

ALANTRA














Financing BESS

November 2023



Alantra Energy Transition Advisory Proposition

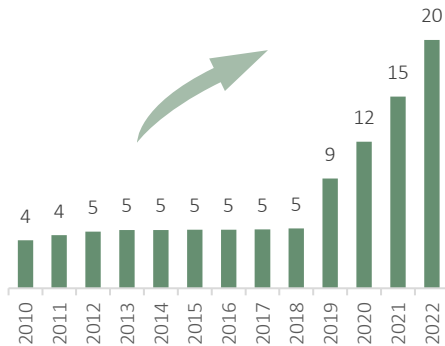
Our value proposition

1	Leading financial advisor in the mid-market	 <p>Leading position in the middle market Corporate Finance space Alantra was named as 'European Corporate Finance House of the year 2021' – by Real Deals</p>	<p>c. 150 M&A transactions closed in 2022</p> 
2	In-depth understanding of the sector	 <p>In-depth knowledge of the renewables sector, including regulation knowledge, market conditions and impact on valuation drivers. <u>Permanent dialogue with sector players.</u> >50 projects and deals assessed: portfolio economic valuation, business model strategic advisory, hybridization opportunities optimization (PV, Wind and BESS). Internal modelling capabilities to simulate price forecast (Alantra in-house prices curves) and business models Special dedicated Energy Transition Team with senior members across EU</p>	 <p>Technical support to candidate hybrid projects (RPS + RPS5) >1000 MW to the Recovery funds' call amounting to 150 MEUR</p>  <p>Market DD and NBO valuation models for portfolios of RES including hybrid opportunities + 1GW</p>
3	Highly Specialized Team	 <p>Alantra's Renewable Energy Corporate Finance team has been involved in a range of transactions in recent years, including divestment, partnership and financing transactions advising top tier sponsors in the sector such as Audax Renovables, Repsol, Cox Energy, Enerside and Solaria</p> <p>Alantra's approach in all transactions is to facilitate a competitive situation to maximise shareholder value together with execution certainty</p> <p>Senior team with full dedication, knowledge of the industry, ready to start working immediately in transactions and wide experience in sell-side processes, maximizing valuation for the shareholders</p>	 <p>Advisor to Copenhagen Infrastructure Partners on the acquisition of a hybrid portfolio of wind and solar assets</p>  <p>Global advisor to Audax on the closing of the Market Access partnership with Shell</p>  <p>Global Coordinator at the company's IPO</p>  <p>USD 30,000,000 Sustainable Bond A/B By institutional investor and multilateral development banks</p>
4	No Conflicts of Interest	 <p>As we do not have conflicts of interest, the proposed alternatives are specifically tailor-made Each alternative bears a perfect balance between feasibility and optimization of terms and conditions</p>	 <p>No Conflict of Interest and fully client orientated</p>
5	Global outreach of the potential investors	 <p>Alantra, as an international investment banking firm, is able to offer global reach combined with a relevant local presence.</p> <p>Unrivalled access to decision makers from the potential investors universe through 555 professionals in 25 offices in 22 countries in Europe, the US, LatAm and Asia.</p> <p>Relationship with all key investors in the renewables sector, including utilities, IPPs, Asset Managers and institutional investors</p>	<p>Institutional Investors</p> <p>Direct Lending Funds</p> <p>Banks</p> <p>Utilities</p> <p>Infra / PE Funds</p> <p>Family offices</p>

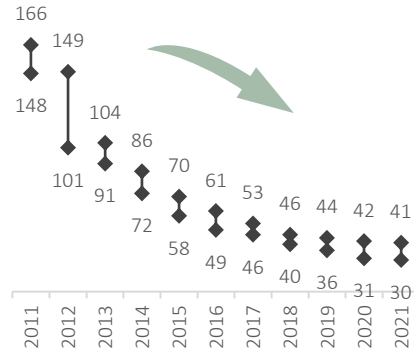
There is a clear need of large-scale Batteries to balance the renewables incorporation and replace of traditional energy sources

Spain has the best irradiance levels which led to high penetration of Solar PV...

