Towards a more resilient Europe

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Can Europe achieve energy sovereignty while enabling economic growth?

What is happening?

1. EU policy is driving electrification of transport, heating and industry
2. Renewable generation is reducing dependence on imported fuels
3. Data centre growth is further increasing electricity demand

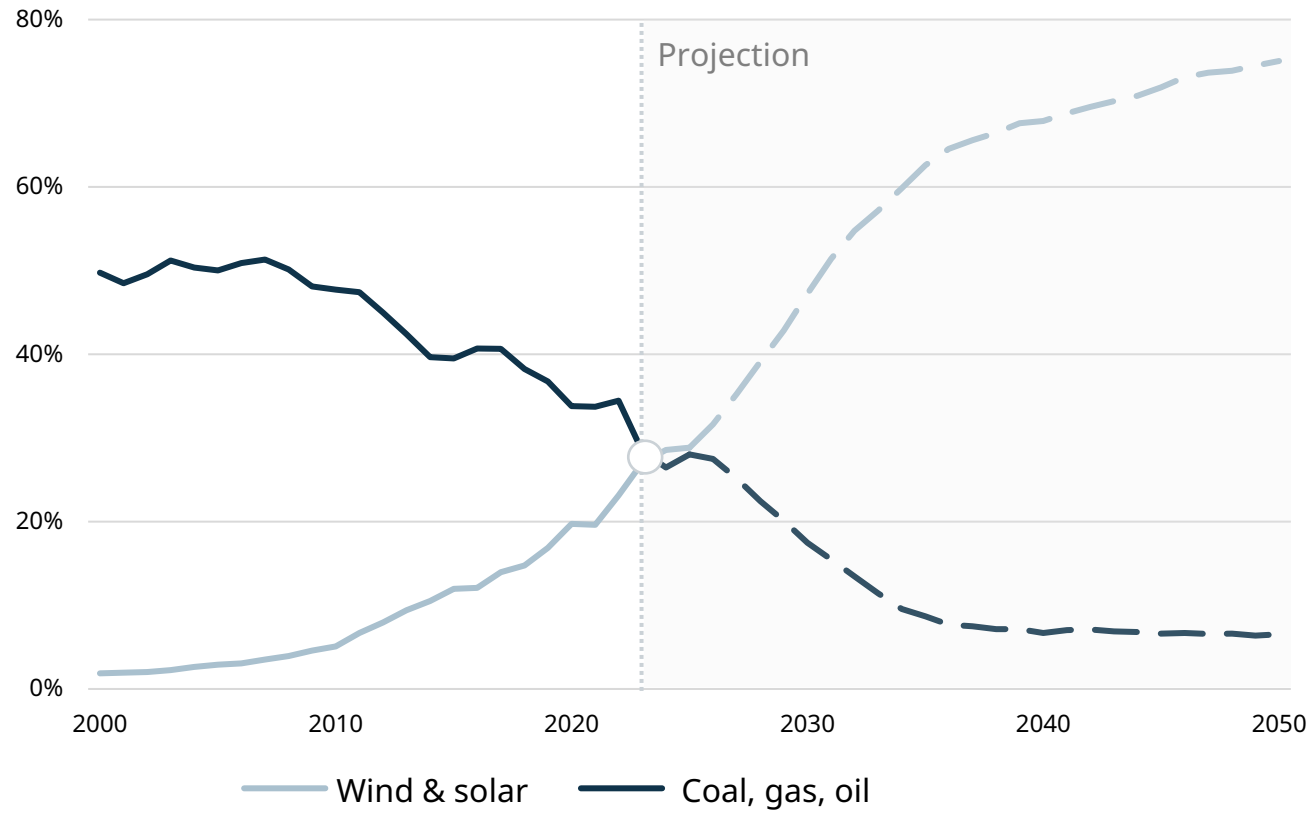
What does energy sovereignty actually mean?

