GridBeyond™

Caught in the crosswinds

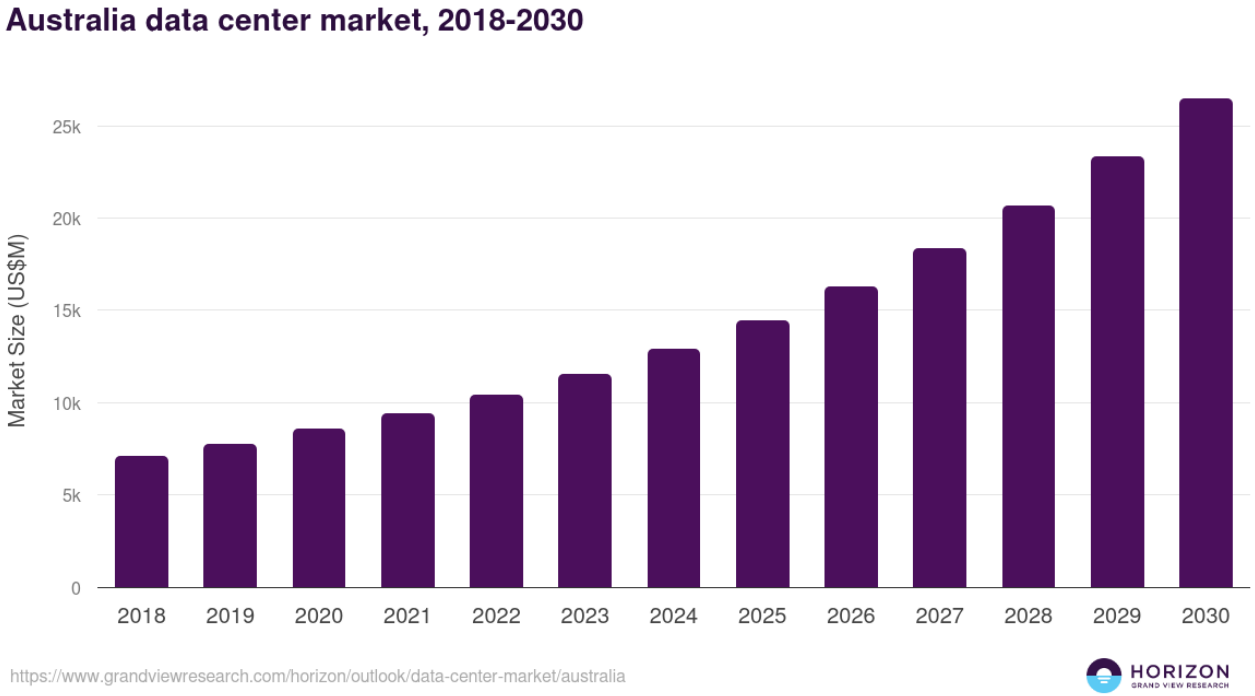
Australia 2026

Overview

- The energy transition is entangled with the shifting tides of politics, national identity, and strategic security.
- At the same time, changing patterns of demand are emerging as a disruptive force.
- Digital optimisation and machine learning are becoming key tools for balancing supply and demand in increasingly complex energy systems.
- **Through data, insight, and action, the demand side and the intelligent use of flexible technologies and assets will define the next generation of electricity systems.**

