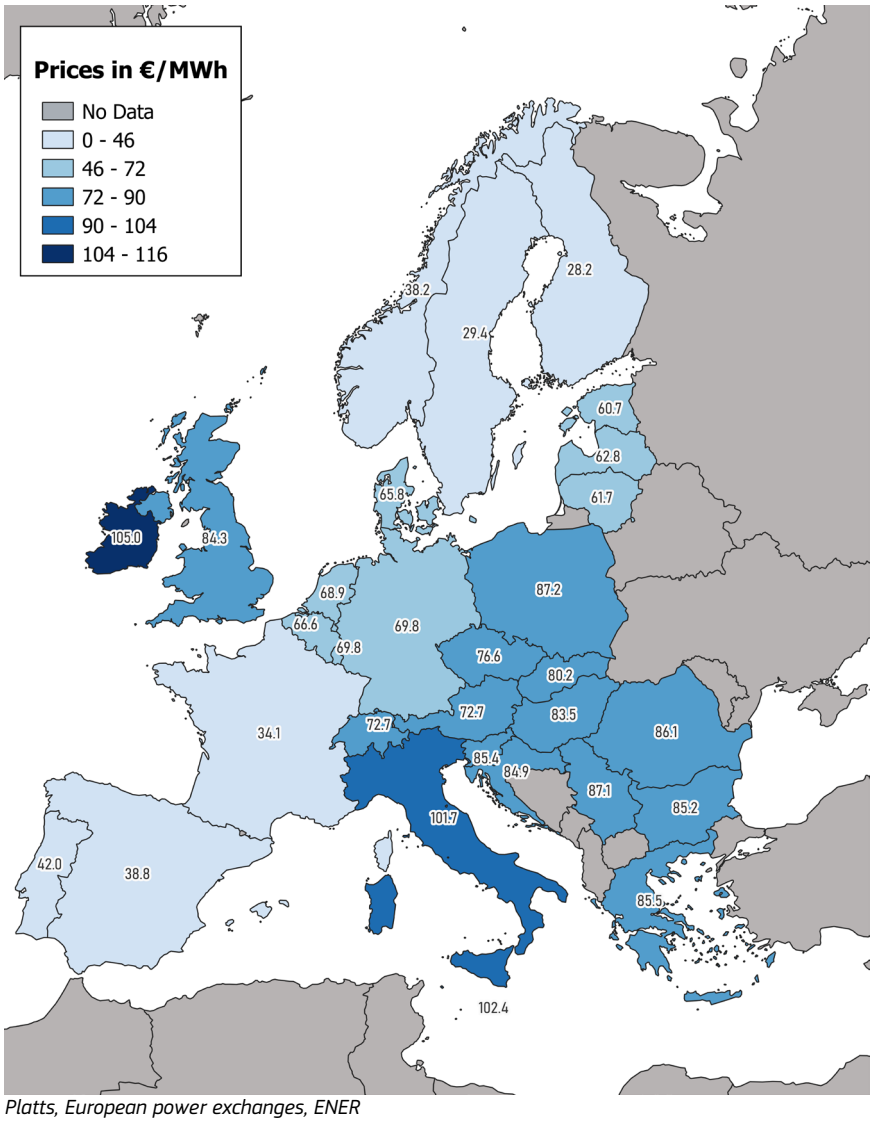
Source: S&P Global Platts

1.3 European wholesale electricity markets and their international comparison

Q2 2025	Q2 2024	Q2 2023
65 €/MWh	61 €/MWh	92 €/MWh
▲6%	▼−34%	▼−53%

- The map below (**Figure 10**) shows the average day-ahead wholesale electricity prices in Europe in Q2 2025. Average day-ahead wholesale electricity prices in Europe were 6% higher than in Q2 2024 and 29% lower than in Q2 2023. This slight increase price environment reflects a small decrease in low-carbon electricity generation (particularly hydro) compared to last year. However, prices did not rise significantly as fossil generation and prices only increased slightly.
- The EU Wholesale Price averaged 65 €/MWh in Q2 2025. Prices ranged from a quarterly average of 28 €/MWh in Finland to 105 €/MWh in Ireland. On a yearly basis, price changes in EU markets ranged from -30% to +23%. The largest decreases were observed in Finland (-30%), Estonia (-20%), Lithuania (-19%) and Latvia (-18%). Conversely, the largest increases occurred on the Iberian Peninsula with Portugal (+23%) and Spain (+16%) due to higher gas generation. Belgium also saw prices rise by 22%.

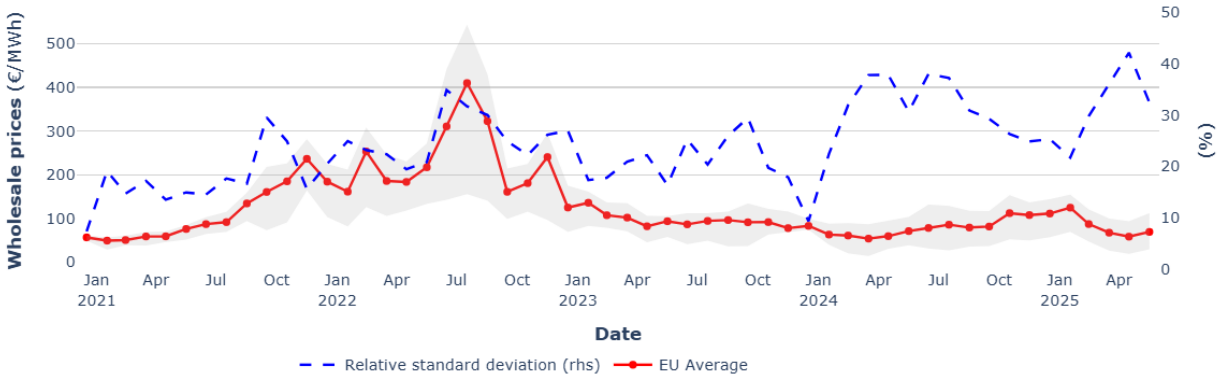
Figure 10 – Comparison of average wholesale baseload electricity prices, Q2 2025



Source: S&P Global Platts, European power exchanges, ENER

- **Figure 11** shows the lowest and highest regional prices in Europe represented by the two boundary lines of the shaded area, the weighted EU average of these regional markets, as well as the relative standard deviation of regional prices. The **Annex** provides graphics of the monthly and daily evolution of regional prices in Europe.

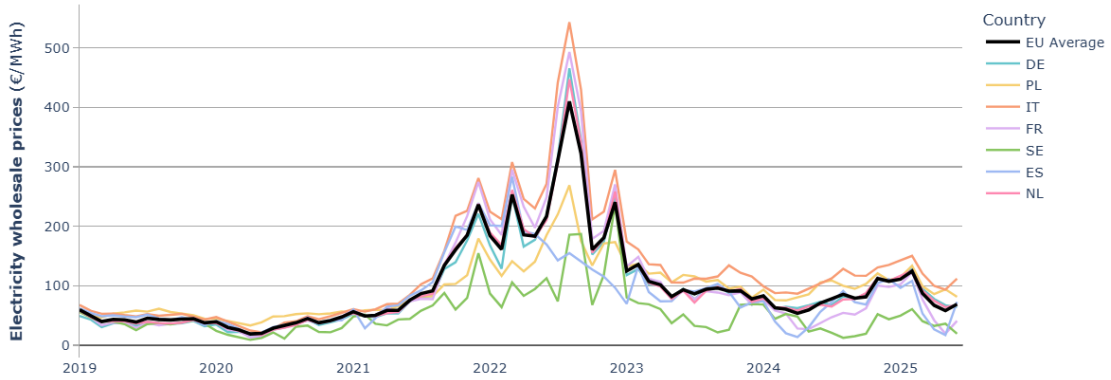
Figure 11 - The evolution of the lowest and the highest regional wholesale electricity prices in the European day-ahead markets and the relative standard deviation of the regional prices



Source: S&P Global Platts, European power exchanges. The shaded area delineates the spectrum of prices across European regions.

- **Figure 12** presents the evolution of weekly average electricity wholesale prices in nine selected European markets. Germany, the Netherlands and France average prices in Q2 2025 were at 70, 69 and 34 €/MWh, respectively, from 68, 64 and 31 €/MWh in Q2 2024. Thus, prices remained roughly stable year-on-year. Italy registered an average quarterly price in Q2 2025 of 102 €/MWh, the highest of the major markets and slightly up from Q2 2024 prices (95 €/MWh). Spanish prices were at 39 €/MWh, also rising slightly year-on-year in Q2 2025, measured against exceptionally low prices in Q2 2024 (33 €/MWh).
- At 29 €/MWh, prices in Sweden as the largest Northern EU market remained lower than on the continent in Q2 2025 and reported a small fall compared to Q2 2024 (33 €/MWh). In particular, Sweden maintained its position as a significant net electricity exporter, supported by strong wind and hydro generation.
- Central Eastern Europe markets prices were above those in Central Western Europe, with prices at 87 €/MWh on average in Q2 2025 in Poland. However, this is a slight decrease compared to Q2 2024 (91 €/MWh).

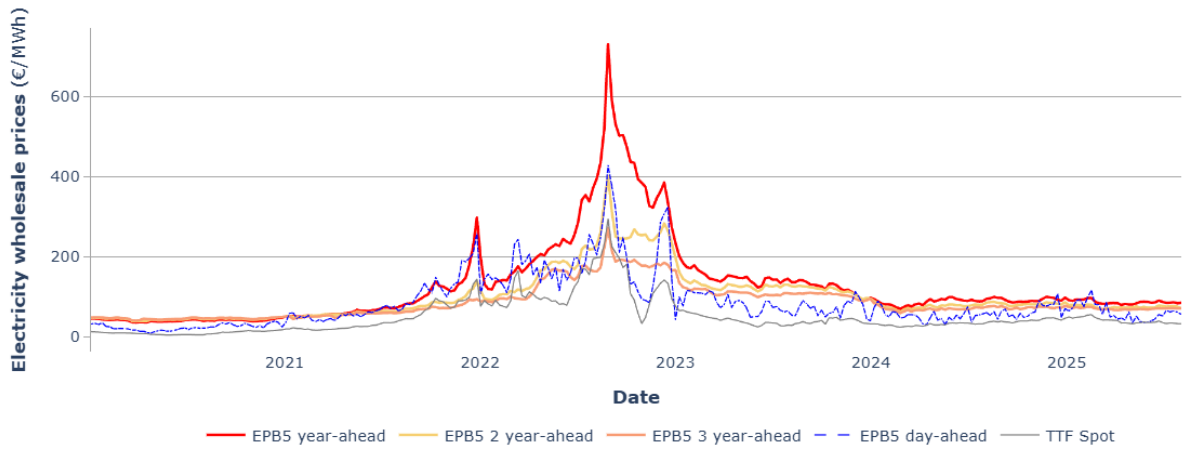
Figure 12 – Monthly average electricity wholesale prices in selected European markets



Source: S&P Global Platts, European power exchanges, ENER

- **Figure 13** shows the strong influence of gas prices (TTF) on future electricity prices during the energy crisis, where every unit change in gas price resulted in roughly twice the change in electricity price.
- In Q2 2025, the average electricity year-ahead, two-year ahead and three-year ahead contracts were 85 €/MWh, 74 €/MWh and 69 €/MWh, respectively. The premium of the weekly median between the year-ahead contract and the spot price averaged 44 €/MWh during Q2 2025.