- Security of supply
- Resilience
- Flexibility
- Affordability
- Conservation
- Efficiency

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System flexibility is becoming paramount as the share of renewables increases

Share of total electricity generation in Europe



Flexibility has two dimensions: capacity and time

ENTSO-E expects flexibility needs to double by 2033

Batteries manage short-term variability

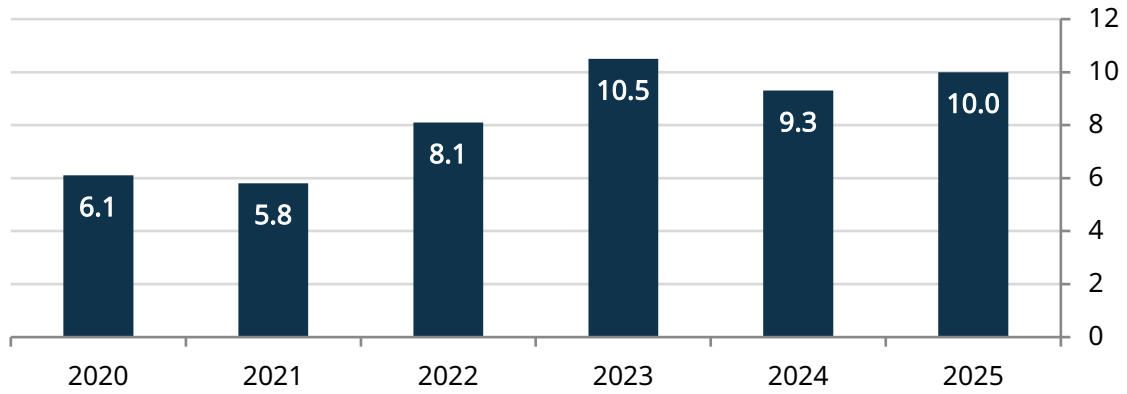
Prolonged shortfalls require firm capacity

Source: BloombergNEF, New Energy Outlook Europe, Economic Transition Scenario 2026, Ember 2026

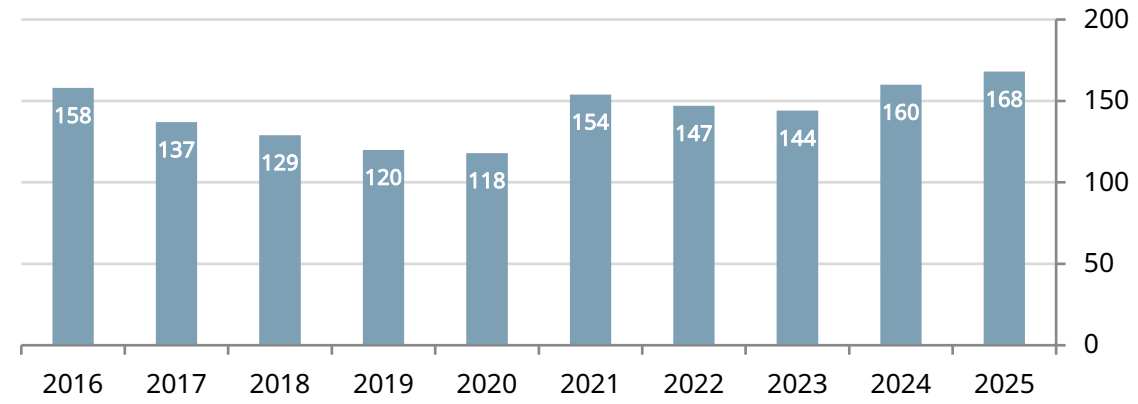
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Coupling of heat and power sectors is one of Germany's largest flexibility opportunities

Renewable electricity curtailed due to grid congestion (TWh)[1)]



Number of Dunkelflaute events in Germany (≥10 h)[2)]



Source: 1) SMARD, 2) Dunkenflauten: : Struktureller Bestandteil des deutschen Stromsystems, Uniper

