Capra Renewables

CapraNews

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The Renewables Market and Information Network
Advertisements, Market Data, News, and Networking

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Capra Renewables is Now Free for Two Users per Member Organisation

We have changed our membership pricing to allow member companies two free users. We encourage all members to also opt for paid users depending on company size. This is voluntary, but will help us expand our service offering.

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Dear Readers - in this issue of CapraNews we provide an analysis of peak demand vs controllable as well as variable low-carbon generation capacity highlighting sharp contrasts in low-carbon resilience across some of Europe's major power systems.

Country	Peak Demand (GW)	Load-Factor Adjusted Firm Low-Carbon Capacity (GW)	BESS (GW)	Coverage of Peak (Firm + BESS)	Load-Factor Adjusted Wind&Solar (GW)	Coverage of LF-Adjusted Wind&Solar)	Low Output Wind&Solar (GW)	Coverage of Peak (Firm + BESS + Low Output Wind&Solar)
FR	85	76	1	91%	9	101%	3	93%
ES	40	24	2	65%	11	93%	4	69%
IT	50	20	6	52%	4	60%	1	43%
UK	58	14	5	32%	13	54%	4	30%
DE	85	12	10	26%	31	62%	9	25%
ALL	318	146	24	53%	68	75%	21	52%

* *Load-factor adjusted capacities provide annual base-load equivalents.*
* *Firm low-carbon capacity includes nuclear, hydro, and biomass.*
* *BESS excludes BTM installations. Even though these are very substantial, they are excluded to account for low synchronicity with FOM BESS.*
* *The "Low-Renewable Scenario" assumes BESS is unavailable due to the extended duration of renewable shortfalls.*

France – based on its legacy investments in nuclear and hydro capacity – stands out among Europe's largest economies in having by some distance the highest coverage of peak demand based on controllable low-carbon generation technologies. Spain and Italy come second and third, while the United Kingdom, and – following the closure of its nuclear power stations – Germany, remain highly dependent on fossil generation and imports during interruptible renewable lulls.

France

France's 90 GW of dispatchable low-carbon capacity — dominated by nuclear and complemented by very substantial hydro and some biomass — more than matches its 85 GW peak demand, allowing full operation on low-carbon power even without wind, solar, or storage. Adjusting for typical load-factors this still matches around 90% of peak demand. This ratio jumps to >100% once BESS and LF-adjusted wind and solar capacity are

factored in. It remains a remarkable coverage of 93% of peak during extended low wind and solar generation.

Spain
Spain ranks second, with 28 GW of stable low-carbon generation covering load-factor adjusted 65 % of its 40 GW peak demand. Including LF-adjusted interruptible renewables, Spain can almost meet total peak demand (93%), but in a low-wind winter event, residual fossil capacity or imports of about 13 GW are still required to meet peak, were it to coincide with these conditions.

Italy
Italy benefits from substantial hydro assets as well as 6GW BESS covering LF-adjusted more than half of its 50GW peak. This jumps to 60% coverage including LF-adjusted wind and solar but leaves a gap of roughly 20 GW under persistent low-renewable conditions, underscoring the importance of flexible thermal / import backup.

United Kingdom
The UK's 16 GW of aging, yet controllable low-carbon capacity covers only 28 % of its 58 GW peak load, increasing to 36 % with 5 GW of BESS. Load-adjusted renewables would typically meet one-third of the residual demand but may fall to around 10% during multi-day low-wind events, leaving a shortfall of 40 GW.

Germany
Germany made itself one of the most exposed systems, with firm low-carbon capacity covering barely 15% of its 85 GW peak demand. The phase-out of nuclear generation amplified reliance on fossil fuel during low renewable output. Despite extensive renewable build-out, around 65GW of peak demand remains to be covered by imports and fossil generation under extended low-RES output assumptions.

Strategic Implications

Our analysis is simplified as it deals with seasonality and synchronicity in only a very crude way. It still highlights the basic vulnerabilities. Across all markets, BESS mitigates short-term intermittency but not multi-day or seasonal renewable deficits. Only France currently combines sufficient nuclear and hydro to sustain peak-hour decarbonisation – as long as EDF keeps availability of its nuclear assets sufficiently high.