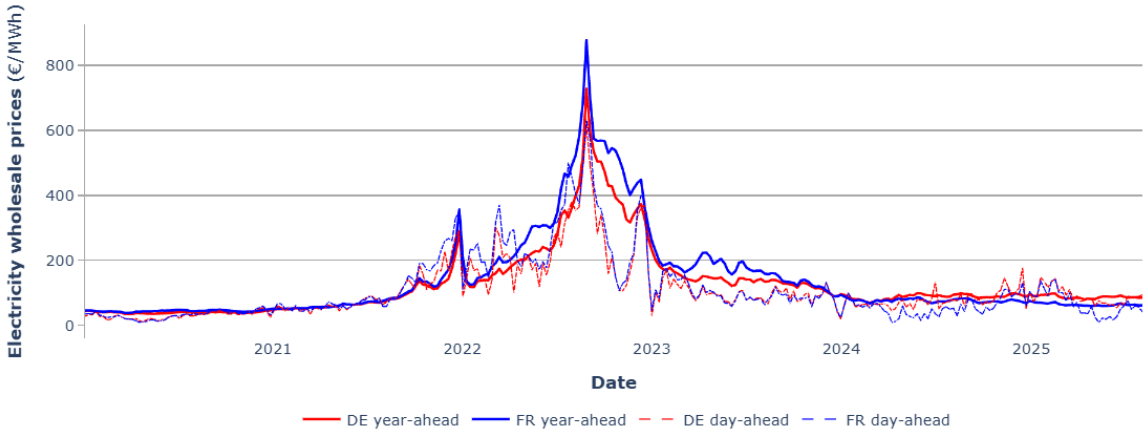
Figure 13 5 – Weekly futures baseload prices – weighted average of selected European markets



Source: S&P Global Platts.

- **Figure 14** shows the evolution of year-ahead contracts of Germany and France, together with their equivalent spot (day-ahead) prices. In Q2 2025, the German contract averaged 86 €/MWh, 24 €/MWh above France's 62 €/MWh, representing a 10 EUR/MWh year-on-year increase in the premium.

Figure 146 – Weekly German and French year-ahead contracts



Source: S&P Global Platts.

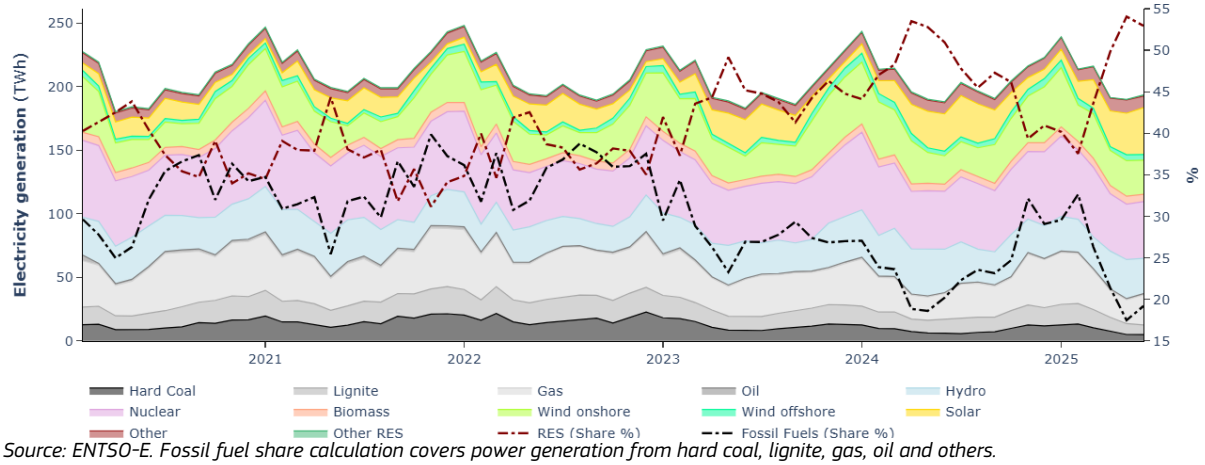
1.4 Electricity mix in the EU

Oil	Hard Coal	Lignite	Gas	RES	Nuclear
3 TWh	18 TWh	27 TWh	64 TWh	301 TWh	133 TWh
▲14%	▼−9%	▼−13%	▲12%	▼0%	▼−2%

Electricity generation in Q2 2025 compared to Q2 2024. Source: ENTSO-E

- **Figure 15** shows the monthly evolution of the electricity mix in the EU. In Q2 2025, RES generation stayed stable at 301 TWh (unchanged compared with Q2 2024) constituting 52% of the electricity mix (same as in Q2 2024). This plateau in RES generation occurred despite an underlying increase in installed RES capacity.
- The share of the electricity produced from fossil fuels increased slightly from 24% (Q2 2024) to 25% (Q2 2025). The year-on-year comparison shows decreases in lignite (-13%), hard coal (-9%) but an increase in generation from gas (+12%) with oil also increasing (+14%). The share of electricity produced through nuclear declined slightly to 23%.

Figure 15 7 – Monthly electricity generation mix in the EU

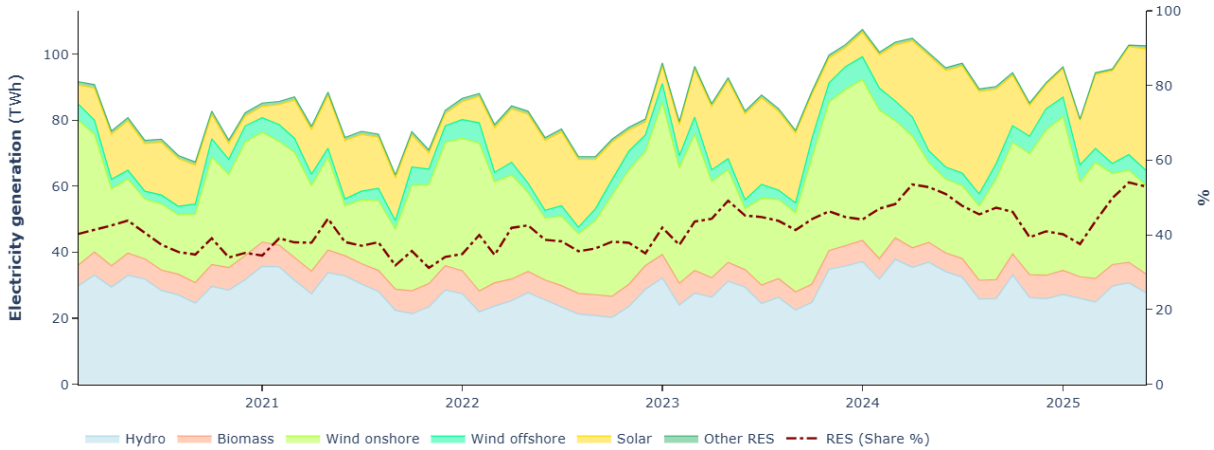


Source: ENTSO-E. Fossil fuel share calculation covers power generation from hard coal, lignite, gas, oil and others.

- **Figure 16** depicts the evolution of monthly renewable energy generation in the EU, alongside its share in the electricity generation mix. The share of RES generation in Q2 2025 compared to Q2 2024 (52% in both Quarters) was stable despite a significant decrease in generation from hydropower (-17%) and a slight downturn in wind offshore (-6%). However, this was balanced out by large growth in solar power generation (+20%) and a small uptick in generation from wind onshore (+3%) and biomass (+5%). The drop in hydro generation mostly reflects a return to normal levels after an exceptionally strong year 2024. The increase in solar was caused by particularly high solar irradiation levels for the season combined with a significant increase in installed capacity compared to the last year.

Wind Onshore	Wind Offshore	Solar	Hydro	Biomass
82 TWh	12 TWh	98 TWh	88 TWh	18 TWh
▲3%	▼−6%	▲20%	▼−17%	▲5%

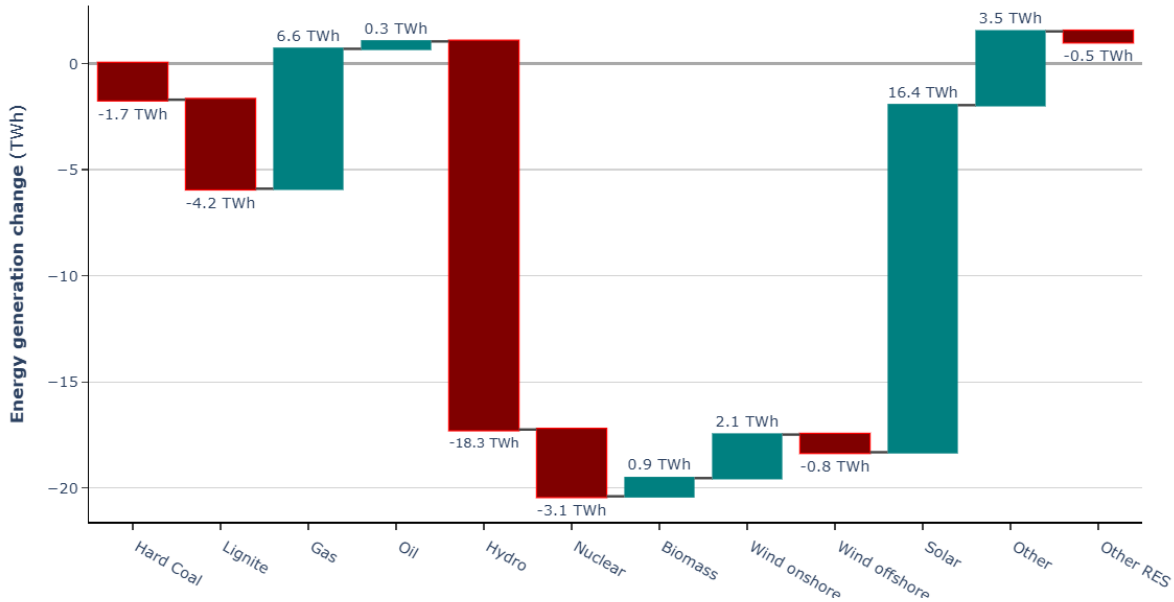
Figure 168 – Monthly renewable generation in the EU and the share of renewables in the power mix



Source: ENTSO-E. Data represent net generation.

- **Figure 17** visualises changes in the EU27 electricity generation in Q2 2025 compared with Q2 2024. The largest decrease was observed for hydro (-18 TWh) with other notable decreases for coal (-6 TWh) and nuclear (-3 TWh). This reduced low-carbon generation was almost fully offset by higher solar generation (+16 TWh). Additional gas (+7 TWh) rose to replace generation from coal. Other generation sources saw no significant change compared to last year's quarter.

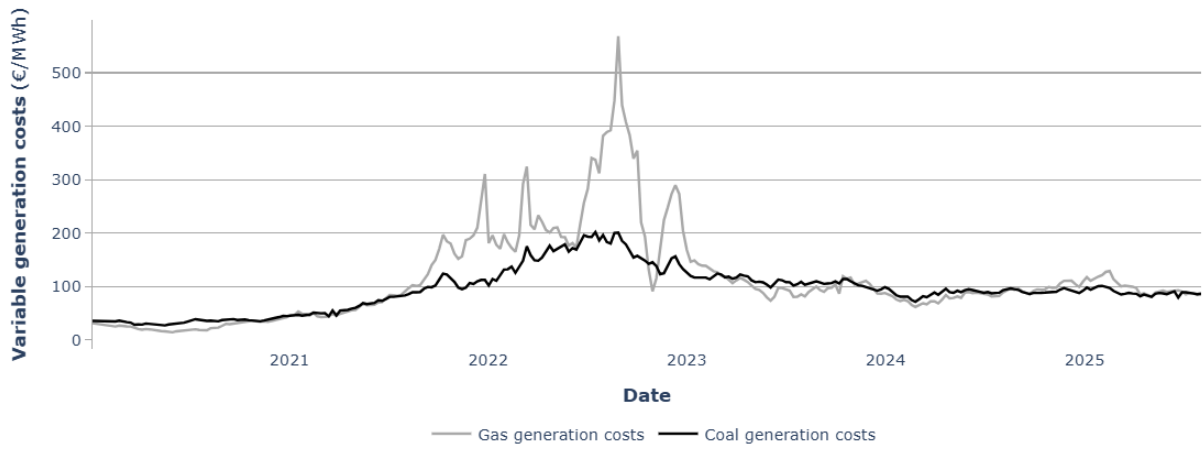
Figure 179 - Changes in power generation in the EU between Q2 2025 and Q2 2024



Source: ENTSO-E.

