

Flexibility needs and demand shape Nordic solar PV potential

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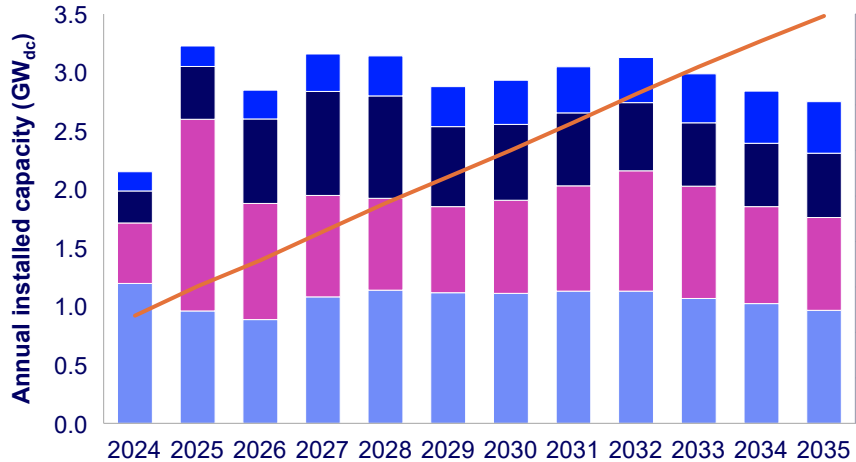
Finland Solar 2026 – May 19th, 2026



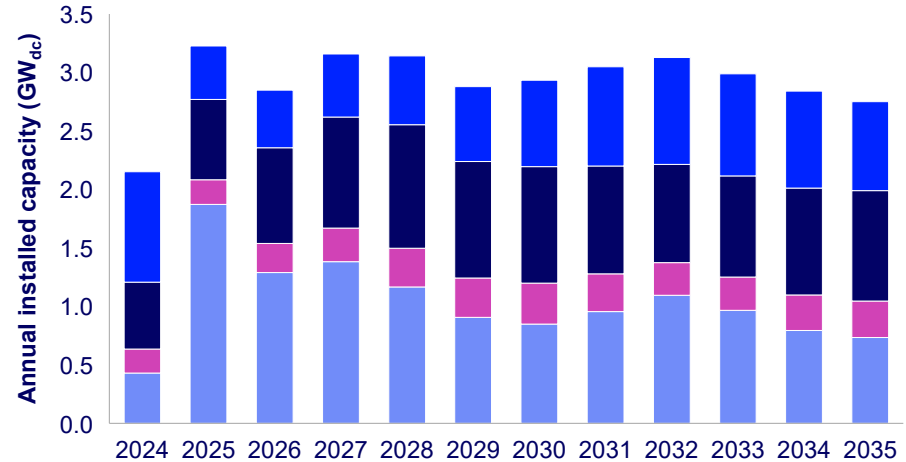
The Nordics will install 29.7 GW_{dc} of solar by 2035, tripling current cumulative base

Sweden leads at 36% of the decade outlook, driven by residential and commercial installations, while Denmark and Finland follow on utility-scale momentum. Utility-scale accounts for 34% of the Nordics outlook across all segments.

Nordics regional solar PV outlook by market, 2024-2035



Nordics regional solar PV outlook by segment, 2024-2035



Cumulative Sweden Denmark Finland Norway

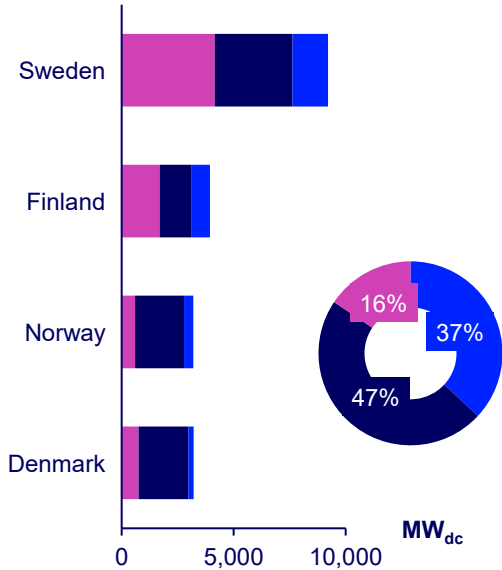
Residential <20 kW Industrial 1 MW - 5 MW
Commercial 20 kW - 1MW Utility > 5 MW