However, for sustained energy security and emissions reduction, Europe must (i) build a lot more RES, (ii) extend life and deployment of firm low-carbon assets and (iii) build and extend life of long-duration storage — particularly hydro and potentially emerging solutions such as hydrogen-derived fuels. And, until such capacity is available at scale, (iv) a reserve of flexible fossil generation will remain critical to balance supply during extended renewable lulls.

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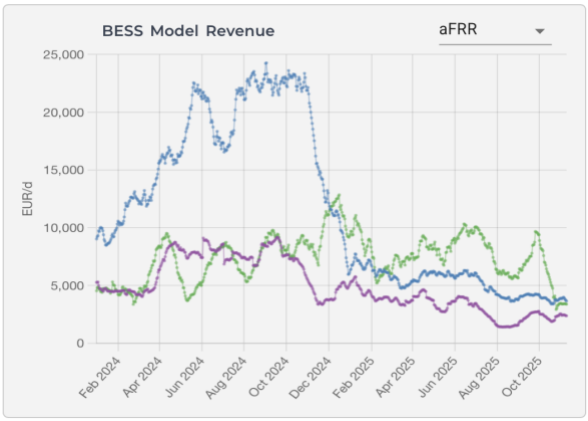
Market View



Revenue potential for BESS in aFRR (secondary reserve) markets got grounded in Belgium after venturing into lofty hights during 2024. It is now aligned with levels found across Germany or the Netherlands. aFRR pricing remains highly changeable even capricious responding to market fundamentals and regulatory interventions.

Members of Capra have full access to standard and balanced (forecasting errors taken through imbalance markets) capture prices as well as BESS model revenue in D-1 and aFRR markets for a range of European countries. Visit www.caprarenewables.com/price-and-market-information *for additional information about Capra's market performance data.*

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Type of Transaction	Sell-Side Buy-Side	Energy or Resource	Place of Transaction	Min – Max	Technology of Asset	Status of Asset	Location of Asset
Market Data Services	Offer Services	Electricity, Green Certificates,	Albania, Austria, Belgium,	–			

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Selection of Newsfeeds

EIB signs €500m green loan with Iberdrola for 315 MW Windanker offshore wind farm

EIB has provided a €500m green loan to Iberdrola for the development of its 315 MW Windanker offshore wind project in the German Baltic Sea. The financing is backed by a guarantee from the Spanish export credit agency CESCE — the first use of this guarantee scheme for Spanish-company green

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LEAG and Fluence Partner for Europe's Largest 1 GW/4 GWh BESS Project at Jänschwalde

LEAG Clean Power GmbH and Fluence Energy, Inc. (via its German subsidiary) have announced a joint project to deploy a 1 GW / 4 GWh BESS in Germany, marking the largest battery storage system in Europe to date.

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Alantra Solar's N-Sun Energy Secures €400m Financing to Advance Italian Solar Portfolio

Alantra Solar (via its investment vehicle N-Sun Energy) has obtained approximately €355m in green financing from Intesa Sanpaolo, alongside an additional €50m corporate facility from Bankinter, to develop five solar plants totalling 275 MW across Italy. The funding supports N-Sun's broader 1.8 GW platform in Southern Europe, with the Italian

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Italy and France Advance Solar Procurement: Italy Takes Forward 1.8 GW of Requests, France Awards ~300 MW to C&I Rooftop PV Projects

Italy's latest renewables auction — aligned with the Net Zero Industry Act (NZIA) framework and managed by Gestore dei Servizi Energetici (GSE) — chose to move ahead with 157 bids totalling over 1.85 GW of solar capacity requests. Meanwhile in France, the Ministry of Ecological and Solidarity Transition awarded 300.9

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Apple and European Energy Enter Long-Term Solar PPA for Australian Project

European Energy has signed a long-term PPA with Apple Inc. to supply electricity from the 108 MW DC Lancaster Solar Park in Victoria, Australia, which is under construction and expected to be operational in 2026.

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EU Commission awards €2.9 billion from Innovation Fund to 61 net-zero tech projects

The European Commission has approved grants totalling €2.9 billion under the Innovation Fund, drawn from the revenues of the EU ETS, to support 61 net-zero and low-carbon technology projects. Among the breakdown: ten large-scale decarbonisation awards (€1.26 billion) target sectors such as cement, lime, refineries, chemicals and CO_2-infrastructure; 19 medium-scale

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5 November 2025

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