



2021-Q4 MIBEL pool prices outlook and market services

g-advisory
GRUPO GARRIGUES



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Authors' experience



www.g-advisory.com

- ▶ **+ 20 years experience in Energy and ESG.** Supporting our clients in energy transition, sustainability and climate change.
- ▶ **G-advisory + Garrigues.** Integrated approach combining technical and legal aspects.
- ▶ **+ 40 countries experience in 5 continents.** Offices in México City, Santiago de Chile, Paris and Madrid.
- ▶ **+ 40 GW of renewable capacity analysed.** Experience in all commercial technologies and innovative projects.
- ▶ **+ 5 years providing advice on electrical market.** MIBEL market outlook and pool price projections.



www.simulyde.com

- ▶ **Invesyde group.** Consultancy and IT services firm.
- ▶ **+ 15 years experience.** Assisting our clients to reach their goals in the energy sector.
- ▶ **+ 5 countries modelled.** Spain, Portugal, France, Italy and UK.
- ▶ **+ 6 major energy agents use our models.** Price model (xPryce) used for price and revenue projection, and ad-hoc models for any energy aspect.
- ▶ **+ 7 years modelling MIBEL.** Price projections, market and regulatory reports.

2021-Q4 Regulatory highlights - Brief

01 Renewable capacity auctions Q4-21 and Q2-22

- In October, the second renewable energy auction was celebrated, auctioning 3,124 MW, divided in 865 MW for solar and 2,258 MW for wind generation, with an average price of 31.65 €/MWh for solar and 30.18 €/MWh for wind generation.
- The draft of the third renewable energy auction has been published for public consultation. The auction, to be held in April 2022, aims to allocate 500 MW of renewable energy capacity, including solar CSP, distributed solar, biomass, and other minor clean energy technologies.
- Additionally, the MITERD has published for public hearing the draft Royal Decree and the draft Ministerial Order that will rule the future cogeneration auctions.

02 Royal Decree-Law 29/2021

- The RD grants nine additional months for obtaining the environmental impact statement, preliminary administrative authorization and construction administrative authorization, which provide some buffer for achieving the milestones previously established in the Royal Decree-Law 23/2020.

03 Special Protection measures for consumers

- Following the Royal Decree-Law 17/2021, the production under a long-term contract (minimum 1 year), will not be affected by the mechanism for diminishing the excessive return established in the RDL.

- In addition, the VAT reduction from 21% to 10% and the reduced IEE (0.5%) has been extended until April 30, 2022. The IVPEE (7% of the energy sale) has been suspended until March 31, 2022

04 Tolls and charges and regulated cost for 2022

- The TED/1484/2021 and the CNMC resolution from 16 December, establishes tolls and charges, and regulated cost for the year 2022. The government has included a reduction of 31% for charges and 4.6% for tolls.

05 PERTE-ERHA economic government support

- The strategic project for recovery and economic transformation of the renewable energies, green hydrogen, and storage, PERTE ERHA, will count with a total investment over euro 16,300 million. This first announcement, out of four in total, accounts euro 500 million for green hydrogen, storage, and energy communities.

06 EU drafts plan to label gas and nuclear investments as “green”

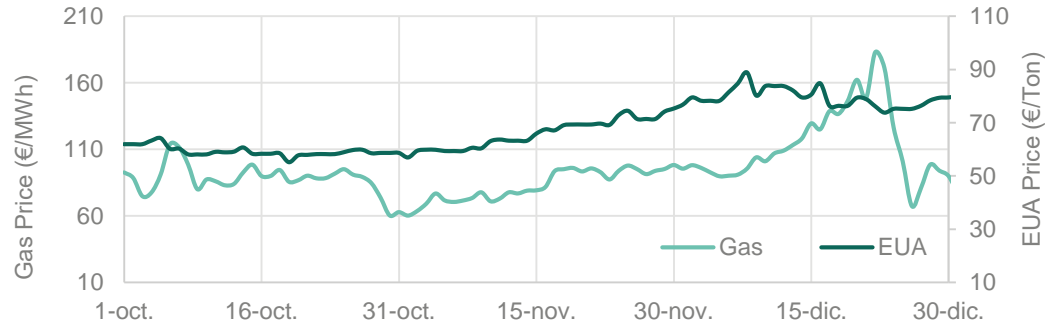
- The European Commission (EC) will propose rules in January where gas and nuclear projects will be included in the EU "sustainable finance taxonomy".



Further regulatory and market highlights included in our Quarterly subscription to MIBEL pool price projection. Click [here](#) to contact for further information.

