Nominated Electricity Market Operator
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Monthly European Energy Market Trends

October-2025

Note: This is a new report that is intended to be issued monthly. The format and content may change slightly over the coming months, based on feedback from readers. Please feel free to send in any comments or suggestions for improvements to info@semopx.com

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1. Introduction

The retail cost of electricity in Ireland – the price paid by households and businesses – consists of several key cost components. These reflect not just the cost of generating electricity but delivering it to where it is needed, managing the electricity system and government charges.

The wholesale electricity price relates to the cost of generating electricity and, typically, accounts for 30-40% of the retail cost of electricity. The wholesale electricity price is the price that electricity is bought and sold in bulk, typically by electricity generators, retailers and large energy consumers.

This report provides a summary of the latest trends in the factors influencing Western Europe and neighbouring countries wholesale electricity prices with a particular focus on the Single Electricity Market (SEM).

Section 2 provides a summary of the key trends seen in October 2025.

Section 3 compares wholesale electricity prices across key European jurisdictions over October 2025.

Sections 4, 5 and 6 provide further detail on the main drivers for the wholesale electricity prices namely gas prices, generation mix and interconnection.

Section 7 provides a glossary of some of the more technical terms used in this report.

2. Summary of Trends

In October 2025, wholesale electricity prices across Western Europe averaged 8% lower year-on-year.

The SEM remained the most expensive market, averaging €100/MWh, reversing the downward trend in SEM average prices observed since July. Prices were 6% higher month-on-month but still 18% below October 2024.

Norway reclaimed its position as the cheapest jurisdiction, while France recorded the largest monthly increase (~65%) alongside this Belgium also saw a sharp rise (+22%)

Gas prices fell 5% month-on-month amid mild weather, strong wind output, and stable LNG supply.

Solar generation rose 24% year-on-year but fell 34% from September, while wind output increased 21% year-on-year and 18% month-on-month. SEM and Great Britain saw wind gains of 15% and 4%, respectively, though gas generation also rose significantly (+14% in SEM, +46% in GB), contributing to prices. France experienced a 150% surge in gas generation and an 11% demand increase, making it the system with the largest price jump. Belgium faced nuclear shortfalls after Tihange 1's closure, pushing prices.

Interconnector flows broadly followed price signals. SEM closed as a net importer but increased exports to GB by 56% year-on-year.

3. Wholesale Electricity Prices

Wholesale electricity prices fluctuate over time in Western Europe and neighboring regions based on several factors, including gas prices, renewable generation, interconnection, and seasonal demand.

In October 2025, average wholesale electricity prices in the region were 8% lower than in October 2024. This decrease was mainly driven by a 24% drop in gas prices and a 20% increase in renewable generation.

Compared to September 2025, prices rose by 13%, despite a 5% decrease in gas prices. This was due to a 30% increase in gas-fired generation, combined with a 6% rise in demand and a reduction in other energy sources.

Among the observed jurisdictions, SEM recorded the highest average price at €100/MWh, breaking the downward trend since July 2025. This was 6% higher than September, which had the lowest average price so far in 2025. SEM also showed one of the largest year-on-year differences, about 18% lower than October 2024.

France lost its position as the cheapest system, with Norway now being the lowest-priced market. France also showed the largest month-on-month increase, around 65%.

Belgium recorded one of the largest increases compared to September (+22%)

From April, Norway's prices had aligned with continental Europe. However, in October, Norway broke this trend, showing a continuous decline and reclaiming its title as the cheapest jurisdiction.

