

# March Market Watch

Highlights from March in Day-Ahead electricity market

# About this Market Watch



The data analysed in this Market Watch was collected from ENTSO-E's Transparency Platform and JAO Data Portal; following time interval is used for the analysis:

- Prices - 2024: March 1st 00:00 – 31st March 23:00 and 2023: March 1st 00:00 – 31st March 23:00
- Actual aggregated generation by Renewables (Solar + Wind): March (2023 and 2024) 1st 00 :00 – 31st March 23:45.
- Actual Load: March 2023 and March 2024
- Net positions: March 2024
- Polish Allocation constraints: March 2024

Bidding zones regarded in Capacity calculation regions (CCRs):

- Baltic: Estonia, Finland, Latvia, Lithuania, Poland, Sweden (bidding zone SE4 only)
- Core: Austria, Belgium, Croatia, Czech Republic, France, Germany/Luxembourg, Hungary, Netherlands, Poland, Romania, Slovakia, Slovenia
- GRIT: Italy, Greece
- Hansa: Denmark, Germany/Luxembourg, Netherlands, Poland, Sweden (bidding zone SE4only)
- IT North: Austria, France, Italy (bidding zone NORD only), Slovenia
- Nordic: Denmark, Finland, Norway, Sweden
- SEE: Bulgaria, Greece, Romania
- SWE: France, Portugal, Spain.

# Key insights



**European Price Dynamics:** In March, the European electricity market continues its downward trend: persistently low average day-ahead electricity prices hovering around €64/MWh. This pattern was predominantly influenced by lower demand and robust renewable generation. The month saw the resurgence of the negative prices in Core and the Nordic region. Moreover, the price spreads for Q1 remain lower than the previous year, indicating less volatility in the electricity prices



**Market integration across Europe:** The trend of price convergence persists in Europe, with the Core region maintaining price differences below €10/MWh for approximately 40% of the time throughout March. Allocation constraints emerge as a significant impediment to enhanced price convergence, notably affecting bidding zones such as Italy-North and Poland. Italy-North consistently struggles with congested borders, resulting in elevated price spreads across its bidding zone borders for a considerable duration. Similarly, Poland's allocation constraint led to elevated prices and widened spreads across its bidding zone borders.