Sweden and Norway are the only markets offering direct capex subsidies

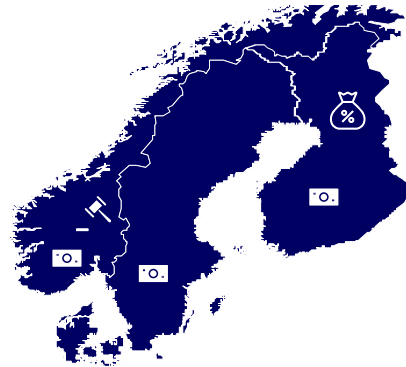
Most Nordic markets count on net billing compensation, indexed against wholesale market power prices.

Nordics distributed solar PV 10-year outlook by segment, 2026-2035



Residential Commercial Industrial

Net metering Net billing FIT



Sweden

The Grön Teknik capex subsidy for residential solar PV covers 15% of total installation costs for residential PV. Net billing compensation is not structured and completely indexed against wholesale market power prices. No sales tax discounts. <500 kWp system owners don't pay tax on self-consumed power.

Finland

Direct capex grants are no longer available, but there is a 35% tax deduction on labour costs for home PV installations. There is also an enhanced tax depreciation (50% instead of 25%) for C&I PV systems, resulting in capex reductions.

Norway

The Enova capex grant covers around 15% of total installation costs for home PV systems. Oslo residents can get up to 40% savings. There is a rooftop PV mandate for government-owned buildings.

Denmark

Small tax deduction on installation labour costs.



Capex rebate



Tax exemption



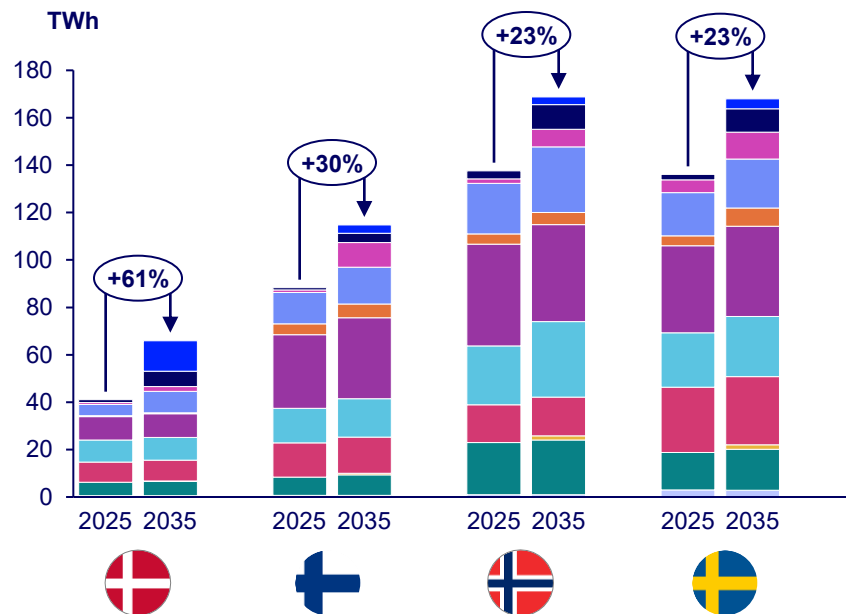
Rooftop PV mandate



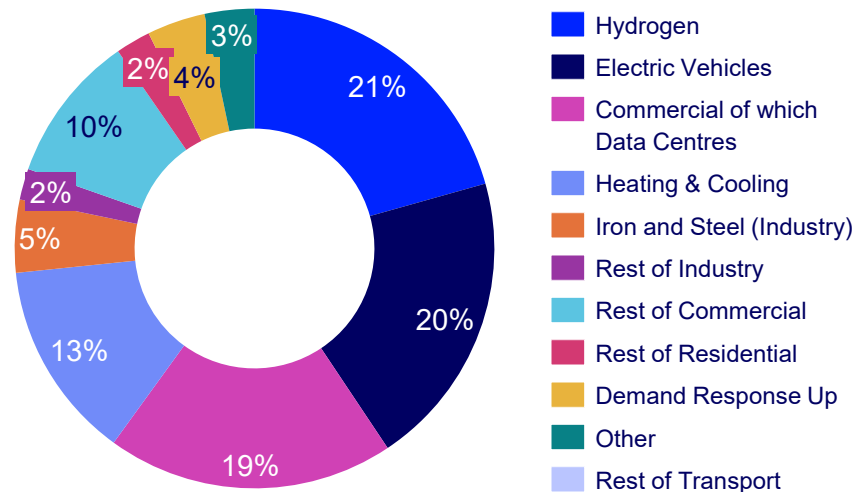
Hydrogen, EVs and data centres: 60% of power demand growth by 2035