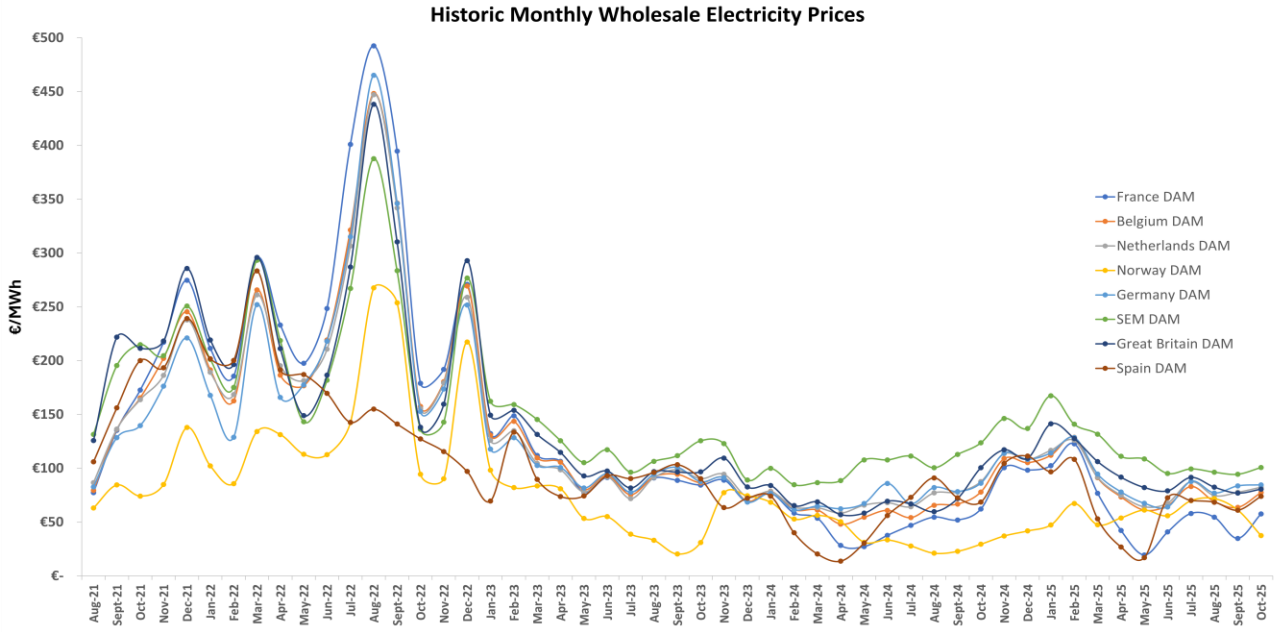

Figure 1: Historical Average Monthly Wholesale Prices in European Jurisdictions

Data source: Montel EnAppSys [BE, FR, GB, NO, NE], ENTSO-E transparency platform [DE, SP], SEMOpx [SEM]

