



2021-Q1 MIBEL POOL PRICES OUTLOOK

April 2021



This note is a summary of our 2021-Q1 release for the projections of the MIBEL wholesale price over a 25 years horizon.

G-advisory (<https://www.g-advisory.com/es/>), in cooperation with Simulyde (<https://www.simulyde.com/>), elaborates, with a quarterly frequency, a release of MIBEL pool price projections for our subscribers. As a compliment to our clients, we publish this note summarizing our 2021-Q1 view of the MIBEL market.

1. MARKET AND REGULATORY HIGHLIGHTS

1.1 Regulatory events

Renewable capacity Auctions

On January 26th, the first renewable capacity auction was celebrated within the framework of the inter-annual auction program published in Spain for the period 2020-2025. In total 84 agents participated with a total volume of 9,700 MW. The following figure summarizes main results of the auction:

	Average price €/MWh	Minimum price €/MWh	Maximum price €/MWh	Tenor
Wind	24.47	14.89	28.90	30/09/2024 + 12 years
Solar	25.31	20.00	28.89	30/09/2023 + 12 years

Action results per type of agent

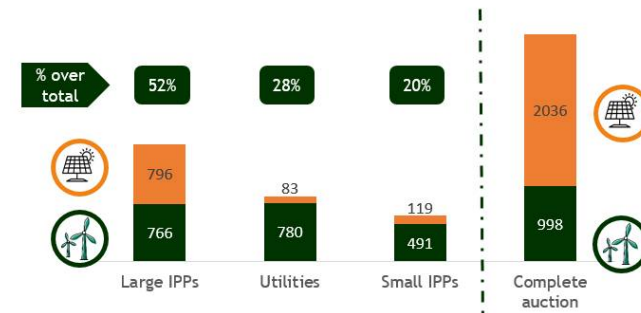


Figure 1.1: Spanish auction results

Tax on the Value of Electricity Generation (IVPEE)

The recent judgment of the Court of Justice of the European Union (CJEU) endorses the legality of the 7% Tax on the basis that:

- The tax does not oppose to the national regulation on tax levying.
- The IVPEE is not a direct tax that affects directly or indirectly the consumption of energy.
- It is not against directive 2009/28.

- That the tax does not go against the directive 2009/72/CE and the European legislation.

Royal Decree (RD 1183/2020) and Circular 1/2021 of access and connexion to the transmission and distribution grid

The Royal Decree (RD 1183/2020) and Circular 1/2021 (CNMC) recently published introduce relevant changes with impact on some key aspects of the development of renewable energy assets, mainly related to the access and connection to the grid procedures. Among others, these documents present the following highlights:

- Establishment of a single interlocutor, the grid manager.
- Establishment of an economic guarantee of 40€/kW, with a new rejection procedure.
- Expiration of the permits in five years if the installation has not reached all the compulsory administrative operational authorizations, or it has ended the production for a period longer than three years.
- Possible capacity auction in nodes in case there are changes in grid planning or regulation, when new capacity greater than 100 MW emerge due to these changes. This point excludes new capacity from so the called “Fair Transition” nodes.

Prices limits – Spot and Intraday markets

The market operator (OMIE) has moved forward with the adaptation of the market rules to the harmonized prices limits. After the public consultation, the final proposal for adapting the market rules has been sent to regulators (CNMC and ERSE).

On this first draft, OMIE sets the following limits:

- -500/+3,000 €/MWh for Day-Ahead market.
- -9,999/+9,999 €/MWh for Intraday markets.

The response from regulators and the final implementation of changes is expected before the end of this year.

Collective Self-Consumption – Allocation

The government has opened the period of public information for the modification of Annex 1 of the Royal Decree 244/2019, about the allocation of consumption under a collective self-consumption framework.

So far, the allocation of the energy self-consumed by each consumer in a collective self-consumption was previously fixed and equal for all hours. With this modification, the allocation would be dynamic and could vary depending on the day and hour. The modification allows a better adjustment of the self-consumption to the consumption profile of each member, optimizing self-consumption installation. The dynamic allocation must be fixed before the consumption takes place and cannot be changed within 12 months.

Spanish’s Power System Deficit – Results and forecast

On February 23th, the CNMC published the report about the actual situation of Spanish’s Power System debt. As of December 31st, 2020, the debt was 14,294 M€, 13.90% less than the previous year. According to this report, the debt will be paid in full by 2028.

The fund “FADE” still has 84% of the debt, followed by banks (11%), foreign agents (3%) and the “ICO” (2%).

In 2021, a payment of 2,068 M€ (1,760 M€ principal and 307 M€ interests) is forecasted.

Storage Road map

The Ministry for the Ecological Transition and the Demographic challenge (MITECO) has recently published the storage road map. This national guideline considers a capacity of 20 GW in 2030 and 30 GW in 2050 of storage and breaks down this capacity in different storage technologies such as chemical (Hydrogen), electric (capacitors), mechanical (pumped, liquid air), thermal (heat) and electrochemical (batteries).

The document includes action lines for the following years, including among others the participation of storage in balancing markets, local markets, and the possibility of developing capacity mechanisms. Besides, road map points out the need of i) a clearer definition of storage in the regulation, ii) the elimination the duplicity of charges and iii) the development of hybridization.

This initiative is aligned with the Hydrogen road map, published in October, that establishes an objective of 4GW of electrolyzers and 75% green hydrogen consumed by industries by 2030.