1. Large load growth

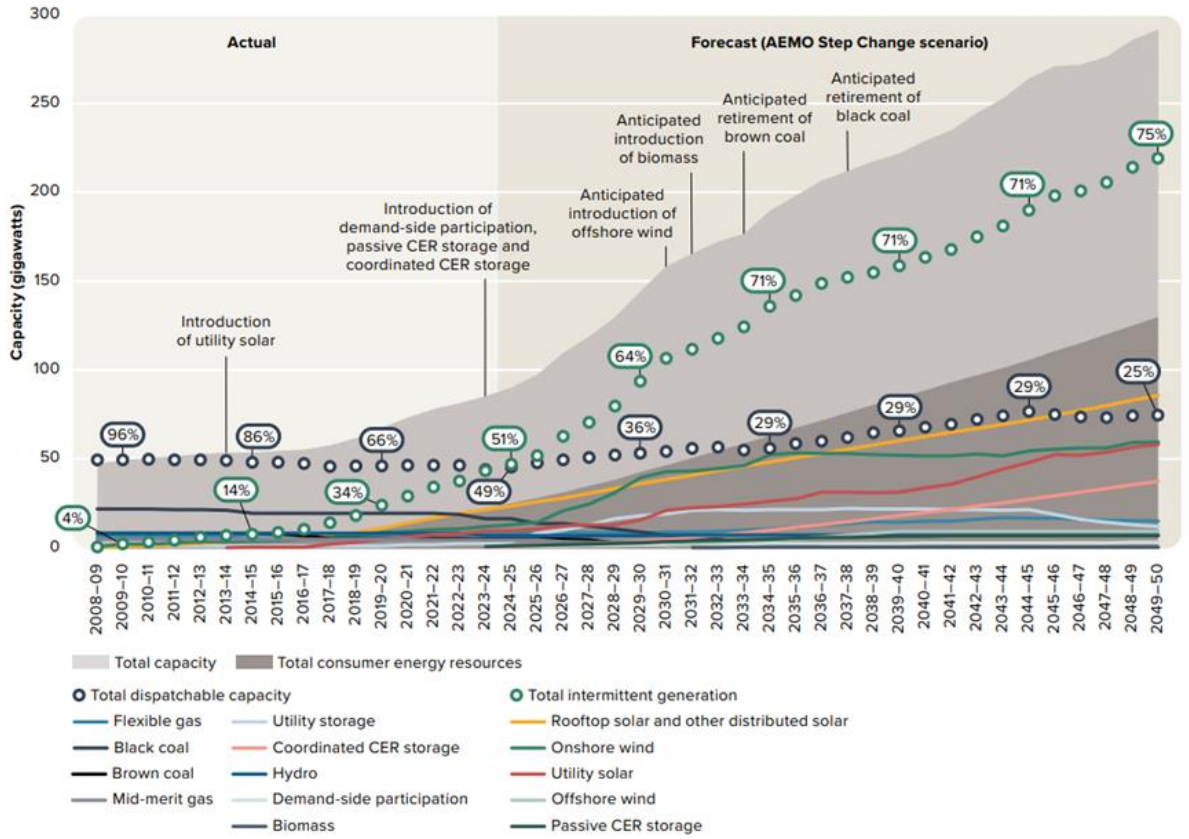
- data centres are expected to consume up to 12% of the national grid's energy by 2050, with an annual growth rate of 25%
- in September, the CCA published its 2035 Targets Advice:
  - energy demands from AI technologies and data centres are presenting significant challenges
  - recommended a reduction in carbon emissions by 62%–70% by 2035, a target that was accepted by the Australian government
  - data centres and AI have been classed as key "delivery risks" contributing to increased electricity demand and higher emissions than anticipated.
- AEMO's expects a 28% increase in operational electricity consumption from 178TWh in 2024-25 to around 229TWh by 2034-35
  - driven by the rapid expansion of data centres, electrification and the inclusion of prospective industrial energy users



2. Changing energy mix

- last financial year saw a record 4.4GW of new generation and storage commissioned
- over the next five years, additional investment between 5.2GW to 10.1 GW is expected to come online annually
- around 90% of the NEM's coal generators are scheduled to retire by 2035
- by 2030 the share of electricity requirements met by coal-fired generation is forecast to decline to 17% of the grid and 14% of total system demand
- by 2050, there is forecast to be zero coal-fired generation in the NEM
- grid-scale wind and solar are forecast to meet 65% of grid electricity requirements by 2030 and 88% by 2050
- consumer energy resources (CER) are forecast to increase to reach 130GW of capacity by 2050
  - 45% of total NEM generation capacity

Figure 1.1 NEM capacity, by generation type



Note: CER: consumer energy resources. % reflects the proportion of total capacity.
Source: AEMO, 2024 Integrated System Plan, June 2024.