Power demand is expected to grow by 28% in the Nordics in the next decade. Denmark will experience the highest rates of demand growth in the region due to ambitious green hydrogen plans and robust EV deployment growth.

Nordics cumulative power demand outlook, 2025 vs 2035



Nordics power demand growth delta by sector, 2025 vs 2035



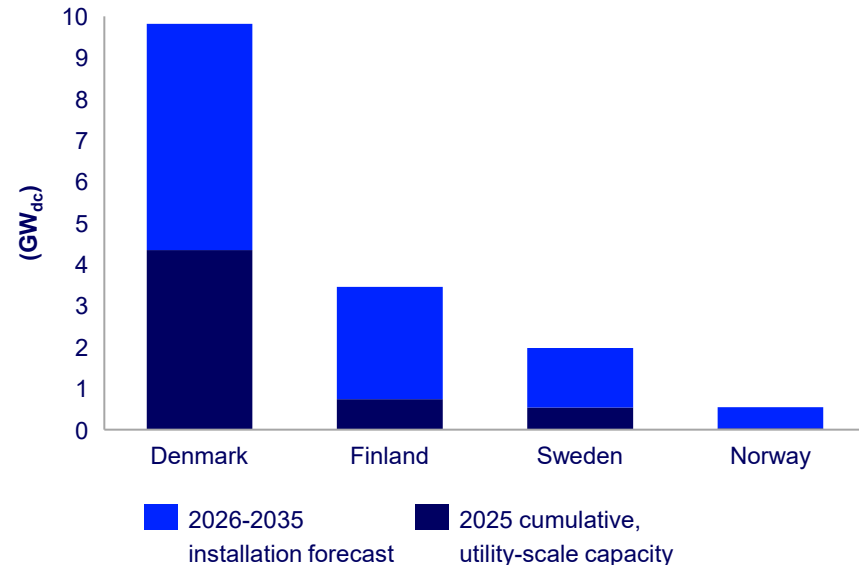
Source: Wood Mackenzie. Other includes distribution losses and own use.



Nordics utility-scale solar PV to nearly triple to 15.8 GW_{dc} by 2035

High renewable share, limited grid capacity, and low solar capture prices limit increased standalone solar buildout. However, power demand growth and financing support boost installations in Denmark and Finland.

Decade forecast additions in key utility-scale PV markets 2026-2035



Key markets highlights



Denmark

- Annual power demand growth of 6% on average by 2035 and an increased deployment of solar-plus-storage systems.
- Grid congestion has worsened. The TSO has halted new grid connection requests and is implementing reforms to clear the queue.



Finland

- The EU's Renewable Energy Financing Mechanism: 61.2 million euros in grants have been awarded across 14 large-scale solar projects, totaling 658 MW_{dc} of capacity. The third round launched in March 2026.
- Finland's recent Land Use Act proposes a 50-ha zoning threshold.



Sweden

- Merchant utility-PV profitability remains challenged; Sweden has the lowest solar capture prices in the Nordics. Some solar PPA volume, though declining. Lack of national strategy for large-scale solar PV.