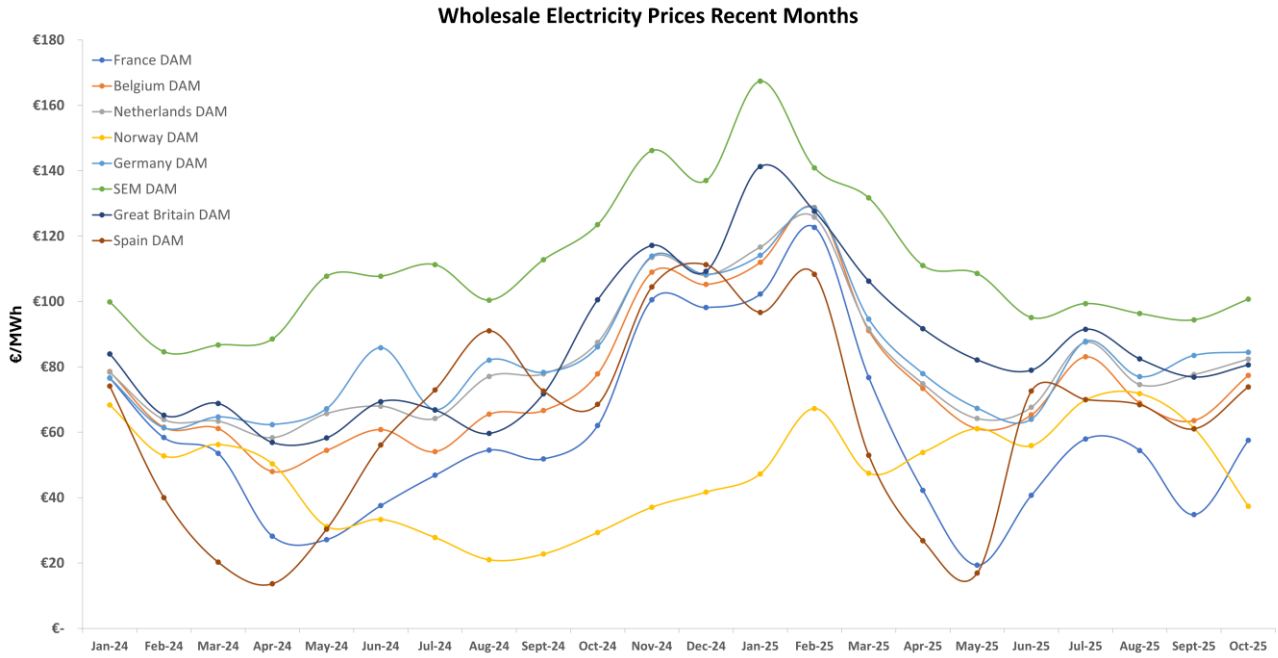

Figure 2: Average Wholesale Prices Recent Months - Jan 2024 to Oct. 2025

Data source: Montel EnAppSys [BE, FR, GB, NO, NE], ENTSO-E transparency platform [DE, SP], SEMOpx [SEM]

4. Gas Prices

Gas prices have a substantial impact on wholesale electricity costs across Western Europe and neighboring regions. Markets with a high dependence on gas-fired generation, such as SEM, are particularly affected.

Gas prices in October 2025 were influenced by mild weather, strong wind generation, and abundant LNG supply, falling 5% compared to September, reflecting relatively stable market conditions.

Storage levels in Europe remained stable at 82%, with reduced injections and some withdrawals.

