

2021-Q3 MIBEL pool prices outlook

October 2021

This note is a summary of our 2021-Q3 release for the projections of the MIBEL wholesale price over a 25 years horizon.

G-advisory, in cooperation with Simulyde, elaborates a quarterly release of MIBEL pool price projections for our subscribers. As a compliment to our clients, we publish this note summarizing our 2021-Q3 view of the MIBEL market.

1. MARKET AND REGULATORY HIGHLIGHTS

1.1 Regulatory events

Royal Decree Law 17/2021

Given the current situation, in which power prices have sharply risen in the last months, the government published on September 14th the RD 17/2021 with urgent measures to mitigate the impact of the rise of natural gas prices on the retail gas and electricity markets. The main measures are explained below.

Mechanisms for diminishing the excessive returns within the electricity market due to the price of gas in the international markets.

Until March 31, 2022, the remuneration obtained by non-emission generators from the spot-market will be reduced, proportionally to the PVB gas based on the formula included in the RDL.

Consequently, and in practice, non-emission generators will have to refund the benefit obtained from the spot market when the monthly average natural gas spot price in the MIBGAS market is higher than 20 €/MWh, which corresponds with an electricity price of 60-70 €/MWh.

The government has excluded generating facilities of non-peninsular territories, facilities with a net power equal to or less than 10 MW, or facilities with a recognized economic regime (installations under the RD 413/2014 regimen or installations awarded in any of the renewable auctions).

Afterwards, the government, in response to a TSO (REE) request, has clarified that in case of facilities with signed PPAs, the energy covered by the PPA is excluded from this reduction mechanism unless the PPA is signed between companies belonging to the same corporation.

Long-term purchase contracts for utilities

To encourage forward power purchasing, RDL 17/2021 sets out an auctions system for forward power purchase agreements with settlement periods longer than a year and states that the first of these auctions will be held in 2021 for an amount of 15,830.08 GWh.

The sellers will be energy producers consider market dominant in accordance with the Law 3/2013, and the buyers could be any utility company, except utilities from the same company group as the sellers, and direct consumers in the wholesale electricity market.

Volume Auctioned (GWh)

Endesa	6,737.26
Iberdrola	7,323.63
Naturgy	1,405.48
EDP	363.72
Total	15,830.08

7% Tax and Special Tax on Electricity (IEE)

The temporary suspension of the tax on the Value of Electricity Production (IVPEE), 7% Tax, is extended over the fourth annual quarter (until the end of 2021).

The tax rate of the IEE will be reduced from 5.11269632% to 0.5% also until the end of December 2021.

Minimum Vital Supply

The RD establishes that for those consumers that meet the requirements to be considered as vulnerable consumers and are under the PVPC, the supply cannot be cut off for 10 months since the notification of the first non-payment.

For a more complete description of the measures introduced by the Royal Decree Law 17/2021 we recommend downloading the Commentary issued by Garrigues, which can be visited in the following link: [Commentary of RDL 17/2021, Garrigues](#).

[Renewable capacity auctions](#)

The second renewable auction will take place on October 19, 2021. In this auction **3.300 MW** wind and solar will be auctioned. The government has created a fast track quota of 600 MW (of wind or solar assets) in the auction. Installations awarded under this fast track quota must start operation before September 30, 2022. The rest of the capacity (1,500 MW for wind and 700 MW for solar) will have a 20-month period for solar and a 32-month period for wind.

This auction will also include 300 MW for solar plants smaller than 5 MW with relevant local participation, and 200 MW without specific technology.

The government has announced that another auction will be celebrated before 2022 with 200 MW of CSP, 140 MW of biomass and 20 MW of others technologies. Besides, the government has declared the intention of celebrating a special auction for cogeneration, mainly for renovation of existing facilities.

[Capacity Market](#)

The CNMC, has published its report related to the capacity market draft document presented by the government. CNMC comments the need to analyse the European and Spanish coverage capacity and to define the stress situations and their probability.

The regulator indicates that this mechanism should allow the shut-down of thermal plants that nowadays cannot be closed due security purposes.

[Regulatory Sandboxes](#)

The government has subjected to public consultation the creation of “sandboxes”, in which projects under I+D+I could have regulatory exemptions. The objective of these test benches is the speed up the deployment of new technologies.

[Winter Action-Plan for gas](#)

Giving the low gas storage levels at the beginning of winter, the government has published measures to ensure the correct supply during the coming months.

This plan extends the GNL stocks from 3.5 to 5.5 days. These stocks will be reduced as the winter pass by.

Biogas and Off-shore wind Road Maps

The road maps of Biogas and Off-shore wind has been submitted to public hearing.

The road map for biogas considers the creation of guarantees of origin for renewable gases and forecasts that the production of this renewable gases could represent 10.4 TWh in 2030, 3.8 times the production of last year. More than 50% of the volume will be converted to biomethane for gas pipeline injection or heavy transportation.