Installed PV capacity in Spain (GW)

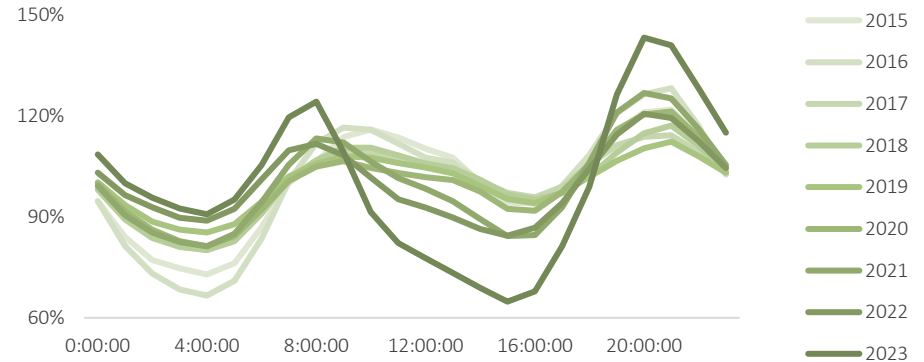


Global PV LCOE in USD



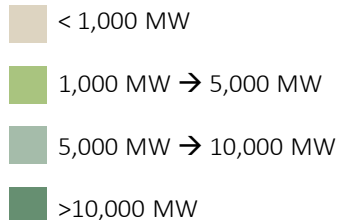
... favouring a strong “Duck Curve” with higher intraday volatility ...

Pool price intraday movement

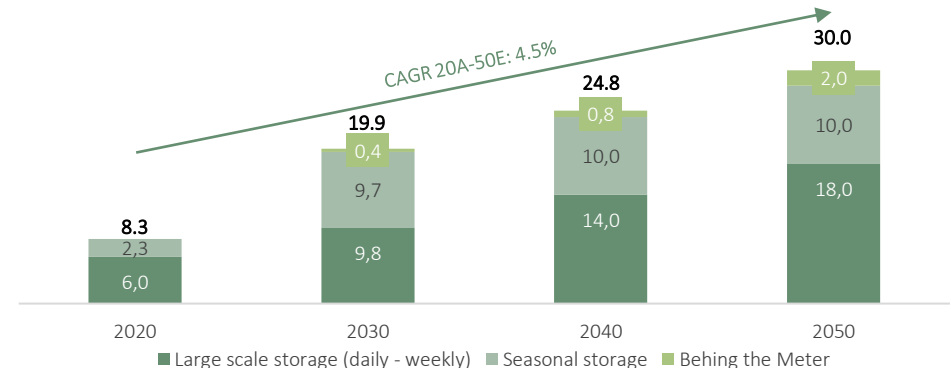


... and making Spain the country with the highest storage needs among EU...

Storage needs in MW (additional to battery capacities in NT2030 and to 2040 capacities for other storage technologies)



... which shall trigger the development of more storage in Spain



- Spain offers a huge opportunity to benefit from Power Storage, due to the high volatility caused by the development of Solar PV capacity and new regulations which will offer a more stable remuneration to the projects
 - Taking into consideration the future closure of more stable sources of generation like thermal or nuclear, storage represents a solution to balance the system

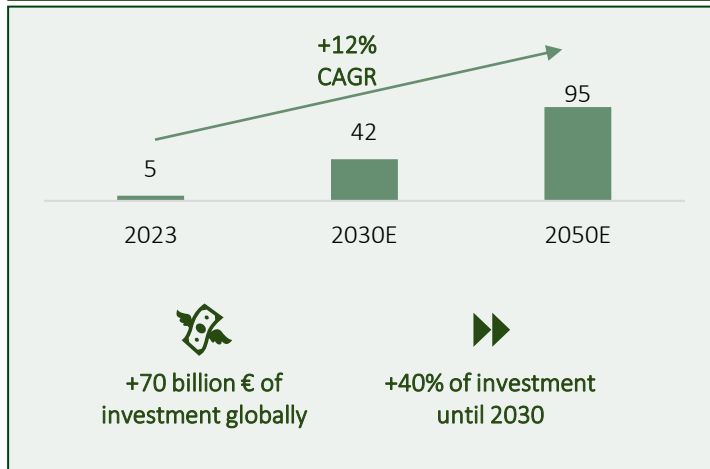
Sector Overview – European BESS market

Battery Energy Storage System (“BESS”) are an essential piece to achieve EU objectives regarding energy transition






Current renewables outlook

- With the next phase of the Paris agreement rapidly approaching, **governments and institutions are looking to increase the adoption of renewable energy sources.**
- **Battery storage is an essential enabler of renewable-energy generation taking over fossil fuels**, as it balances the intermittency of renewable energy sources like wind or solar.
- With the increase of renewables penetration, **the EU ambitious goals for 2030 and 2050 are challenging to achieve without a heavy presence of flexible sources such as BESS.**

Forecast of European installed BESS capacity (GW):



