2025 Australia Energy Storage Update: Business Models

More market momentum for utility-scale batteries

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BloombergNEF

Executive summary

Australia is on the verge of a utility-scale battery boom, driven by sustained elevated power market volatility, supportive government policies, and impending coal plant retirements. Investors are now more convinced than ever that batteries can play a crucial role in facilitating the country's clean energy transition. This is the second note in a two-part series updating BloombergNEF's outlook on energy storage in Australia.

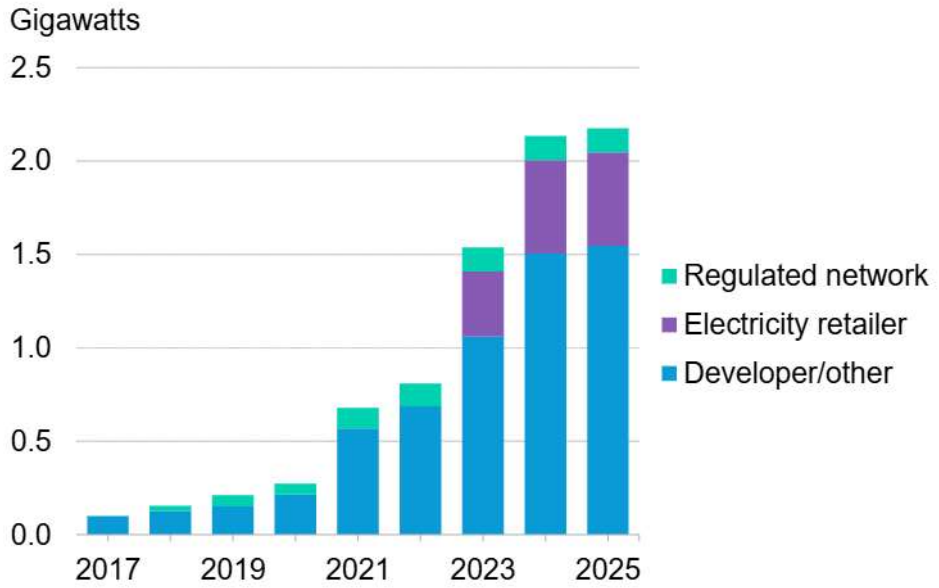
- Prolonged periods of heightened power market volatility have allowed batteries to make more money from arbitraging wholesale power prices than ever before. Last year, batteries earned a record A$165.4 million ($104.3 million) in net arbitrage revenue – more than double the revenue earned from providing frequency control and ancillary services.
- Australia's biggest electricity retailers had previously shied away from outright ownership of batteries, preferring instead to sign lease agreements, which allowed them to earn revenue from competitive markets at the expense of an agreed fee to the owner. This is now changing as costs have declined, revenue potential has improved, and business models have evolved – whetting their appetite for ownership. AGL Energy plans to secure financing for 1.4 gigawatts of new batteries by 2026, while Origin Energy hopes to own or contract 1.7GW of new capacity by 2027.
- In Australia, regulated network companies are restricted from directly owning batteries to prevent anti-competitive behavior. However, lease agreements allow network companies a way to own batteries without running afoul of anti-competitive regulations. In Australia, three battery projects – Dalrymple, Ballarat, and Wallgrove – have secured exemptions and are owned by regulated network companies but are operated by third parties as part of long-term lease arrangements.

500MW/700MWh Capacity of batteries owned by electricity retailers in Australia

128MW/149MWh Capacity of batteries owned by regulated network companies in Australia

7.3 gigawatts Estimated capacity of utility-scale batteries under construction in Australia at the end of 2024

Operational utility-scale battery capacity in Australia, by ownership type



Source: BloombergNEF. Note: Projects with a power output rating of less than 1 megawatt are not included.

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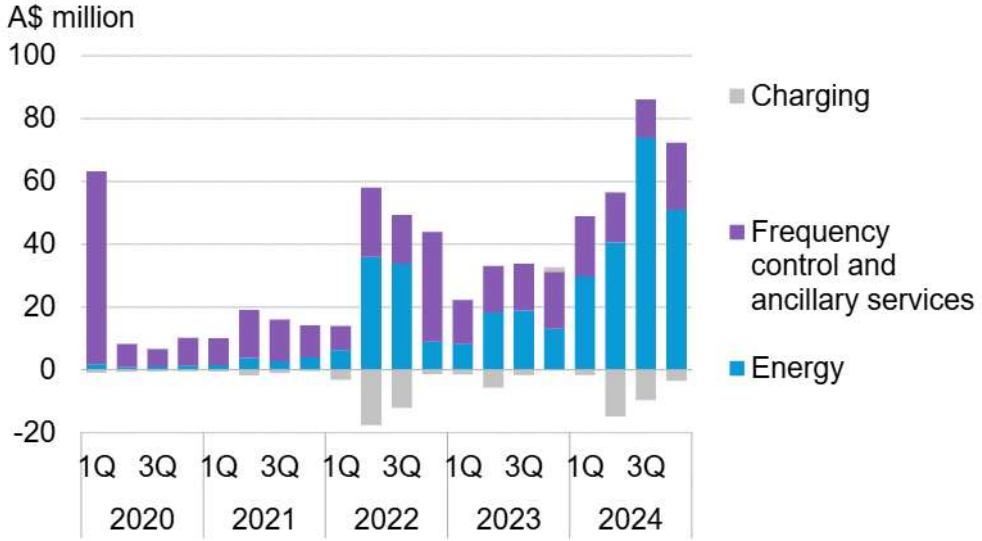
Storage market overview

More market momentum for big batteries

Arbitrage is more financially significant to utility-scale batteries than FCAS

Quarterly market revenue earned by utility-scale batteries in the NEM



Annual revenue earned by batteries in the NEM (A$ million)

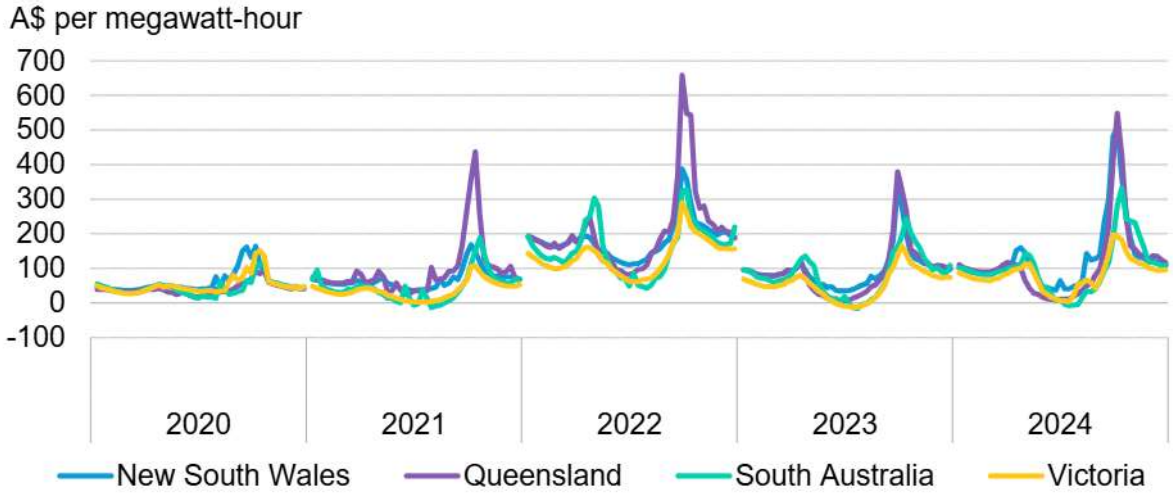
Year	Energy	FCAS	Charging	Net total
2020	$5.15	$83.0	-$2.65	**$85.5**
2021	$11.93	$47.4	-$3.83	**$55.5**
2022	$85.0	$80.1	-$34.4	**$130.7**
2023	$58.3	$61.9	-$7.49	**$112.7**
2024	$195.1	$68.7	-$29.7	**$234.0**

- Batteries have a wide variety of ways to earn value or revenue in Australia's National Electricity Market (NEM). Two of their major sources are providing **frequency control and ancillary services**, or FCAS, to stabilize the grid, and **arbitraging the energy market** by charging when spot prices are low (and supply is high) and discharging when prices are high (and supply is low).
- Historically, **FCAS** have formed the bulk of market-based revenues for utility-scale batteries. This trend was upended in 2022 when significantly elevated levels of power market volatility, spurred by rising fuel costs after Russia's invasion of Ukraine, increased the number of lucrative opportunities for batteries to arbitrage intraday wholesale spot prices. For the first time, batteries earned more gross revenue from arbitraging the **energy** market than from FCAS.
- Sustained heightened volatility in the NEM, driven by ever-increasing renewable energy penetration, has continued to drive arbitrage returns for batteries ever since. In 2024, batteries earned a record A$165.4 million ($104 million) in net revenue from the **energy** market, more than triple the A$50.9 million earned in 2023, as average intraday power price volatility increased significantly year-on-year.
- **FCAS** accounted for A$68.7 million in revenue in 2024 – 11% more than in 2023. The introduction of two new "very fast" ancillary service markets in October 2023 could boost future revenue, but with around 7.3GW of utility-scale batteries under construction in Australia, competition in FCAS markets is likely to intensify over the coming years. For more, see BNEF's *1H 2025 Australia Market Outlook* (web | terminal).

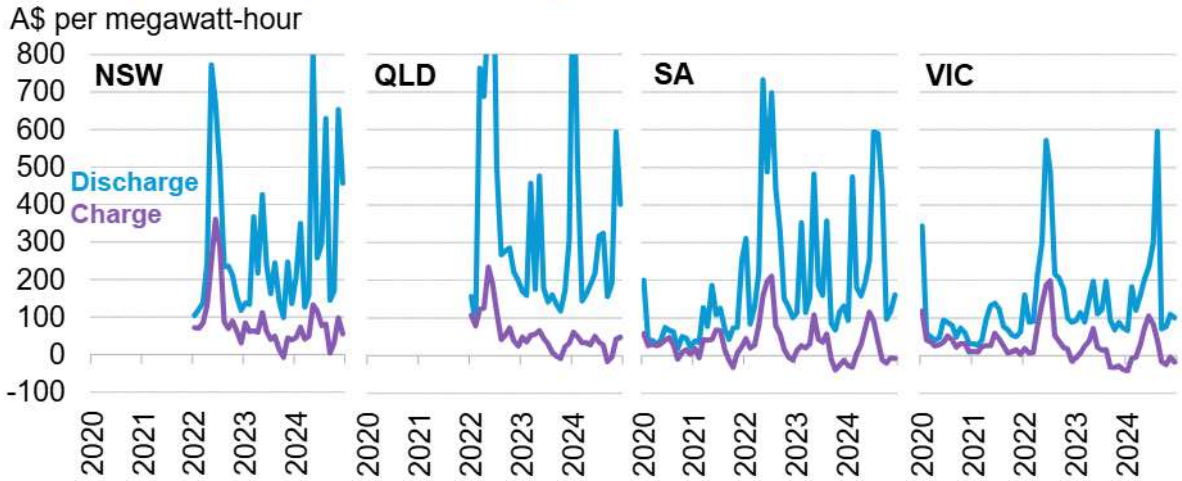
Source: Australian Energy Market Operator, BloombergNEF. Note: Revenue from non-market sources, such as power purchase agreements and/or hedging contracts, is not included. "Charging" refers to costs incurred while charging.

Power market volatility continues to drive arbitrage returns for batteries

Half-hourly average power price profile in the NEM



Monthly realized prices of utility-scale batteries in the NEM



Source: Australian Energy Market Operator, BloombergNEF.

- The rise of renewable energy generation is reshaping Australia's power markets. An ever-growing fleet of wind and solar assets suppresses spot prices when they generate in abundance; conversely, more expensive dispatchable generators ramp up their output and push up spot prices when wind and solar output is low.
- Across 2024, average intraday arbitrage – the difference between the lowest and highest half-hourly average price – ranged from A$88.04 per megawatt-hour ($55.44/MWh) in Tasmania to A$538.88/MWh in Queensland. This was a significant increase from 2023, when arbitrage ranged from A$41.80/MWh in Tasmania to A$373.28/MWh in Queensland.
- Batteries are arbitraging this intraday volatility by charging (buying electricity) when renewable output is high and spot prices are low and discharging (selling electricity) when renewable generation falls and spot prices rise. This is proving lucrative to batteries, as reflected by their realized power prices.
- The realized price of **discharge** is the average price a battery earns for every unit of power it sells to the grid, while the realized cost of **charge** is the average cost it incurs for every unit it buys. The difference between the two is effectively the arbitrage value earned by a battery. The widening gap illustrates a growing arbitrage opportunity for batteries across the NEM, as shown in the bottom charts.

Utilities (and coal plant owners) are showing appetite for battery ownership

List of selected battery projects owned or operated by electricity retailers

Project	Operation year	Owner	Operator	Status
Ballarat	2018	AusNet	EnergyAustralia	Commissioned
Gannawarra	2018	Edify Energy, Gentari	EnergyAustralia	Commissioned
Dalrymple	2018	ElectraNet	AGL Energy	Commissioned
Wandoan South	2021	Vena Energy	AGL Energy	Commissioned
Torrens Island	2023	AGL Energy	AGL Energy	Commissioned
Riverina and Darlington Point	2023	Federation Asset Management, Edify Energy	EnergyAustralia, Shell Energy	Commissioned
Kwinana 1	2023	Synergy	Synergy	Commissioned
Kogan Creek	2024	CS Energy	CS Energy	Commissioned
Broken Hill	2024	AGL Energy	AGL Energy	Commissioned
Kwinana 2	2025	Synergy	Synergy	In commissioning
Collie (Synergy)	2025	Synergy	Synergy	Under construction
Eraring Stage 1	2025	Origin Energy	Origin Energy	Under construction
Tarong	2025	Stanwell	Stanwell	Under construction
Liddell	2026	AGL Energy	AGL Energy	Under construction
Mortlake	2026	Origin Energy	Origin Energy	Under construction
Orana	2026	Akaysha Energy	EnergyAustralia	Under construction
Wooreen	2026	EnergyAustralia	EnergyAustralia	Under construction
Supernode	2026	Quinbrook Infrastructure Partners	Origin Energy	Under construction
Eraring Stage 2	2027	Origin Energy	Origin Energy	Under construction

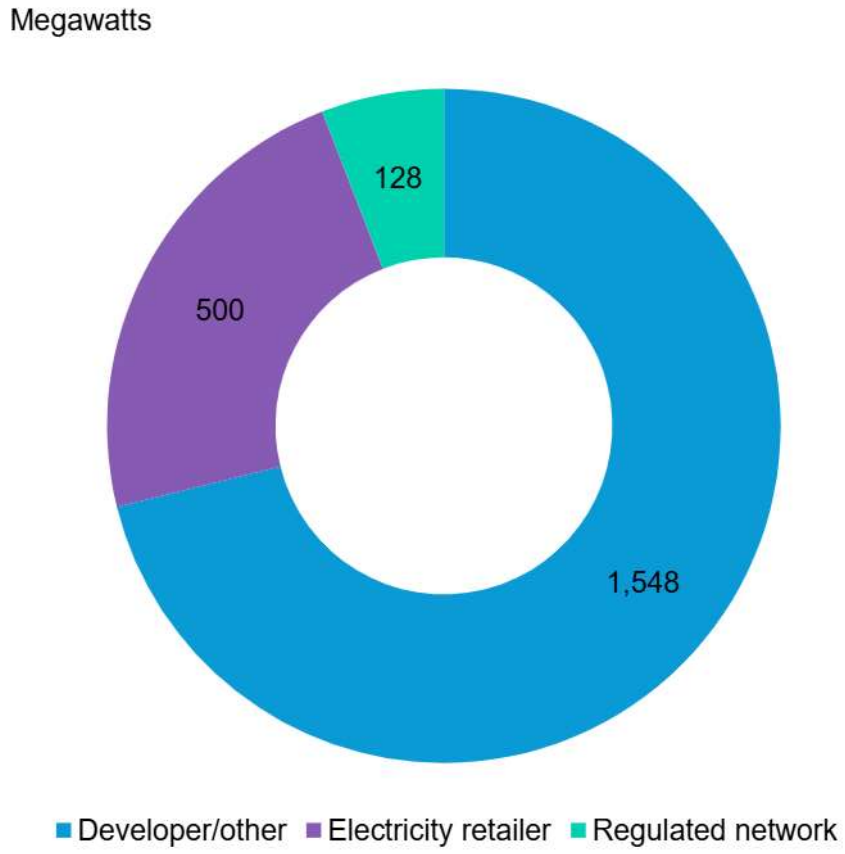
Legend: Developer, Electricity retailer, Regulated network

- Historically, Australia's big utilities have shied away from outright ownership of utility-scale batteries, put off by high upfront costs and uncertain market revenue potential.
- Instead, they preferred to sign lease agreements, which allowed them to operate the asset to earn revenue from competitive markets in exchange for a fixed or pre-agreed fee to the battery owner.
- This trend appears to be changing as costs have declined, revenue potential has improved, and business models have evolved. Utilities are also looking to batteries to replace the aging coal and gas assets in their portfolios.
- AGL Energy plans to secure financing for 1.4GW of new batteries by 2026, while Origin Energy hopes to own or contract 1.7GW of new capacity by 2027.
- For more, see *Australia's Big Coal Generators Pivot Toward Batteries* (web | terminal).

Source: BloombergNEF, Australian Energy Market Operator, company announcements. Note: Operation year for under construction assets is based on publicly available information and does not reflect BNEF's own assessment. Projects can be subject to delays in their development.

Complexity of viable business models is a hurdle for network companies

Operational utility-scale battery capacity in Australia, by ownership type

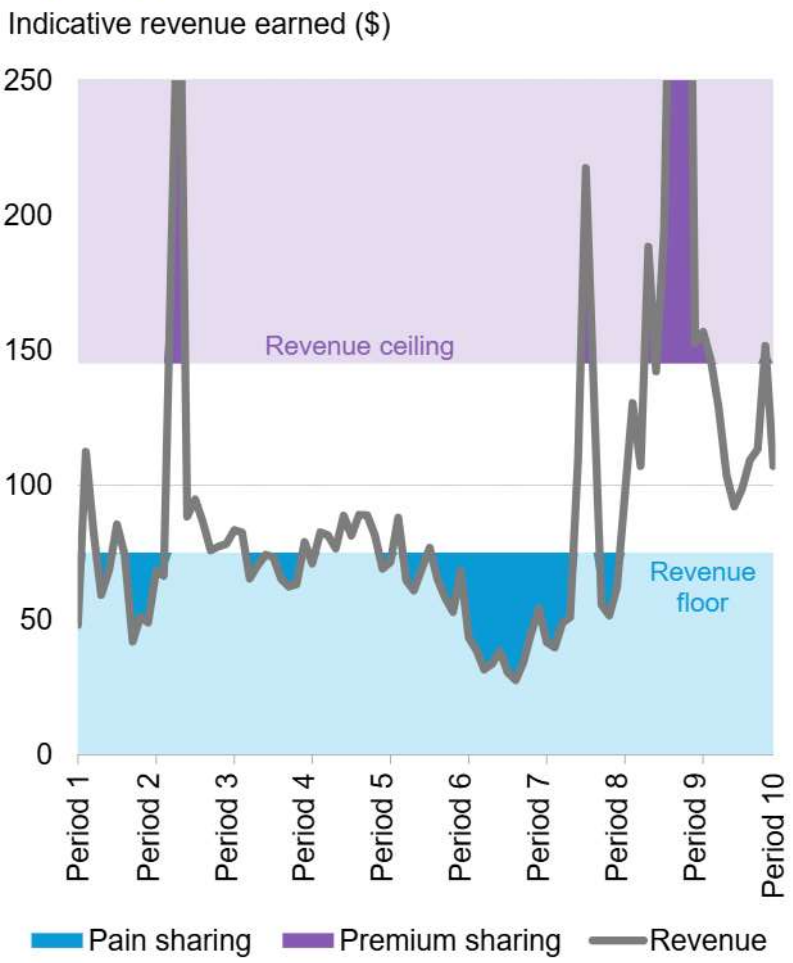


Source: BloombergNEF. Note: Projects with a power output rating of less than 1 megawatt are not included.