2021-Q4 Market review

Fundamentals (Gas, EUAs)



- Gas and EUA prices have reached record levels, continuing their upward trend as a consequence of the uncertainty regarding gas supply in Europe during the winter.
- The Spain's PVB gas hub has finished the quarter with an average price of 94.50 €/MWh, 46 €/MWh above the price of Q3 (48.47 €/MWh).
- The uncertainty regarding gas supply in Europe during the winter, amid by cold weather forecast for 2022-Q1 has driven prices during the last quarter. During the last week of December, a warmer weather forecast update and a stronger gas supply, produced an important drop, driven prices back to 90 €/MWh.
- CO2 prices have also continue beating records following the bullish sentiment in energy markets, jumping to 68.25 €/Ton from 62.83 €/Ton in 2021-Q3

Spot-Market price



- 2021 has finished with an average price of 111.93 €/MWh, with a continued upward trend from 45.24 €/MWh in Q1 to 211 €/MWh in Q4. The spot price has continue setting new records during this last quarter, reaching a maximum of 383 €/MWh.
- During 2021-Q4, wind generation has led the generation mix with 30% of the total energy, followed by nuclear (17%) and CCGTs (16%).
- During the last week of 2021, due to the decrease in gas prices, futures drop, although maintaining high levels, with the product 2022-Q1 at 248.3 €/MWh and CAL-2022 at 219.8 €/MWh. Last updates regarding winter temperatures in Europe, as well as a new possible start operation date in the pipeline Nord Stream 2 has weight on energy prices, relaxing possible peaks during the first quarter of the year.

