Impact Assessment and Strategic Implications of the Iberian Grid Blackout

Executive Summary

Between 28–30 April 2025, the Iberian Peninsula experienced a major grid disturbance resulting in a partial blackout across Spain and Portugal. The incident had operational implications for energy producers, regulators, and investors. NextEnergy Capital (NEC) can confirm that no damage was sustained to any equipment across the NextPower III (NPIII) or NextPower V (NPV) portfolios which have assets across the region. All assets resumed normal operations by 30 April.

While the root cause remains under investigation, the blackout has already sparked policy momentum toward grid modernisation, flexible generation capacity, and battery energy storage systems (BESS) - areas where NextEnergy is well positioned to play a leadership role.

Incident Overview

On 28 April at approximately 12:30 PM, a series of grid disturbances triggered a frequency deviation from the standard 50 Hz in the Spanish transmission network. The French grid operator responded by disconnecting from the Spanish grid, which further destabilised the system. As a result, approximately 12 GW of renewable generation and several nuclear plants were shut down as a safety measure.

During the event, 88% of Spain's electricity demand was being met by wind and solar - consistent with April averages. This high reliance on intermittent sources, whilst not the root cause, compounded the challenge of frequency stability under stress conditions. Unfortunately, some anti-renewables commentators and lobbyists have seized on the incident to promote populist headlines and cast doubt on the energy transition. We find this response disappointing and urge caution in drawing conclusions prior to the official findings of the ongoing investigation, led by the Spanish transmission system operator in coordination with Iberian and French authorities.

Portfolio Impact

NPIII and NPV projects sustained no physical damage to any installed equipment. However, NEC assets experienced temporary outages between 28–30 April, depending on their location. The financial impact is still under assessment, with potential outcomes dependent on:

- The insurance claims process
- Application of force majeure clauses
- Availability of market compensation mechanisms

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Restoration and Grid Response

Grid restoration began immediately after the blackout, using a mix of hydroelectric generation, combined-cycle gas turbines, and cross border imports – up to 2 GW from France and 0.5 GW from Morocco. Spain was nearly fully restored by midnight on 28 April and Portugal was fully restored by 11pm the same day. The recovery process, knows as "black start", was executed effectively, although it required over 10 hours and delicate system balancing.

Regulatory and Political Reactions

Following the incident, the Portuguese government temporarily decoupled from the Spanish grid pending further analysis. This has contributed to short-term electricity price increases in Portugal.

Meanwhile, the Spanish government has:

- Publicly defended renewable energy, rejecting claims that renewables caused the blackout
- Reaffirmed plans to phase out nuclear generation, likely increasing marginal electricity prices under the Iberian market mechanism
- Signalled a commitment to grid modernisation and flexibility, including potential fast-tracking of BESS policies

The Spanish system operator (TSO), Red Eléctrica, is leading the investigation in collaboration with French and Portuguese authorities. All generators and grid operators have been asked to submit generation profiles and technical data from the event window.

Strategic Implications for NextEnergy

The blackout highlights the growing importance of flexible, dispatchable energy solutions in high-renewable grids.
For NextEnergy, this represents a timely opportunity to:

- Accelerate hybridisation of existing assets through co-located battery storage
- Engage with policymakers and TSOs on grid resilience strategies
- Position NPIII and NPV as stable, forward-looking platforms aligned with future grid needs

These steps could enhance both operational performance and the long-term value proposition for investors.

Conclusion

While the Iberian blackout was disruptive, it may ultimately serve as a catalyst for long needed investments in flexible grid infrastructure. NextEnergy's resilient portfolio, technical expertise and readiness to deploy storage solutions position us advantageously to support and benefit from this ongoing transition to a clean energy future.

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