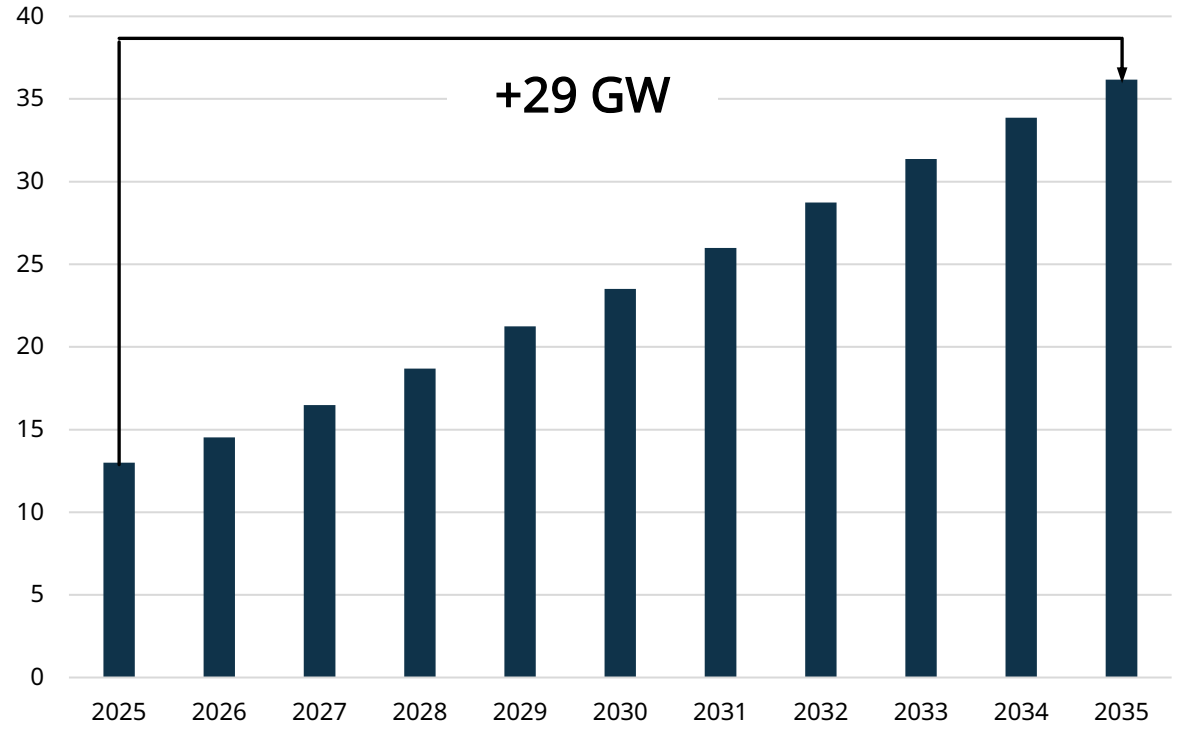
Two-way sector coupling reduces curtailment and system costs

- District heating capacity is set to double to 100 GW by 2045
- Heat pumps absorb renewable power when it is abundant
- Engine CHP plants supply power when renewable output is low

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Data centres can be developed as assets to the system rather than a burden

Projected growth of data centre installed capacity in Europe



Note: "Europe" Europe covers Germany, Spain, Finland, France, Ireland, Italy, Sweden, Denmark, Netherlands, Norway and other European markets

Source: BloombergNEF, EMEA Data Centre Outlook 2026

Interim solutions for data centers can become permanent grid assets

- Grid access is the main constraint on data center's growth
- Engine power plants and BESS can serve both the site and the grid
- Heat generated can be utilised by the district heating

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Europe's energy sovereignty depends on developing power, heat and digital infrastructure together

Each asset can serve more than one purpose – plan them together

Co-optimise power, heat, and compute to decide where and how they are sized

Share needs openly to ensure the gaps are known before assets are planned

Share costs and benefits across sectors to maximise shared value

“Sovereignty is achievable and it’s cost depends on whether infrastructure is built to do one job or several”

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