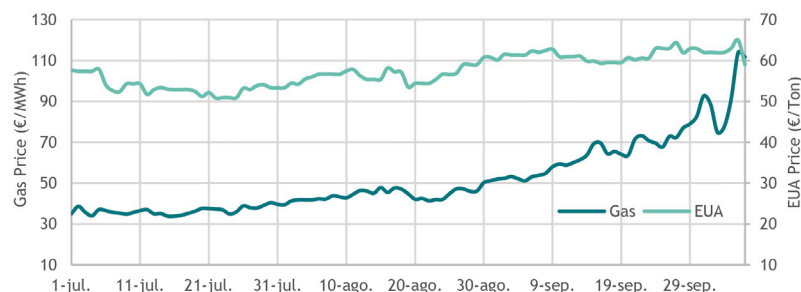
The off-shore wind road map proposes the objective of 3 GW for 2030. The document includes the evaluation of the port area infrastructure and the objective of becoming a reference I+D pole for the design and development of this technology.

1.2 Market Outlook

Fundamentals (Gas, EUAs)

Gas and EUA prices have reached record levels, continuing their upward trend as consequence of high gas demand from China, combined with low storage level, and bullish sentiment in the rest of energy markets.

The Spain's **PVB gas** hub has finished the quarter with an average price of 48.47 €/MWh, 23 €/MWh above the price of Q2 (24.80 €/MWh), closing September



at 82.75€/MWh. Forward products indicate that the upward trend may continue with November-2021 above 100€/MWh and Yr-2022 above 43 €/MWh.

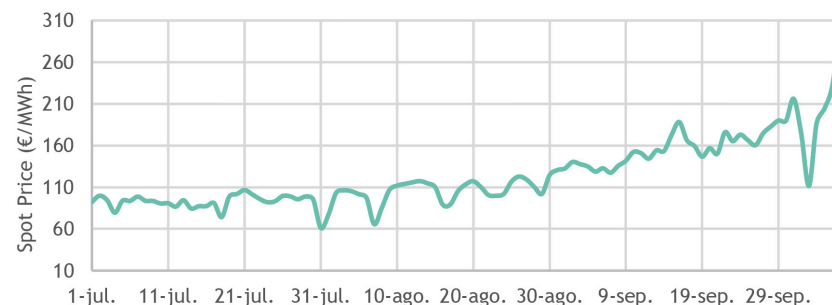
Decarbonization in China has caused a very significant rise in gas demand in the country. In Europe, gas storage levels are at 70% capacity, far from 95% of last year, being storage a major driver for gas prices in the coming months as winter starts.

CO₂ prices, as gas and coal, have also reached prices record due to speculative positions, and bullish sentiment in energy markets. Prices have jumped to 62.83 €/Ton from 56.25 €/Ton in Q2 2021.

Spot-Market price

The energy situation has driven prices up to record levels surpassing the extinct limit of 180€/MWh. The third quarter has finished with an average price of 117.75€/MWh, an increase of 46.00 €/MWh with respect to Q2. At the beginning of October, the spot-price reached an historical price of 288€/MWh. During September, hydro generation were marginal 50% of the hours and CCGT 30%, renewables, pumping and coal were also marginal.

At the beginning of October, futures products show that high prices will continue during 2022, with the product Q1-2022 above 230€/MWh and Yr-2022 above 150€/MWh.



2. 2021-Q3 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-Q3, for the MIBEL pool prices under the three different scenarios considered in our 2021-Q3 release:

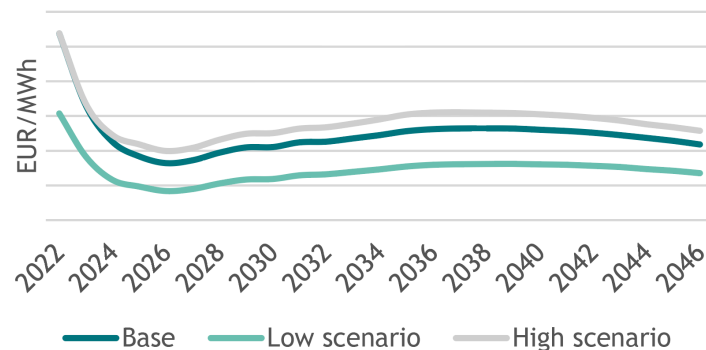


Figure 2.1: Pool prices projections (Base, Low and High scenario)

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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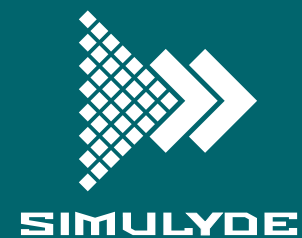
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