- There are inherent advantages for networks to own storage assets. They can generally obtain lower cost capital, have the best understanding of where storage assets can provide value to the grid and usually have access to critical real estate along their networks.
- However, many jurisdictions around the world have rules that restrict networks from rate-basing assets that participate in competitive markets. For more, see *Global Energy Storage Policy Review Part 1 - Overview* (web | terminal).
- In Australia, three storage projects – Dalrymple, Ballarat, and Wallgrove – have secured exemptions and are owned by regulated networks. They did so by setting up arrangements with third parties to lease and operate the storage asset. Leasing out the asset and giving all operational rights to a third party prevents regulated entities from directly participating in competitive markets. However, the added complexity from having to make arrangements with counterparties can be a hurdle for networks interested in owning storage assets. Indirect ownership of assets through unregulated subsidiaries is an option, but this prevents networks from benefiting from the aforementioned advantages of ownership.
- In the case of Dalrymple and Wallgrove, not only are the batteries owned by a regulated network, a certain portion of the battery is also rate-based to provide network services such as fast frequency response. The regulator in Australia determined that the net benefit of the storage asset to customers outweighed costs and hence allowed a portion to be rate-based. The remaining cost (after subsidies) is recovered by leasing the project to a third party that then operates the asset in the competitive market.
- As of March 2025, regulated network companies accounted for just under 6%, or 128MW, of total utility-scale battery ownership in Australia.

The Capacity Investment Scheme will incentivize battery uptake out to 2030

Premium and pain sharing under Australia's Capacity Investment Scheme

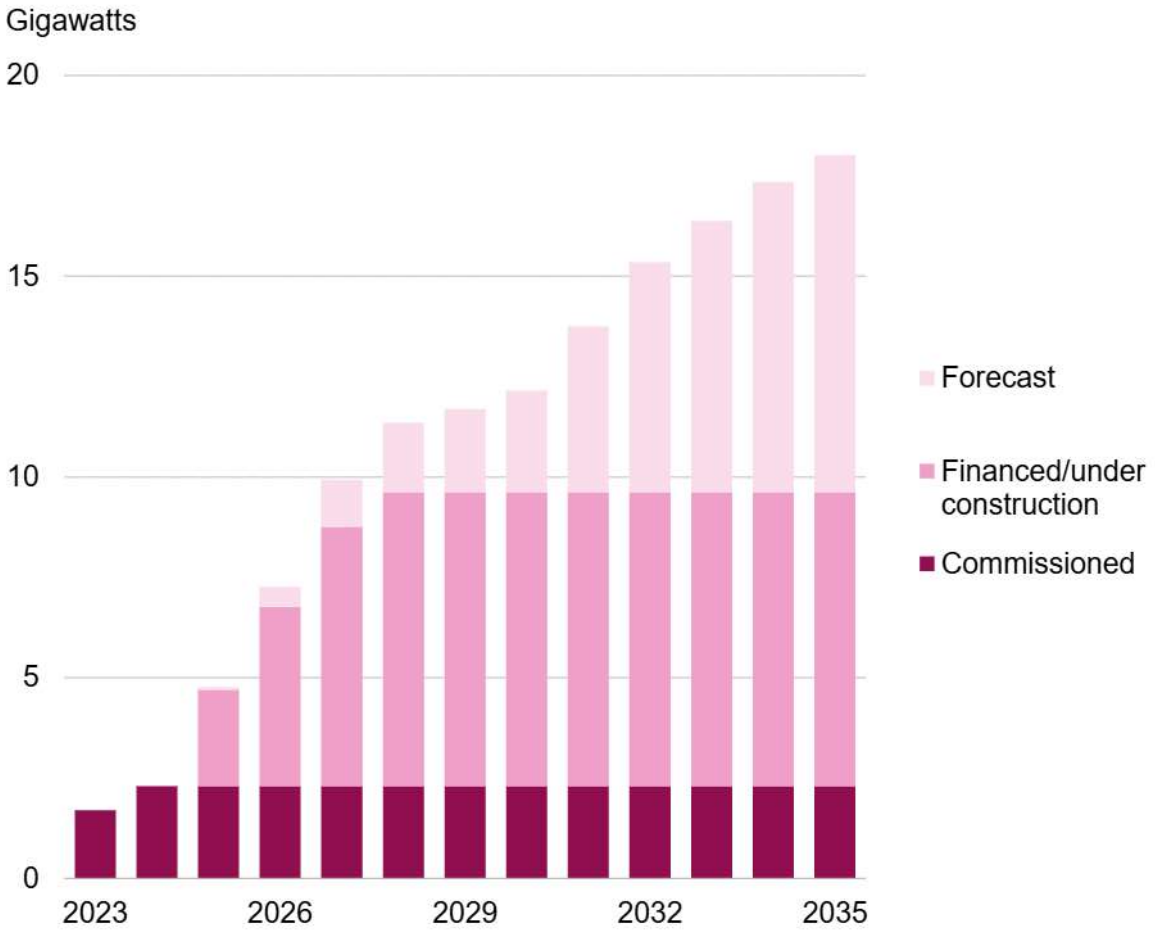


Source: BloombergNEF. Note: Revenue earned, pain sharing, premium sharing and time periods are indicative.

- In November 2023, the federal Labor government expanded its Capacity Investment Scheme (CIS) – a series of tenders held every six months between 2024 and 2027 – to secure 23GW of new renewable energy capacity and 9GW of new clean storage capacity by 2030. The program aims to incentivize uptake by reducing revenue uncertainty – a longstanding impediment to project bankability.
- Successful applicants of the CIS will be offered long-term underwriting contracts for an agreed revenue floor and ceiling. If a project exceeds its ceiling, the project owner pays the government a percentage of the premium. On the flip side, if a project underperforms relative to its net revenue floor, the government pays the owner a share of the shortfall.
- Akaysha Energy's four-hour 415MW Orana battery, AGL Energy's two-hour 500MW Liddell battery, and Iberdrola Australia's two-hour 65MW Smithfield battery were among the winners of the CIS tender in New South Wales in November 2023. The projects were awarded Long-Term Energy Service Agreements (LTESA) by the New South Wales government, which provide generators an option to sell their electricity at an agreed minimum price. In February 2025, the state government awarded LTESAs to 1,025MW of long-duration storage, including a 15-hour 800MW pumped hydro facility.
- In December 2023, the federal government opened a CIS tender for 600MW of four-hour equivalent storage capacity in South Australia and Victoria. EnergyAustralia's four-hour 50MW Hallett battery in South Australia and four-hour 350MW Wooreen battery in Victoria (to be built at the site of its Yallourn coal plant) were among the 995MW/3,626MWh worth of capacity awarded CIS contracts in this tender round.
- In March 2025, a tender for clean dispatchable capacity in Western Australia awarded CIS contracts to four battery projects totaling 654MW/2,595MWh in capacity. Overall, projects constituting at least 3.9GW of utility-scale battery capacity have either been awarded a CIS agreement or LTESA in Australia.

Australia is on the cusp of a utility-scale battery boom

Cumulative utility-scale battery uptake and base-case forecast in Australia, by status



Source: BloombergNEF

- Australia's fleet of utility-scale batteries could more than quadruple over the next three years, propelled by sustained elevated power market volatility, looming coal plant retirements and supportive government policies. For more, see BNEF's *2025 Australia Energy Storage Update: Drivers of Uptake* (web | terminal).
- According to BNEF's base-case forecast, total utility-scale battery uptake in Australia could reach 9.9GW by the end of 2027, up from the 2.3GW at the end of last year. Around 65% of the expected total uptake by 2027 has already secured financing and/or commenced construction, demonstrating investors' increasing confidence in the role batteries will play in Australia's energy transition.
- BNEF forecasts an additional 9.9GW of installed capacity by 2030 and 15.7GW by 2035. This results in 12.1GW of installed capacity by 2030 and 18.0GW by 2035. For more, see BNEF's *1H 2025 Australia Market Outlook* (web | terminal).

This is the second report of a two-part series updating BNEF's outlook on energy storage in Australia. The first part, ***2025 Australia Energy Storage Update: Drivers of Uptake*** (web | terminal), examines the key drivers spurring energy storage adoption in Australia.

Energy storage project profiles

Exploring different business models

Commercial arrangement diagrams explained

1. Funder/owner relationship

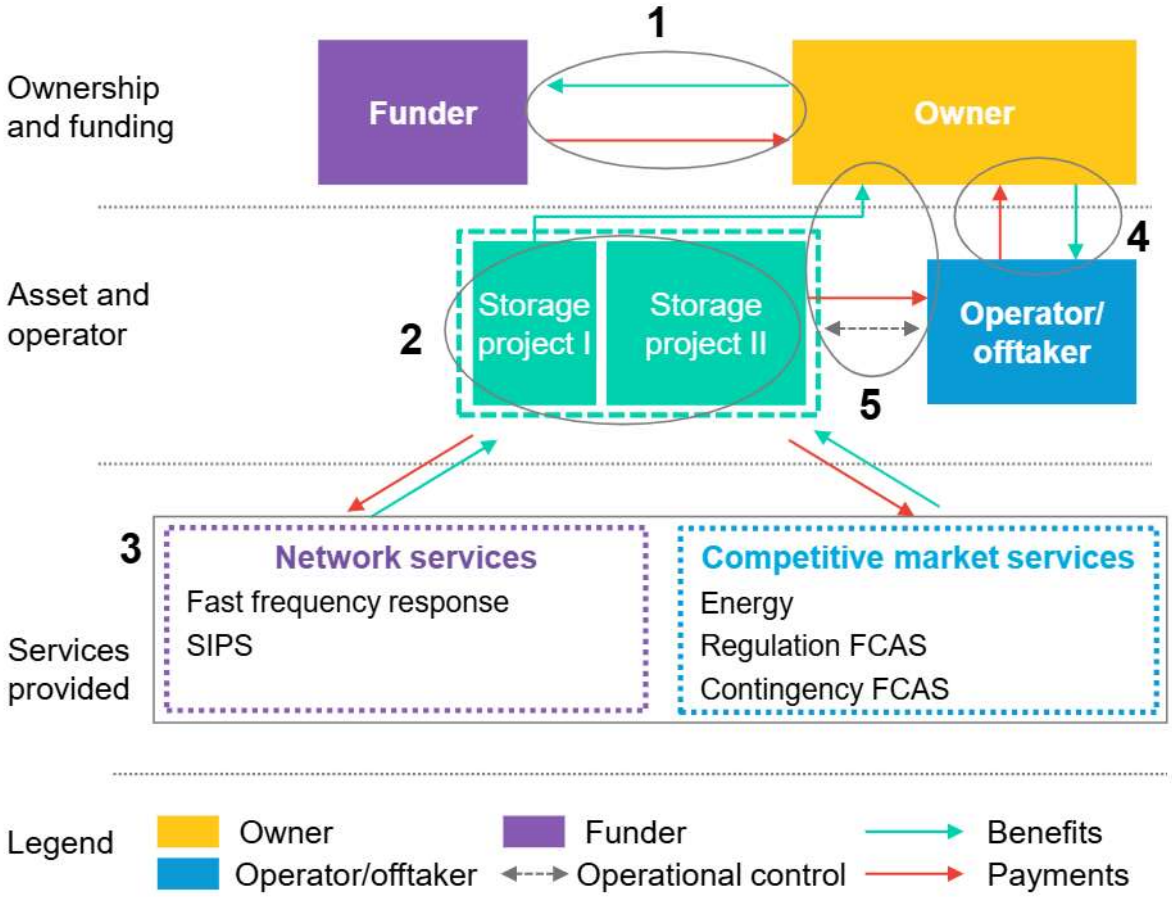
Most storage projects in Australia receive some level of financial assistance in the form of upfront grants or low-cost finance. In exchange, knowledge sharing agreements or service agreements are signed.

2. Storage project breakdown

In some cases, storage projects may be split for operational reasons such as ring-fencing regulated services from competitive market services (if the owner is a network company).

3. Revenue/value streams

Revenue/value streams are grouped into four categories: network services, generator support, non-market ancillary services and competitive market services.



4. Owner/operator relationship

In cases where the owner is not the operator of the storage project, typically an asset leasing agreement is signed, which gives the leasee operational rights for the storage asset for an agreed fixed payment. The agreement may reserve a certain proportion of the asset for the owner's use. In some cases, the owner is also the operator of the storage asset.

5. Operator/storage relationship

The operator/offtaker controls the storage asset and receives payments from the storage project. Depending on the lease agreement signed between the owner and operator, the storage project may provide service benefits to the owner as well.

Source: BloombergNEF. Note: SIPS = system integrity protection scheme, FCAS = frequency control and ancillary services.

South Australia

Operational

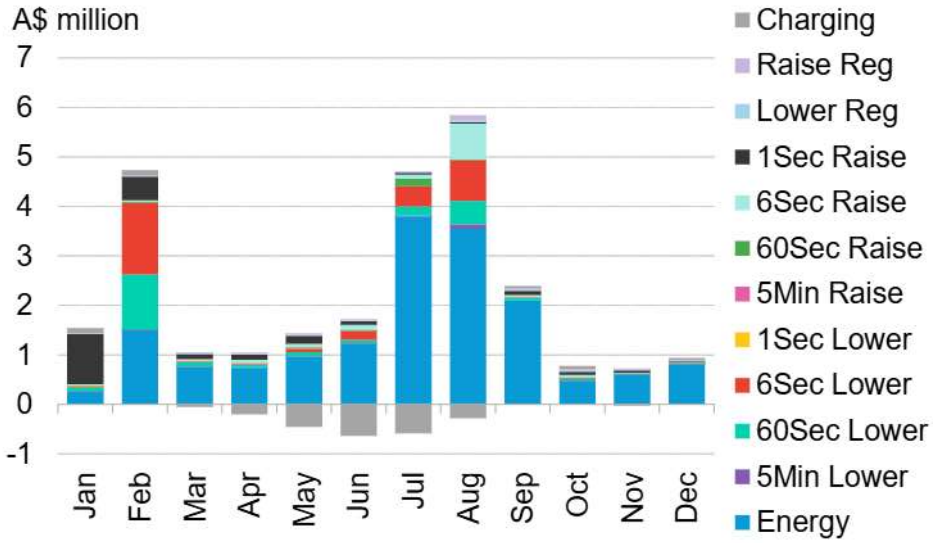
South Australia

Hornsdale Power Reserve

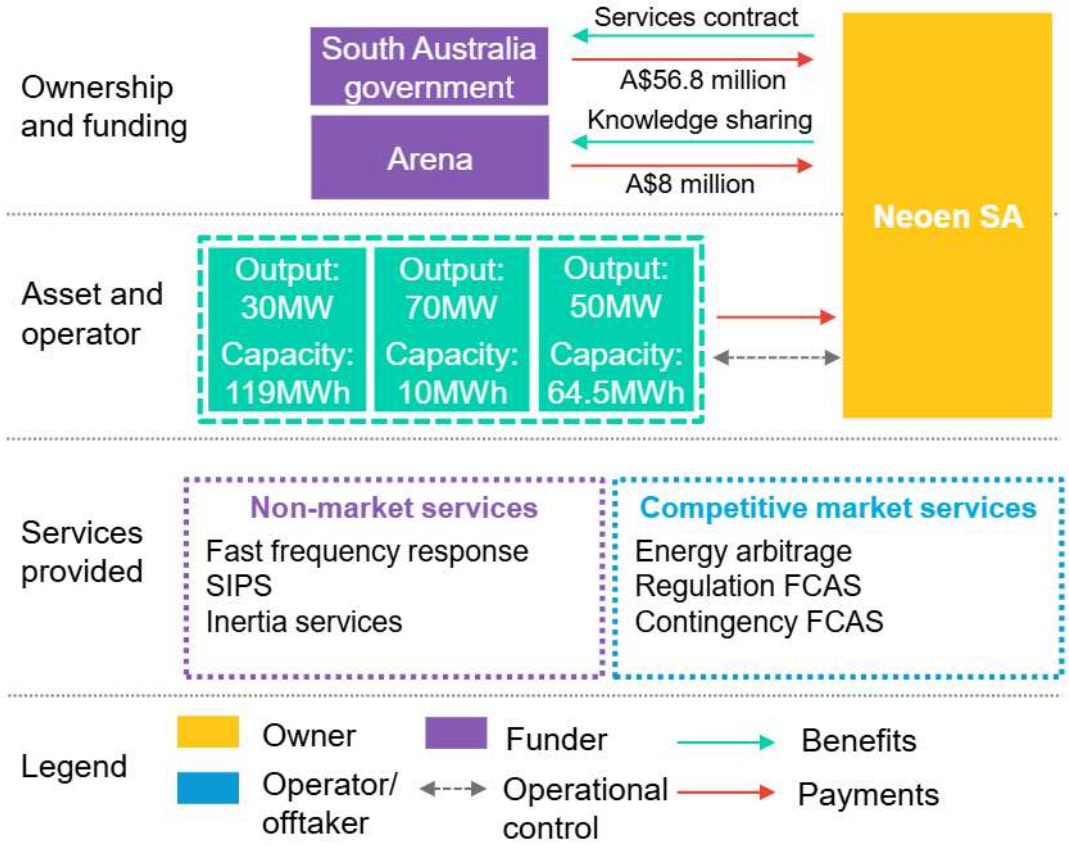
Project details

Size	150MW/193.5MWh
Start of operation	December 2017
Cost	~A$161 million
Owner	Neoen (developer)
System integrator	Tesla
Operator	Neoen
Offtaker	Government of South Australia
Connection	132 kilovolt (kV) transmission level

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, SIPS = system integrity protection scheme, FCAS = frequency control and ancillary services.