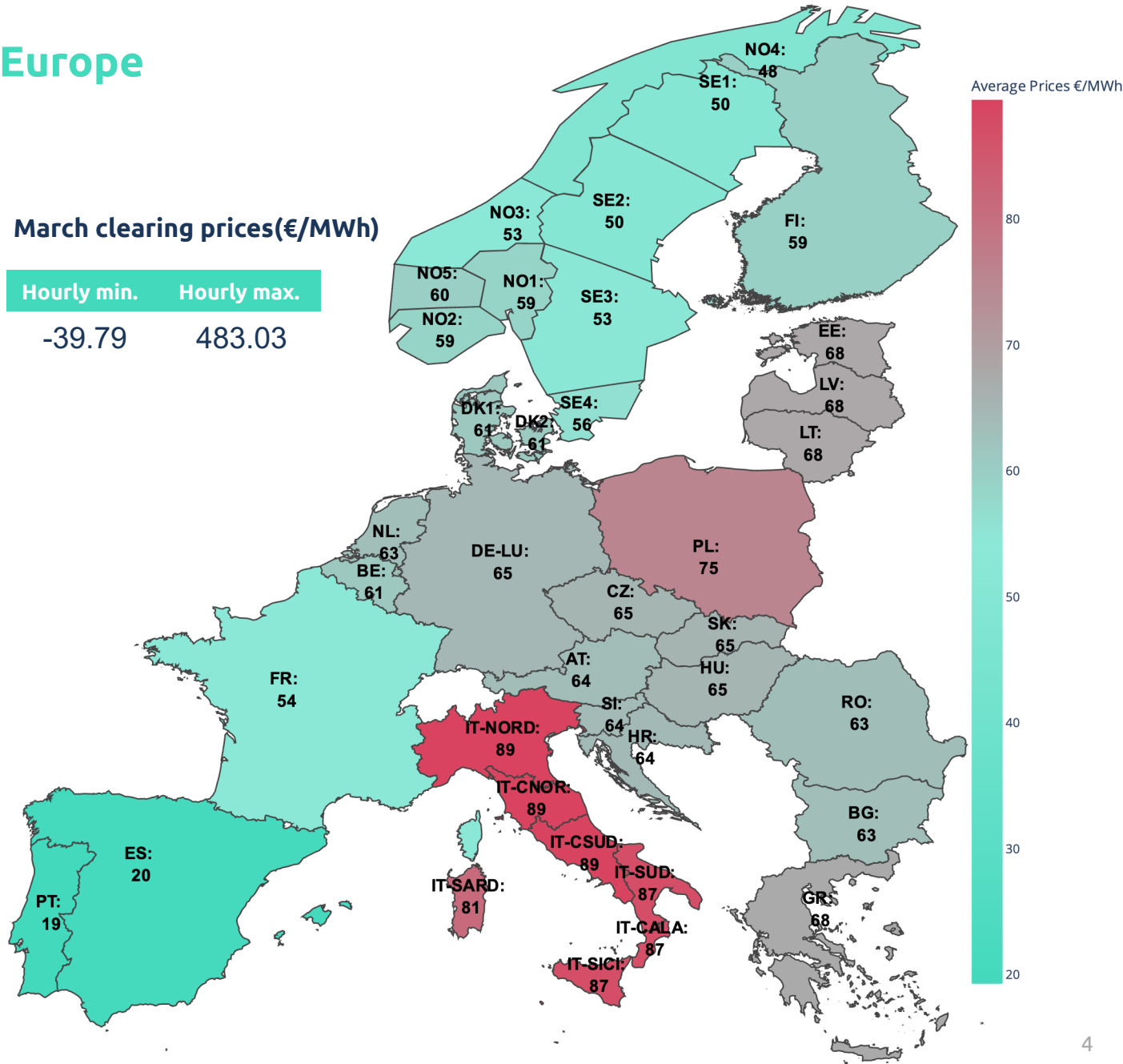
**Impact of Renewable Generation:** Renewable energy sources, particularly solar power, played a pivotal role in shaping market dynamics. The proliferation of large-scale solar generation facilities notably contributed to instances of negative prices, exemplified by occurrences in the Netherlands. This phenomenon was underscored by the emergence of 'duck curve' patterns, reflecting the challenges of balancing supply and demand in the face of high renewable energy generation.