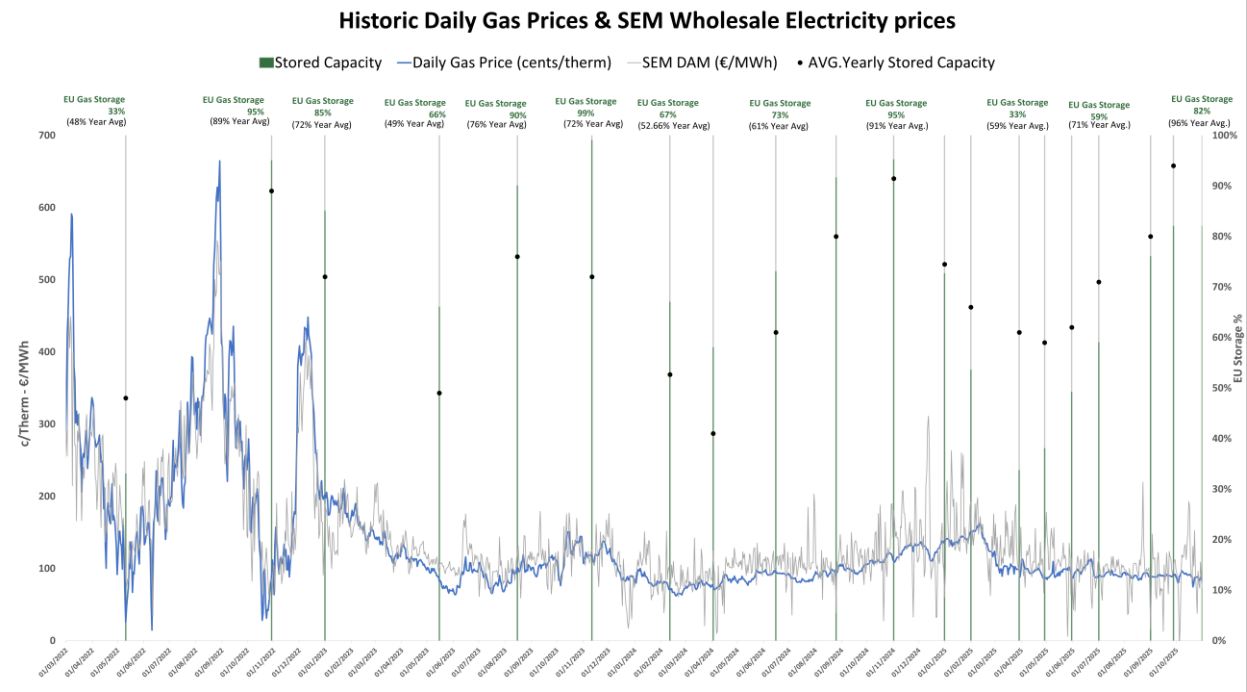

Figure 3: Historical Gas Prices

Data source: GMO operational Data Daily gas price, ENTSO-g Gas dashboard

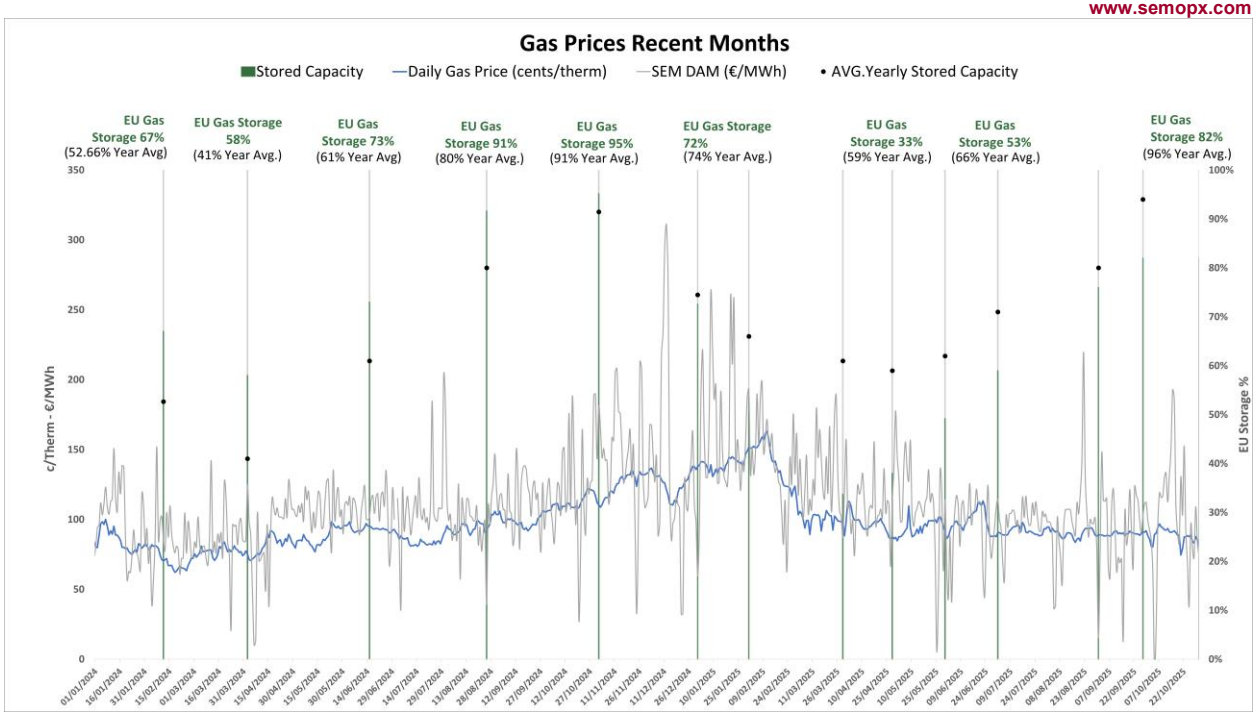

Figure 4: Gas Prices Recent Months - Jan 2024 to October 2025.

Data source: GMO operational Data Daily gas price, ENTSO-g Gas dashboard

5. Generation Mix

The generation mix continues to play a crucial role in shaping wholesale electricity prices across Western Europe and neighboring regions. Generally, a higher share of renewables results in lower prices, while lower renewable output increases reliance on conventional generation.

In October 2025, solar generation increased by 24% year-on-year, but output fell 34% compared to September, as expected with the shorter daylight hours. Wind generation rose 21% year-on-year and 18% month-on-month.

The impact of renewables varied by country. SEM and GB, both heavily reliant on renewables, saw wind power increase by 15% and 4%, respectively, compared to September, while solar dropped by about 50%. Despite higher renewables, gas generation rose by 14% in SEM and 46% in GB.

France experienced a 30% increase in wind output and a 14% decrease in solar, but demand rose 11% from September, leading to a 150% surge in gas generation (0.4 TWh to 1.06 TWh) and a 4% increase in nuclear output.

Belgium faced a nuclear shortfall after Tihange 1 (962 MW) shut down at the end of September after 50 years of service. Nuclear output was 26% lower year-on-year and 4% lower than September.