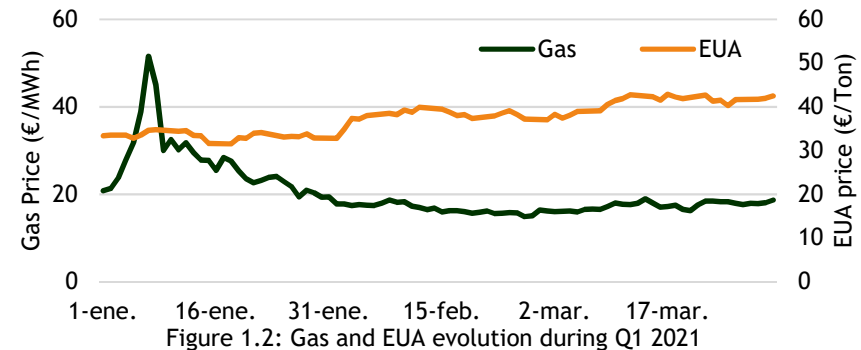
1.2 Market Outlook

Fundamentals (Gas, EUAs)

Gas prices have rallied during this first quarter as rising demand, in both Europe and Asia, has affected supply. High demand, along with cargos moving to Asia, have driven storage level down in Europe (35% vs 60% 2020).

The Spain's PVB gas hub has finished the quarter with an average price of 20.53 €/MWh and forward prices indicating an 18.20 €/MWh Q2-2021 and 18.70 €/MWh Yr-2022.

CO2 prices follow an increasing trend impacted by the tendency of gas prices, the new Green Deal developed by the UE increasing the ambition on CO2 reduction targets for 2030 and the speculative position of agents. EUAs started the year at 33.0 €/MWh climbing to 42.4 €/MWh at the end of Q1.



Spot-Market price

The rise of gas and CO2 prices have also impacted in the spot-market price.

The first quarter has finished with a price of 45.24 €/MWh, 29 % higher than Q1 2020 (34.88 €/MWh). However, past year's first quarter was significantly influenced by the beginning of the COVID-19 pandemic.

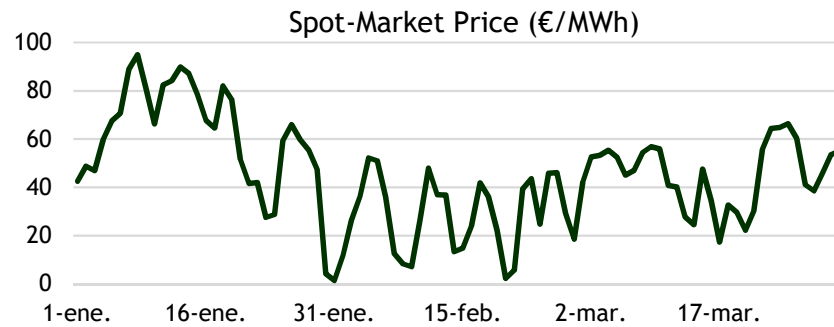


Figure 1.3: Spot market price

It must be highlighted the high prices observed in January were mainly caused by the cold front with temperatures below -10°C in a relevant area of Spain. During the second week of the year (7-16th) the market reached an average price of 82 €/MWh, and a maximum hourly price of 121 €/MWh, being 60.16 €/MWh the average price for that month.

1.3 Other highlights

Interconnection with France, Vizcaya gulf

Recent findings in the construction project of the new interconnection with France through the Vizcaya gulf have delayed the construction and impacted on the project cost. In particular, findings related to the movement of the seafloor have delayed at least two years the commercial operation date of the interconnection, as alternative technical solutions are being studied to deal with this unforeseen circumstance.

2. 2021-Q1 MIBEL POOL PRICE PROJECTION

The model *xPryce* used to simulate the MIBEL electricity market in the analysis for this report was developed by Simulyde. This kind of models has been extensively used by energy sector players to forecast and analyse the electricity market during the last decades, and has been dealt with in academia, covered in a large number of journal publications and discussed at numerous top international conferences. The model simulates the operation of the electricity system, optimising timing decisions taken by market agents to ensure that the total expense of covering demand is minimised.

The model calculates the economic dispatch of MIBEL's electricity generation assets in conditions of perfect competition, considering the output of nuclear, thermal and hydroelectric plants, renewable energy facilities and interconnections.

The following figure shows the output of the *xPryce*, considering our updated assumptions as per 2021-Q1, for the MIBEL pool prices under the three different scenarios considered in our 2021-Q1 release:

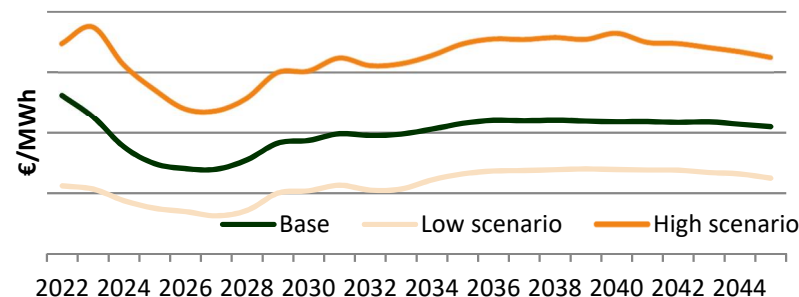


Figure 2.1: Pool prices projections (Base, Low and High scenario)

Capture prices for wind and solar technologies in the three scenarios are also available for our clients.

For getting more information about our quarterly pool price projections service and the conditions to subscribe to it, please get in contact with:



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