# Europe's electricity price trends

## Strong price coupling observed across Europe

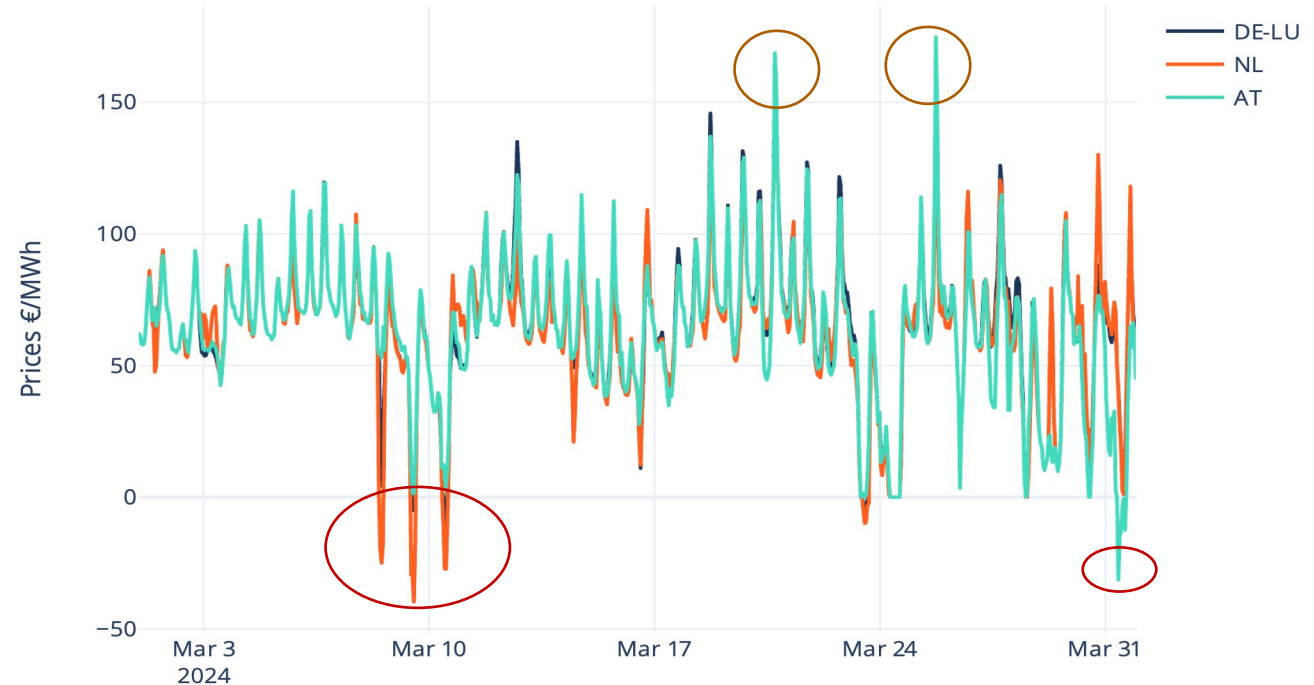
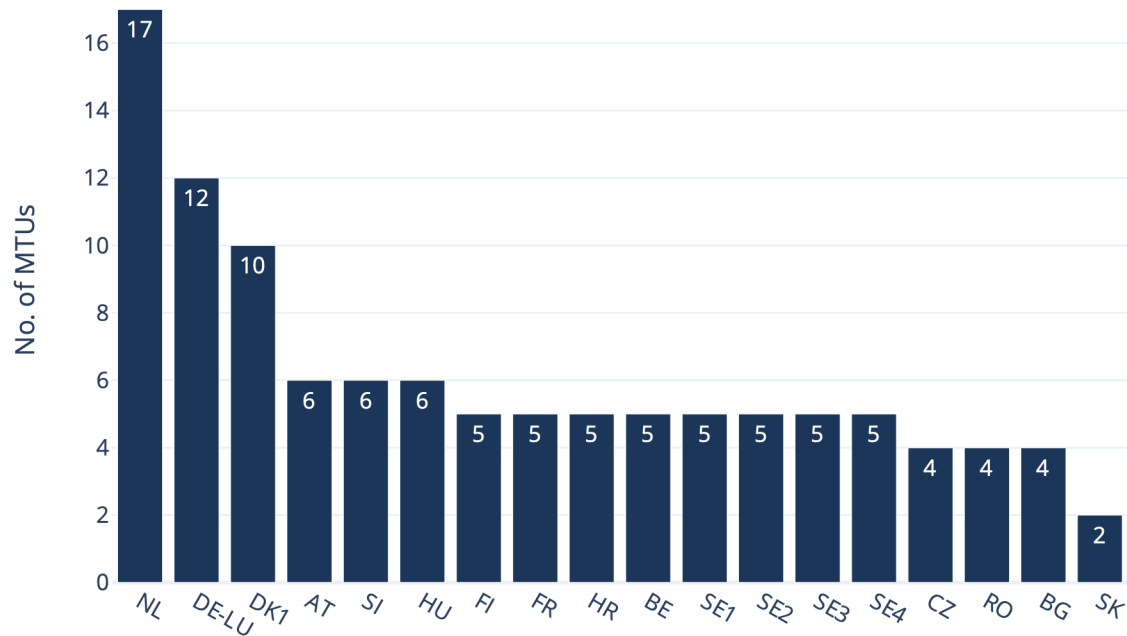
In March, the European electricity market continued its trend towards lower prices, with the average price in SDAC of around €64/MWh, consistent with the previous month. The month saw the emergence of **negative price trends across Europe**, attributed to favorable wind conditions and sunny days, demonstrating a notable impact of renewables on the power systems.