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3. Volatility - Negative pricing rises

- since 2020, the frequency of both negative prices and prices above $300/MWh has increased significantly
- negative prices made up 15% of all prices in 2024, up from 3.5% in 2020
- prices above $300 per MWh increased from 0.4% to 1.8% of all prices over the same period
- the frequency of negative prices is changing:
  - 3am and 4am has increased from 4.1% of the time in 2020 to 5.8% in 2024
  - between 11am and noon has increased from 8.5% to 41.9% of the time
- frequency of prices above $300/MWh increased at all times of day but especially during the evening peak
  - between 6pm and 7pm, the frequency of prices above $300/MWh rose from 1.3% to nearly 10%

Figure 15 Negative prices observed overnight and during daytime in South Australia and Victoria

Negative price occurrence by time of day – Q3 2025

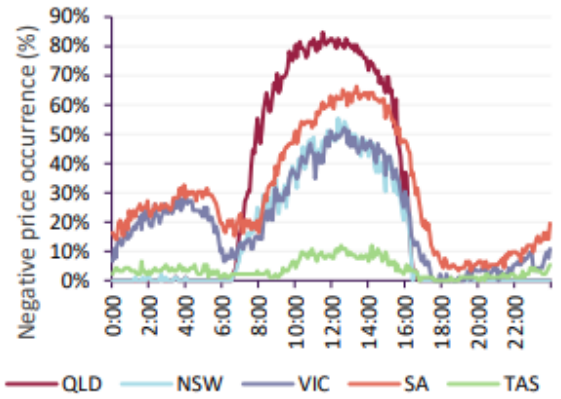
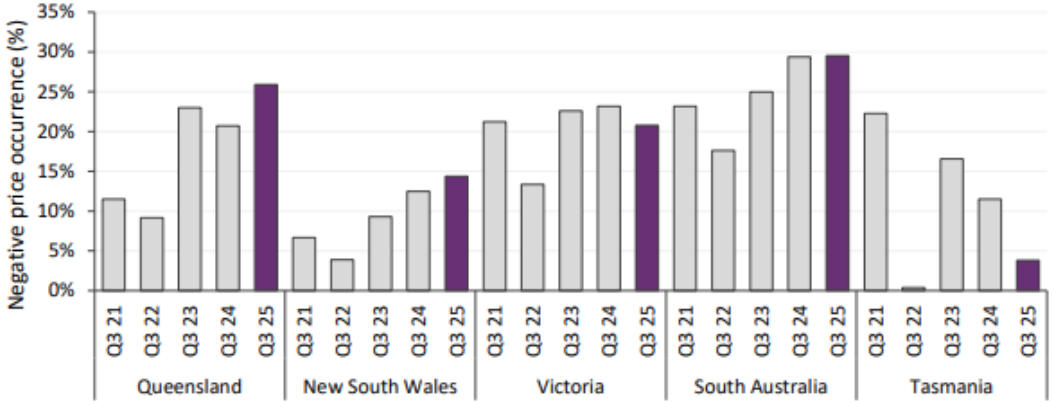


Figure 14 Record high negative price occurrence in Queensland and New South Wales