Advantages of BESS for the Energy Market

 Grid stability and reliability	<ul style="list-style-type: none"> ▪ Energy storage systems help maintain grid stability by balancing supply and demand, ensuring a consistent and reliable flow of electricity. They can quickly respond to fluctuations, reducing the risk of blackouts and brownouts.
 Integration of renewable energy	<ul style="list-style-type: none"> ▪ Storage facilitates the integration of intermittent renewable energy sources like wind and solar into the grid. It stores excess energy when generation is high and releases it when needed, enabling a smoother transition to cleaner energy sources.
 Peak load management	<ul style="list-style-type: none"> ▪ Energy storage allows utilities to manage peak electricity demand efficiently. During periods of high demand, stored energy can be dispatched to alleviate stress on the grid, reducing the need for costly infrastructure upgrades.
 Grid resilience	<ul style="list-style-type: none"> ▪ In the event of natural disasters or grid failures, energy storage can provide backup power and support critical infrastructure. This enhances grid resilience, helping communities recover more quickly.
 Energy cost savings	<ul style="list-style-type: none"> ▪ By storing energy during periods of low demand and discharging it during high-demand periods, energy storage can help utilities and consumers reduce energy costs. These benefits make energy storage a valuable asset for both grid operators and electricity consumers.

EU recommendations

Member states should:

- Remove existing barriers and facilitate permit-granting procedures.
- Explore whether energy storage services, in particular the use of flexibility in distribution networks, are sufficiently remunerated and whether operators can add up the remuneration of several services.
- Identify potential financing gaps for short-, medium- and long-term energy storage.
- Consider competitive bidding process. Potential improvements should be explored in the design of capacity mechanisms for energy storage. A flexibility remuneration scheme is under consideration at EU level.
- Continue to support research and innovation in energy storage, in particular long-term energy storage..

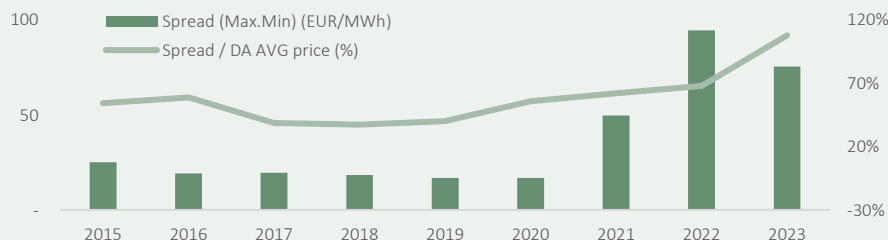
Sector Overview – Spanish BESS market (I/II)

Market conditions in Spain are generating a favorable environment for the rapid expansion of the energy storage capacity