Price convergence in Core remains robust, except for Poland, for which its allocation constraint caused higher prices, as imports of cheaper electricity were constrained. On the contrary, France showed relatively stable prices compared to neighboring zones and, due to significant nuclear generation, maintains its status as the bidding zone with the lowest prices in the Core region. Italy maintains its position as the priciest region in SDAC, while Portugal and Spain continue to experience low prices.



# Negative prices are back after the winter!!!

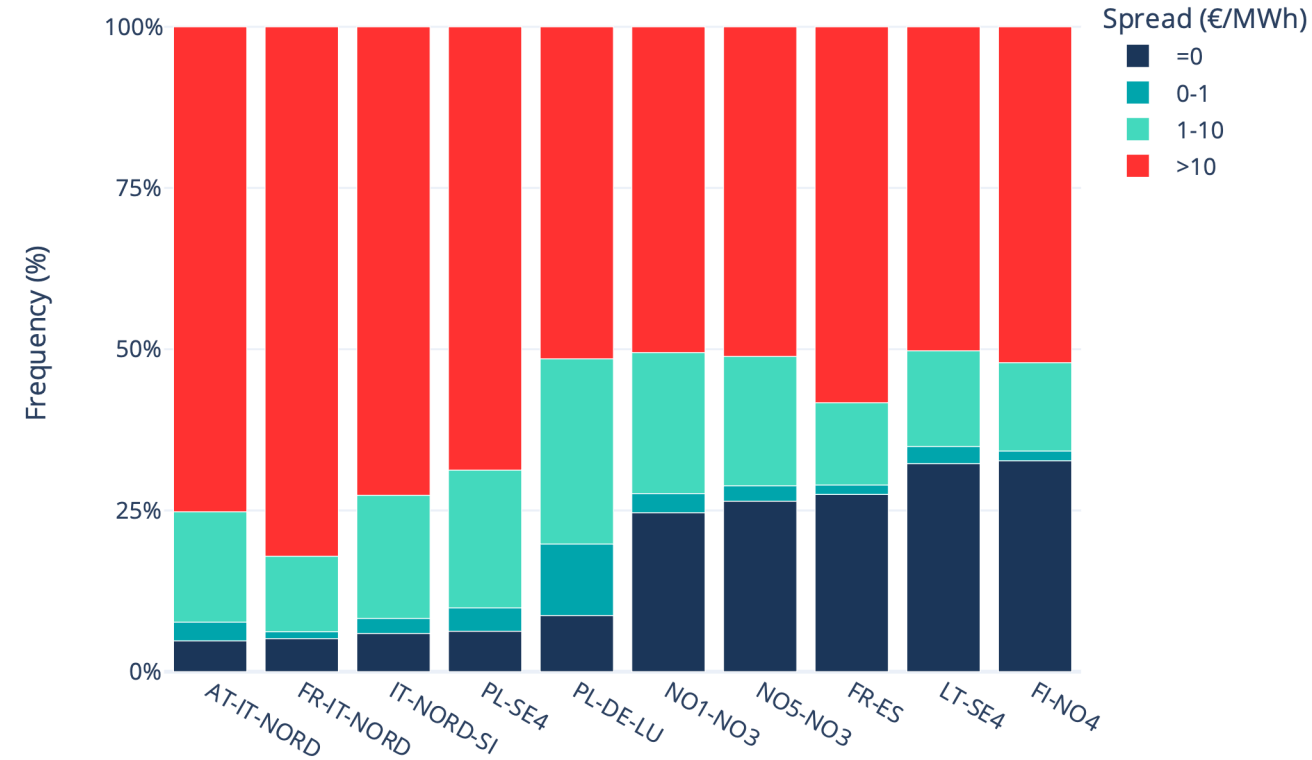
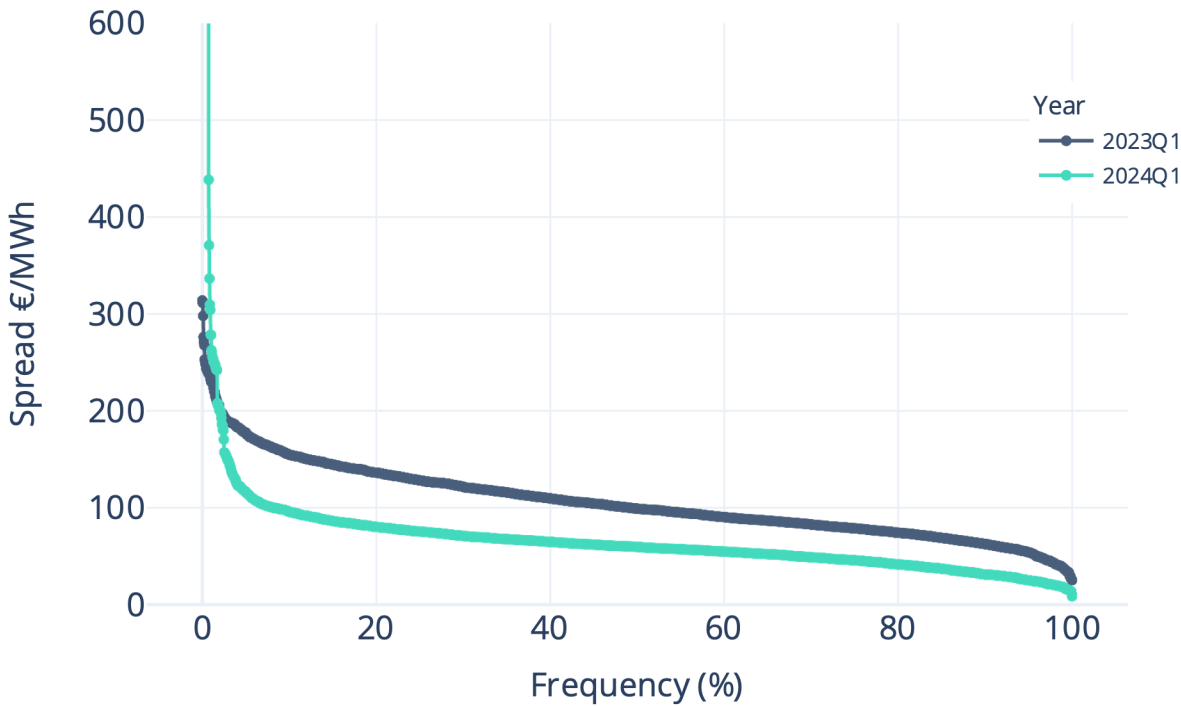
## Prices go below zero due to surplus renewable generation and low demand