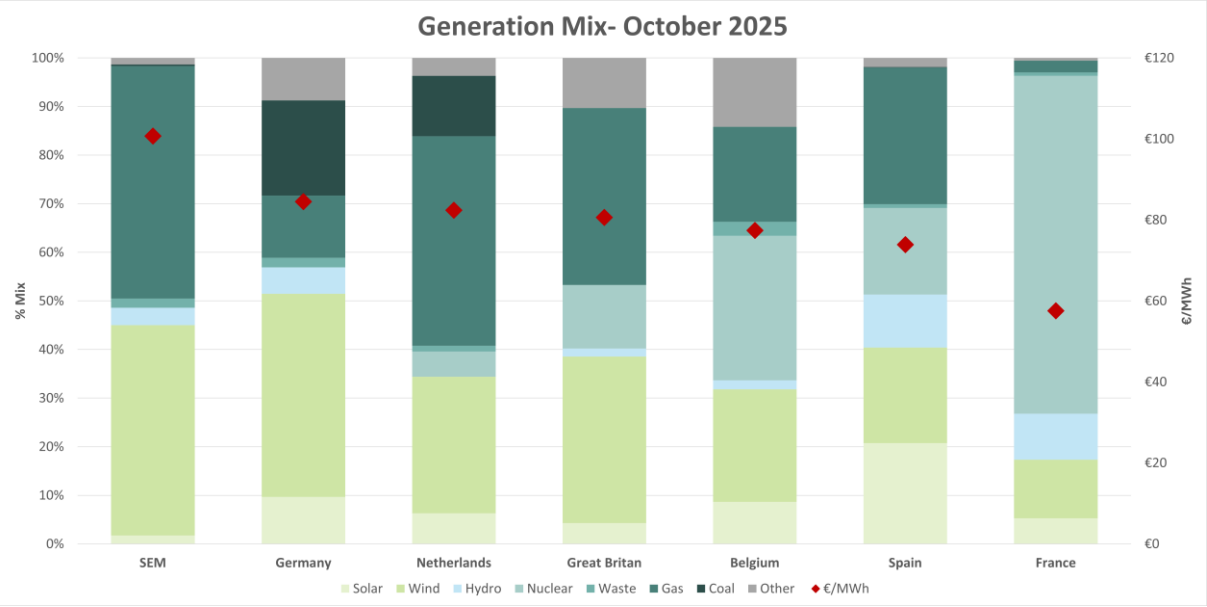

Figure 5: Generation Mix and Prices in Selected European Jurisdictions – October. 2025.

Data source: Montel EnAppSys [Prices - BE, FR, GB, NO, NE], Fraunhofer Energy-Charts [Fuel Mix - BE, FR, GB, NO, NE], ENTSO-E transparency platform [DE, SP], SEMOpx [SEM]

6. Interconnector Flows

Interconnection plays a key role in enhancing the efficiency and stability of the electricity market across Western Europe and neighboring regions by enabling electricity to flow from low-price areas to high-price areas.

In October 2025, interconnector flows broadly followed market price signals. Exports from France decreased. However, flows into France did not rise significantly,

Overall, flows seemed to follow wind availability.

SEM recorded a 26% increase in exports year-on-year and a 56% increase in imports from GB, thanks to strong renewable performance.

Figure 6: Europe Interconnector Physical Flows – October. 2025.

Data source: Fraunhofer Energy-Charts, ENTSO-e transparency platform, SEMOpx

7. Market Events

7.1.1 Storm Amy 4th October 2025

On October 4, the wind forecast showed consistent generation of 5 GW in the SEM, exceeding demand from midnight until noon. This coincided with the peak impact of Storm Amy, a powerful storm that swept across Ireland, GB, and Northern Europe between October 3 and 4.

Storm Amy brought severe winds, with gusts exceeding 95 mph in parts of Scotland and Ireland. The storm significantly boosted wind generation across Europe, creating an oversupply that drove electricity prices into negative territory in several markets, including SEM, Great Britain, and Germany.