Operational

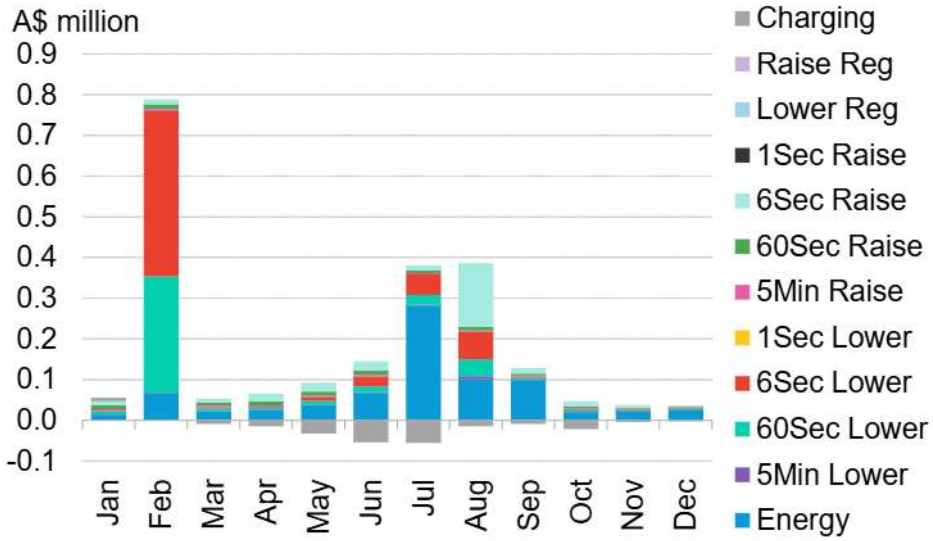
South Australia

Dalrymple

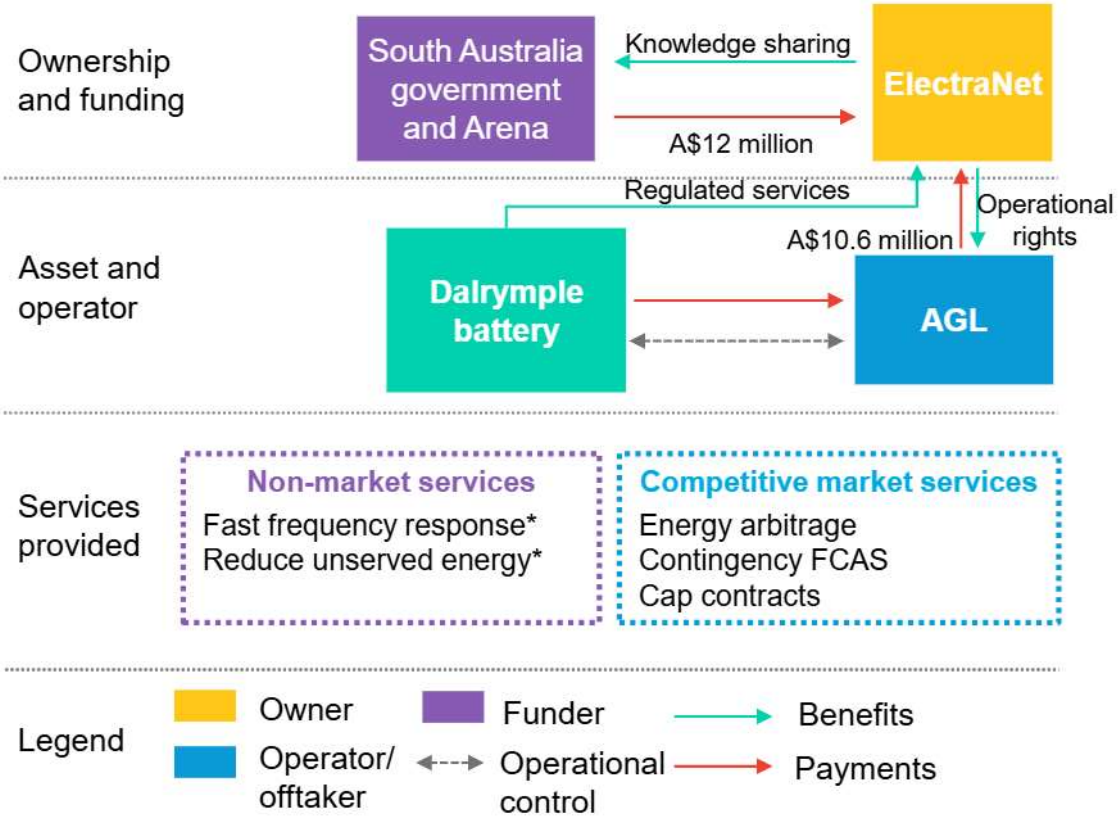
Project details

Size	30MW/8MWh
Start of operation	July 2018
Cost	A$30 million (A$5.8 million rate-based)
Owner	ElectraNet (network)
System integrator	ABB and Samsung SDI
Operator	AGL Energy (electricity retailer)
Offtaker	AGL Energy
Connection	33kV bus at substation (transmission)

Market-based revenue and costs in 2024



Revenue streams



*Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services. *These are regulated services provided to ElectraNet.*

Operational

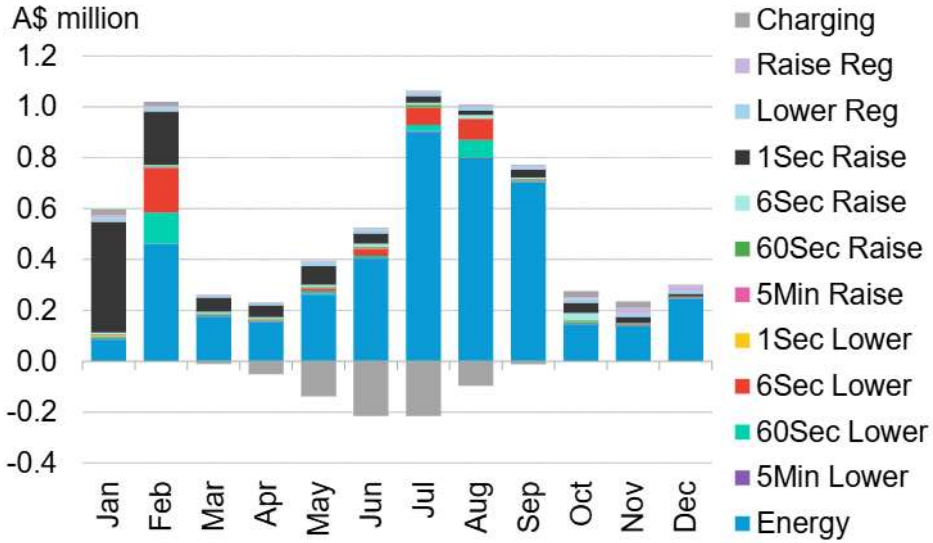
South Australia

Lake Bonney

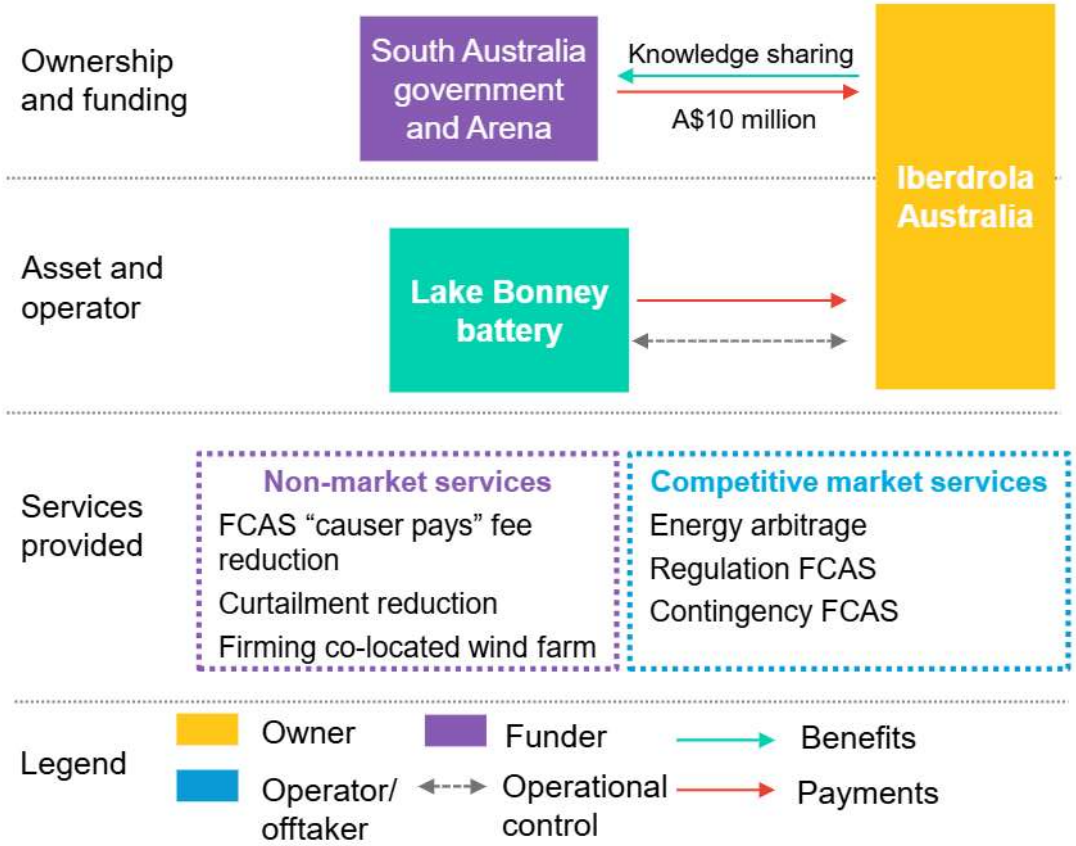
Project details

Size	25MW/52MWh
Start of operation	December 2019
Cost	A$41.6 million
Owner	Iberdrola Australia (developer)
System integrator	Tesla
Operator	Iberdrola Australia
Offtaker	N/A
Connection	33kV bus at substation (transmission)

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

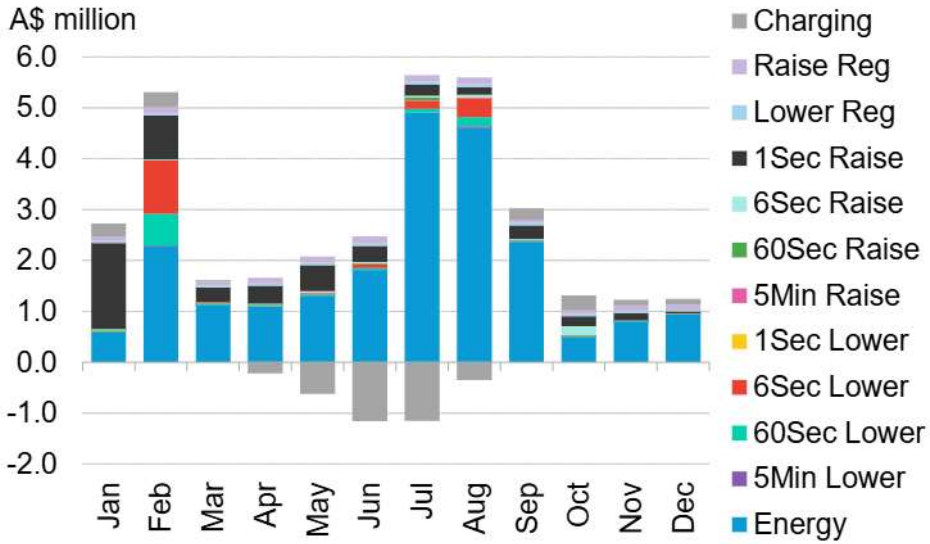
South Australia

Torrens Island

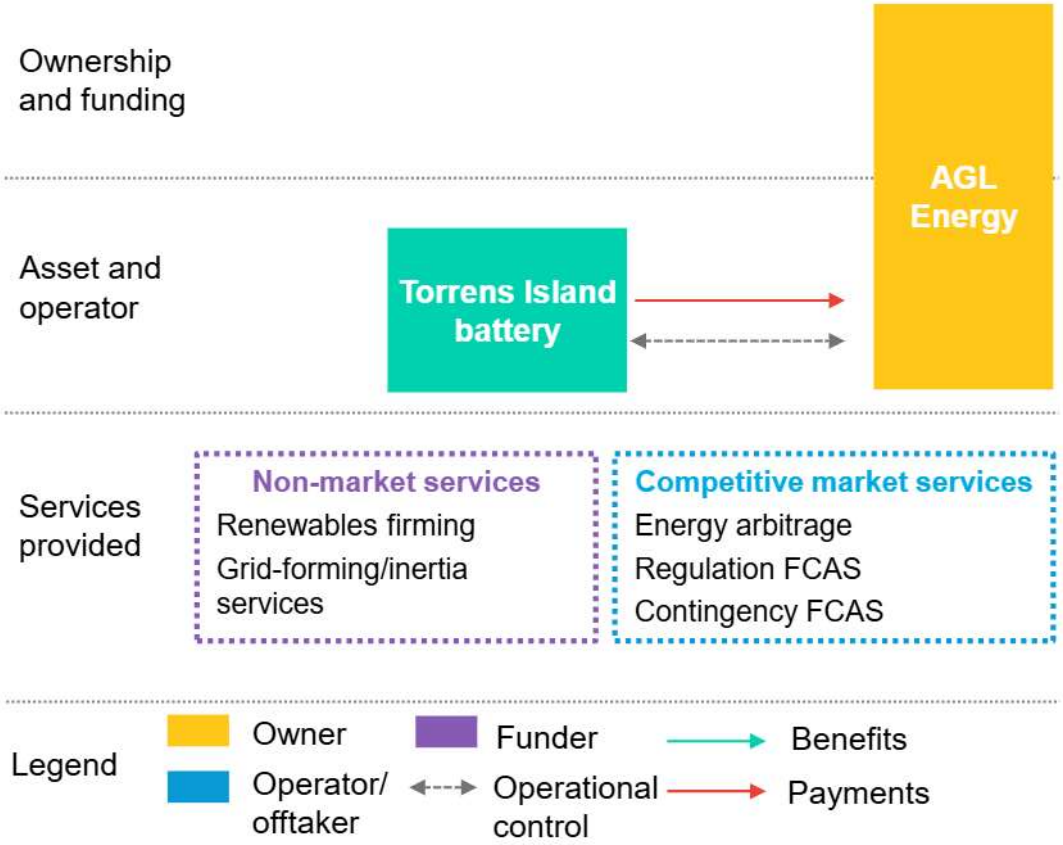
Project details

Size	250MW/250MWh
Start of operation	August 2023
Cost	~A$180 million (first stage)
Owner	AGL Energy (electricity retailer)
System integrator	Wartsila
Operator	AGL Energy
Offtaker	N/A
Connection	275kV ElectraNet transmission line

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

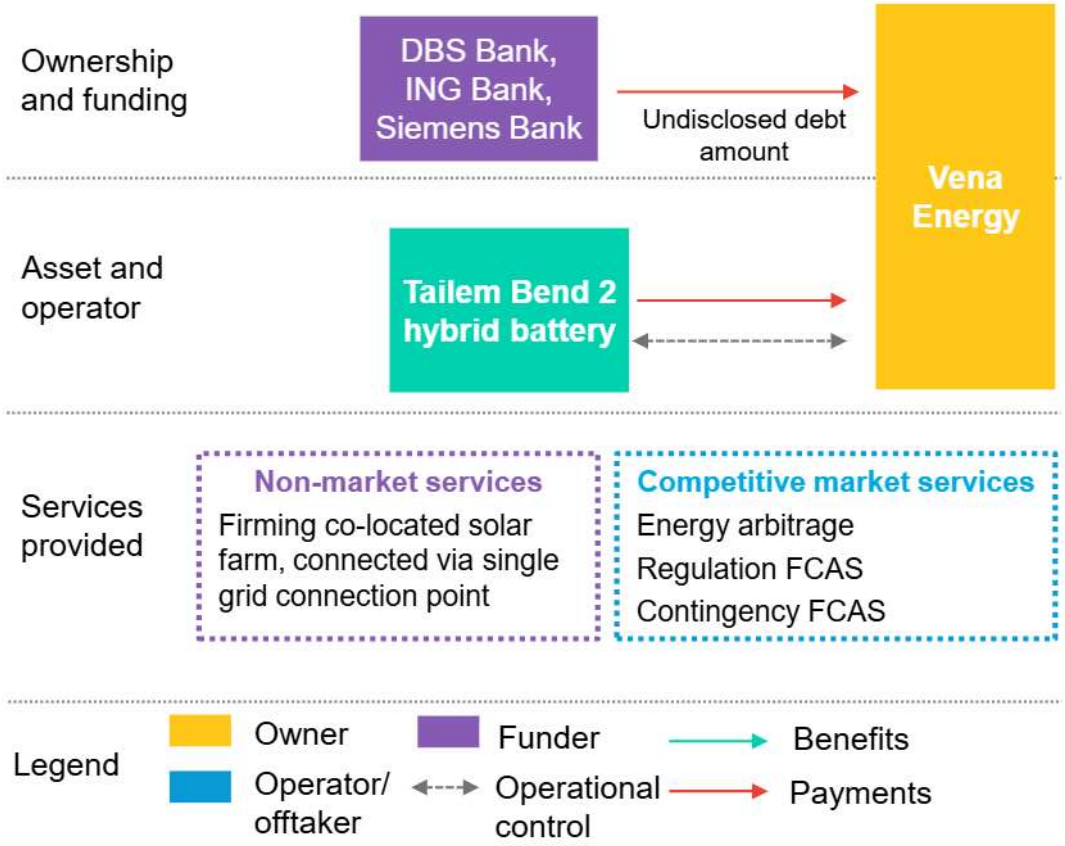
South Australia

Tailem Bend 2 Hybrid

Project details

Size	41.5MW/41.5MWh
Start of operation	January 2025
Cost	A$200 million (solar + battery)
Owner	Vena Energy (developer)
System integrator	N/A
Operator	Vena Energy
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services. No revenue data available for 2024 as project was commissioned in 2025.

Financing secured/under construction

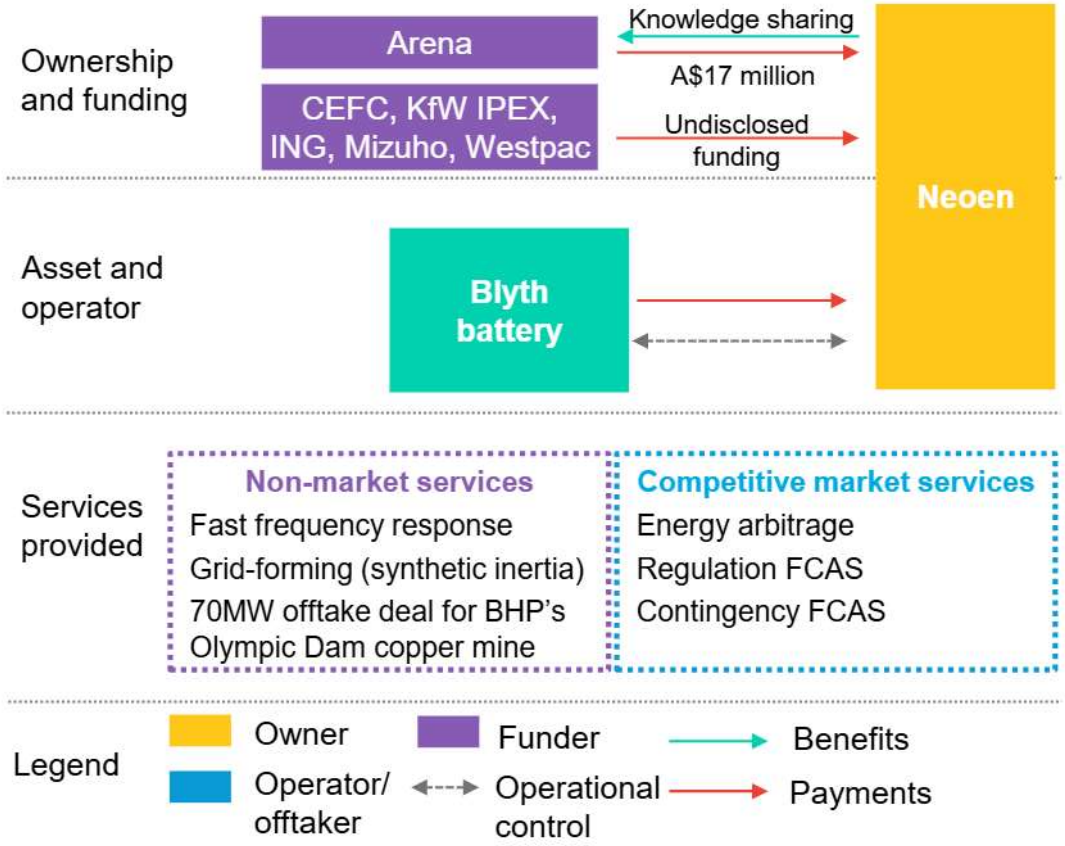
South Australia

Blyth

Project details

Size	200MW/400MWh
Start of operation	1H 2025
Cost	A$337.45 million
Owner	Neoen (developer)
System integrator	Elecnor, NHOA
Operator	Neoen
Offtaker	BHP Group

Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: FCAS = frequency control and ancillary services.