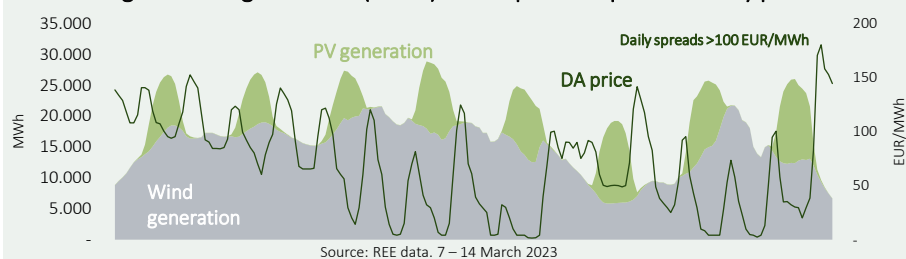
Penetration of renewables effect

Spain Spreads Evolution

Energy prices at solar peak are getting lower with time, increasing spreads



Unmanageable RES generation (MWh) and impact on spot electricity prices



Capex evolution

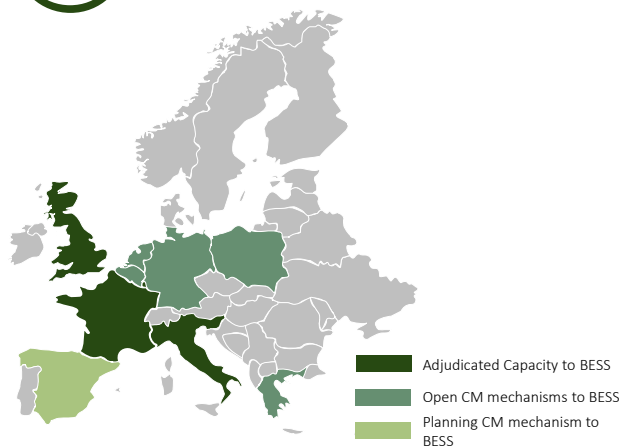
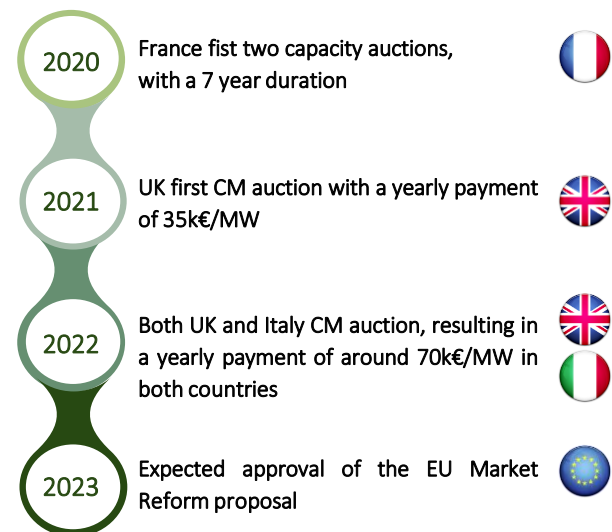
2 hours BESS All In CAPEX



BESS lithium price evolution



Capacity mechanism in EU



Key considerations

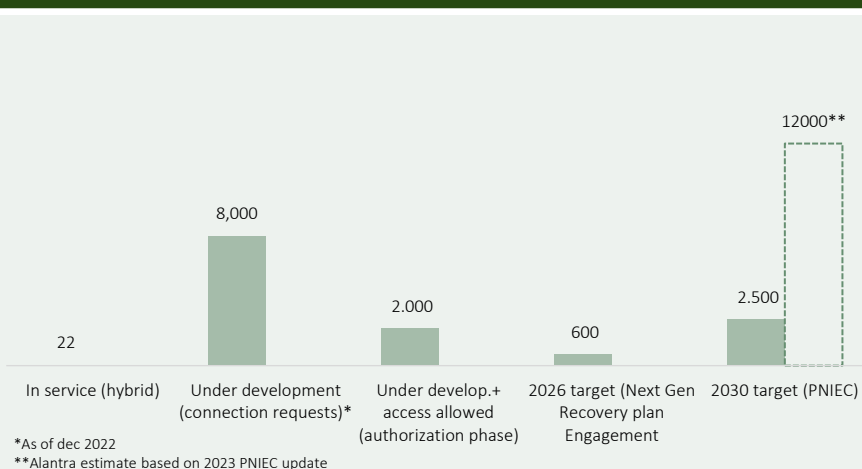
- With the penetration of Solar PV in the past years, **there been an incremental price differential due to lower prices in the central hours of the day (peak PV).**
- Consequently, we are noticing **higher prices at peak times** due to lower combined cycles activation: internalization of start-up costs.
- This environment is ideal for **BESS** since they are able to capture more revenues derived from arbitrage (buying energy at peak PV and selling when prices are higher).
- Additionally, increasing RES penetration will result in **additional balancing needs** and thus, more interesting opportunities in balancing markets for BESS participation (aFRR, mFRR and RR).
- Furthermore, the recent decrease and stabilization of battery capex make it more **favorable for BESS project deployment**

Sector Overview – Spanish BESS market (II/II)

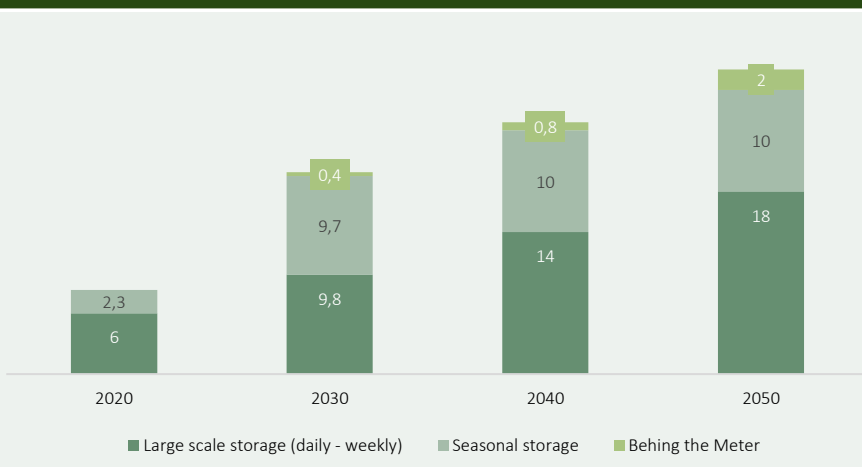
The BESS market in Spain is expected to see investments to strengthen the country's energy transition and decarbonization