- **Figure 18** shows the impact of gas prices on estimated gas and coal-fired generation variable costs for estimated average power plants (fuel and emission allowances costs). Despite slightly declining carbon prices, lower gas prices in the second quarter of 2025 led to gas and coal variable costs being very similar. This led to some coal-to-gas switching compared to Q1 2025 where elevated gas prices had made coal more attractive.

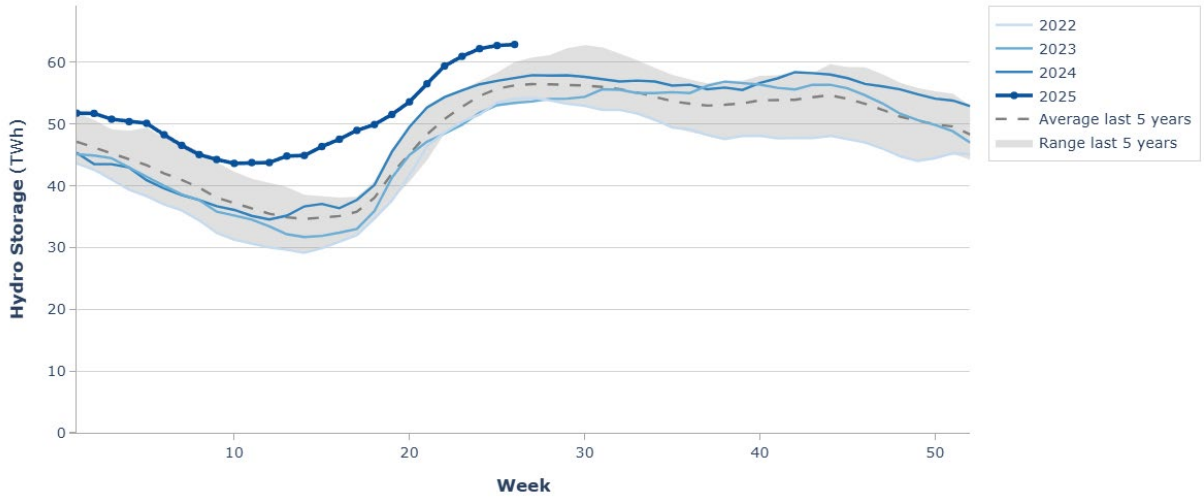
Figure 1810 - Estimated variable generation costs of coal- and gas-fired power plants.



Source: S&P Platts, ENER.
Note: Thermal efficiency values used for coal- and gas-fired plants were 41% and 55% respectively. Emissions intensity values used were 0.85 and 0.37 tCO2e/MWh respectively for coal- and gas-fired generation.

- **Figure 19** shows the filling levels of hydro reservoirs in the reported markets until the end of Q2 2025. Despite already strong levels in 2024, hydropower reservoirs saw an increase (+8% compared with end of Q2 2024 levels). Driven by strong filling levels in the Nordics and the Iberian Peninsula, reservoir levels have consistently exceeded the weekly maximum observed in any of the past five years (2020–2024).

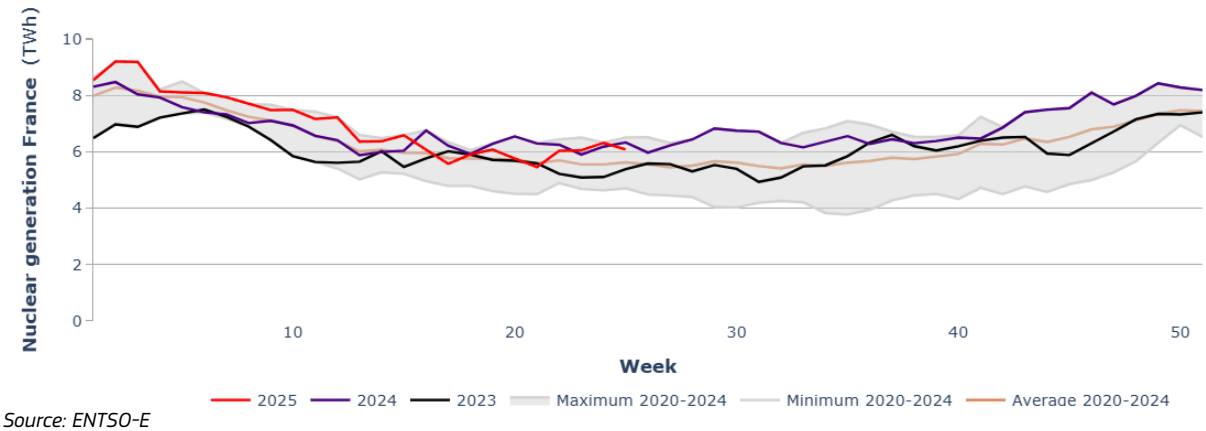
Figure 11 19- Aggregated EU hydropower reservoirs – weekly



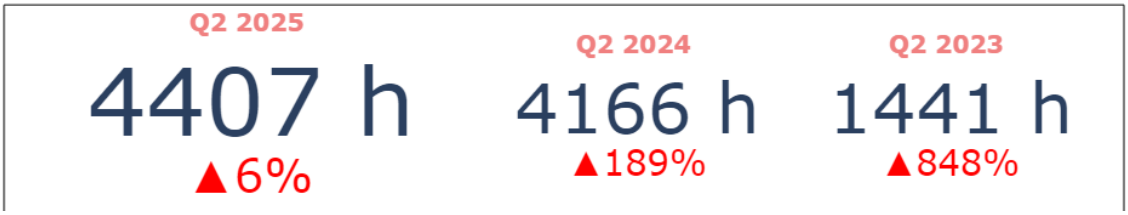
Source: ENTSO-E. Aggregated hydropower reservoirs for Austria, Bulgaria, Spain, Finland, France, Greece, Hungary, Italy, Lithuania, Latvia, Portugal, Romania and Sweden.

- As shown in **,** French nuclear output amounted to 79 TWh in Q2 2025 and was down by 3% compared to Q2 2024 (81 TWh). Nonetheless, this output was still considerably higher than the low levels seen in 2022 and 2023 (62 TWh and 73 TWh, respectively).

Figure 2012 - Weekly nuclear electricity generation in France



Source: ENTSO-E

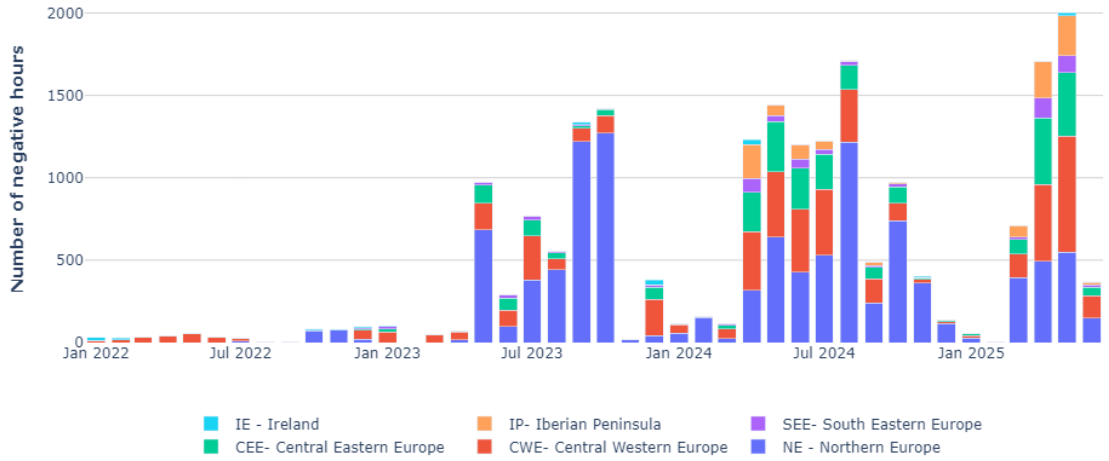


Negative hours in Europe in Q2 2025, Q2 2024 and Q2 2023

- **Figure 21** shows the monthly frequency of the occurrence of negative hourly wholesale electricity prices in selected European markets. In Q2 2025, the total number of negative-price hours reached a new record for a second quarter, at 4,407 hours**,** compared with 4,166 hours in Q2 2024, representing an **increase of 6%**. This rise was driven by a strong start to the quarter, with April recording 1,836 hours and May 2,177 hours**,** both exceeding the levels observed in the same months of 2024. In contrast, June 2025 experienced a substantial decline in negative-price hours, with 394 hours**,** compared with 1,302 hours in June 2024**.**
- Negative hourly prices generally occur when electricity demand is lower than expected and when variable renewable energy generation is abundant, combined with large and relatively inflexible baseload electricity generation (e.g.

nuclear or lignite). In such cases, conventional power plants offer their output for a negative price to avoid switching the unit off and having to go through the costly and high-maintenance operation of restarting the facility when they want to enter the market again.

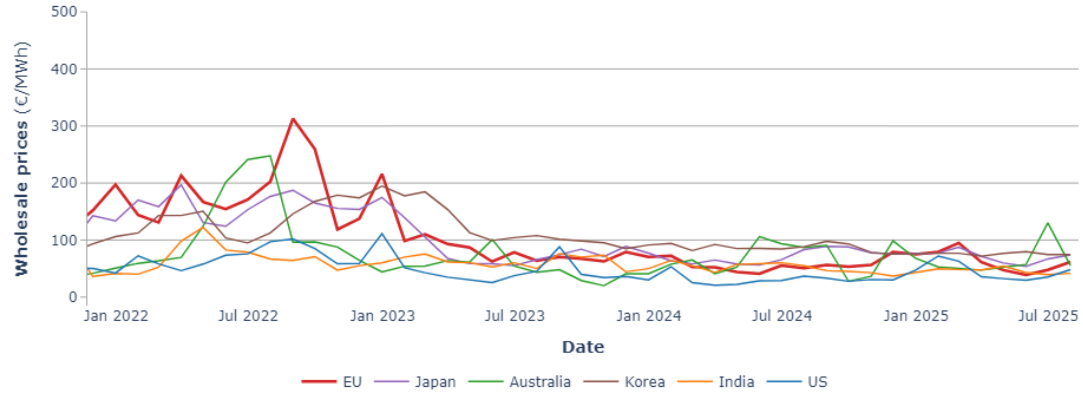
Figure 21 13- Number of negative hourly wholesale prices on selected day-ahead trading platforms in Europe



Source: ENTSO-E.

- **Figure 22** compares price developments in wholesale electricity markets of selected major economies. Q2 2025 saw a degree of heterogeneity in power price development across markets.
- In the U.S., wholesale electricity prices in selected regional markets saw year-on-year changes ranging from -13% (ERCOT) to +48% (CAISO) in Q2 2025. In Q2 2025, the US average price of selected markets was 19% higher than in Q2 2024 – a markedly higher increase than in the EU.
- In Japan, prices decreased by 2% year-on-year in Q2 2025. Conversely, prices in Korea rose by 2% during the quarter.
- In Australia, wholesale electricity prices decreased by 9% year-on-year in Q2 2025 but saw large increases in June due to a mix of factors: "high demand, low wind output, network limitations, as well as planned and unplanned baseload outages", according to the Australian energy regulator. Prices in India registered a year-on-year fall of 28% in the reference quarter.