Financing secured/under construction

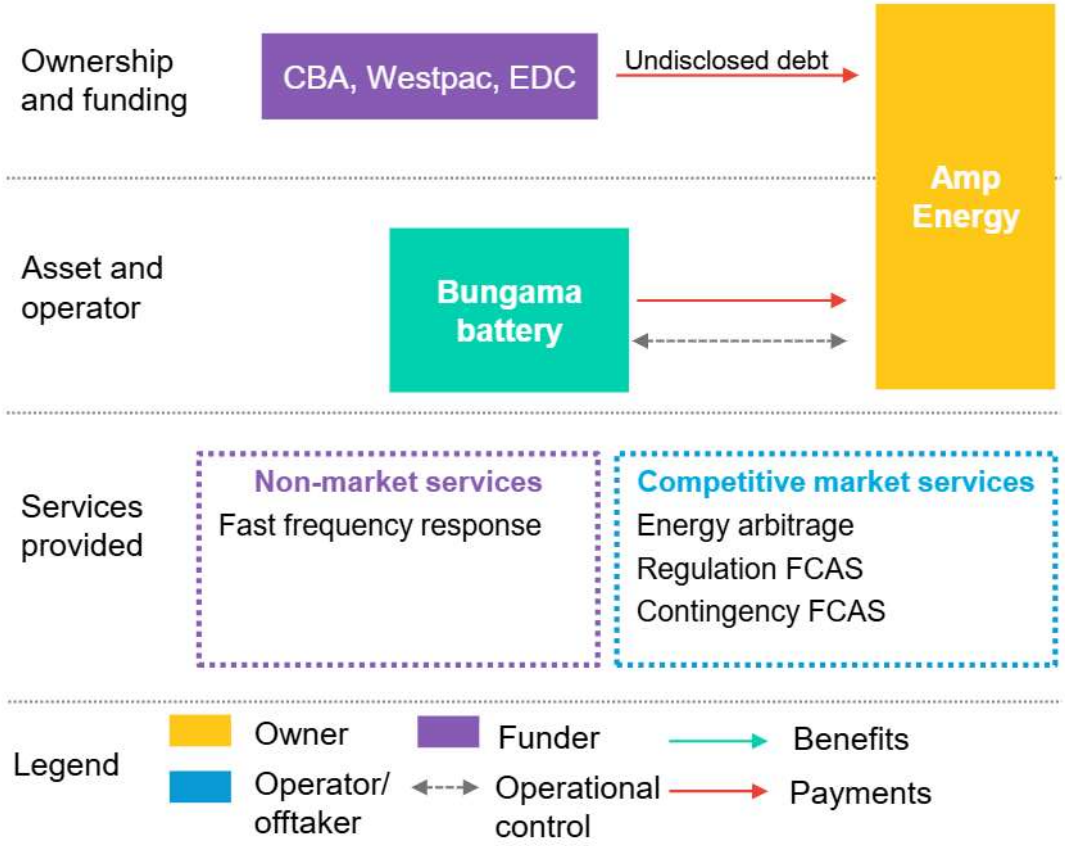
South Australia

Bungama

Project details

Size	150MW/300MWh
Start of operation	1Q 2026
Cost	Undisclosed
Owner	Amp Energy (developer)
System integrator	Wartsila
Operator	Amp Energy (developer)
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: FCAS = frequency control and ancillary services.

Victoria

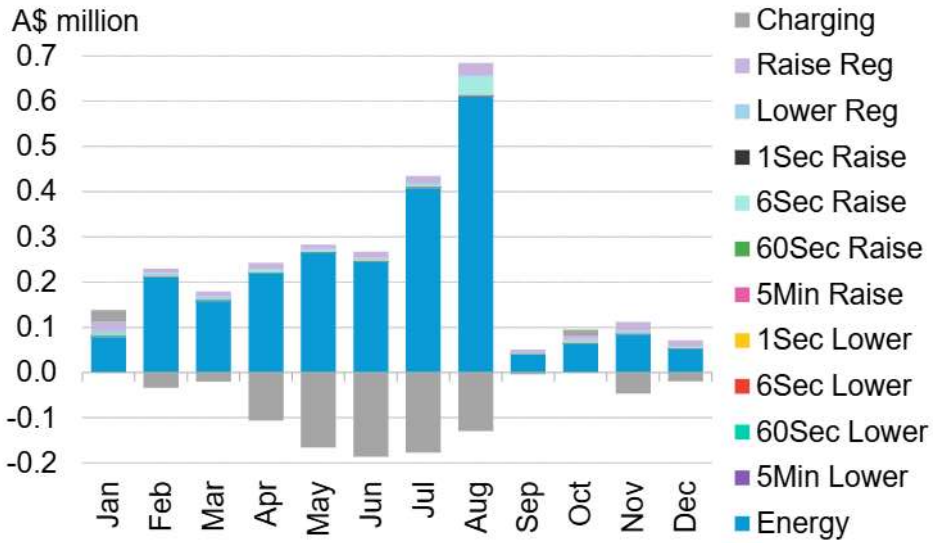
Victoria

Gannawarra

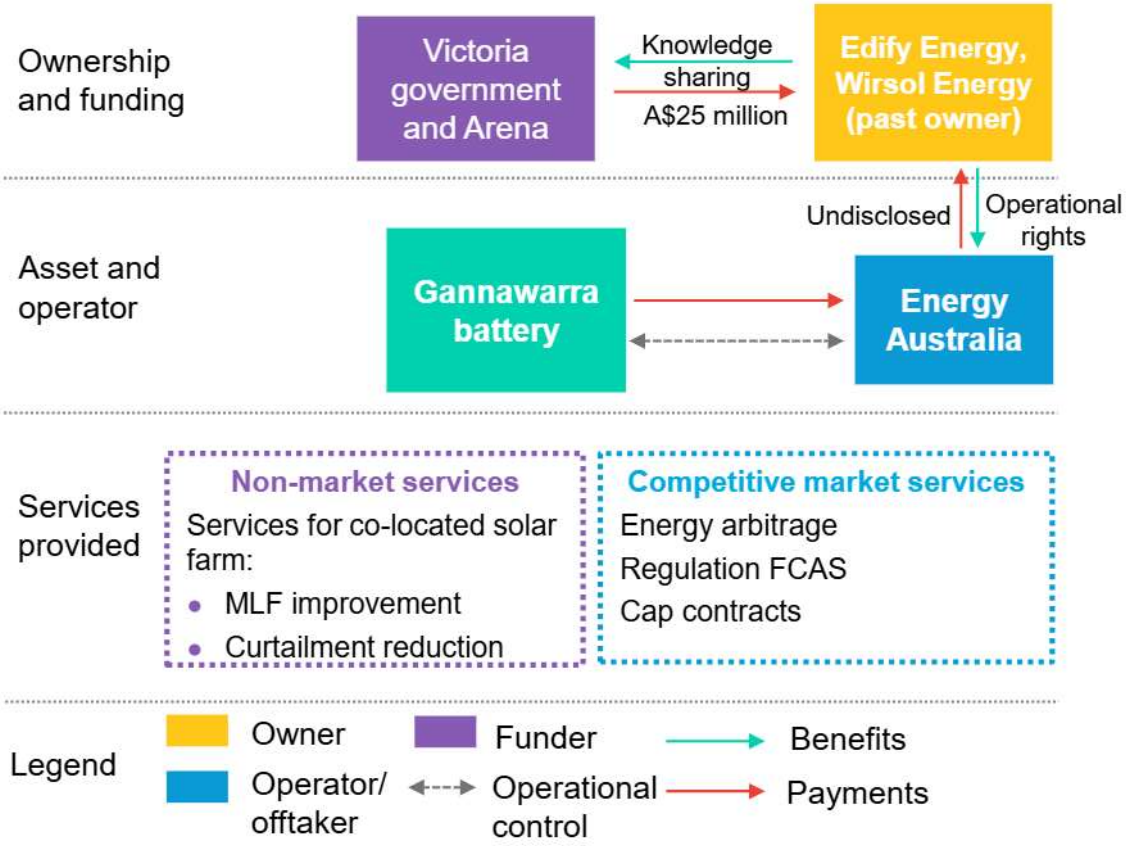
Project details

Size	25MW/50MWh
Start of operation	November 2018
Cost	A$41.19 million
Owner	Edify Energy, Gentari (developers)
System integrator	Tesla
Operator	EnergyAustralia (electricity retailer)
Offtaker	EnergyAustralia
Connection	Shares high voltage transformer with solar farm, connected at 66kV (distribution)

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services, MLF = marginal loss factor.

Operational

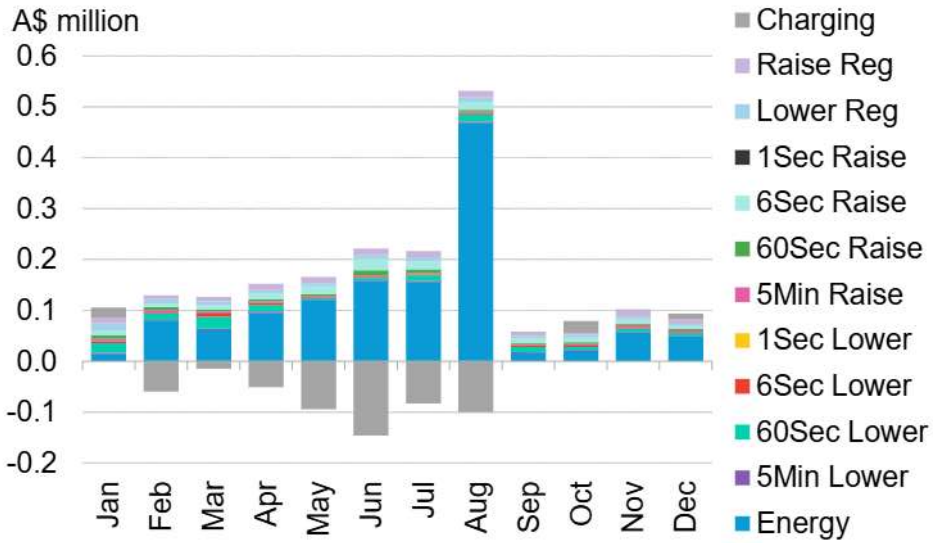
Victoria

Ballarat

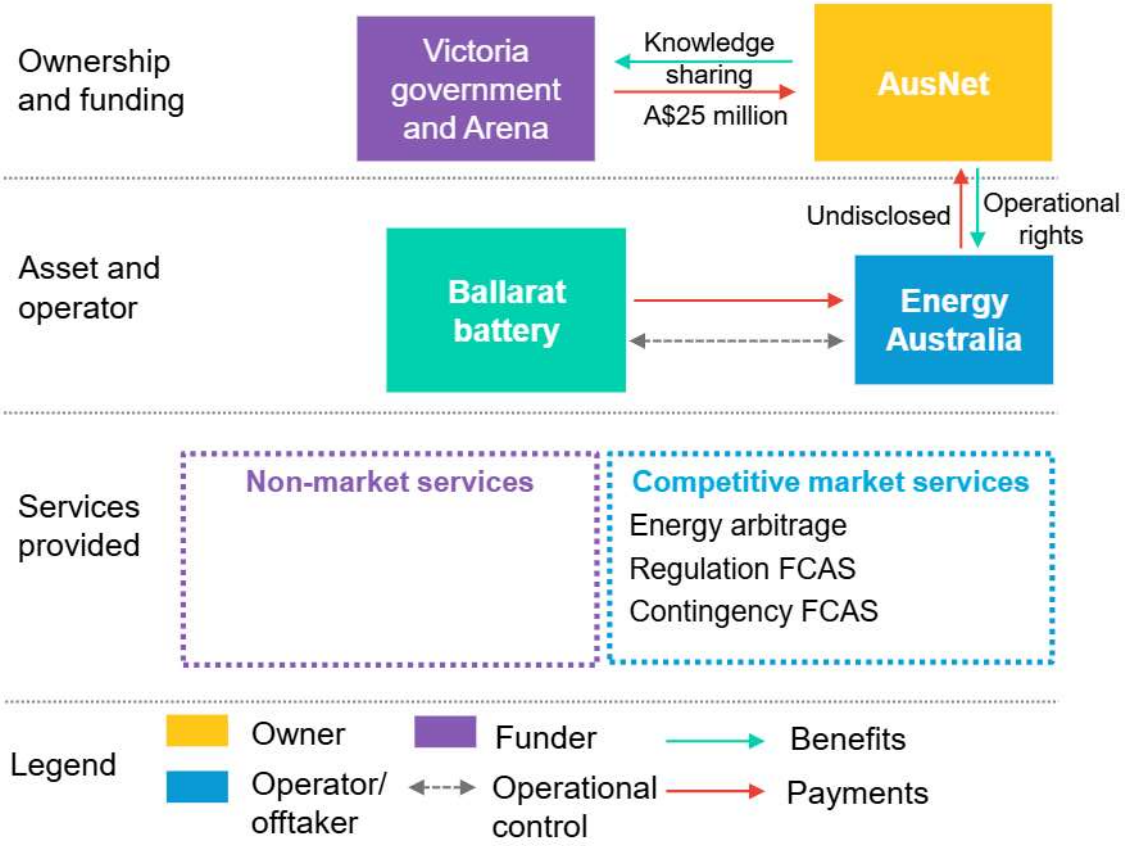
Project details

Size	30MW/30MWh
Start of operation	December 2018
Cost	A$42.66 million
Owner	AusNet (network)
System integrator	Spotless and Fluence
Operator	EnergyAustralia (electricity retailer)
Offtaker	EnergyAustralia
Connection	33kV bus at substation (transmission)

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

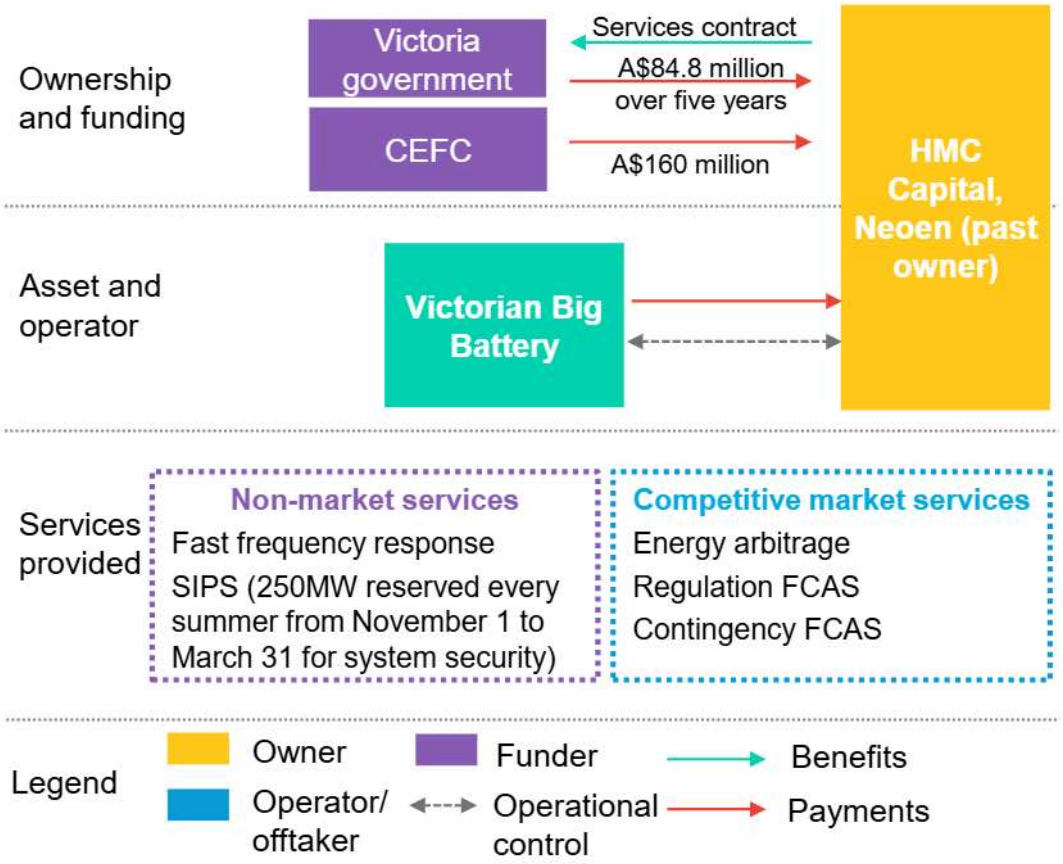
Victoria

Victorian Big Battery

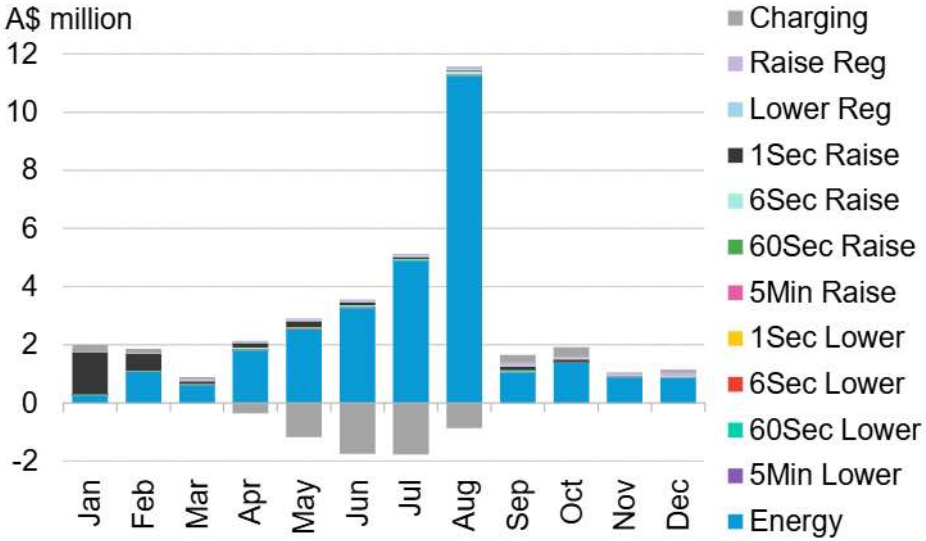
Project details

Size	300MW/450MWh
Start of operation	December 2021
Cost	Undisclosed
Owner	HMC Capital
System integrator	Tesla
Operator	Neoen
Offtaker	Government of Victoria

Revenue streams



Market-based revenue and costs in 2024



Source: Australian Energy Market Operator, Clean Energy Finance Corporation (CEFC), BloombergNEF. Note: Reg = Regulation, SIPS = system integrity protection scheme, FCAS = frequency control and ancillary services. In December 2024, asset manager HMC Capital announced that it had acquired Neoen's portfolio of assets in Victoria.

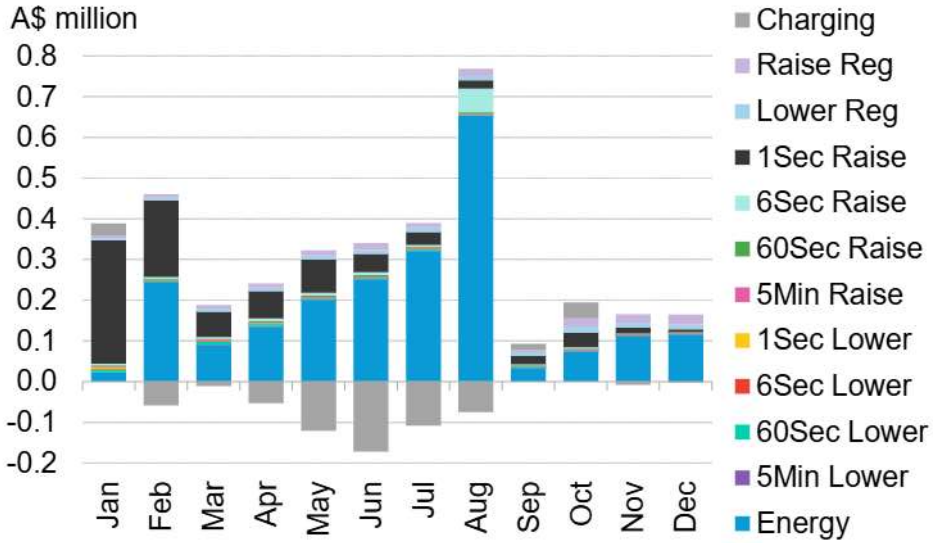
Victoria

Bulgana

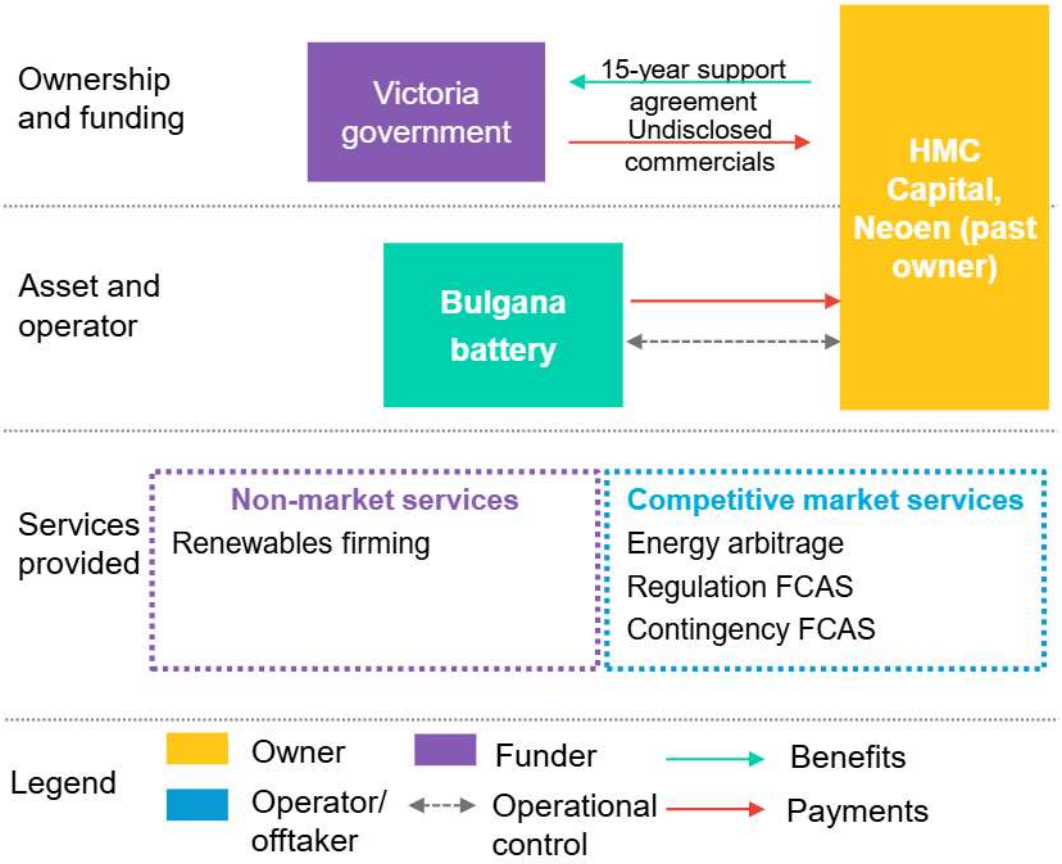
Project details

Size	21MW/34MWh (paired with 194MW wind)
Start of operation	December 2021
Cost	A$350 million (for wind + battery projects)
Owner	HMC Capital
System integrator	Tesla
Operator	HMC Capital
Offtaker	Nectar Farms
Connection	Shares high voltage transformer with wind plant, connected at 220kV (transmission)

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services. In December 2024, asset manager HMC Capital announced that it had acquired Neoen's portfolio of assets in Victoria.