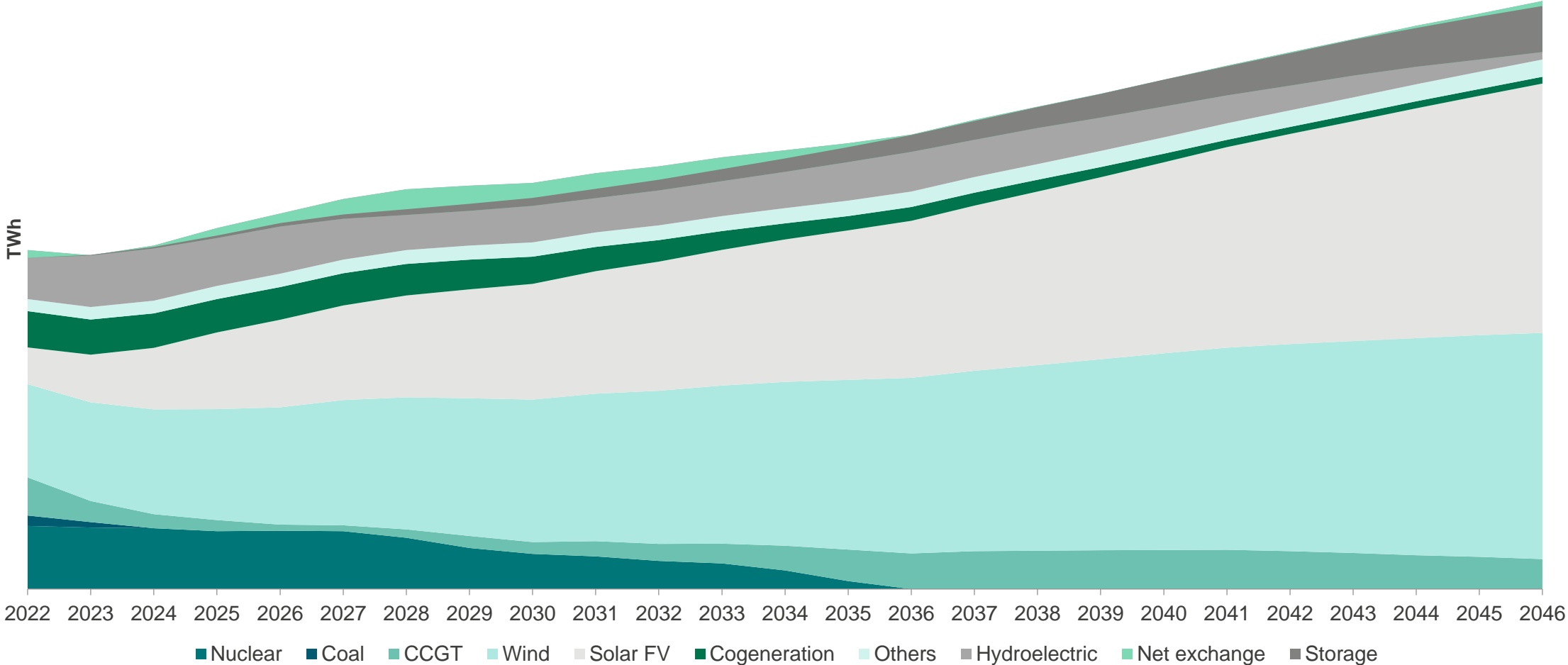
Model



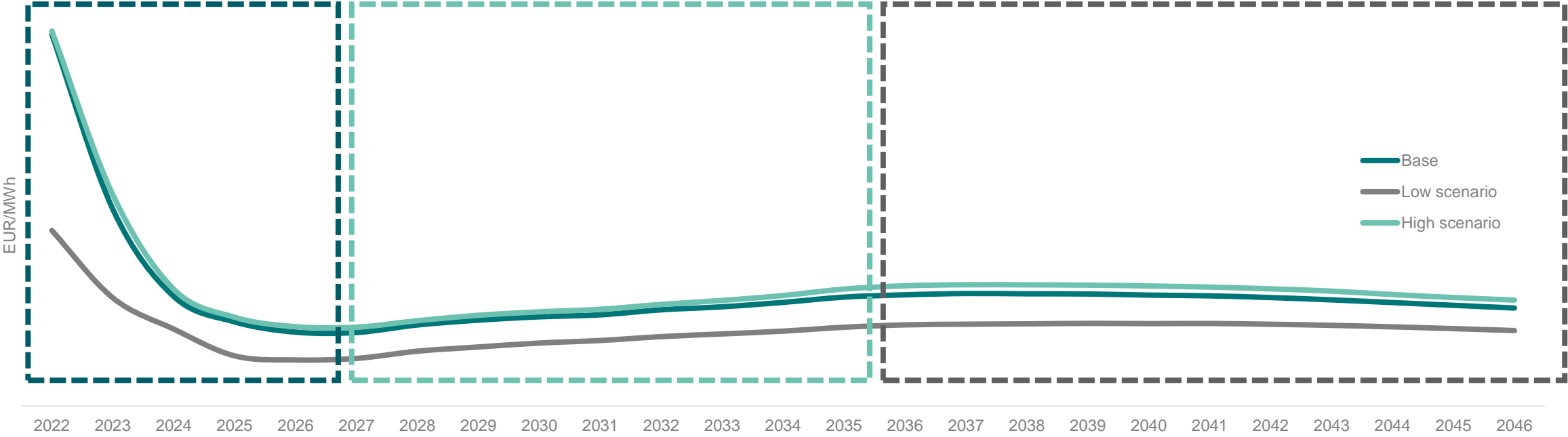
The xPryce model, used to simulate the MIBEL electricity market in the analysis for this report, was developed by **Simulyde**.

- ✓ **Fundamental Model**, simulating the hourly operation of the electricity system, optimising timing decisions taken by market agents and representing in detail both generation and demand.
- ✓ **Model output**, **pool hourly price projections** for all the simulated years in the base scenario (the “Base Scenario”) and in all the alternative scenarios; hourly generation and capture prices for every technology.
- ✓ **Modelling of France included**, due to its paramount importance in MIBEL price formation.
- ✓ **Optimization of the operations of plants involved in the market**, in order to simulate the pool dispatch, thermal, renewable and hydro units are represented using all their technical and economic characteristics.
- ✓ **Hourly thermal and hydroelectric programming**, for a yearly time horizon.

Results – Energy mix and generation projections



Results – Pool price projections



- STABLE DEMAND
- RAPID RENEWABLE PENETRATION
- COAL PLANTS DISMANTLING
- DECLINE IN NATURAL GAS PRICES

- INCREASE IN DEMAND DUE TO ELECTRIFICATION OF THE ECONOMY
- STEADY ANNUAL RENEWABLE POWER
- INCREASE NUCLEAR PLANTS DISMANTLING
- CCGT MATCHING INCREASE
- MODERATE ENERGY STORAGE PENETRATION

- MODERATE RENEWABLE PENETRATION
- GRADUAL PARTIAL CCGT DISMANTLING
- INCREASE IN ENERGY STORAGE PENETRATION

Products and contacts

Report

A Complete MIBEL market outlook and pool price projection

B Quarterly subscription to MIBEL pool price projection

C Specific analysis for innovative projects

- Hybridization, Self-consumption, Batteries, Hydrogen

Content

- 01** Spanish Electricity System Overview
 - Demand, Generation, Transmission, Distribution and Retail activity
- 02** MIBEL Electricity Market
 - Market operation review, historical market pool prices, futures
- 03** 25 years MIBEL pool price projection
 - Base, Low and High Scenarios. Elaboration of other alternative scenarios
- 04** 25 years MIBEL Energy mix and production projection
 - Base, Low, High Scenario and other alternative scenarios.
- 05** 25 years capture price projection
 - Technologies capture prices
 - Specific asset capture price estimation
 - Capture ratios
- 06** Quarterly Market and Regulatory highlights review

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