Figure 22 14 - Monthly average wholesale electricity prices in international markets (D-A markets)

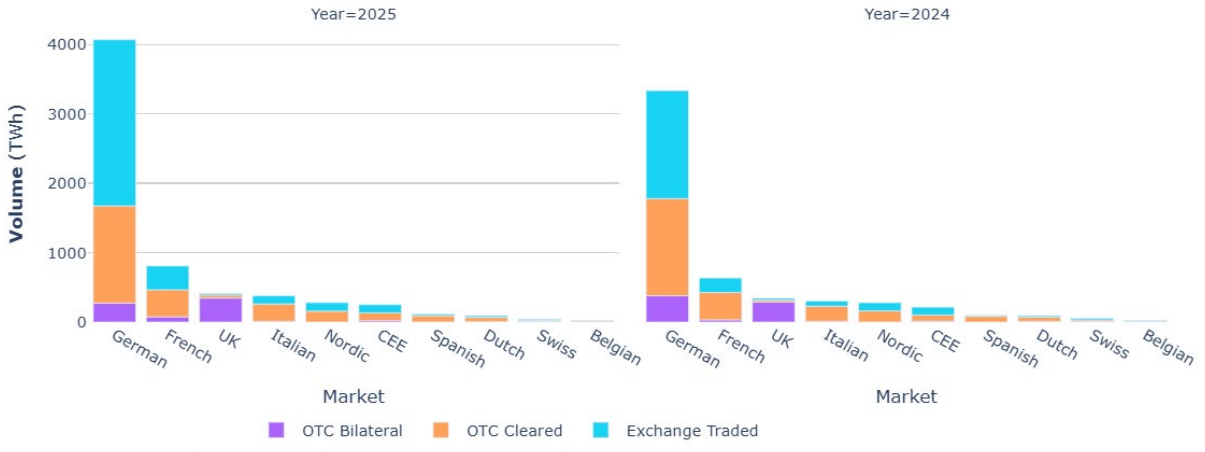


Source: European Power Benchmark based on S&P Global Platts and ENTSO-E Transparency Platform, JPEX (Japan), AEMO (Australia), and the arithmetic average of selected PJM West, ERCOT, MISO Illinois, CAISO, NYISO Hudson Valley and ISONE Internal regional wholesale hubs in the United States.

1.5 Traded volumes and cross border flows

- **Figure 23** shows annual changes of traded volumes of electricity in the main European markets in 2025 until Q2, including exchange-executed trade and over-the-counter (OTC) trade. Selected markets and regions witnessed a year-on-year improvement in trading activity. The increase in total traded volumes between the first half of 2025 and the first half of 2024 (+21%) reflects the improvement in trading activity in the electricity sector, which was supported by a surge in exchange-traded volumes (+48%). Activity grew slightly in both OTC cleared contracts (+4%) while falling slightly for OTC bilateral (-1%).
- In the first half of 2025, Germany was by far the largest and most liquid European market, as total volume (4 067 TWh) was equivalent to 63% of the total traded volumes under observation.
- The biggest year-on-year increases were seen in Greece (+64%), France (+27%) and Germany (+22%). Only Switzerland saw a decrease (-25%) compared to its total traded volumes compared to the first half of 2024.

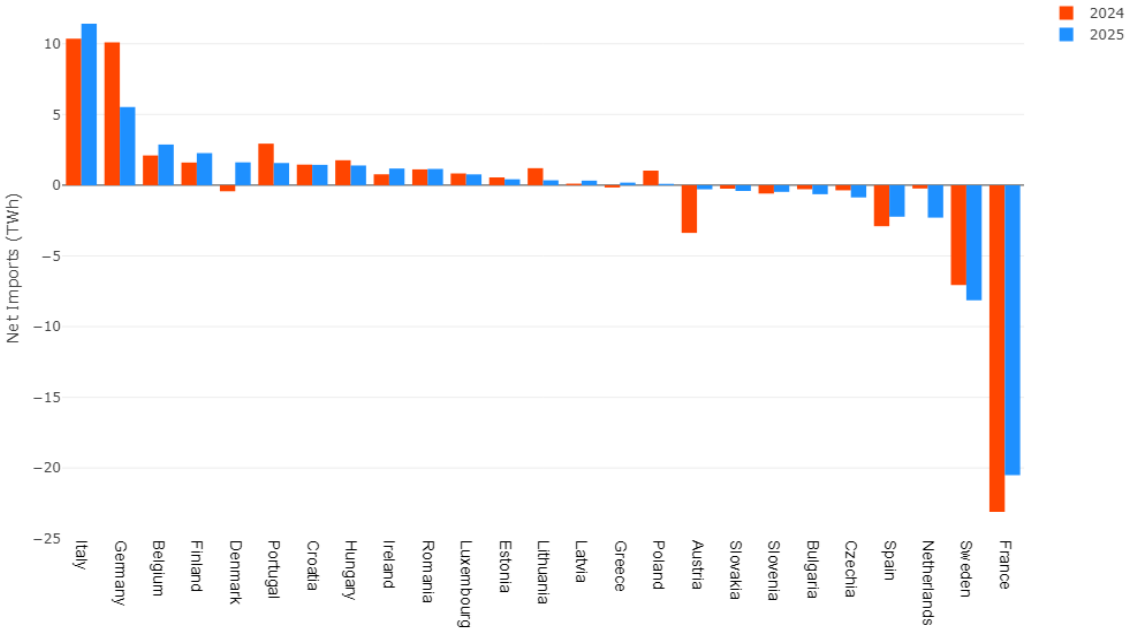
Figure 2315 - Annual change in traded volume of electricity on the most liquid European markets



Source: Trayport, London Energy Brokers Association (LEBA) and DG ENER computations

- **Figure 24** compares net balances of scheduled electricity flows among EU Member States in Q2 2025 and Q2 2025. France kept its position as the net exporter in the EU (20 TWh) in Q2 2025, even though net exports were 11% lower than in Q2 2025. Sweden was the second largest net exporter (8 TWh) improving its net position with volumes 15% higher than the same quarter in 2024.
- The largest EU net importer was Italy (11TWh), worsening its net position by 10% (i.e. it had higher net imports than in Q2 2024). Germany followed, with 6 TWh of net imports, becoming the second-largest net importer in Q2 2025.

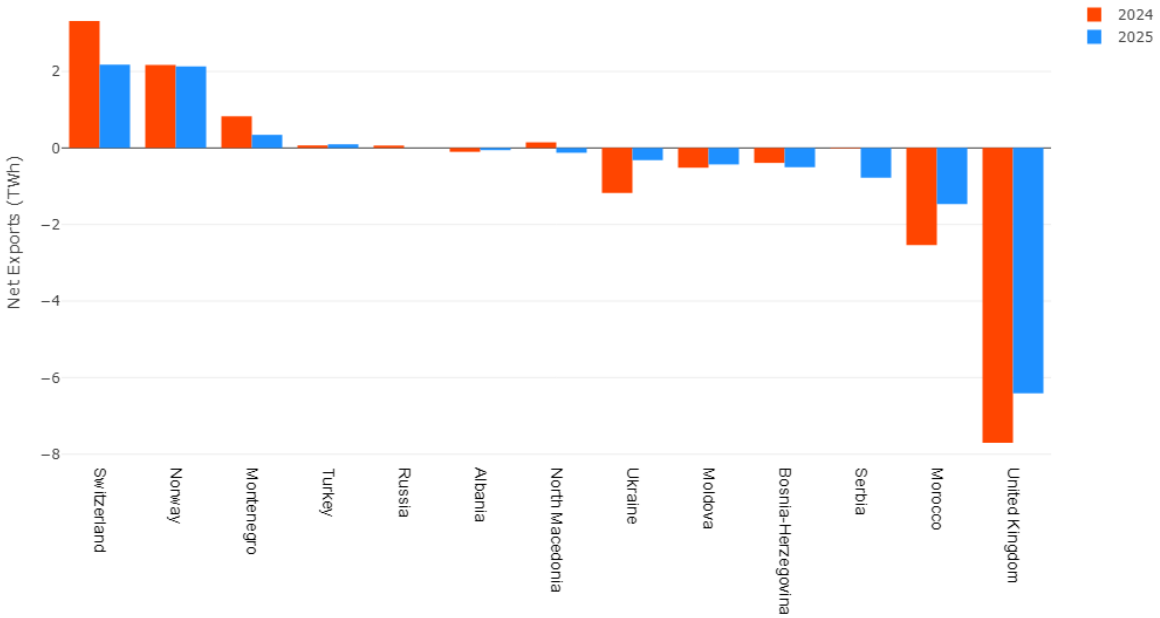
Figure 2416 - Member States' net scheduled commercial export/import positions within the EU in Q2 2025 and Q2 2024



Source: Scheduled Commercial flows ENTSO-E via Fraunhofer, TSOs

- **Figure 25** shows netted electricity exchanges with EU neighbours in Q2 2025. Great Britain reduced its import dependency from the EU, by registering 6 TWh of net imports in Q2 2025 (-17%). Switzerland and Norway were the largest net exporter to the EU (2 TWh).
- Net exports from the EU to Ukraine amounted to 0.3 TWh in Q2 2025, a decrease from Q2 2024 (1.2 TWh). Commercial exchanges of electricity between Continental Europe and Ukraine/Moldova started in 2022, after the successful synchronisation of the power systems. Since then, the TSOs of Continental Europe have regularly increased the capacity available for trading.

Figure 2517 – Extra-EU electricity commercial scheduled exchanges in Q2 2025 and Q2 2024 – netted



Source: Scheduled Commercial Flows ENTSO-E via Fraunhofer, TSOs. Positive values indicate net flows into the EU.

Retail markets

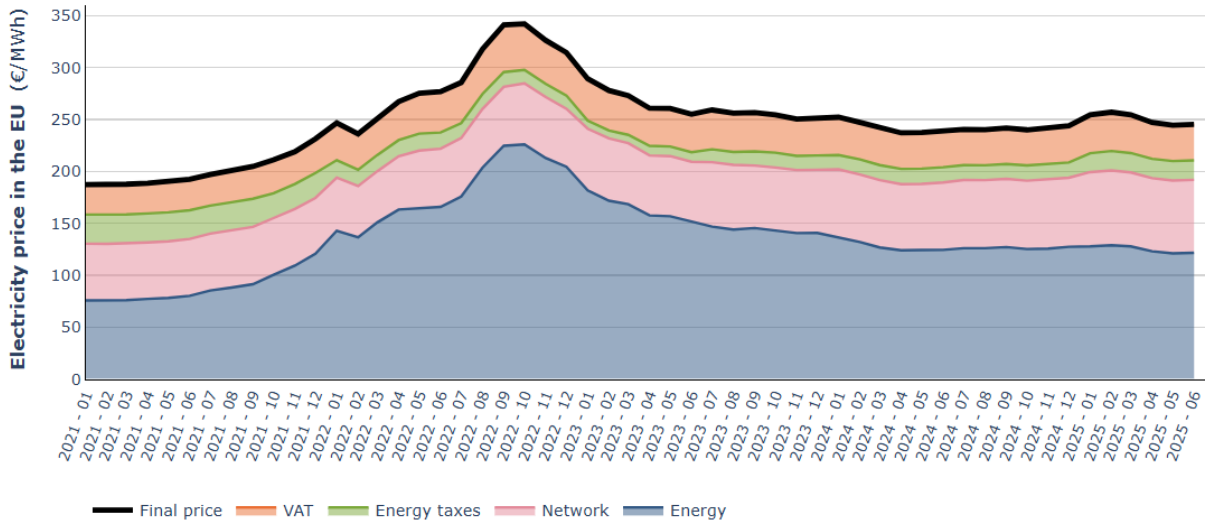
1.6 Retail electricity markets in the EU

Q2 2025	Q2 2024	Q2 2023
246 €/MWh ▲3%	238 €/MWh ▼−8%	259 €/MWh ▼−5%

Retail electricity prices in Q2 2025, Q2 2024, and Q2 2023

- Retail prices increased slightly (+3%) in Q2 2025 compared to Q2 2024, despite the energy component decreasing compared to last year's quarter. While VAT decreased, other energy taxes rose year-on-year with the overall tax component thus increasing by one percentage point. Additionally, network costs rose by two percentage points as well. **Figure 26** shows the monthly evolution of the EU average residential retail electricity prices over the last few years. The increase in average retail electricity prices for household costumers in EU capital cities can be attributed mostly to April 2025 when prices still remained at elevated levels from the previous quarter.