Negative price occurrence in NEM regions – Q3s



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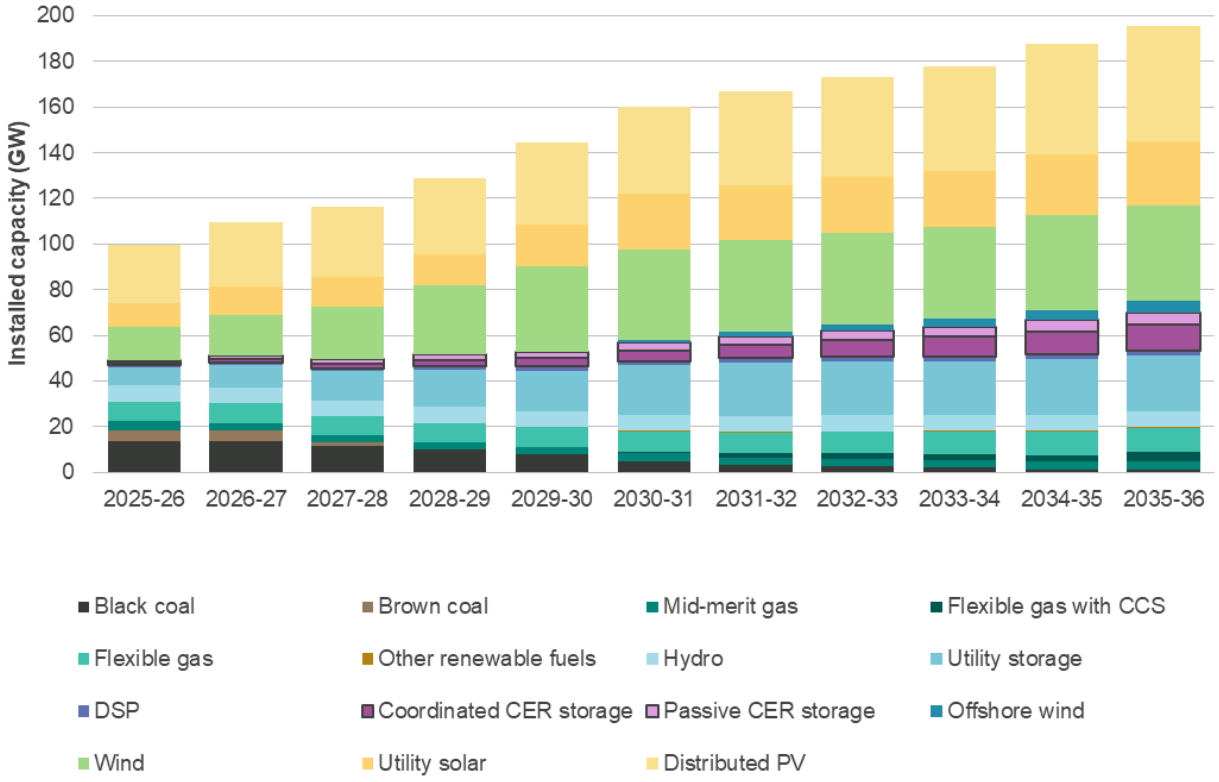
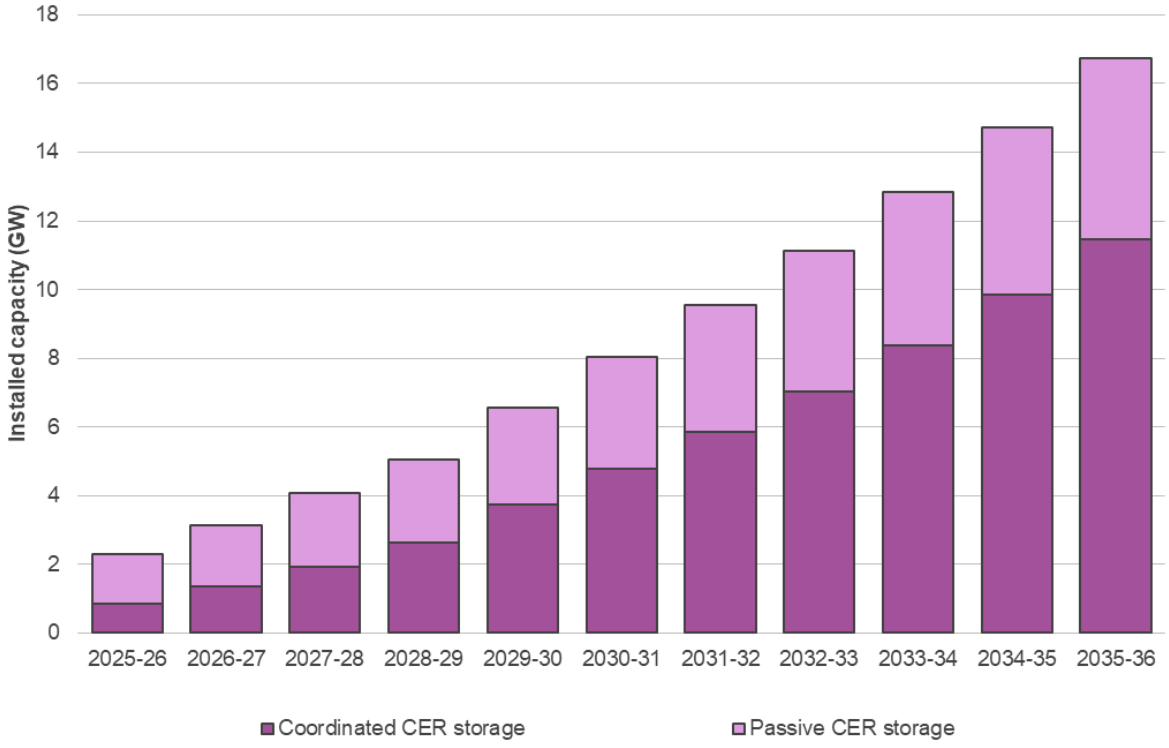
The Rise of Consumer Energy Resources





