

Spanish wholesale, PV and wind capture price projections (2021 – 2050)

Increased natural gas and CO2 prices have led to record power prices in Spain post-COVID-19. The Spanish government is reverting to its interventionist past with a barrage of regulatory measures aimed at controlling the end-user price of electricity while at the same time pushing for renewable auctions that could potentially end up over-delivering on Spain's NECP target.

Will these measures impact the rate of deployment and viability of investments in renewables?

How do high commodity prices impact on the ability of the market to absorb more renewables?

How long will the pool prices stay high and to what degree will cannibalization of renewables come into play?

Will prices in the pool drop below the LCOE of PV and Wind?

In this 170-page report, EKON provides a one-stop shop for investors looking to understand the risks and opportunities of investing, operating or developing wind and PV assets in Spain. The report contains our independent price forecasts (wholesale price and wind / PV captured price forecasts under 3 scenarios), as well as our expert opinion on the Spanish energy market (regulatory and market risk analysis) and its likely future development post COVID-19.

Our bankable reports and price projections have been used by leading utilities, infrastructure funds, lenders and independent promoters in investment decision processes, negotiating debt or re-financing as well as in commercial and investor/state arbitrations.

Key Report take-aways

- Spanish pool price projections / wind and PV captured prices
- Analysis of key drivers (Market /Regulatory)
- Regulatory and Market risk analysis (economic & energy sector indicators)
- Risk & Revenue analysis by asset type: operational or developing.

Impact of government's interventions? With day-ahead prices reaching record levels, the government has implemented or is planning to implement a number of regulatory measures aimed at lowering the electricity end-user prices. Understanding the impact of these measures, at a time of rapid renewable deployment is fundamental. The report explains why these measures are unlikely to lead to a repeat of the Tariff Deficit that sparked the regulatory changes in 2010-2013 and, whilst not impacting new renewable investments, will affect the nuclear fleet and large hydro assets and pre-2003 wind farms.

Government-backed auctions

The government is organizing a second auction for 3.3 GW of renewables to be held in October 2021, the first auction having been held in January 2021. The report presents our assessment of January 2021 auction and possible impacts of subsequent auctions on the outlook for renewables.

Importance of flexible hydro

Spain's hydroelectric generation has proven to be very flexible thereby reducing the spread of peak and off-peak prices and, in turn, the viability of Battery Energy Storage Systems (BESS).

Whilst hydro does set prices in the day-ahead market quite often, they cannot set prices independently of the costs of thermal plants which they simply shadow price. More renewables will be needed before costs of natural gas and CO2 stop having such an impact on wholesale electricity prices.

Will new additions lead to pool prices eventually falling below renewables' LCOEs?

The report sheds light on the cannibalization effect (an increase in negative capture price spread) and explains why this will be contained by the LCOE of PV and wind.

What is the role for BESS? In the short to medium term, dry conditions would be needed to improve the viability of batteries. In the longer term, a significant role for batteries will depend on future cost reductions of both batteries and PV.

Bespoke services We prepare deliver bankable reports and models including bespoke services such as:

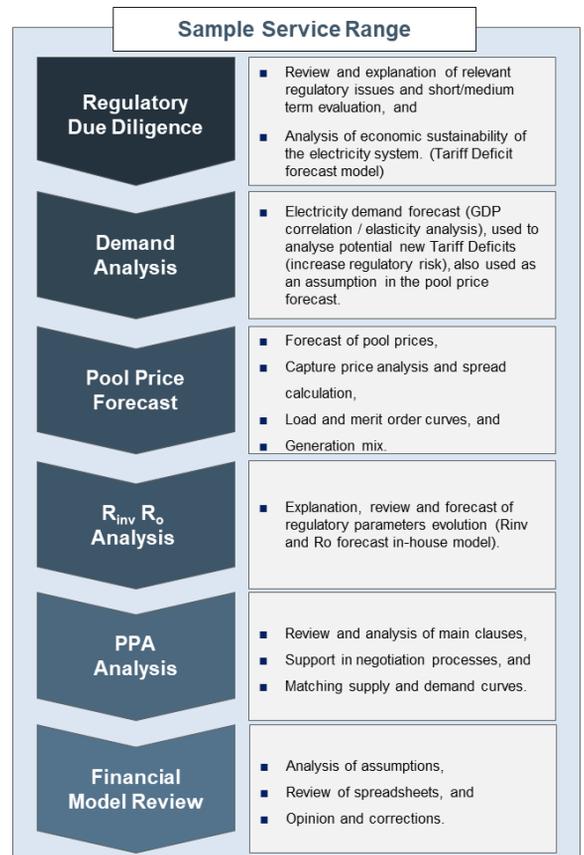
- Tailored price sensitivities using the client's assumptions
- Portfolio and plant-specific assessments to determine capture prices
- Lenders' base case analysis based on low risk market case

PMM Power Market Model: Our pool price / capture price model is based on a deterministic dynamic linear programming approach with the objective of minimizing the present value of fuel, CO2, maintenance, and capital investment costs across the whole forecast horizon. Resulting prices, dispatch, fuel use, and capacity expansion are optimal for each set of input parameters.



Our Philosophy

- Work on complex and large transactions, offering a full range of services from a high-level red-flag report, all the way through to complete advisory services to buyers and sellers of assets or energy related businesses.
- Leverage on our experience in both conventional (coal, CCGT, cogeneration and nuclear) and RES (hydro, wind, solar) generation, electricity and gas infrastructure (electricity distribution, gas pipelines and regasification terminals), PPAs (power purchase agreements) and GSAs (gas supply agreements).
- Offer in-house models, internally developed, for long term (>25 years) pool price projections in order to be able to provide a full scope of services on an asset by asset or a portfolio basis, or an entire business.
- Provide robust and traceable financial models that can be easily audited but also allow for complex valuations.
- Work closely with the client and their financial, legal and technical advisors in preparing the deal or assisting in the negotiation phase.



Selected References



EKON Strategy Consulting is based in Madrid and provides key services in the energy sector that cover a broad range of strategic and operational services for our clients (banks, utilities, IPPs and governmental agencies and authorities).

EKON's regulatory and market due diligence reports (including our price projections) have been relied upon by leading banks, utilities and infrastructure funds when investing and/or seeking finance for large energy investments. Our experts have also participated in international arbitration and investor/state disputes.

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