In March, the year's first occurrences of negative prices emerged, with the Netherlands witnessing the highest number of occurrences, attributed to low demand and substantial residential solar generation. The lowest negative price occurred in the Netherlands on **09/03 at 13:00, reaching -39.79 €/MWh**. The second lowest occurred over the Easter weekend, with prices dropping to -31.39 €/MWh in Austria. The resurgence of negative prices in the Nordics stemmed from robust wind generation and sunny conditions. Conversely, price spikes exceeding 150 €/MWh occurred during periods of low solar generation and high demand.

# SDAC quarterly price comparison

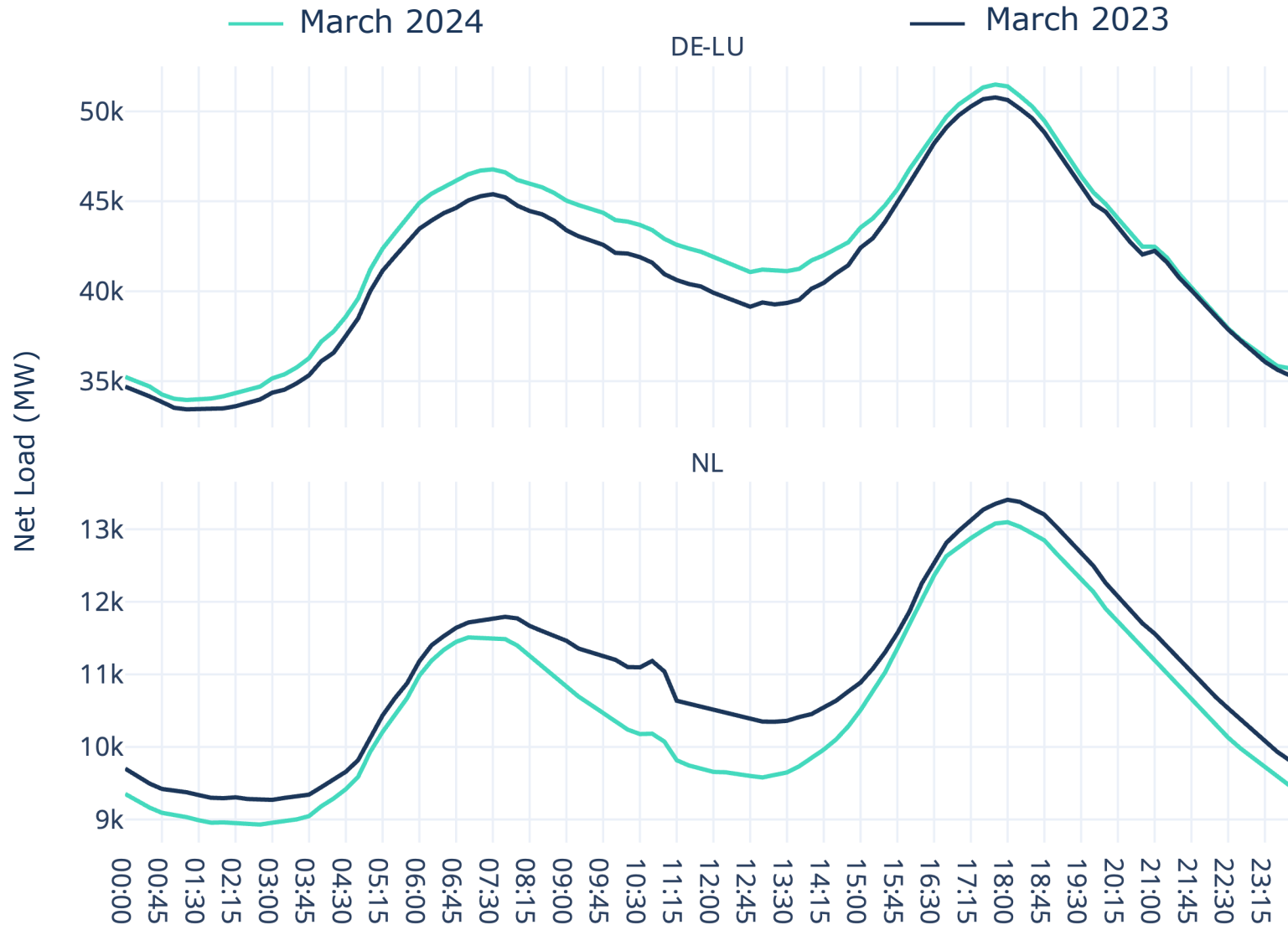
## Price spread and congestion on select bidding zone borders in Q1



The price spread for the first quarter of 2024 remains lower compared to the same period last year. **Approximately 30% of the time**, the price spread remains **below ~50 €/MWh**.

The graph on the right illustrates the top 10 congested borders in SDAC (measured by spreads >10 €/MWh) for the first quarter of 2024. The **Italy-North borders** stand out as the **most congested borders** followed by two Polish bidding zone borders.