AEMO: ISP, 2024 Step Change Scenario

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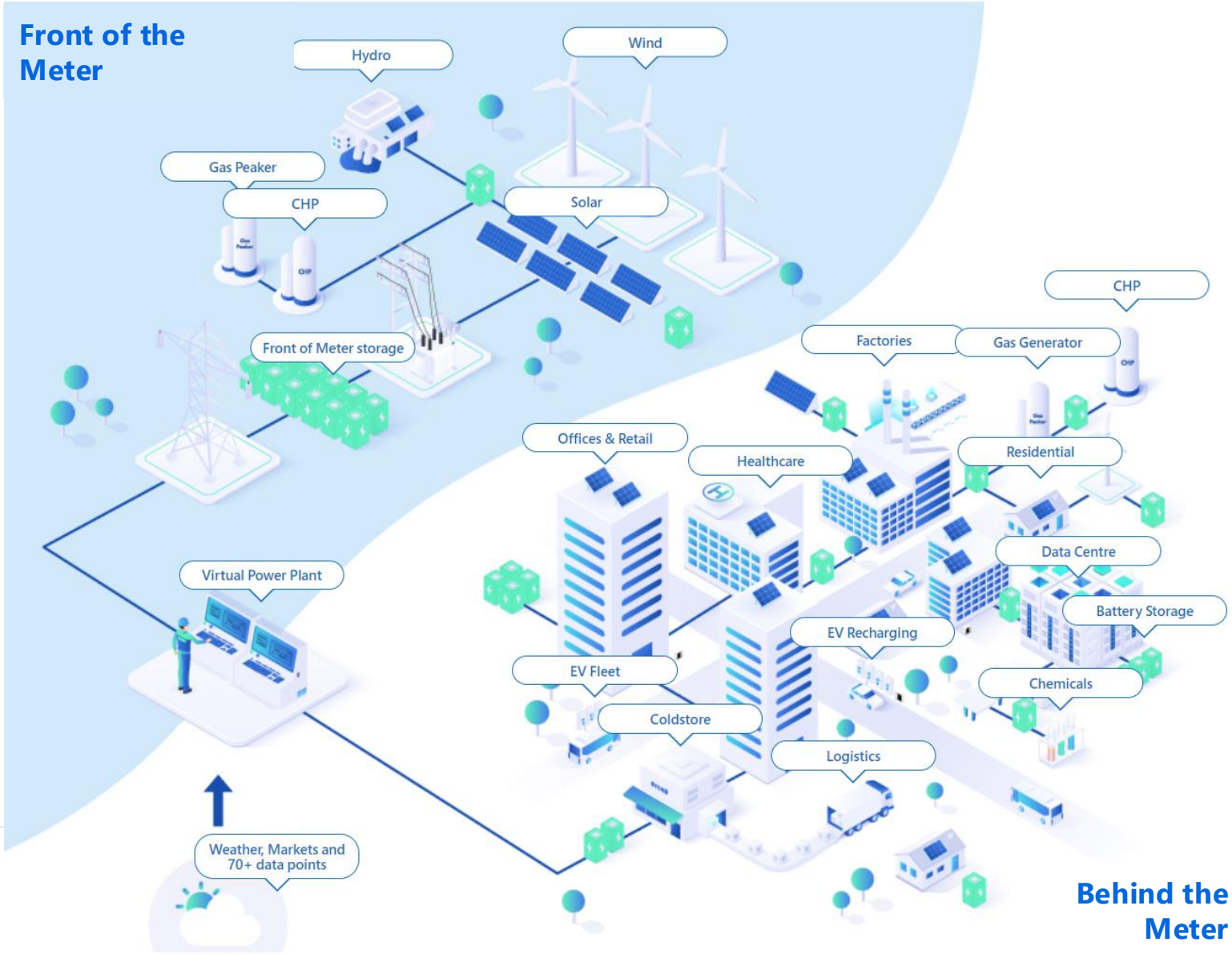
About GridBeyond