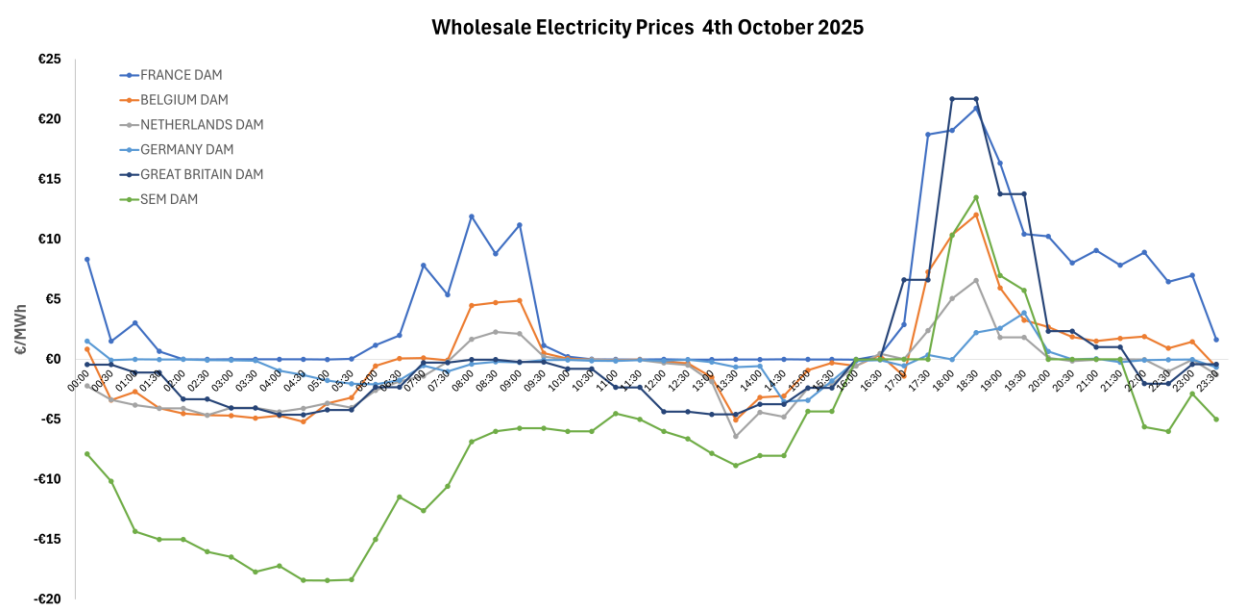

Figure 6: DAM Wholesale Electricity prices 4th October 2024

Data source: Montel EnAppSys [BE, FR, GB, NE], ENTSO-E transparency platform [DE], SEMOpx [SEM]

In the SEM Day-Ahead Market (DAM), wind reached a record share, accounting for 78% of all sold volumes. The remaining volumes came from Asset Units (Aus) (9%) and other price-taker units. Prices dropped to nearly –20 €/MWh, among the lowest of the year and the first time that the SEM show more negative prices in a day in the DAM compared other jurisdictions. These negative prices were mainly caused by wind units bidding at minimum or negative prices, and some AUs also submitted negative bids, displacing some wind units that had offered at zero prices.

In the IDA1 market, volatility was higher than in DAM, with prices alternating between negative and positive throughout the day. Wind continued to offer significant volumes, but negative priced offers decreased, and units that had bid at zero in DAM repeated these bids.

Interconnectors were net exporters during the morning with prices cheaper than GB.

8. Glossary

The glossary provides a description of the key terms used in the report.

Term	Definition
Average Monthly Wholesale Prices	Refers to the average of the hourly day-ahead wholesale electricity prices for a given month.
Capacity Factor	Is a measure of how much energy a generator produces relative to its technical maximum energy output. It is especially relevant for renewable sources like wind or solar where generation levels are variable dependent on the wind or solar intensity.
Day-Ahead Market (DAM)	The Day-Ahead Market is the forward electricity market where electricity is bought and sold one day in advance of the actual delivery. It is the key index for wholesale electricity prices.
Wholesale Electricity Price	Refers to the prices for which electricity is bought and sold in bulk, typically by electricity generators, retailers and large energy consumers. It is a key component of the cost electricity but represents only part of the total cost of electricity supply.
SEM	The Single Electricity Market is the electricity market arrangements that cover the island of Ireland namely Ireland and Northern Ireland.