National Energy Pillar	<ul style="list-style-type: none"> The development of BESS is recognized in national energy planning as an essential technology for the transition to a decarbonized economy. There is a consensus that the development of batteries represents an opportunity for the Spanish economy with positive repercussions throughout the industrial value chain.
Urgent need for BESS	<ul style="list-style-type: none"> Should PV deployment continue as of the current trend renewable production surplus during the central hours of the day will push market prices down and thus decreasing PV capture rates. The solution to cope this cannibalization is to speed up the development of flexibility sources such as BESS.
Favourable regulation	<ul style="list-style-type: none"> Overall regulatory framework is ready to accommodate new stand-alone or hybridized battery storage projects. BESS model is a revenue stacking model comprising comprising Arbitrage, ancillary services , technical constrains, voltage control, others to come.
Revenue streams	<ul style="list-style-type: none"> It will be key to implement additional remuneration mechanisms that reward the flexibility that batteries offer the system in a context of high renewable penetration. These mechanisms have been successfully implemented in European countries and the implementation of a new capacity mechanism in Spain is expected in the near future.
Financing mechanisms	<ul style="list-style-type: none"> In the medium term, the government strategy to lead energy storage is defined by the commitments with the European Commission to obtain "Next Generation EU" funds in the 2023 - 2026 timeframe. Through the PERTE mechanism, standalone assets are eligible for up to €150m in direct subsidies.
Future perspectives	<ul style="list-style-type: none"> As the EU needs to develop a valid mechanism for all EU countries and there isn't any European model, each country is developing its own mechanism. Flexibility remuneration mechanisms will be launched under a unified process across EU countries.

Status of BESS development in Spain as of Q3 2023 (MW)



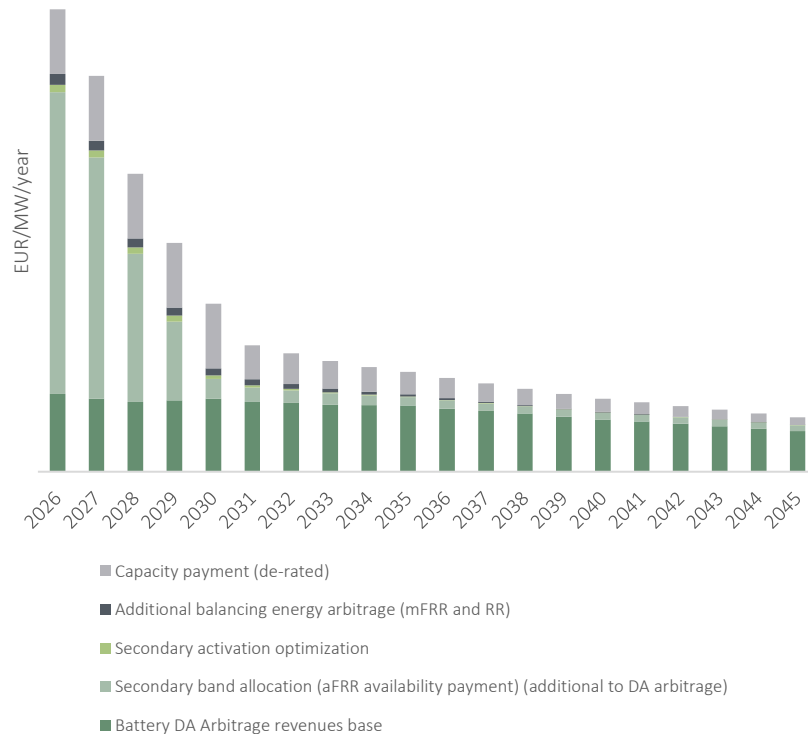
Spain's Storage needs (GW)¹



Business Plan

Investment case and financing challenges

Revenue stacking model



Challenges for BESS financing

Revenue model

As opposed to traditional RES, BESS business case relies on a number of revenues that shall be tapped through an efficient operation of the asset.

Time to market for these assets is key.

Regulatory scheme

As of today, there business model in Spain is **purely merchant** and thus this leads to financing challenges due to the lack of operating existing models with this technology.

Contracted revenues would help.

Current alternatives

As of today, the possibility of **financing** these assets **within a diversified perimeter** of projects is the main alternative

Going forward

The financing from institutional players that are familiar with the technology and understand the market dynamics and investment case will likely be the first route to market