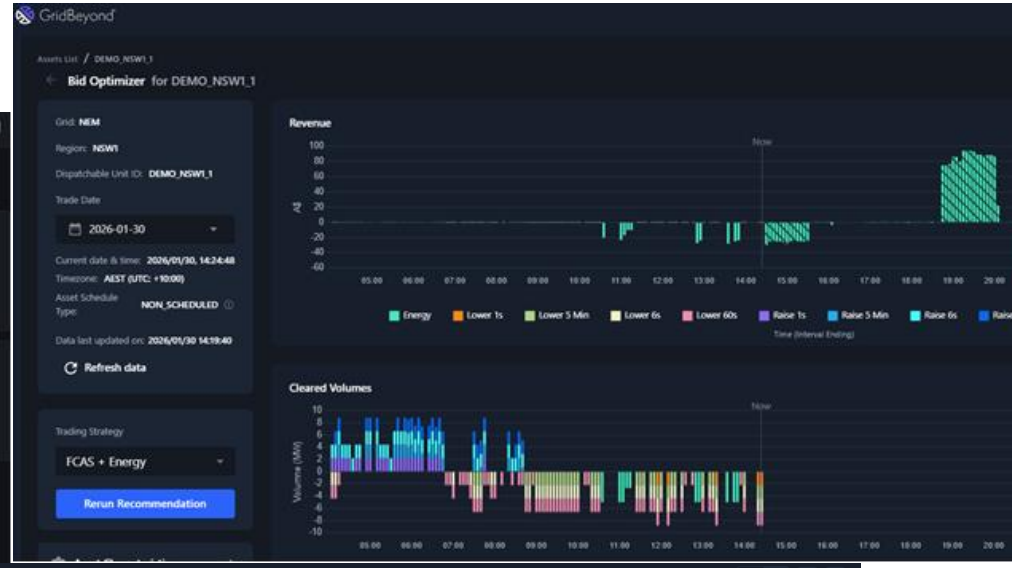
We Transform Energy Into Opportunity For The Entire Ecosystem

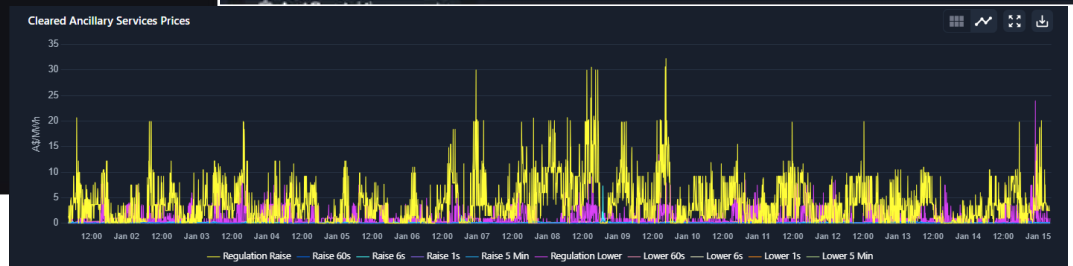


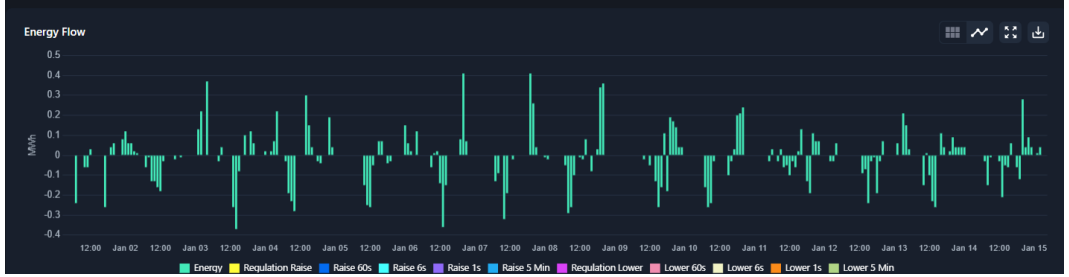
GridBeyond leverages the power of AI to help organisations capitalise on opportunities resulting from the digital and energy transitions.