Operational

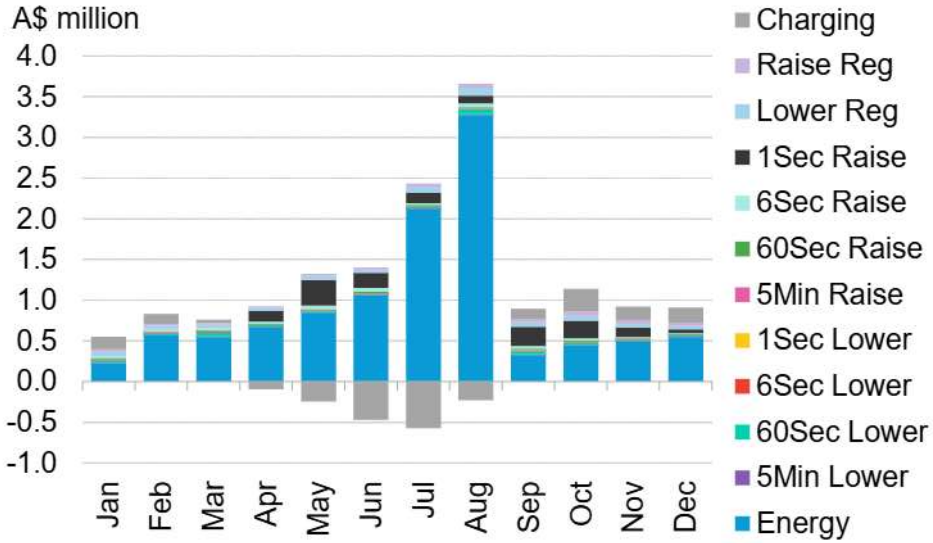
Victoria

Hazelwood

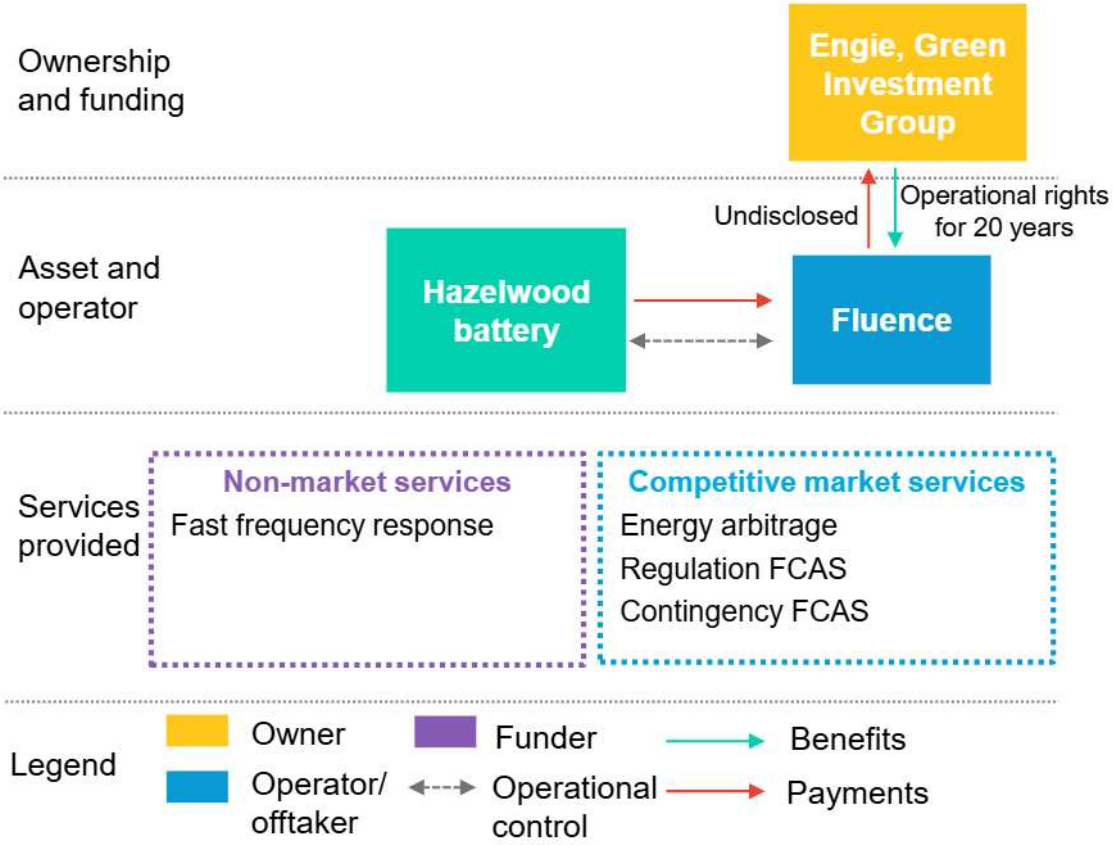
Project details

Size	150MW/150MWh
Start of operation	June 2023
Cost	~A$150 million
Owner	Engie (70%), Green Investment Group (30%)
System integrator	Fluence
Operator	Fluence
Offtaker	Fluence

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

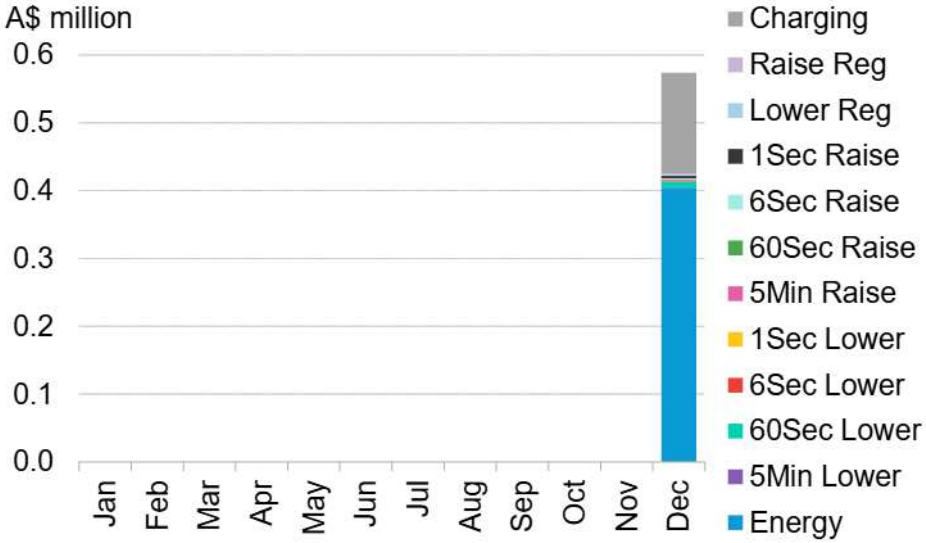
Victoria

Rangebank

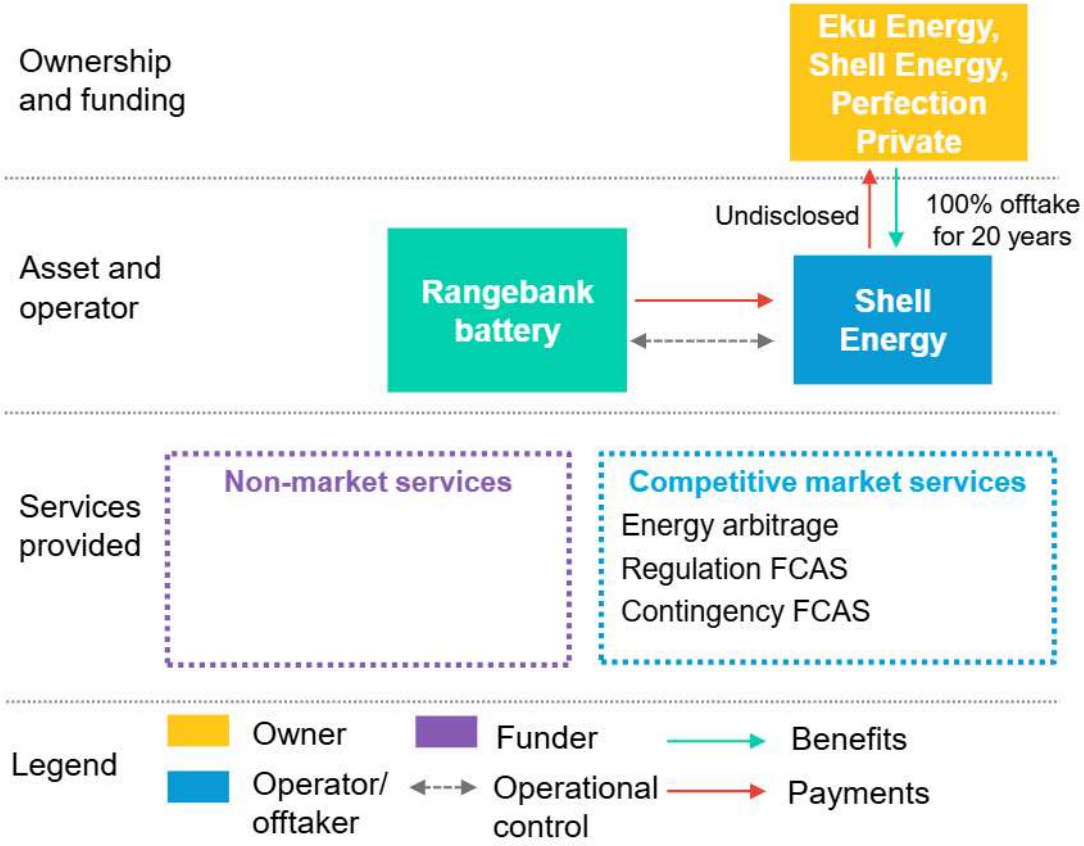
Project details

Size	200MW/400MWh
Start of operation	December 2024
Cost	A$400 million
Owner	Eku Energy (45%), Shell Energy (45%), Perfection Private (10%)
System integrator	Fluence
Operator	Shell Energy
Offtaker	Shell Energy
Connection	Connected via AusNet's Cranbourne Terminal Station

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

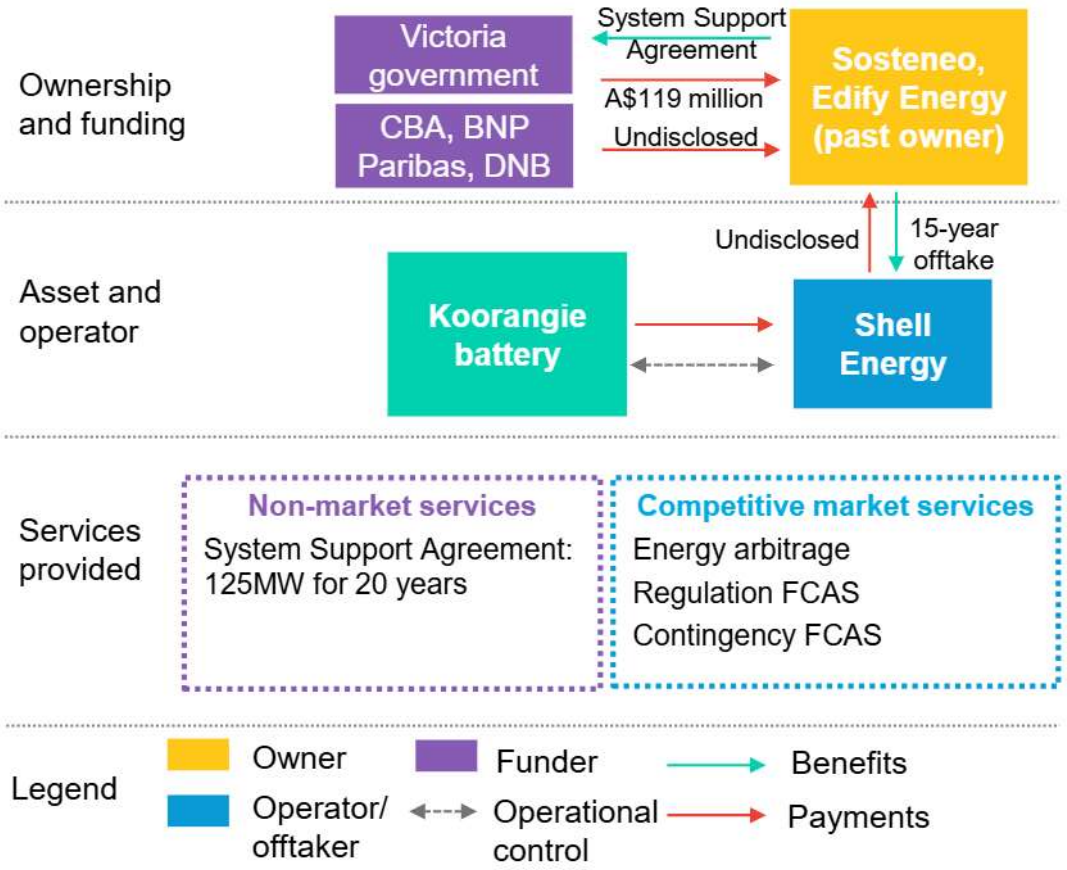
Victoria

Koorangie

Project details

Size	185MW/270MWh
Start of operation	2025
Cost	A$400 million
Owner	Sosteneo SGR S.p.A
System integrator	Tesla
Operator	Shell Energy
Offtaker	Shell Energy

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

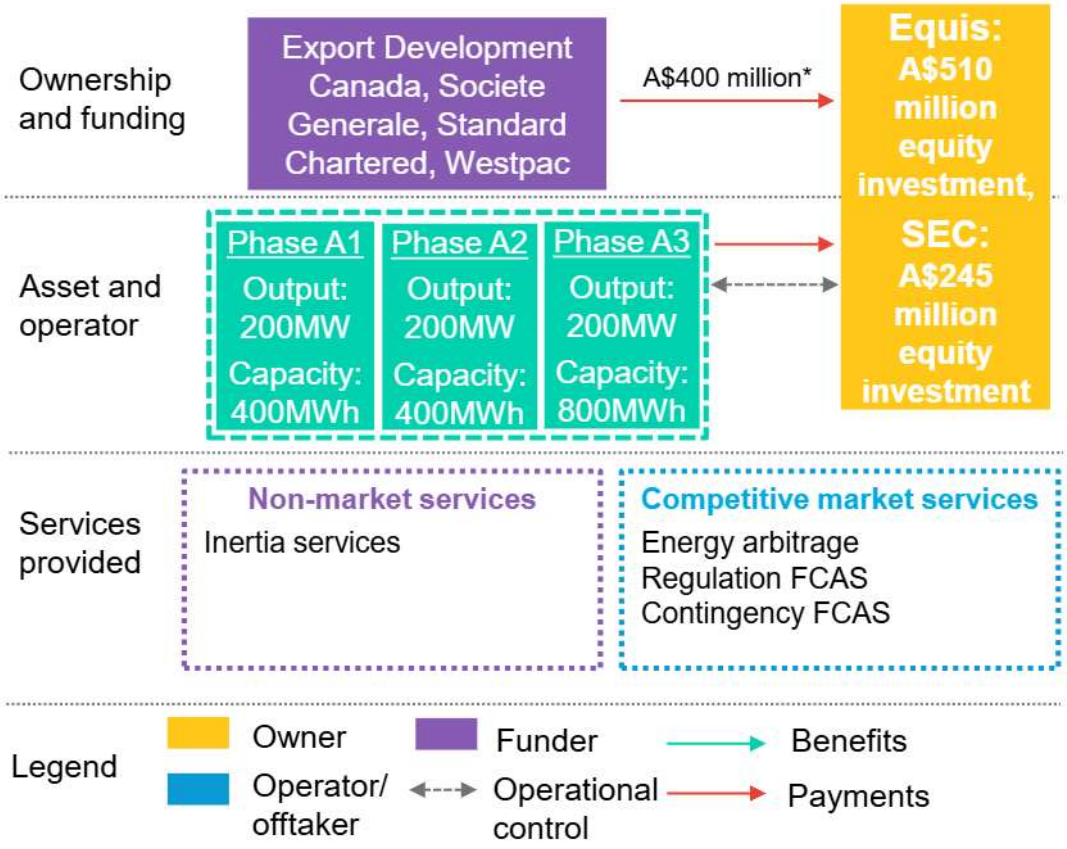
Victoria

Melbourne Renewable Energy Hub (MREH) Phase I

Project details

Size	600MW/1,600MWh
Start of operation	2025
Cost	A$1 billion
Owner	Phases A1 and A2: Equis (70%), State Electricity Commission (30%) Phase A3: Equis (51%), SEC (49%)
System integrator	Tesla, Samsung C&T, Genus Plus Group
Operator	State Electricity Commission (SEC)
Offtaker	SEC (100% of phase A3)

Revenue streams



*Source: BloombergNEF, Australian Energy Market Operator, Equis, State Electricity Commission. Note: *A$400 million debt facility is for Phase A3 only.*