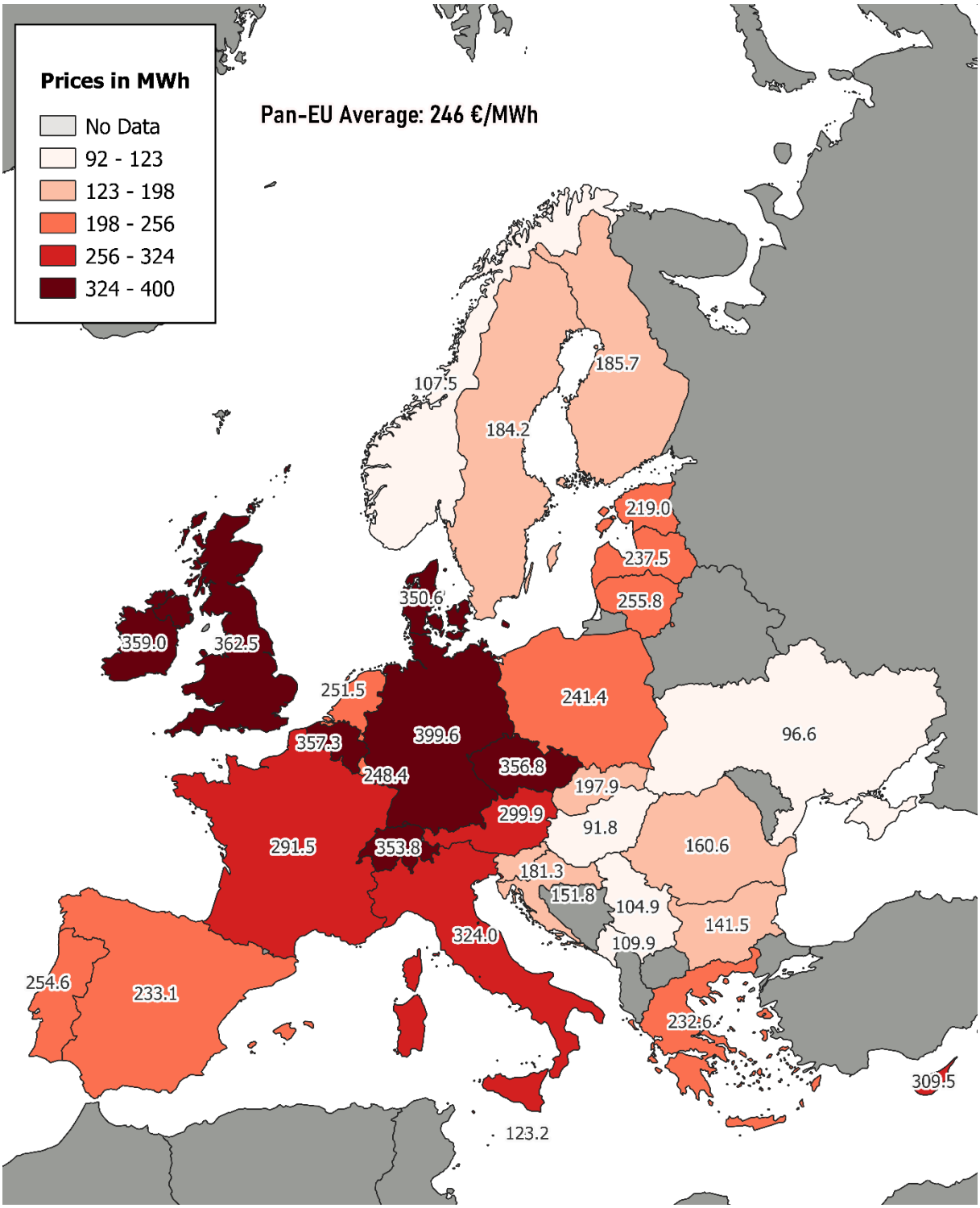
Figure 26 18 - Monthly average electricity price in the EU, paid by typical household customers



Source: VaasaETT

- **Figure 27** shows the average yearly electricity prices paid by households in capital cities in EU Member States and other European countries with typical annual consumption.

Figure 27 19 –Average household retail electricity prices in European capitals, Q2 2025



Source: VaasaETT

- **Figure 28** shows retail electricity prices for representative household consumers in European capital cities, and their composition divided into four categories (energy, network charges, energy taxes and the value added tax). In Q2 2025, the highest average prices were observed in Germany, Ireland and Belgium (400, 360 and 357 €/MWh, respectively). The lowest prices were recorded in Hungary, Malta and Bulgaria (92, 123 and 142 €/MWh), all countries with particularly low energy taxation for household consumers.
- In Q2 2025, the share of the energy component (including margin) was, on average, 50%, a decrease of almost 2 percentage points compared to Q2 2024. Meanwhile, the network and tax component of the final price increased by roughly 2 percentage points each.

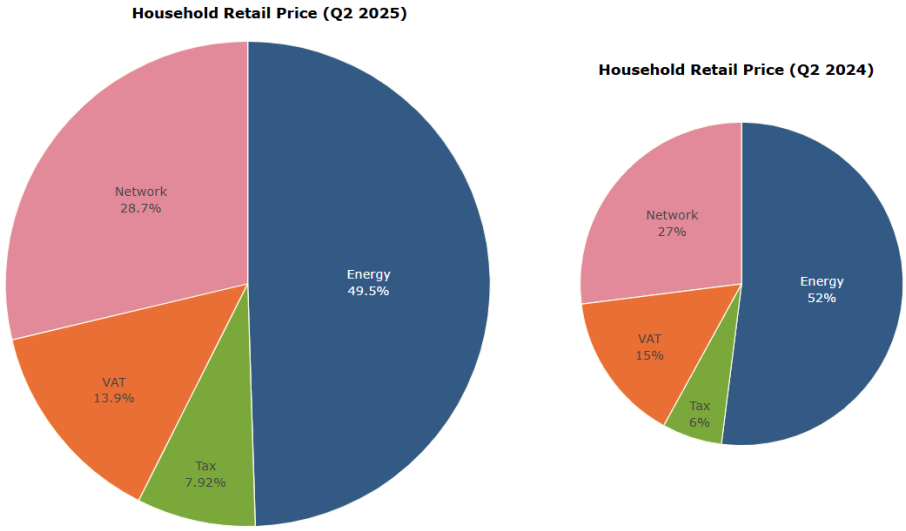
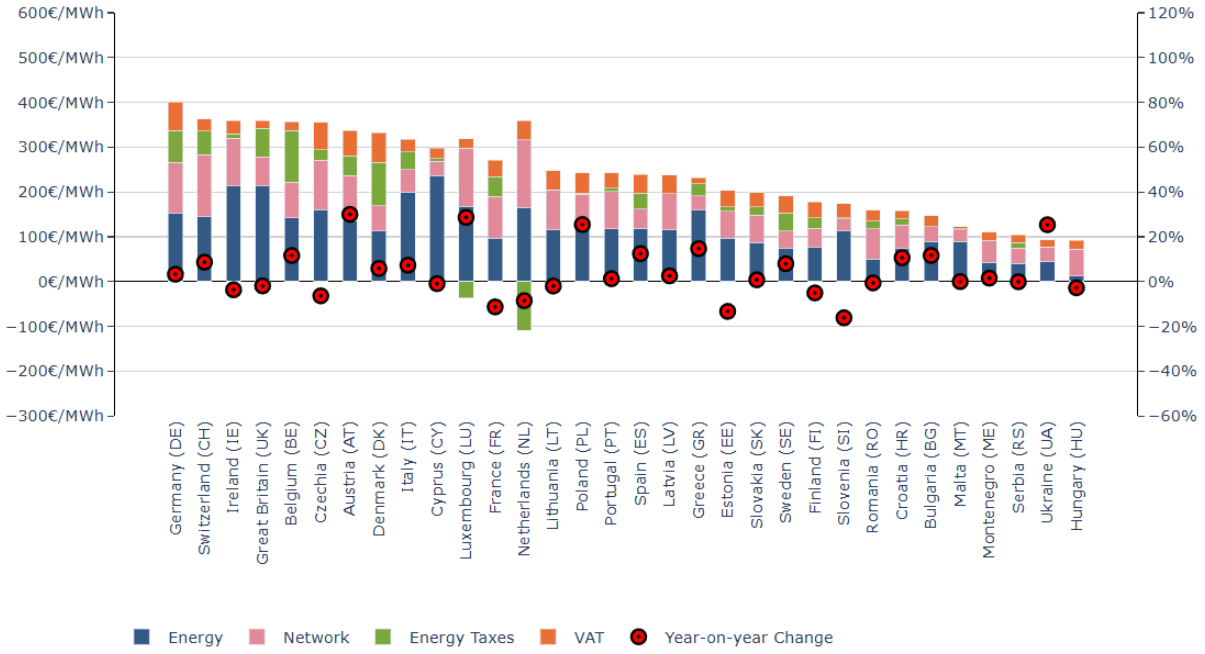


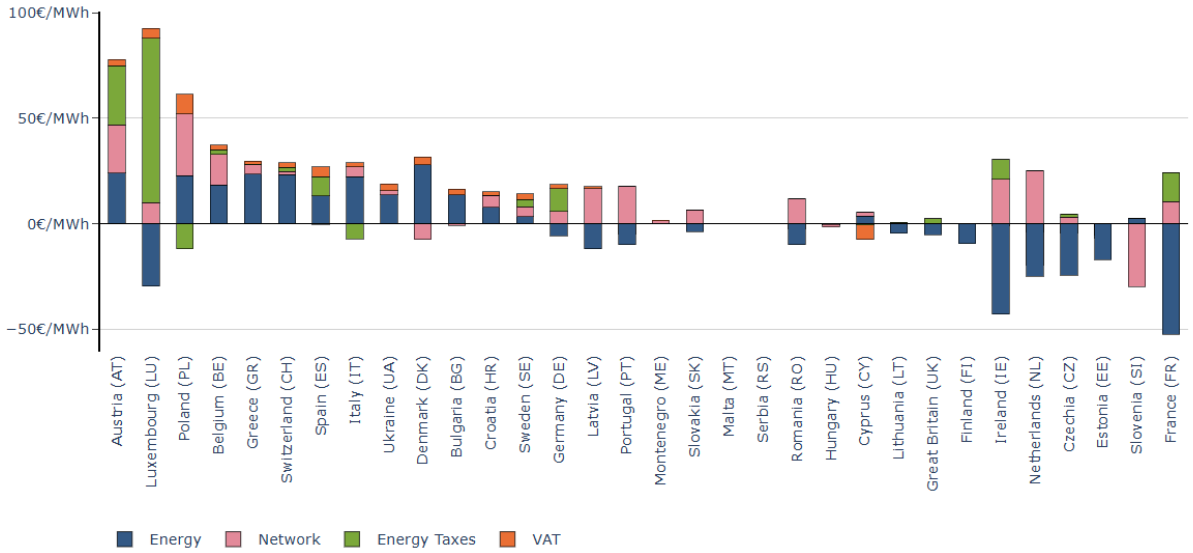
Figure 28 20 – The Household Energy Price Index (HEPI) in European Countries, Q2 2025



Source: VaasaETT

- Compared to Q2 2024, the largest price decrease in relative terms were observed in Slovenia (-16%), Estonia (-13%) and France (-11%). Conversely, Austria (+30%), Luxembourg (+29%) and Poland (25%) saw steeply rising household prices, driven by a combination of increasing grid fees and a larger energy component. Additionally, Luxembourg phased out its energy price cap in January 2025, resulting in steep price hikes. As shown in **Figure 29**, household price developments across Europe are heterogenous as likewise many countries saw significant decreases in the energy price component and thereby lower household prices.