# Impact of Solar generation 'Duck curves' from the supply-demand dynamics

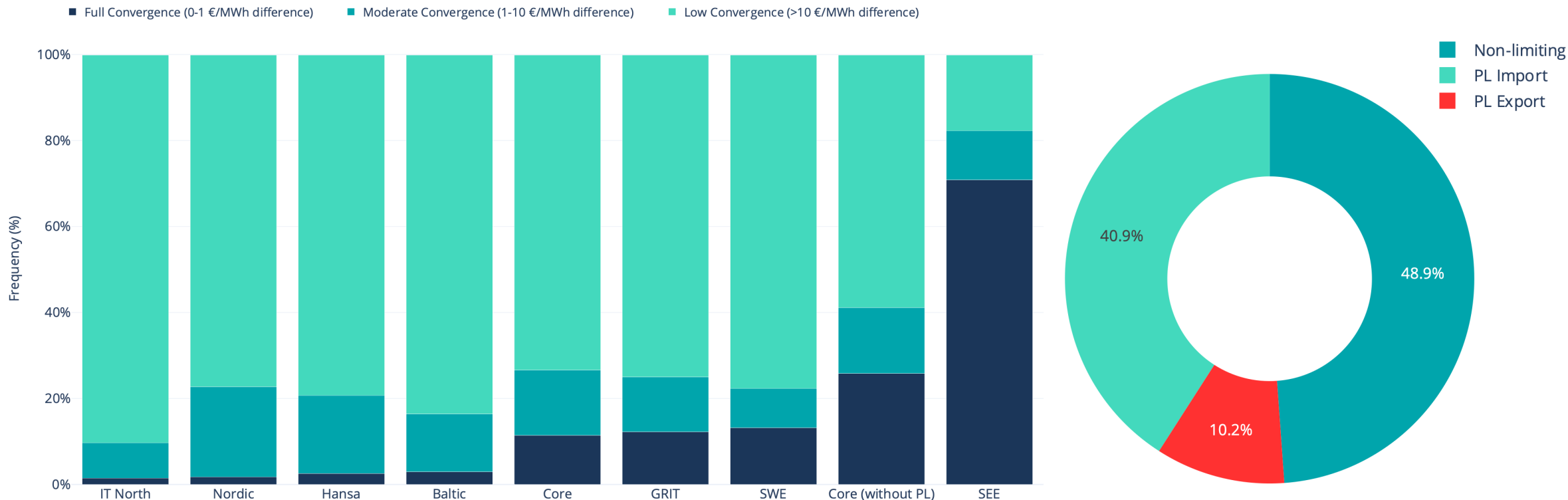


The graph displays the infamous **'Duck Curve'**, showcasing challenges in balancing electricity supply and demand when renewable sources such as solar and wind are significant part of the energy mix. These duck curves are derived by averaging supply-demand curves per market time unit (MTU). This curve reflects energy demand, peaking in the morning and evening with a valley in between. The deeper trough is due to increased renewable energy (including solar) has come online.

The Netherlands saw **significant impacts**, especially at noon, reducing the load. Germany, with the highest solar capacity in Europe, experienced a similar trend, although to a lesser extent. As solar capacity continues to rise, the midday trough becomes more pronounced.

# Price Convergence across CCRs

## Polish AC limits price convergence in Core



Once more, the Core region has demonstrated its notable trend of price convergence, second only to SEE, with almost **40% of occurrences** exhibiting a convergence of **less than €10/MWh** when Poland (PL) is excluded. Italy-North and the Nordics experienced the poorest price convergence last month.

The accompanying figure to the right illustrates the frequency of the Polish Allocation Constraints (AC) limiting im- or exports to/from Poland. The AC allocation constraints was binding for roughly half of the month, primarily limiting import, leading to the isolation of Poland from neighboring bidding zones. Consequently, Poland found itself susceptible to very high prices.