Norway

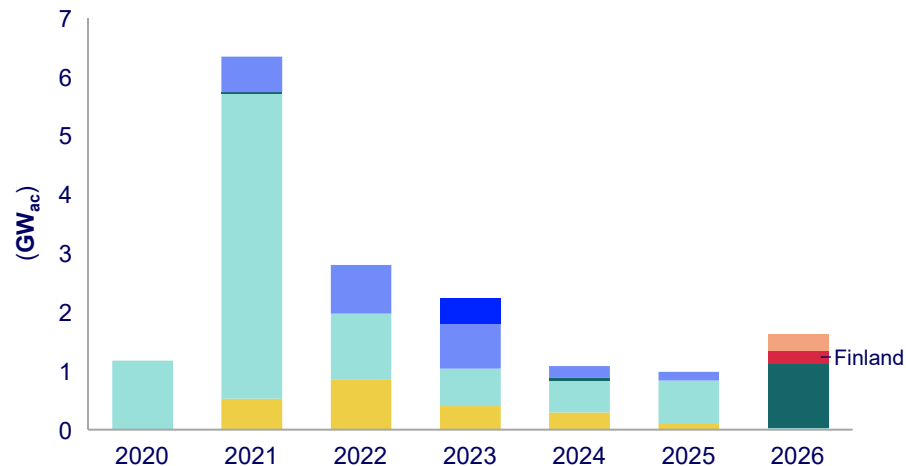
- Permitting threshold was increased from 1 MW to 10 MW for large-scale solar projects, a measure expected to streamline deployment.



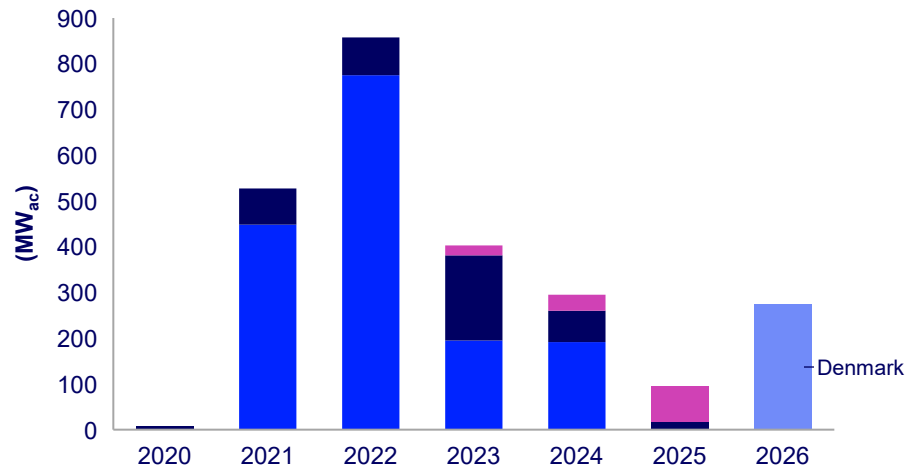
Wind accounts for 65% of contracted PPA capacity in the Nordics since 2020

Standalone solar PPA capacity is declining, but solar-plus-storage deals are emerging. Denmark leads in solar PPAs driven by corporate needs to hedge against volatile electricity prices during the energy crisis.