We empower energy users, generators, fleet operators, and renewable developers to uncover additional **revenue** streams, lower **energy cost**, and drive **sustainability**.

Forecasting & Optimisation







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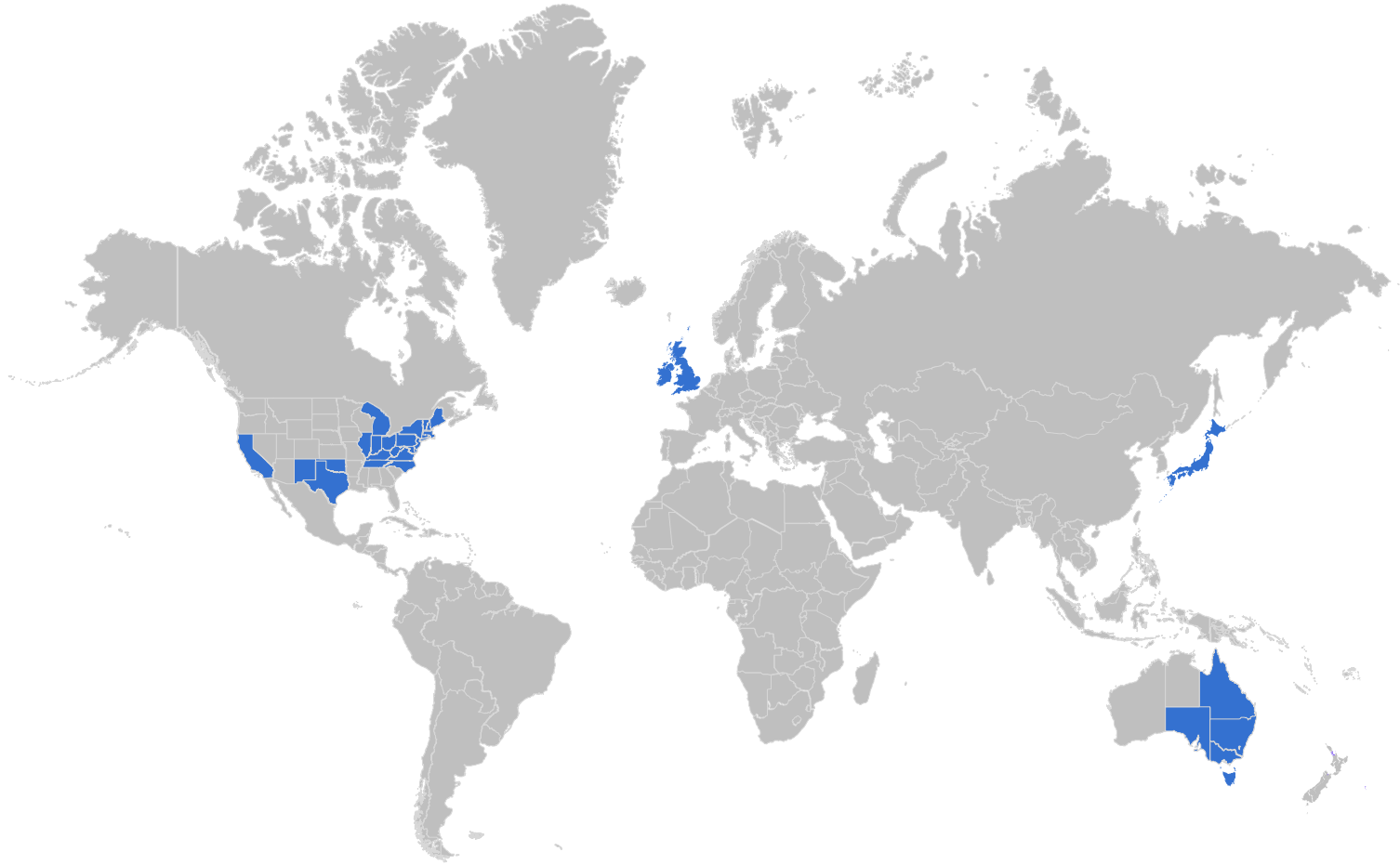
Operating across 4 continents, we empower energy users, generators, fleet operators, and renewable owners/developers to uncover additional revenue streams, lower energy cost, and drive sustainability.