Financing secured/under construction

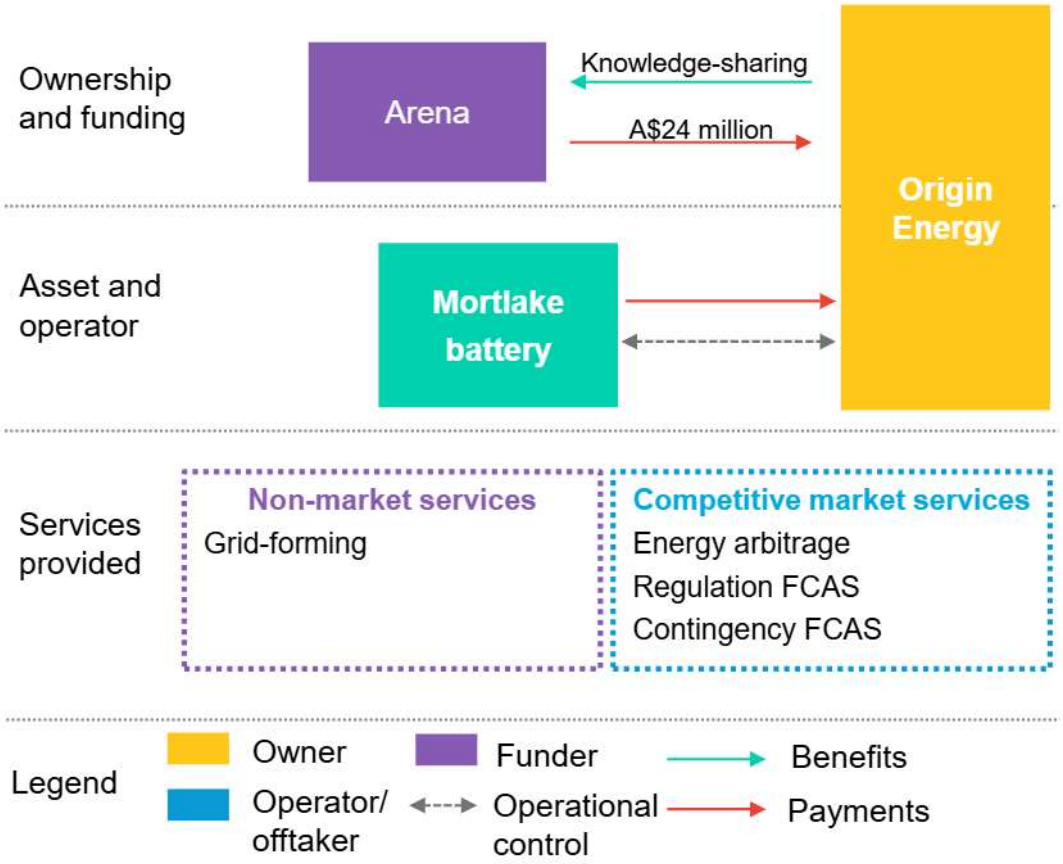
Victoria

Mortlake

Project details

Size	300MW/650MWh
Start of operation	2026
Cost	A$417 million
Owner	Origin Energy (electricity retailer)
System integrator	Fluence
Operator	Origin Energy
Offtaker	NA

Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

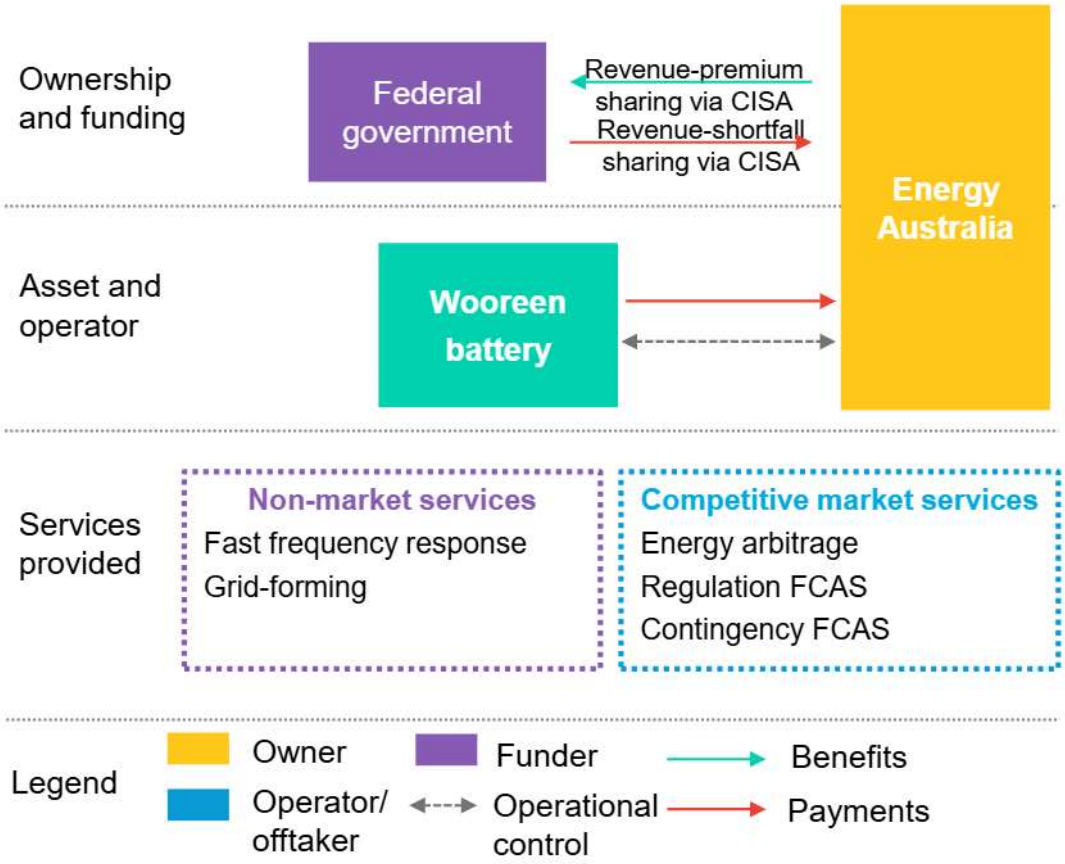
Victoria

Wooreen

Project details

Size	350MW/1,400MWh
Start of operation	2026-27
Cost	~A$700 million
Owner	EnergyAustralia (electricity retailer)
System integrator	Wartsila
Operator	EnergyAustralia
Offtaker	NA

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, CISA = Capacity Investment Scheme agreement, FCAS = frequency control and ancillary services.

New South Wales

Operational

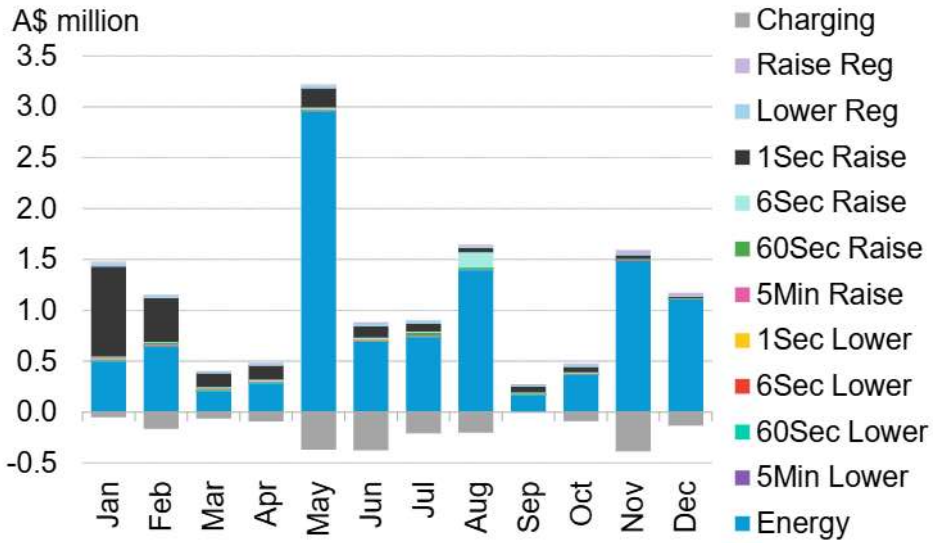
New South Wales

Wallgrove

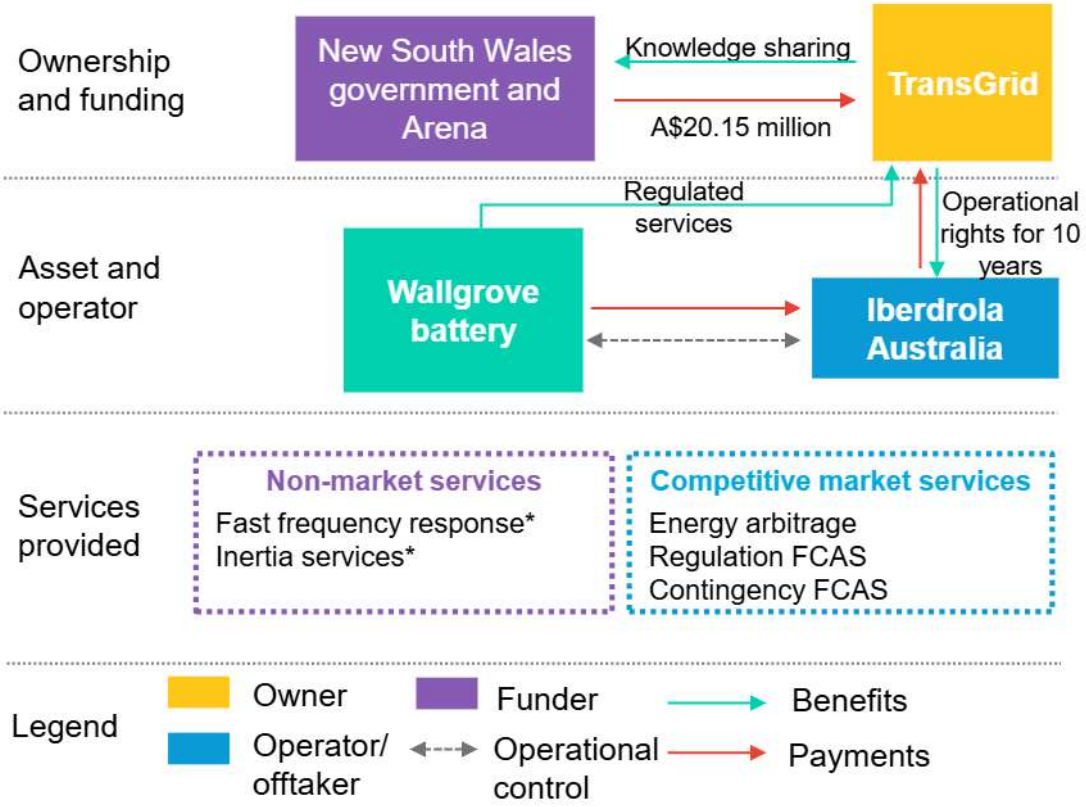
Project details

Size	50MW/75MWh
Start of operation	December 2021
Cost	A$65.45 million
Owner	TransGrid (network)
System integrator	Tesla
Operator	Iberdrola Australia (developer)
Offtaker	Iberdrola Australia
Connection	132kV transmission level

Market-based revenue and costs in 2024



Revenue streams



*Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services. *These are regulated services provided to TransGrid.*

Operational

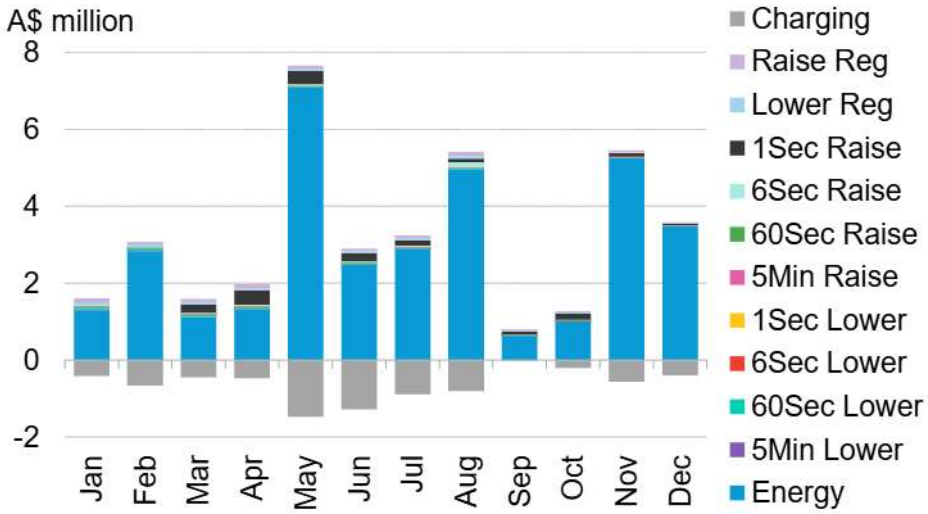
New South Wales

Darlington Point and Riverina

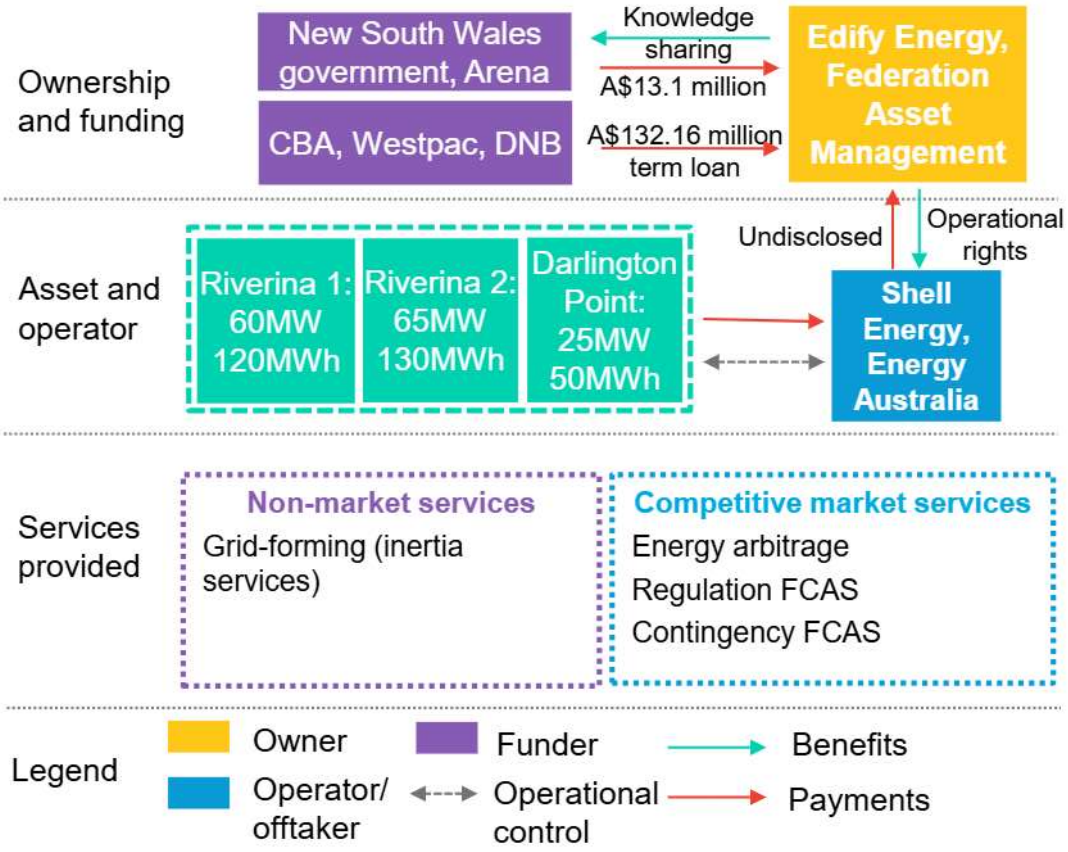
Project details

Size	150MW/300MWh
Start of operation	October 2023
Cost	A$32.24 million (Darlington Point only)
Owner	Federation Asset Management (90%), Edify Energy (10%)
System integrator	Tesla
Operator	EnergyAustralia, Shell Energy
Offtaker	EnergyAustralia, Shell Energy
Connection	132kV transmission level (Darlington Point)

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

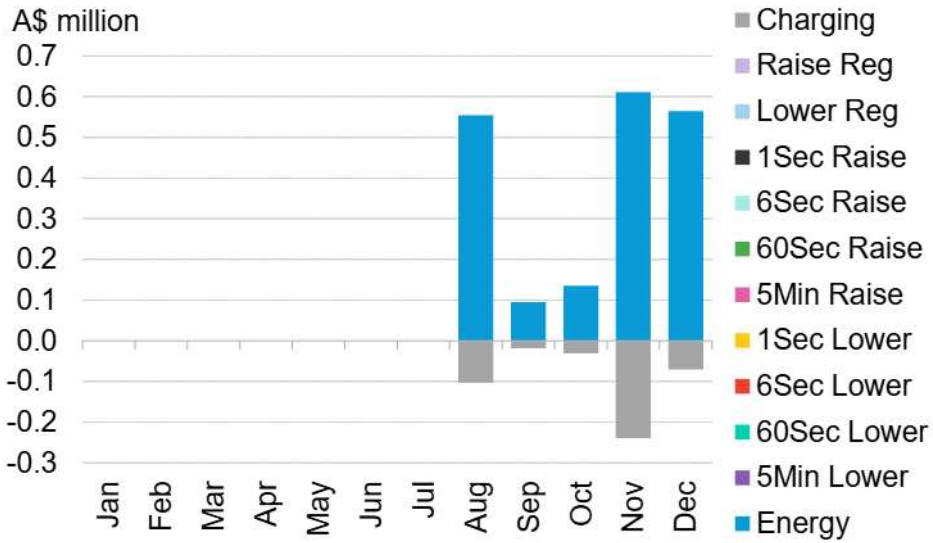
New South Wales

Broken Hill

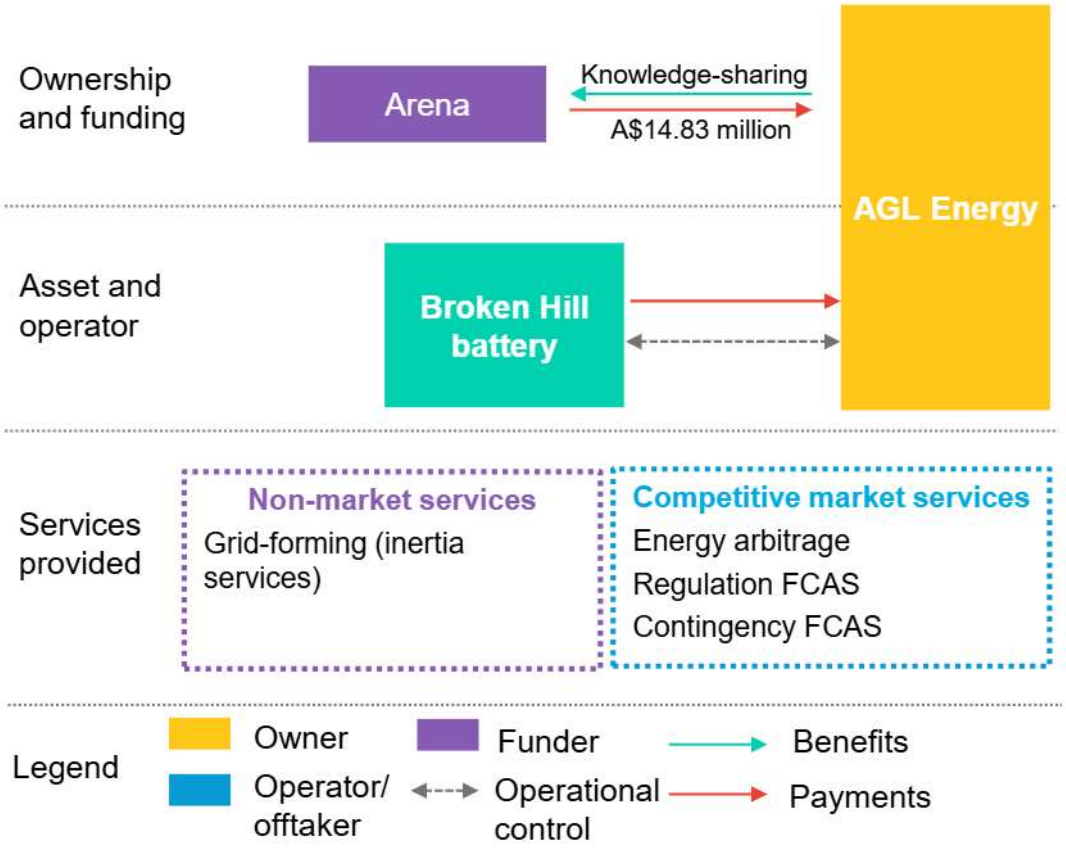
Project details

Size	50MW/50MWh
Start of operation	August 2024
Cost	A$39.4 million
Owner	AGL Energy (electricity retailer)
System integrator	Fluence
Operator	AGL Energy
Offtaker	N/A
Connection	Trangrid's Broken Hill substation