PPA contracted capacity in the Nordics by tech, 2020-2025



Solar PV PPA contracted capacity in the Nordics, 2020-2025



- Solar PV
- Offshore wind
- Storage
- Other
- Onshore wind
- Portfolio
- Hybrid

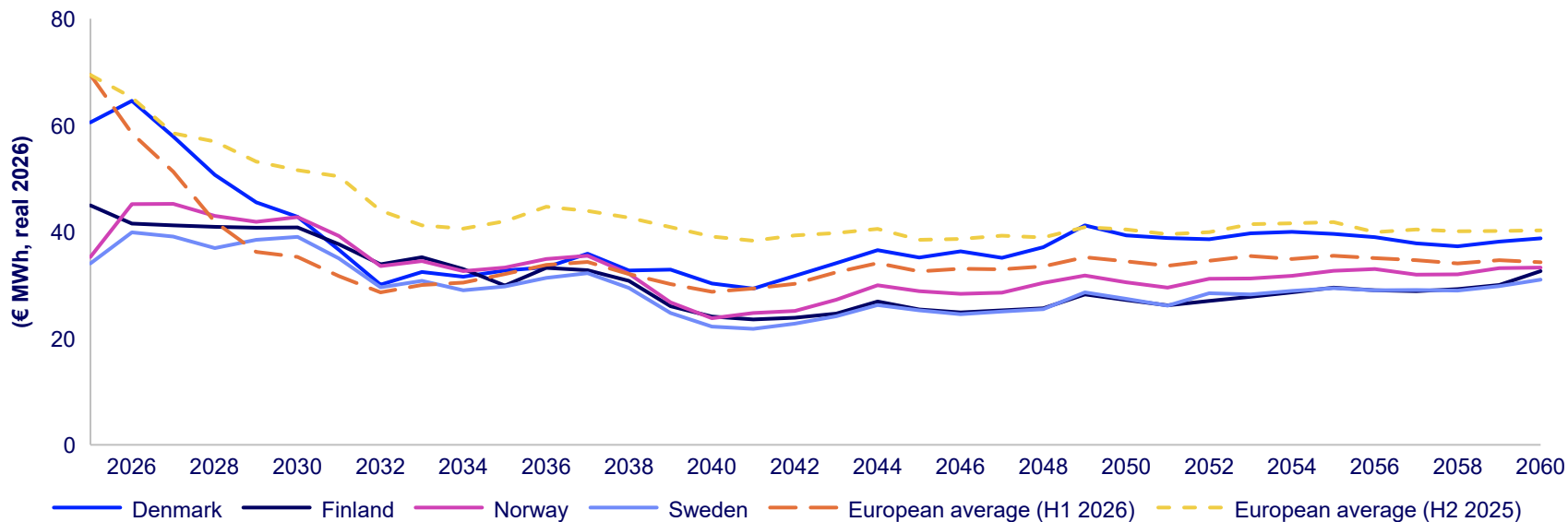
- Denmark
- Sweden
- Finland
- *Hybrid



Solar capture prices in the Nordics are expected to decline by 28% by 2035

Denmark's higher gas and coal share boosts solar capture prices, but Nordic merchant solar profitability concerns remain. Power prices will increase from 2040 onwards from power demand growth and increased interconnections.