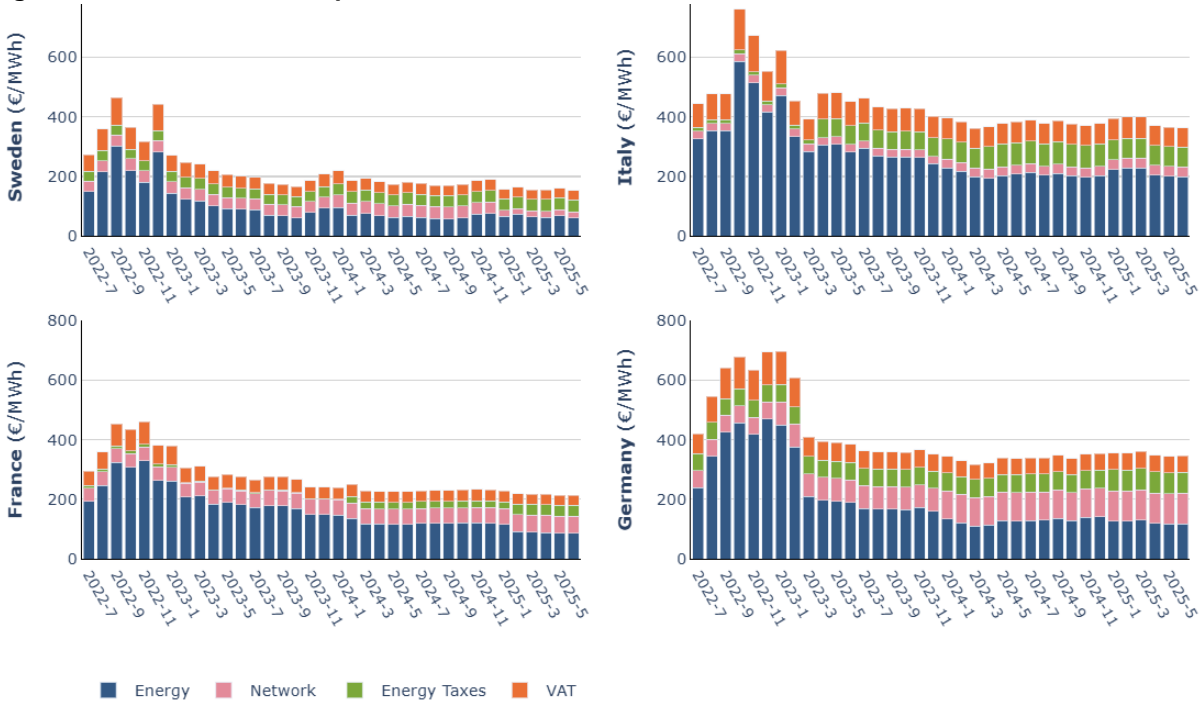
Figure 29 21 – Year-on-year change in electricity prices by cost components in European Countries comparing Q2 2024 and Q2 2025



Source: VaasaETT

- **Figure 30** shows industrial SMEs (IB Band) electricity prices for selected Member States across the years. End user prices in Italy were at 363 €/MWh, slightly more than in Germany (346 €/MWh), France (213 €/MWh) and Sweden (153 €/MWh). Prices were on a downward trajectory compared to the previous quarter across all four markets (in line with seasonal trends).

Figure 30 22 –Industrial retail prices for SMEs in selected EU countries

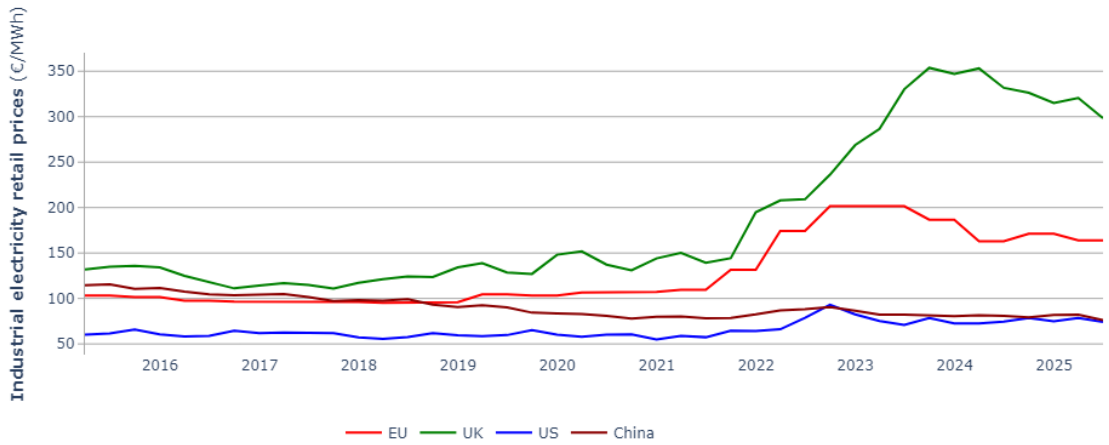


Source: VaasaETT

1.7 International comparison of retail electricity prices

- Figure 31 displays retail prices paid by industrial consumers in the EU[2] and in its major trading partners. According to the latest available data, electricity prices for industrial users in the EU, year-on-year, stayed flat in the first half of 2025 compared to the first half of 2024 (+0.6%). Similarly, In Q2 2025, US industrial retail prices stayed mostly flat (-0.4%), but remain significantly lower than in the EU. In Q2 2024, China (-5%) registered a year-on-year decrease in prices.

Figure 3123 – Retail electricity prices paid by industrial customers in the EU and its main trading partners



Source: Eurostat, EIA, DESNZ, DG ENER computations. Industrial prices in the EU are represented by the ID consumption band for the purposes of international comparison.

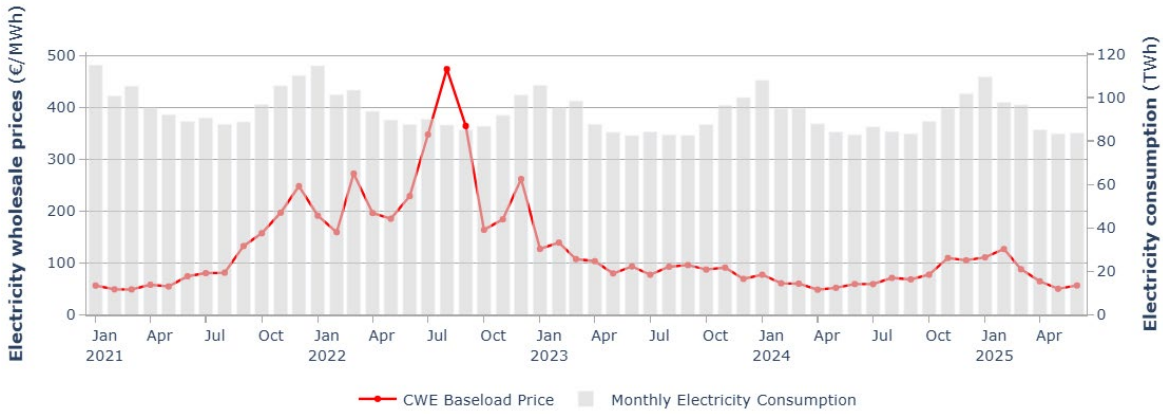
[2] The EU average is reported biennially in the Eurostat database. The prices in the quarter reflect electricity non-household retail prices from 2H 2024 for the ID band.

Annex

Regional wholesale markets

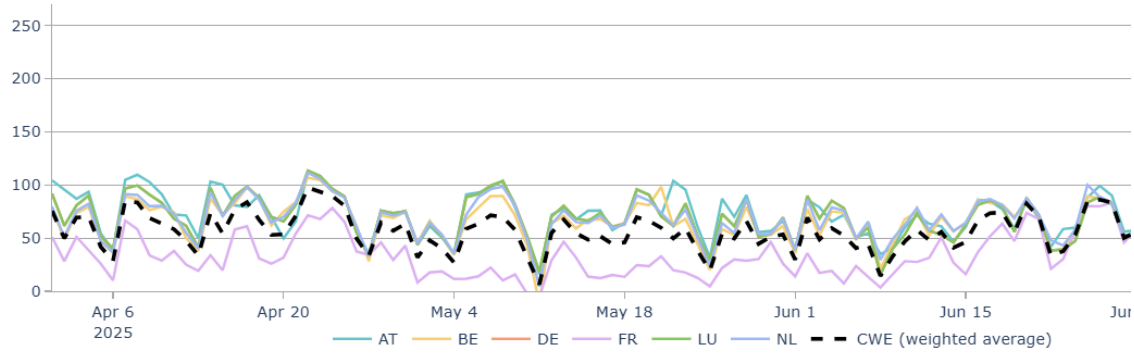
1.8 Central Western Europe (Austria, Belgium, France, Germany, Luxembourg, the Netherlands)

Figure I 24 – Monthly electricity consumption and monthly average prices in Central Western Europe



Source: S&P Global Platts, ENTSO-E, Eurostat

Figure II 25 – Daily average power prices on the day-ahead market in the CWE region



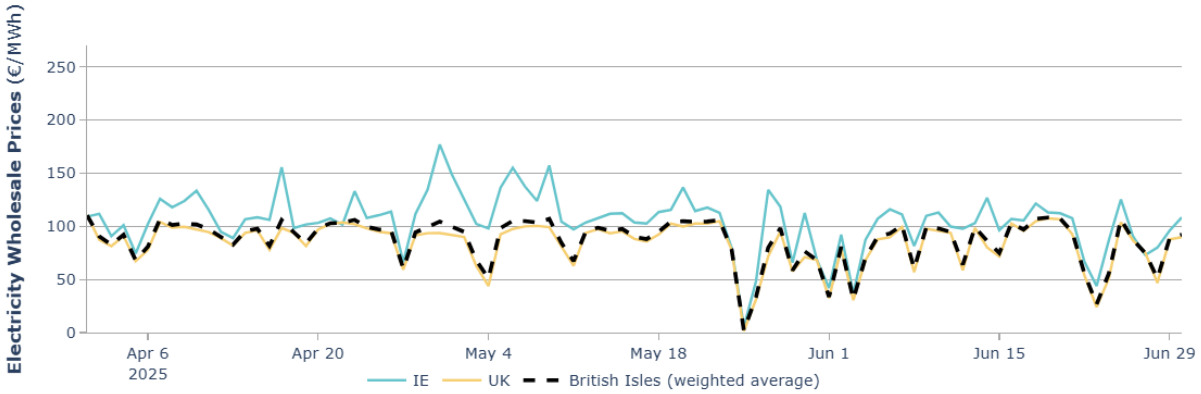
Source: S&P Platts, ENTSO-E, Eurostat

1.9 British Isles (GB, Ireland)

Figure 26 III– Monthly electricity consumption and monthly average prices in Great Britain and Ireland