# Power Play: Total trade (import/export) across BZs in TWh

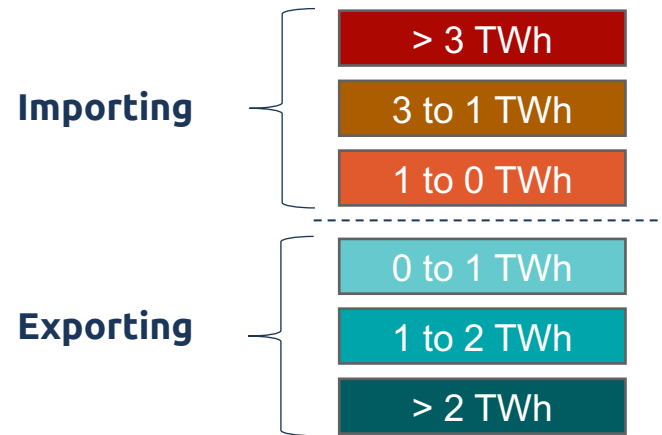
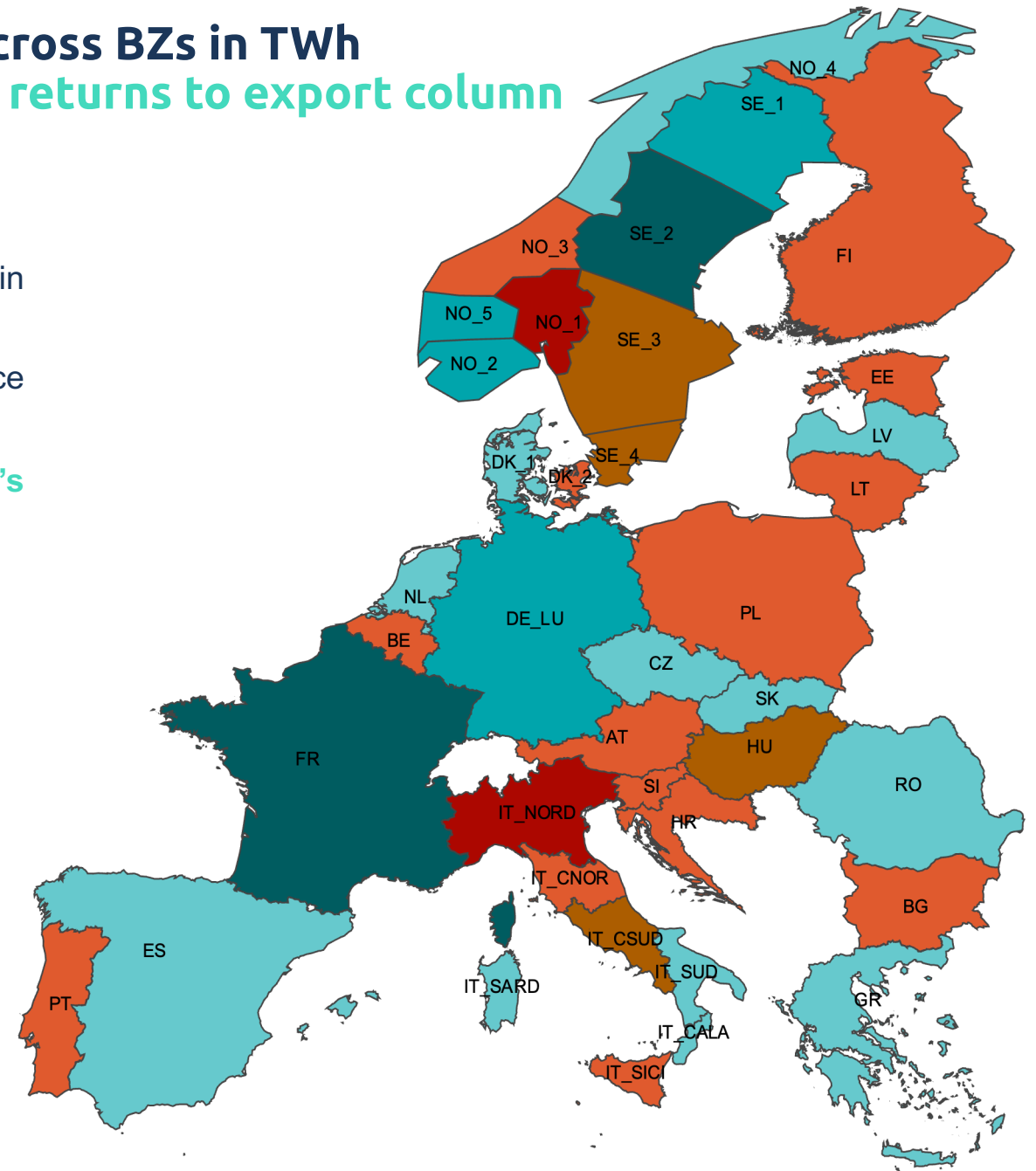
## Italy-North lead the imports and Germany returns to export column



FR and SE2 continue to be the leading exporting bidding zones in SDAC in March, as well as for the year 2024 hereto.

Italy-North remains the biggest importer, showing higher price spreads on the borders.

The only notable change from previous month is Germany's return to export column.



**Reach out to the authors**  
**Here to guide you**

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