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

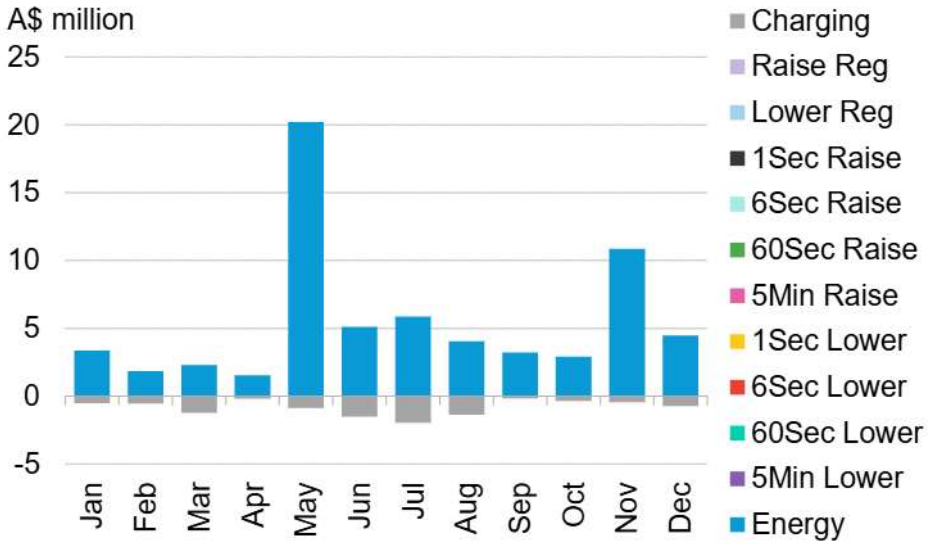
New South Wales

Shoalhaven pumped hydro

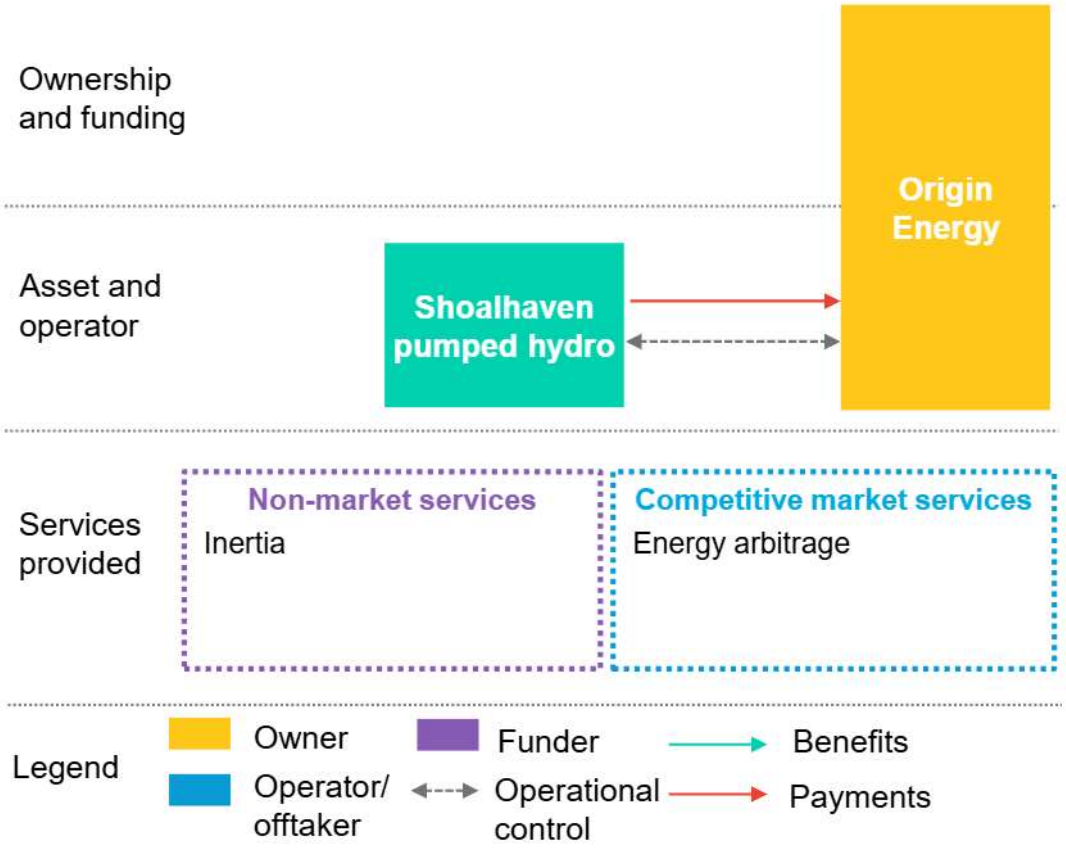
Project details

Size	240MW
Start of operation	1977
Cost	Undisclosed
Owner	Origin Energy (electricity retailer)
System integrator	N/A
Operator	Origin Energy
Offtaker	N/A
Connection	275kV transmission level

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation.

Financing secured/under construction

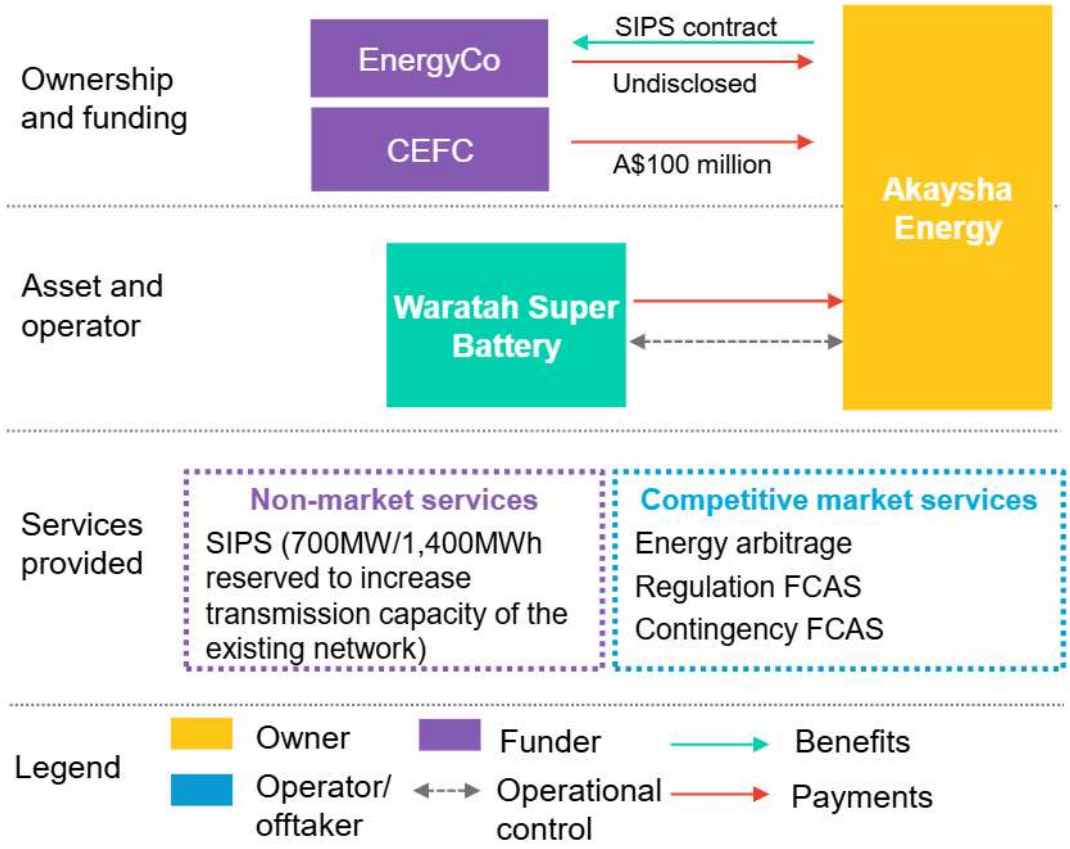
New South Wales

Waratah Super Battery

Project details

Size	850MW/1,680MWh
Start of operation	2025
Cost	More than A$500 million raised by BlackRock to fund the project
Owner	Akaysha Energy (developer, subsidiary of BlackRock)
System integrator	Powin LLC, Consolidated Power Projects Pty Ltd.
Operator	Akaysha Energy
Offtaker	EnergyCo (state-owned corporation)

Revenue streams



Source: Australian Energy Market Operator, Clean Energy Finance Corporation (CEFC), BloombergNEF. Note: Reg = Regulation, SIPS = system integrity protection scheme, FCAS = frequency control and ancillary services.

Financing secured/under construction

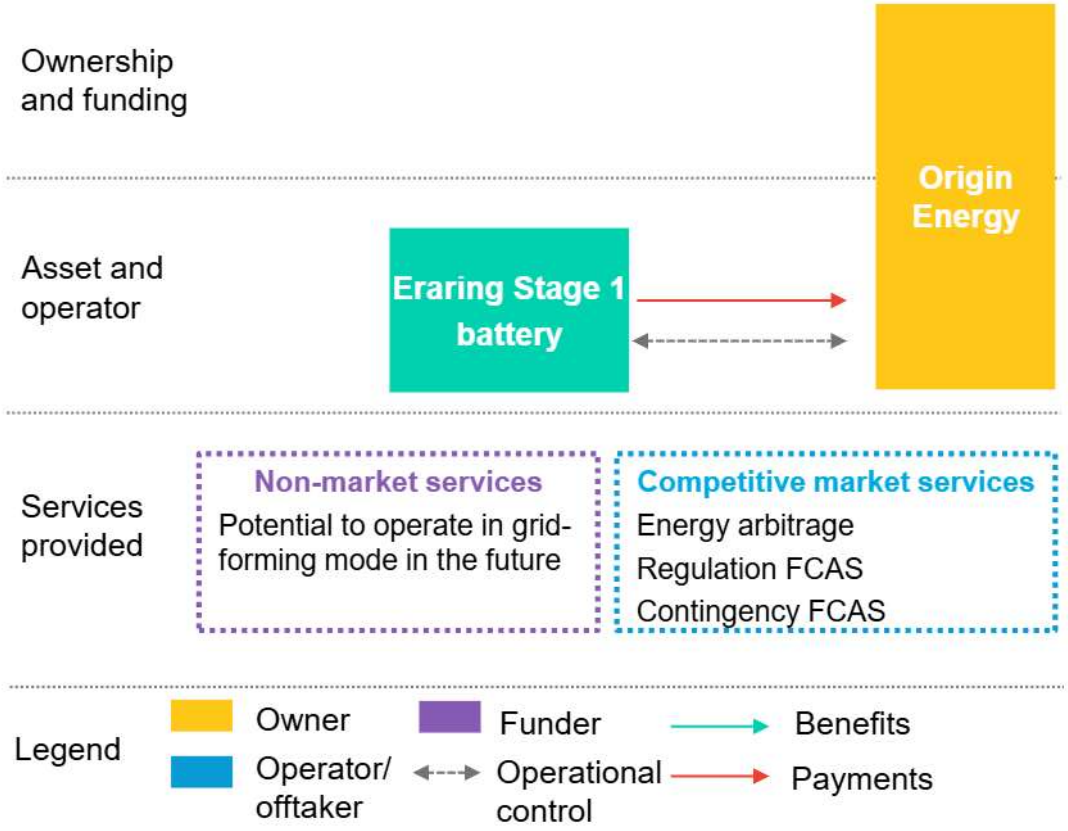
New South Wales

Eraring Stage 1

Project details

Size	460MW/1,770MWh
Start of operation	4Q 2025
Cost	~A$850 million
Owner	Origin Energy (electricity retailer)
System integrator	Wartsila
Operator	Origin Energy
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

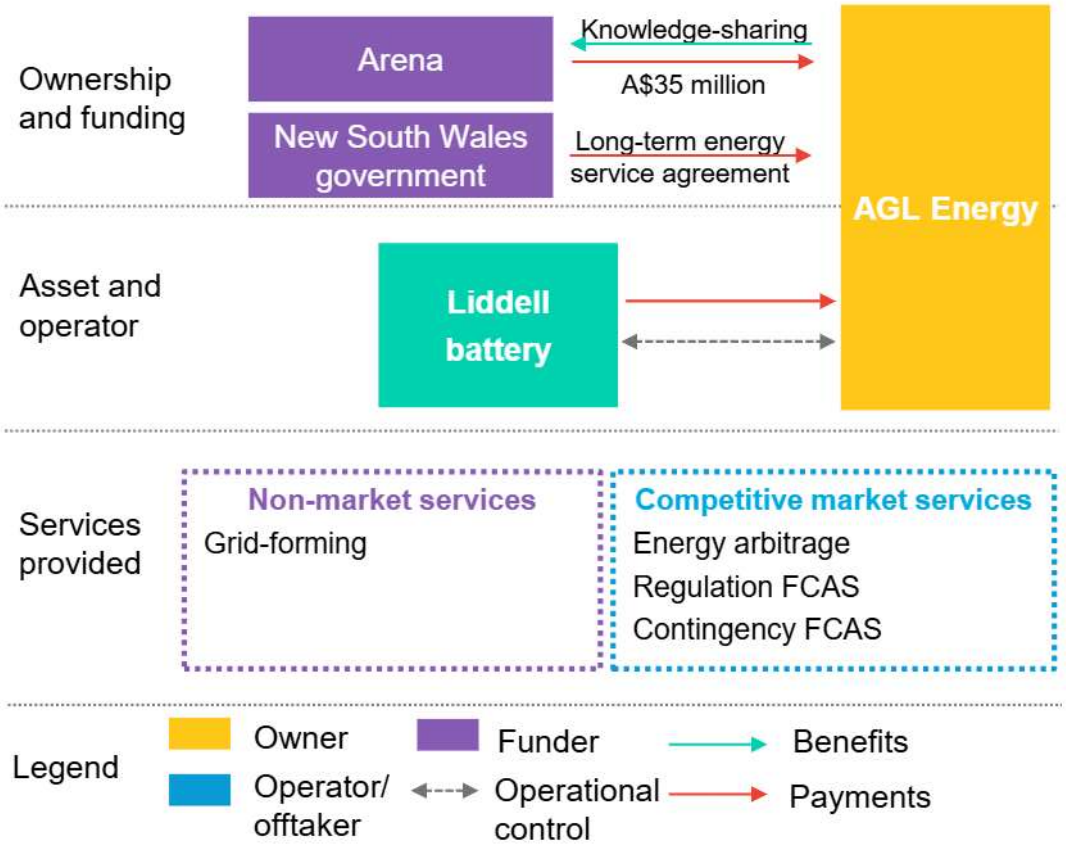
New South Wales

Liddell

Project details

Size	500MW/1,000MWh
Start of operation	April 2026
Cost	A$750 million
Owner	AGL Energy (electricity retailer)
System integrator	Fluence
Operator	AGL Energy
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

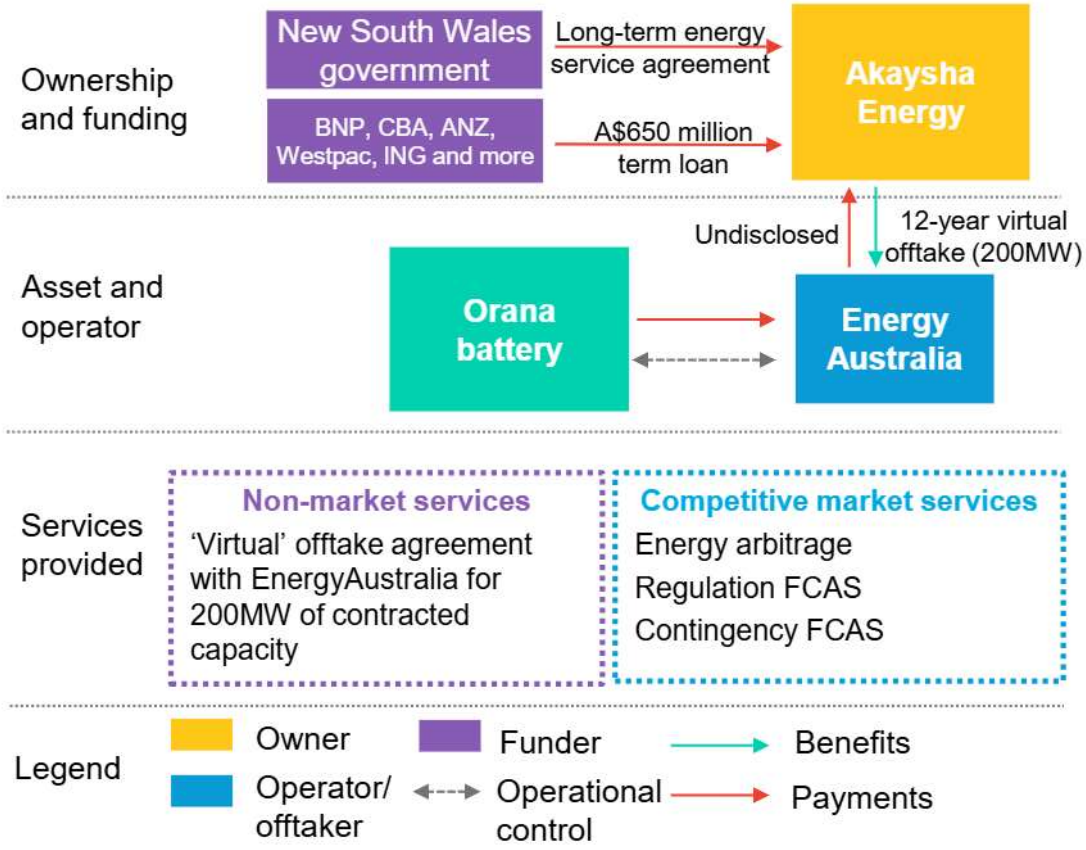
New South Wales

Orana

Project details

Size	415MW/1,660MWh
Start of operation	2026
Cost	A$997 million
Owner	Akaysha Energy (developer)
System integrator	Powin LLC
Operator	EnergyAustralia, Akaysha Energy
Offtaker	EnergyAustralia (200MW)

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

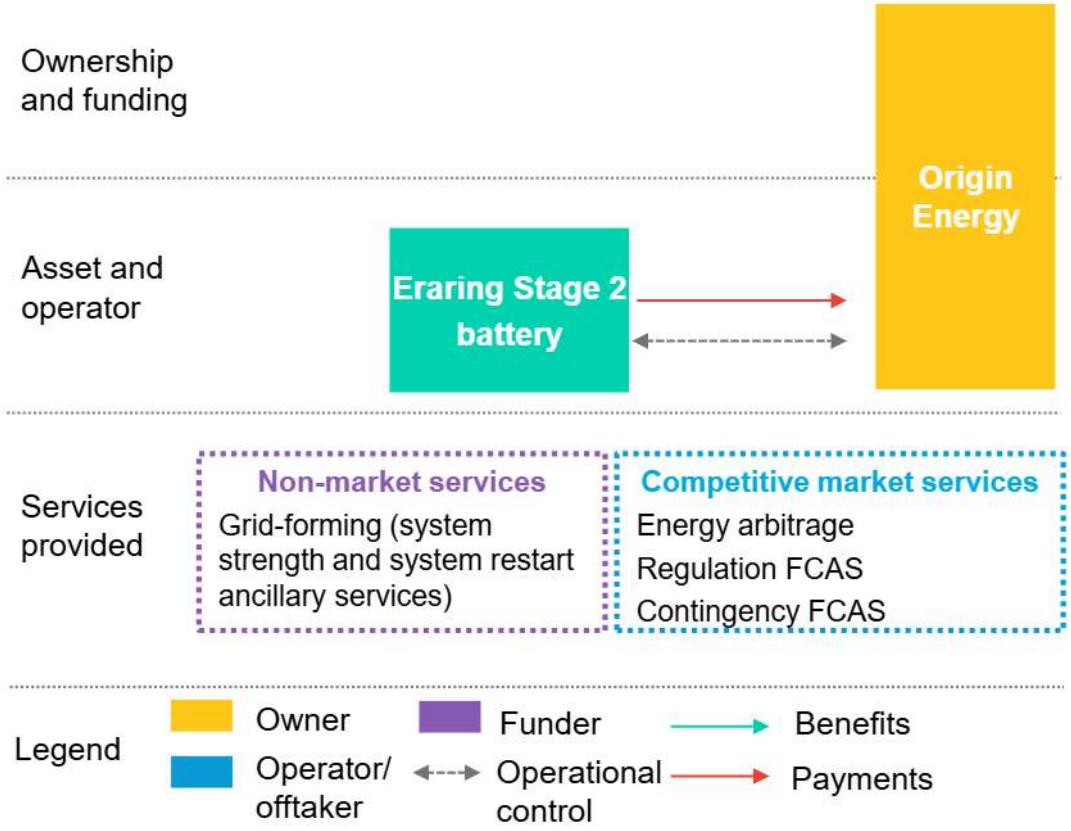
New South Wales

Eraring Stage 2

Project details

Size	240MW/1,030MWh
Start of operation	1Q 2027
Cost	~A$450 million
Owner	Origin Energy (electricity retailer)
System integrator	Wartsila
Operator	Origin Energy
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