Source: Bloomberg, ENTSO-E, GOV.UK, Eurostat

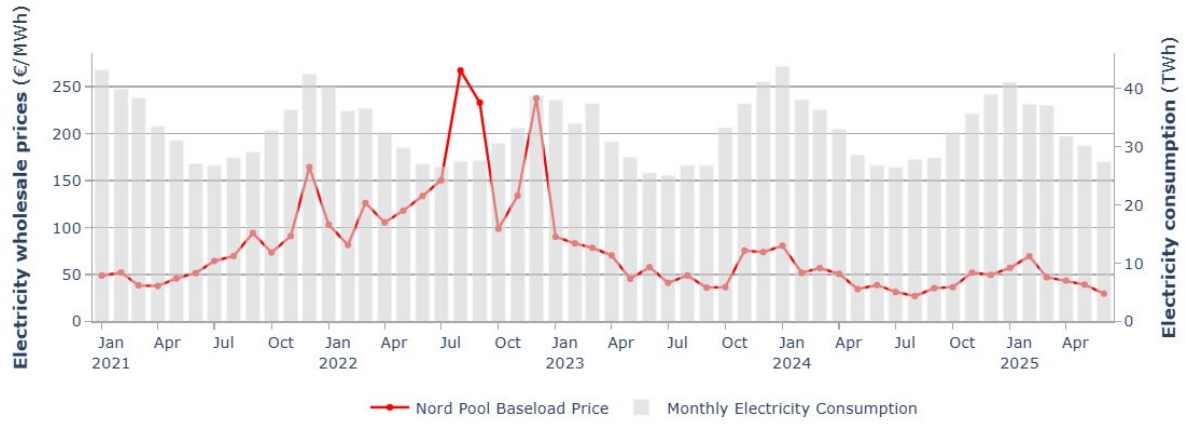
Figure IV27 – Daily average electricity prices on the day-ahead market in Great Britain and Ireland



Source: Bloomberg, ENTSO-E, GOV.UK, Eurostat

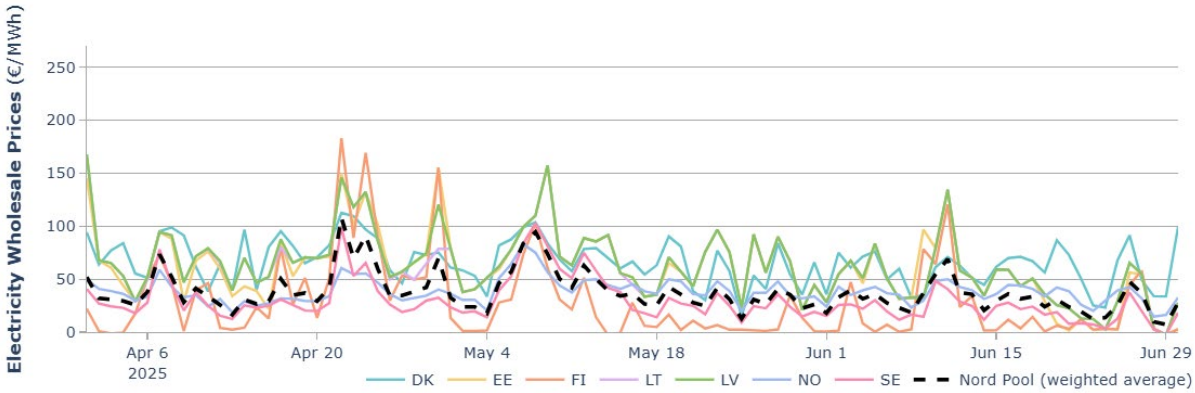
1.10 Northern Europe (Denmark, Estonia, Finland, Latvia, Lithuania, Sweden, Norway)

Figure V28 – Monthly electricity consumption and the average day-ahead wholesale prices in Northern Europe



Source: S&P Global Platts, Nord Pool spot market

Figure VI 29 – Daily average regional prices and the system price on the day-ahead market in the Nordic region



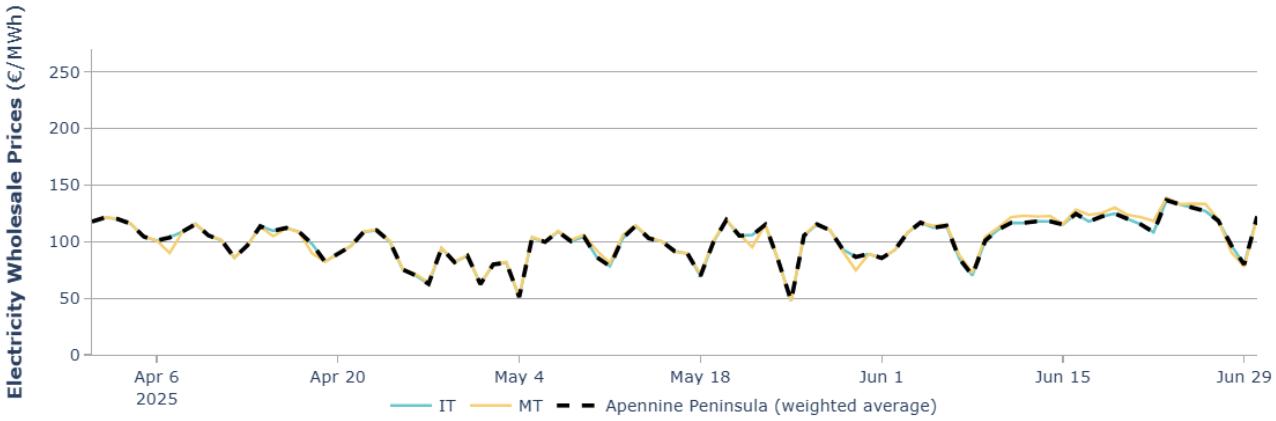
Source: S&P Global Platts, Nord Pool spot market

1.11 Apennine Peninsula (Italy, Malta)

Figure VII30 – Monthly electricity consumption and average day-ahead wholesale prices in Italy

Source: GME (IPEX), Eurostat

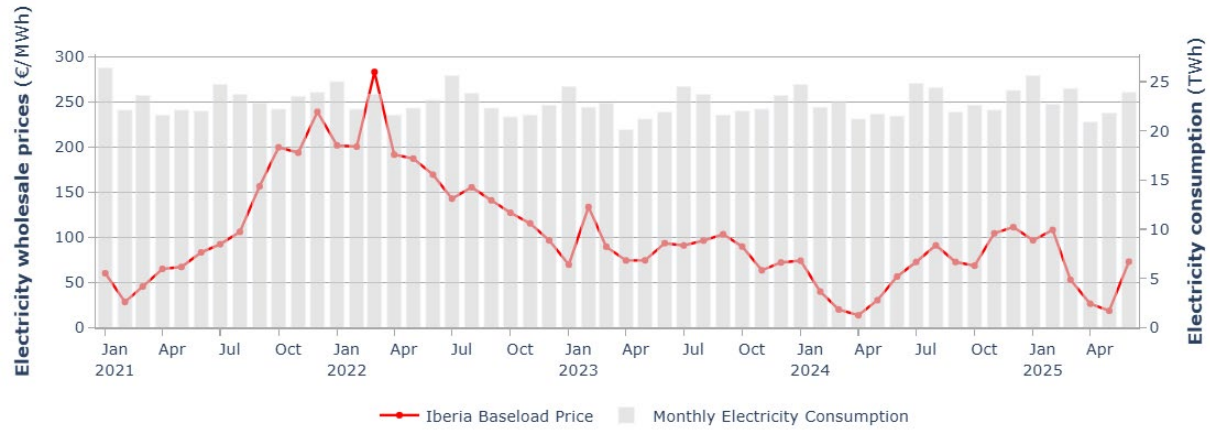
Figure VIII 31 – Daily average electricity prices in the Italian day-ahead market, within the range of different area prices



Source: GME (IPEX), Eurostat

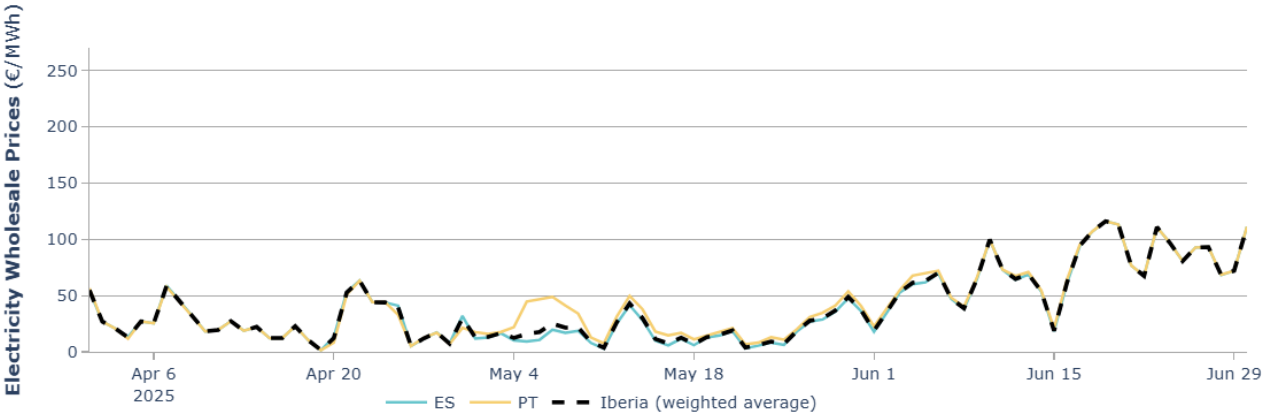
1.12 Iberian Peninsula (Spain and Portugal)

Figure IX 32 – Monthly electricity consumption and average day-ahead prices in the Iberian Peninsula



Source: S&P Global Platts, ENTSO-E, Eurostat

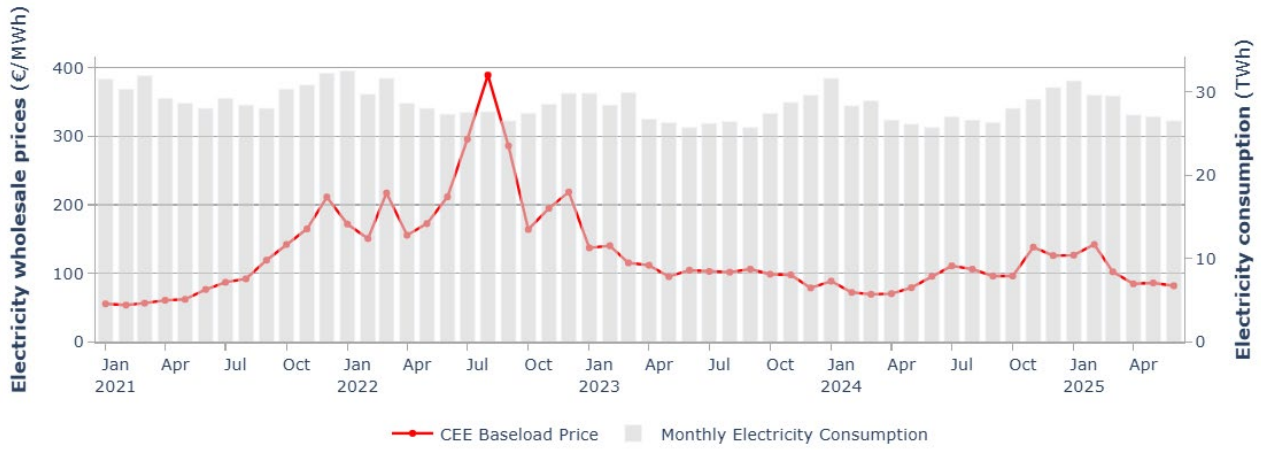
Figure X33 – Daily average electricity prices on the day-ahead market in the Iberian Peninsula