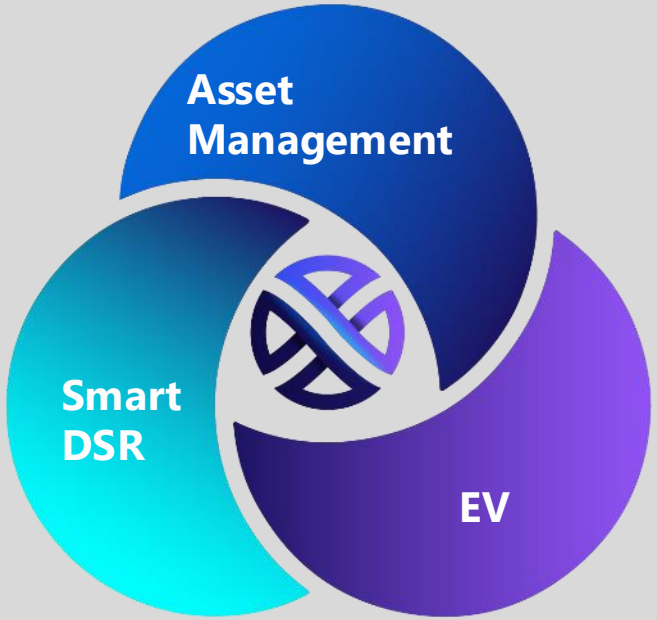


2010
Founded in

1200+
Customers

160+
Employees

4+ GW
total load & Batteries



Partners:

ABB, ESB, PUMPJACK POWER, YOKOGAWA, TOTAL, PNM, edp, RAINPOWER, VEOLIA, EDFENERGY, CHIYODA CORPORATION, Constellation.

Some of our success stories

Key Partnerships

VEOLIA
CHIYODA CORPORATION
Constellation.
YOKOGAWA
PNM
EDF ENERGY
PUMPJACK POWER
OUR ENERGY EMPOWERS YOU
RAINPOWER
ABB

Keppel Data Centres
Deloitte.
U.S. DEPARTMENT OF ENERGY
enel X
North Star BlueScope
PriorityPower
the Wonderful company
AUSTIN ENERGY
Bit Brother
GFG ALLIANCE
PowerSecure
americold
TECO TAMPA ELECTRIC AN EMERA COMPANY
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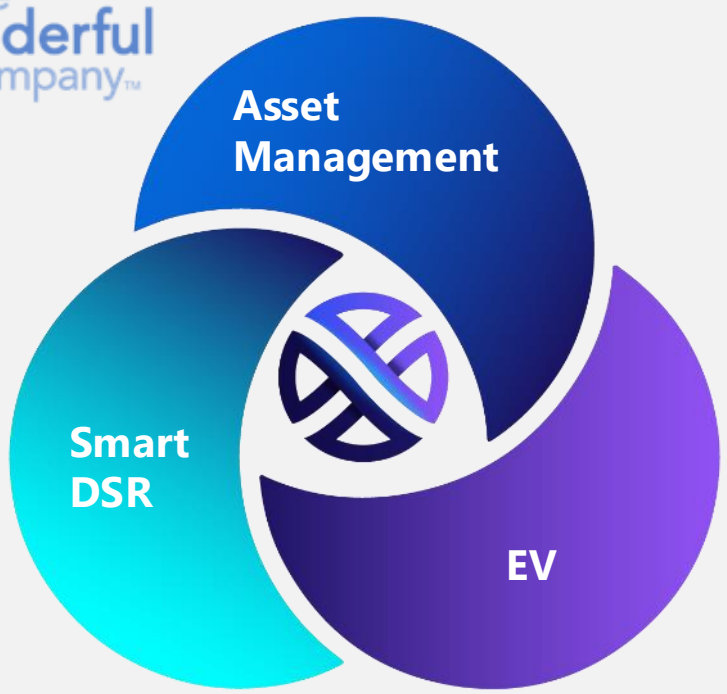

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Thank you

Any questions?

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