Utility-scale solar PV capture prices, post-curtailment

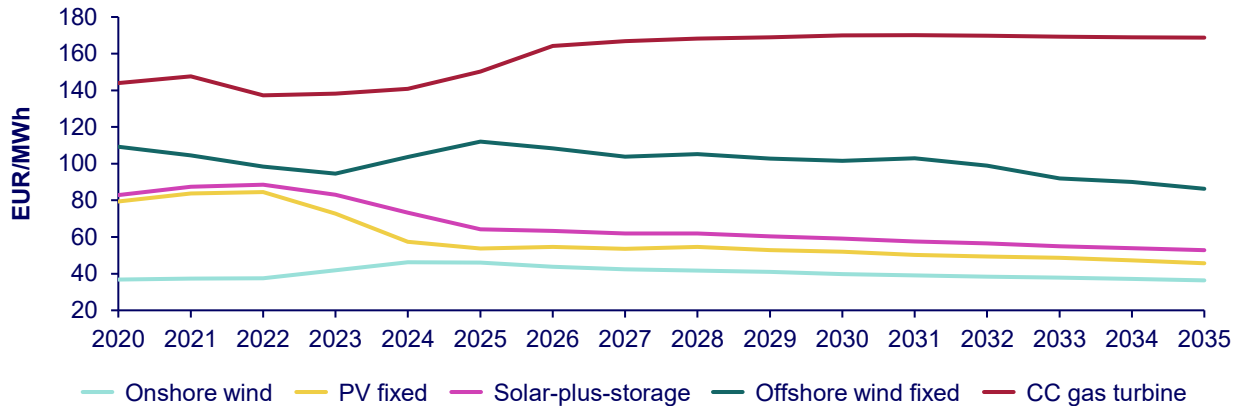




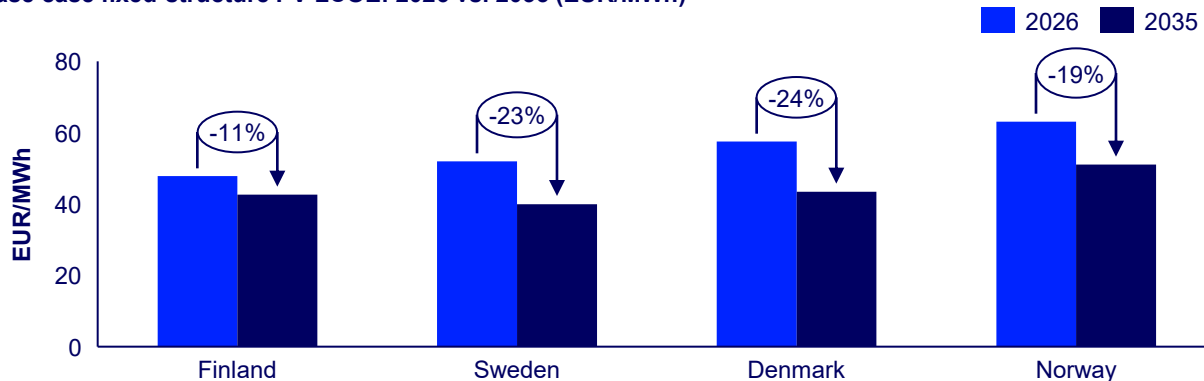
Onshore wind has the lowest average LCOE in the Nordics

Falling PV module prices
enhance solar economics,
but limited solar capacity
factors keep projects
financing-dependant.

Average base case LCOE in the Nordics: 2020–2035



Base case fixed-structure PV LCOE: 2026 vs. 2035 (EUR/MWh)



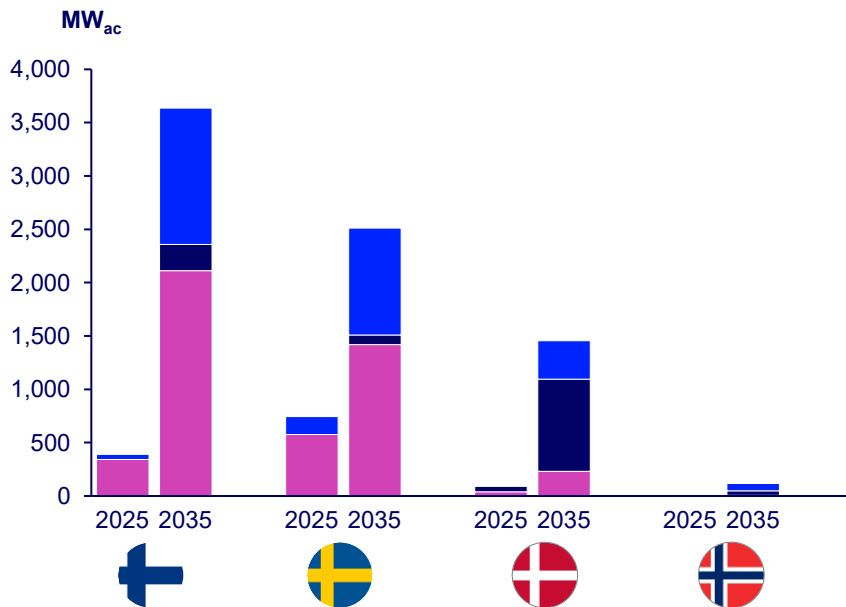
Note: Further information is available in the "[Europe levelised cost of electricity \(LCOE\) 2025](#)"



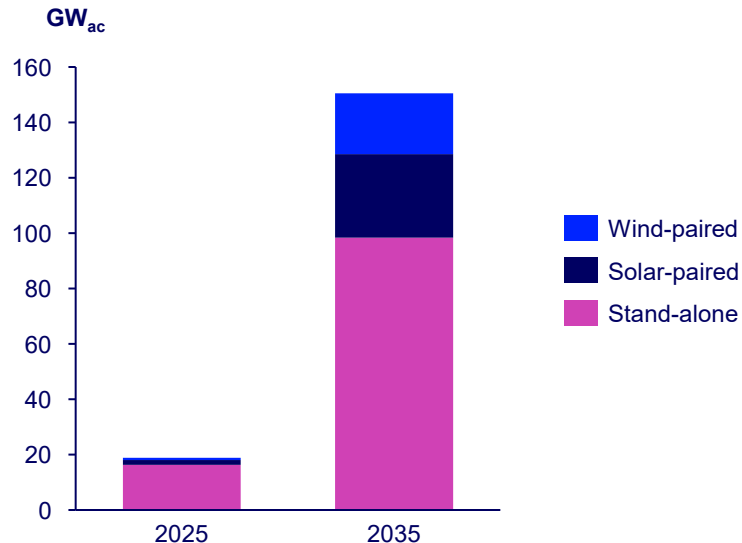
Finland will lead in total storage installs; Denmark in solar-plus-storage

UK, Germany and Italy held 71% of cumulative utility storage capacity in Europe in 2025, a share expected to fall to 44% by 2035 as other markets follow suit amid increasing flexibility needs and declining renewable capture prices.