Source: S&P Global Platts, ENTSO-E, Eurostat

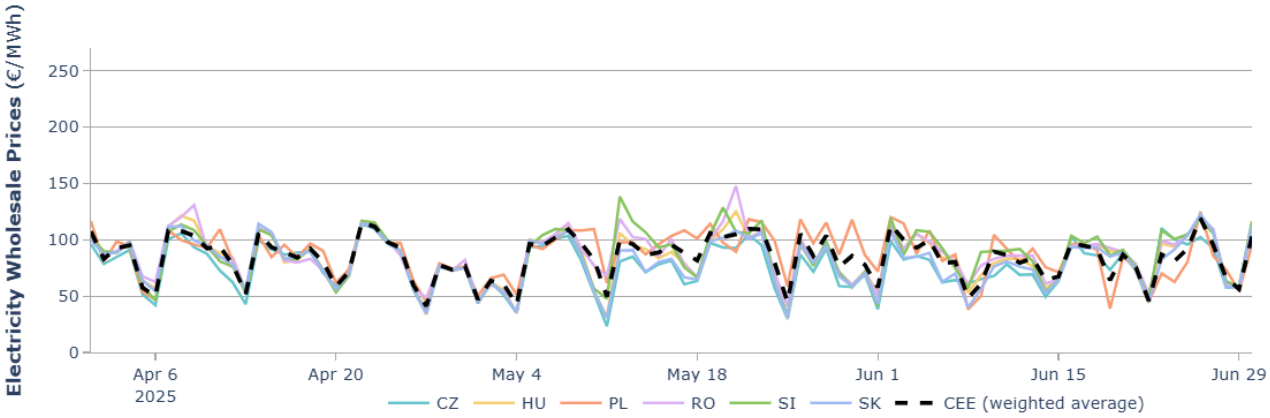
1.13 Central Eastern Europe (Czechia, Hungary, Poland, Romania, Slovakia, Slovenia)

Figure XI34 – Monthly electricity consumption and average day-ahead prices in Central Eastern Europe (CEE)



Source: ENTSO-E, Eurostat

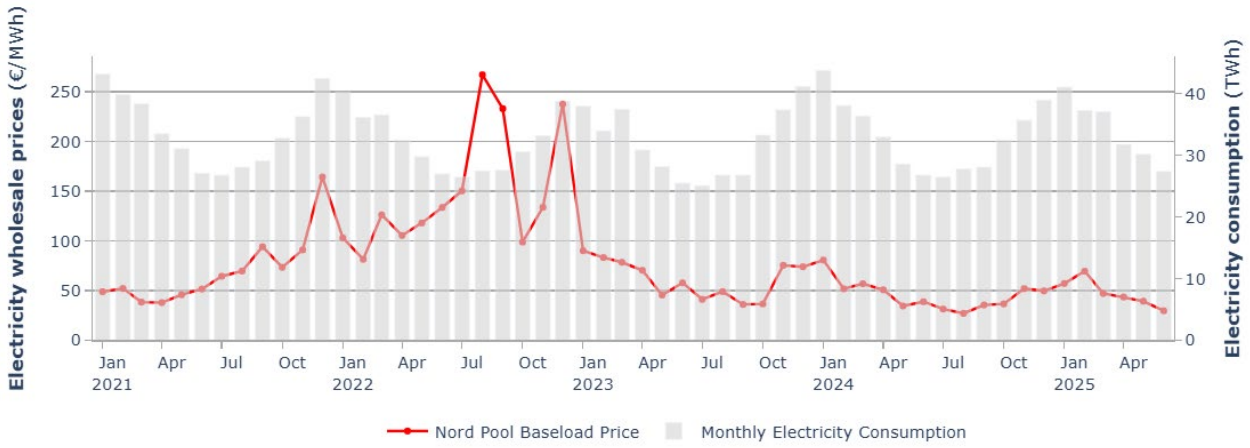
Figure XII 35 – Daily average power prices on the day-ahead market in the CEE region



Source: ENTSO-E, Eurostat

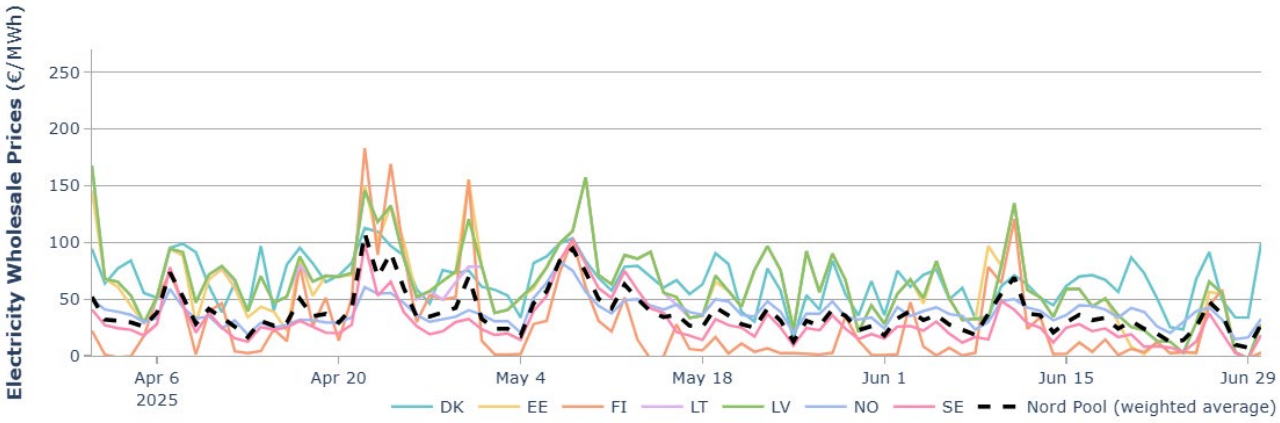
1.14 South-Eastern Europe (Bulgaria, Croatia, Greece and Serbia)

Figure XIII 36 – Monthly electricity consumption and baseload prices in South-Eastern Europe (SEE)



Source: ENTSO-E, Eurostat

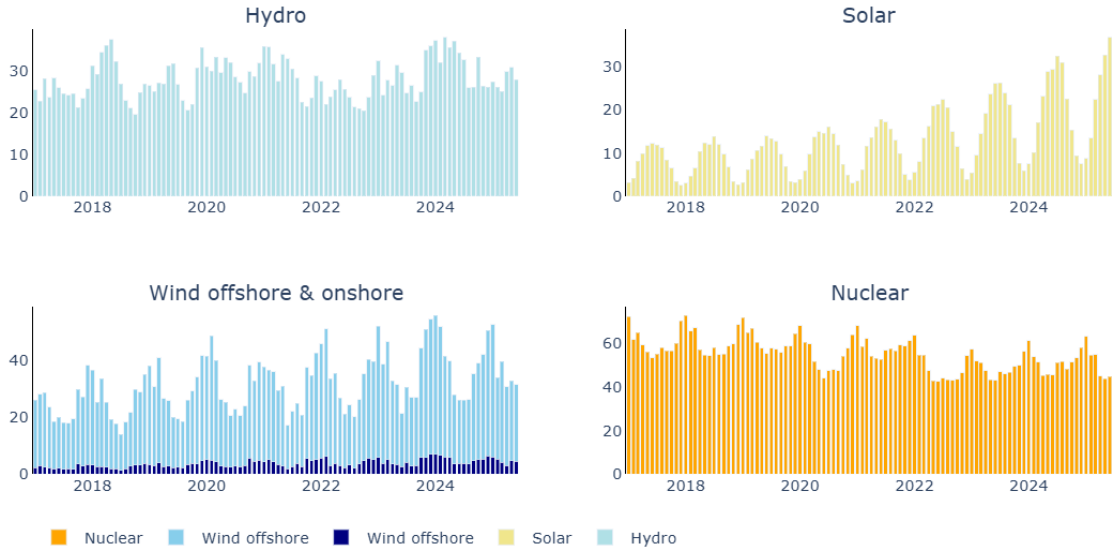
Figure XIV 37 – Daily average power prices on the day-ahead market in Bulgaria, Croatia, Greece and Serbia



Source: ENTSO-E, Eurostat

1.15 **Electricity generation**

Figure XV38 - Monthly renewable generation in the EU (TWh)



Source: ENTSO-E. Data represent net generation

Glossary

Backwardation occurs when the closer-to-maturity contract is priced higher than the contract which matures at a later stage.

Contango: A situation of contango arises in the when the closer to maturity contract has a lower price than the contract which is longer to maturity on the forward curve.

Emission allowances' spot prices are defined as prices for an allowance traded on the secondary market and with a date of delivery in the nearest December.

European Power Benchmark (EPB9) is a replacement of the former Platt's PEP index discontinued at the end of 2016, computed as weighted average of nine representative European markets' (Belgium, Czechia, France, Italy, Germany, Netherlands, Spain, the United Kingdom and the Nord Pool system price) day-ahead contracts.

EP5 is a consumption-weighted baseload benchmark of five most advanced markets offering a 3-year visibility into the future Markets included in the benchmark are France, Germany, the Netherlands, Spain and Nord Pool. Prices are weighted according to the consumption levels in individual markets. Forward prices are rolled over towards the end of each year, meaning that the year-ahead benchmark in 2021 shows the price for 2022; and the year-ahead curve in 2022, in turn, shows baseload prices for delivery in 2023.

Flow against price differentials (FAPDs): By combining hourly price and flow data, FAPDs are designed to give a measure of the consistency of economic decisions of market participants in the context of close to real time operation of electrical systems.
With the closure of the day-ahead markets (D-1), the prices for each hourly slot of day D are known by market participants. Based on the information from the power exchanges of two neighbouring areas, market participants can establish hourly price differentials. Later in D-1, market participants also nominate commercial schedules for day D. An event named 'flow against price differentials' (FAPD) occurs when commercial nominations for cross border capacities are such that power is set to flow from a higher price area to a lower price area. The FAPD chart in this quarterly report provides detailed information on adverse flows, presenting the ratio of the number of hours with adverse flows to the number of total trading hours in a quarter.

Relative standard deviation is the ratio of standard deviation (measuring the dispersion within a statistical set of values from the mean) and the mean (statistical average) of the given set of values. It measures in percentage how the data points of the dataset are close to the mean (the higher is the standard deviation, the higher is the dispersion). Relative standard deviation enables to compare the dispersion of values of different magnitudes, as by dividing the standard deviation by the average the impact of absolute values is eliminated, making possible the comparison of different time series on a single chart.

Retail prices paid by households include all taxes, levies, fees and charges. Prices paid by industrial customers exclude VAT and recoverable taxes. Monthly retail electricity prices are estimated by using Harmonised Consumer Price Indices (HICP) based on bi-annual retail energy price data from Eurostat.

Tariff deficit expresses the difference between the price (called a tariff) that a *regulated utility*, such as an electricity producer is allowed to charge and its generation cost per unit.