Nordics cumulative utility-storage outlook, 2025 vs 2035



European cumulative utility-storage outlook, 2025 vs 2035

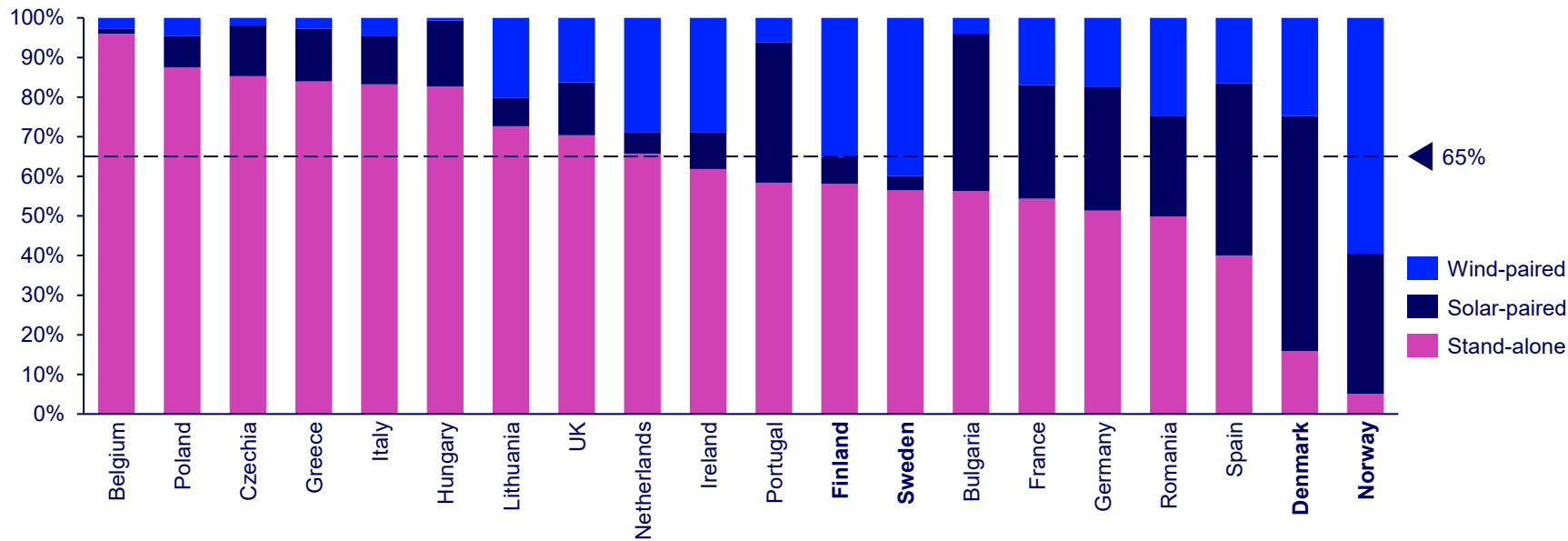




Nordic storage co-location share to exceed the European average of 35%

Standalone systems will represent 65% of European utility storage capacity by 2035, as existing routes-to-markets, such as capacity auctions, remain in their favour.

Europe utility storage capacity by category – cumulative 2035





Biography



Victoria Ortega

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Connect with Victoria



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Victoria joined Wood Mackenzie's Power & Renewables team in January 2023, based in Madrid.

During her first placement she monitored market and project developments for onshore wind power in Southern Europe. Since joining the European solar team in November 2023, she has been responsible for our utility-scale coverage, producing outlooks, analysing PPA and tender dynamics and policy updates.

Prior to joining Wood Mackenzie, she had an internship experience in Aurora Energy Research where she led the regulatory and policy updates for Iberia.

Victoria holds a BSc degree in Environmental Science from the Autonomous University of Madrid.



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