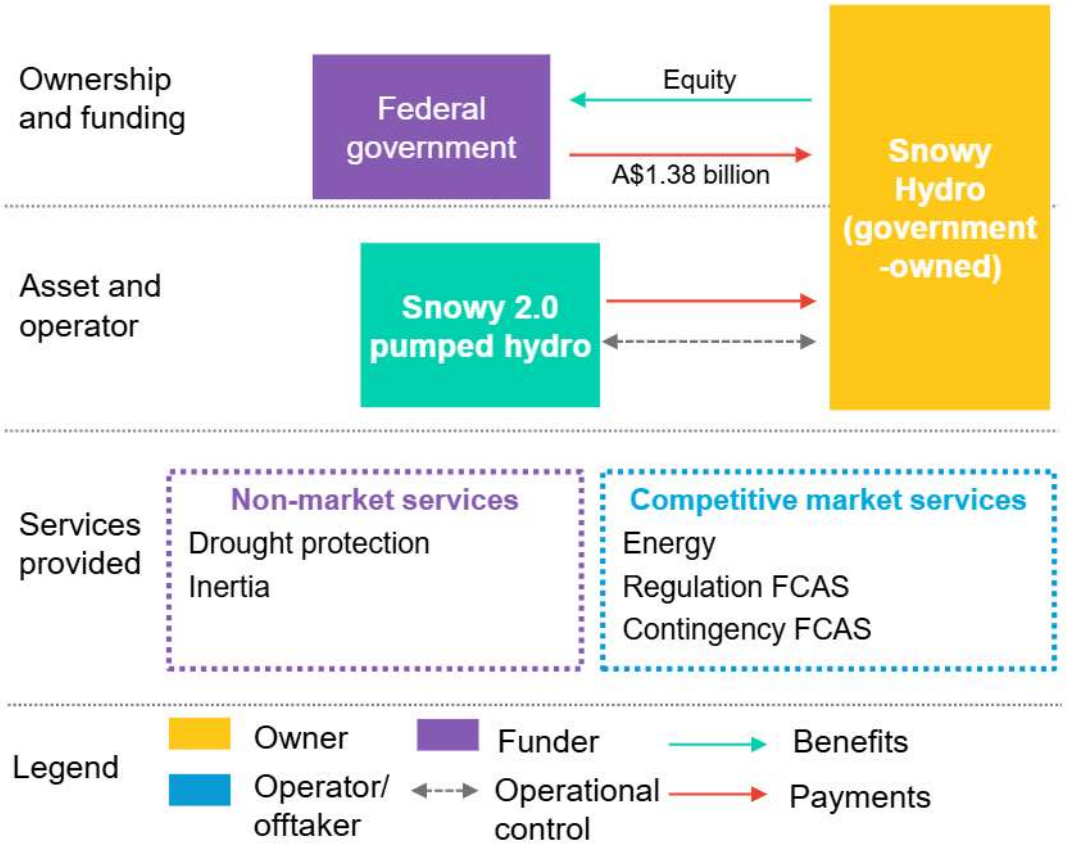
New South Wales

Snowy 2.0 pumped hydro

Project details

Size	2,000MW/35,000MWh
Start of operation	2029
Cost	A$12 billion
Owner	Snowy Hydro (electricity retailer)
System integrator	Salini Impreglio
Operator	Snowy Hydro
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Queensland

Operational

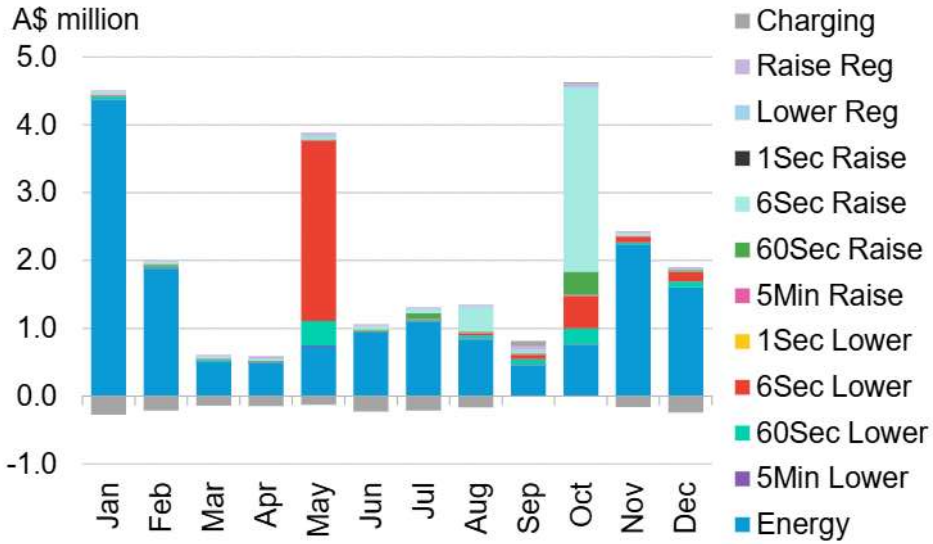
Queensland

Wandoan

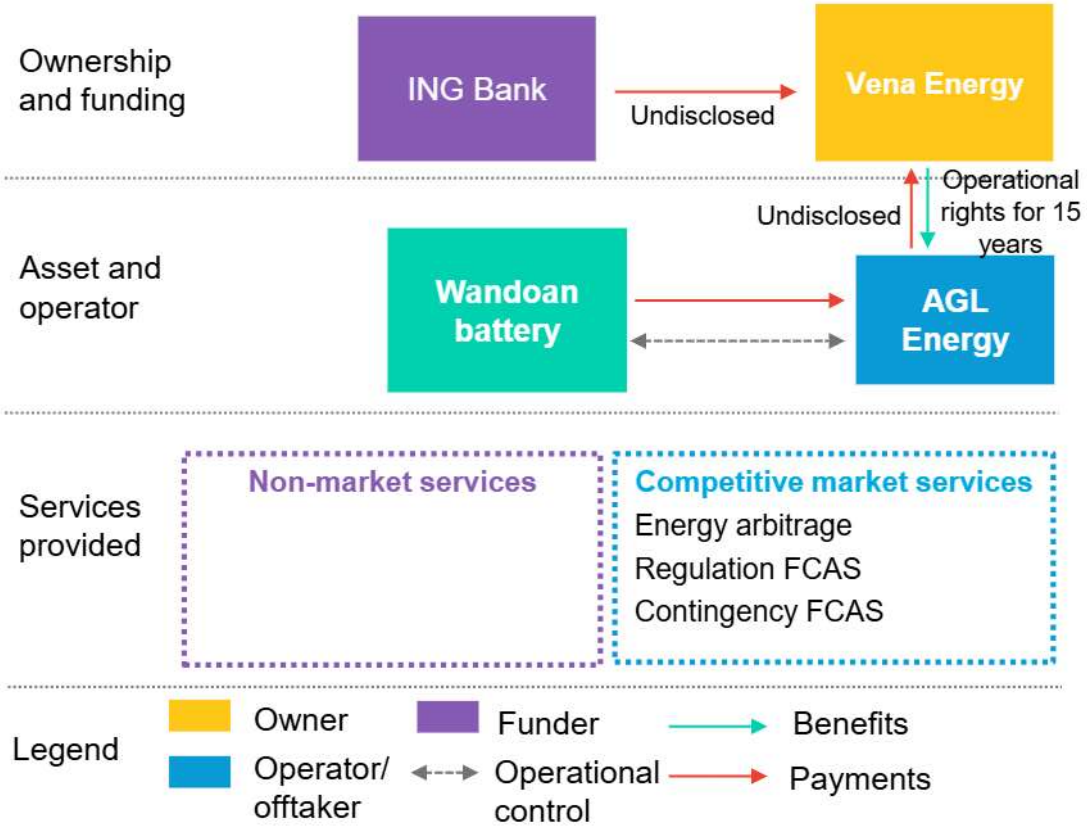
Project details

Size	100MW/150MWh
Start of operation	August 2022
Cost	A$120 million
Owner	Vena Energy (developer)
System integrator	Doosan GridTech
Operator	AGL Energy (electricity retailer)
Offtaker	AGL Energy
Connection	132kV transmission level

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

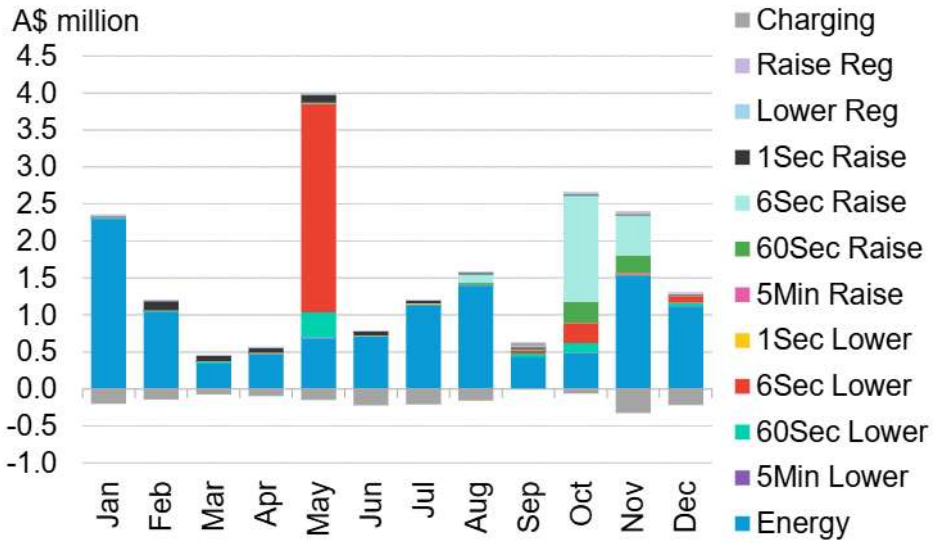
Queensland

Bouldercombe

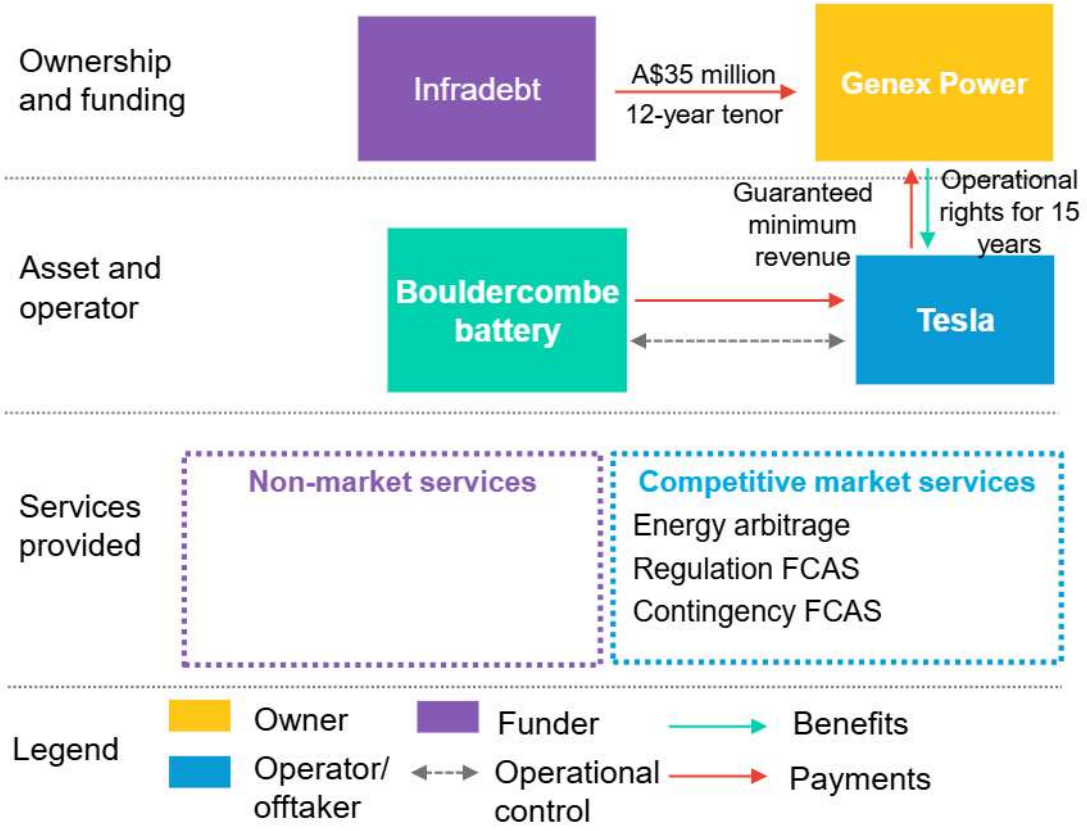
Project details

Size	50MW/100MWh
Start of operation	November 2023
Cost	A$60 million
Owner	Genex Power
System integrator	Tesla
Operator	Tesla
Offtaker	Tesla
Connection	132kV transmission level

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

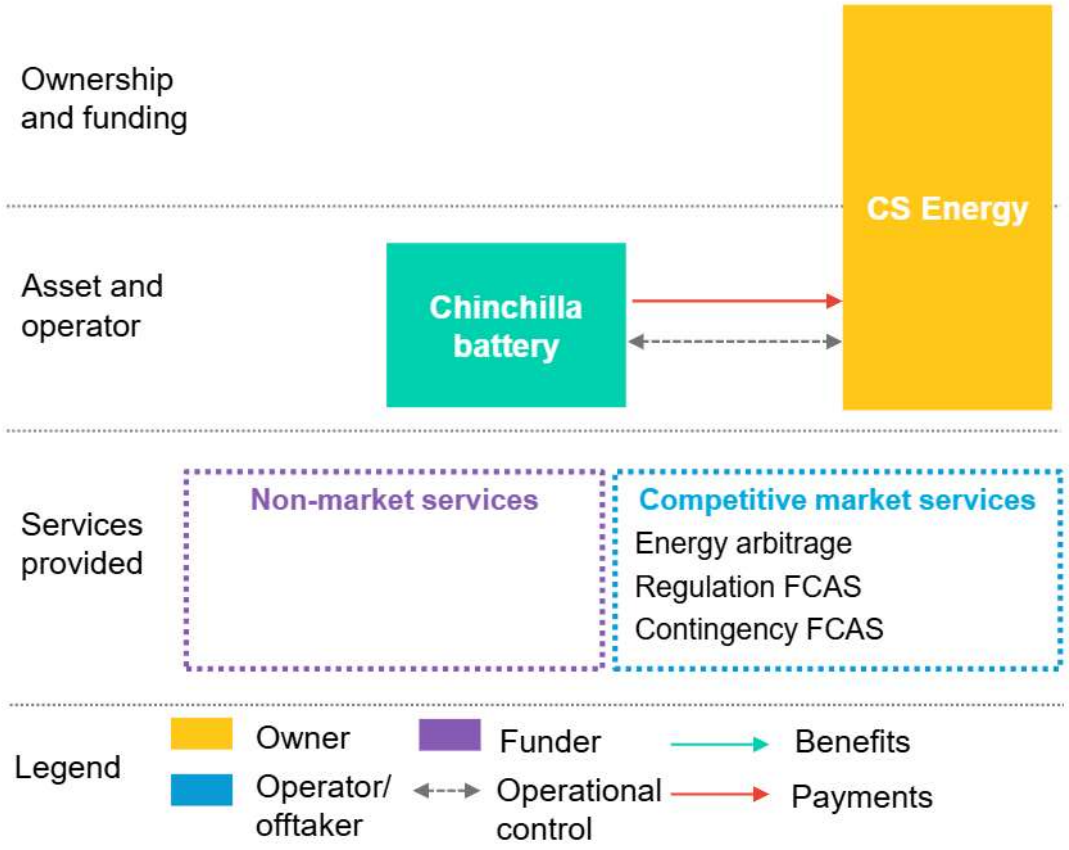
Queensland

Chinchilla

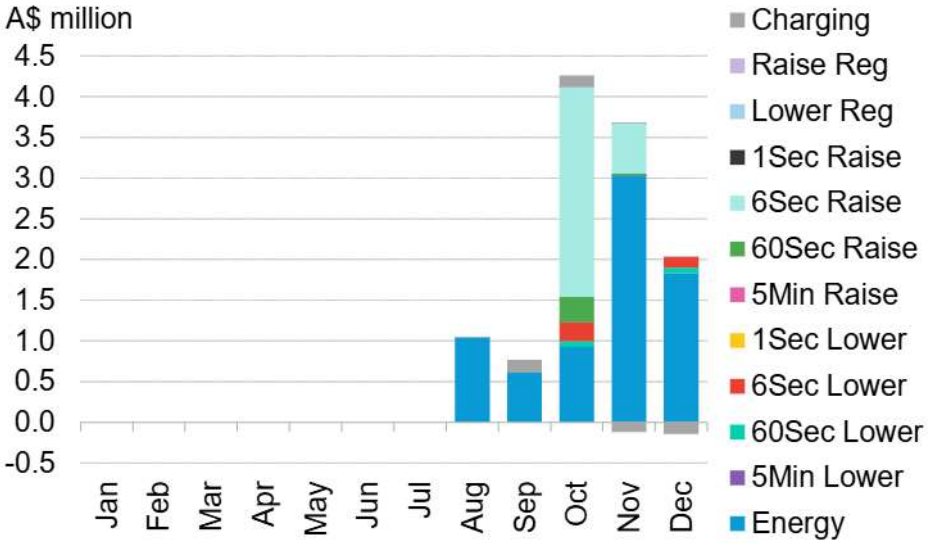
Project details

Size	100MW/200MWh
Start of operation	July 2024
Cost	A$150 million
Owner	CS Energy (electricity retailer)
System integrator	Tesla, Downer
Operator	CS Energy
Offtaker	N/A

Revenue streams



Market-based revenue and costs in 2024



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Operational

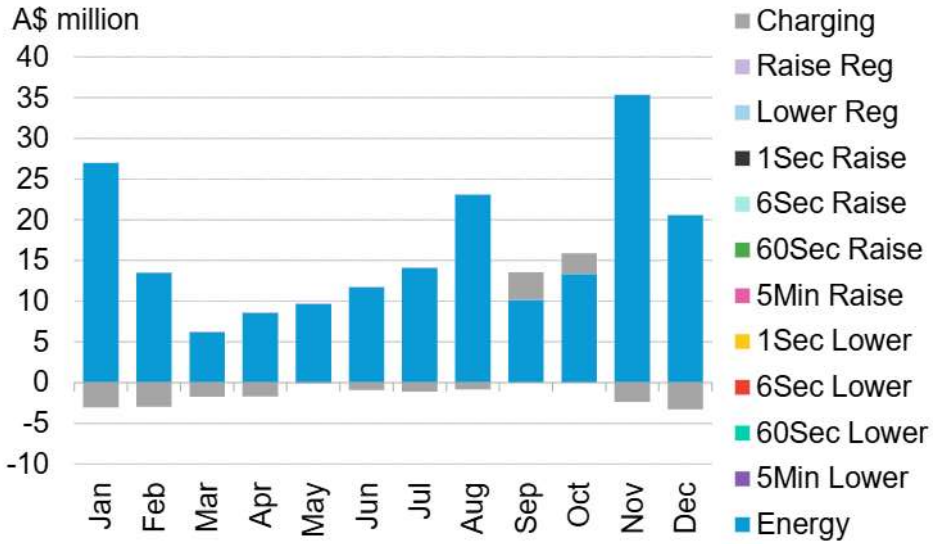
Queensland

Wivenhoe pumped hydro

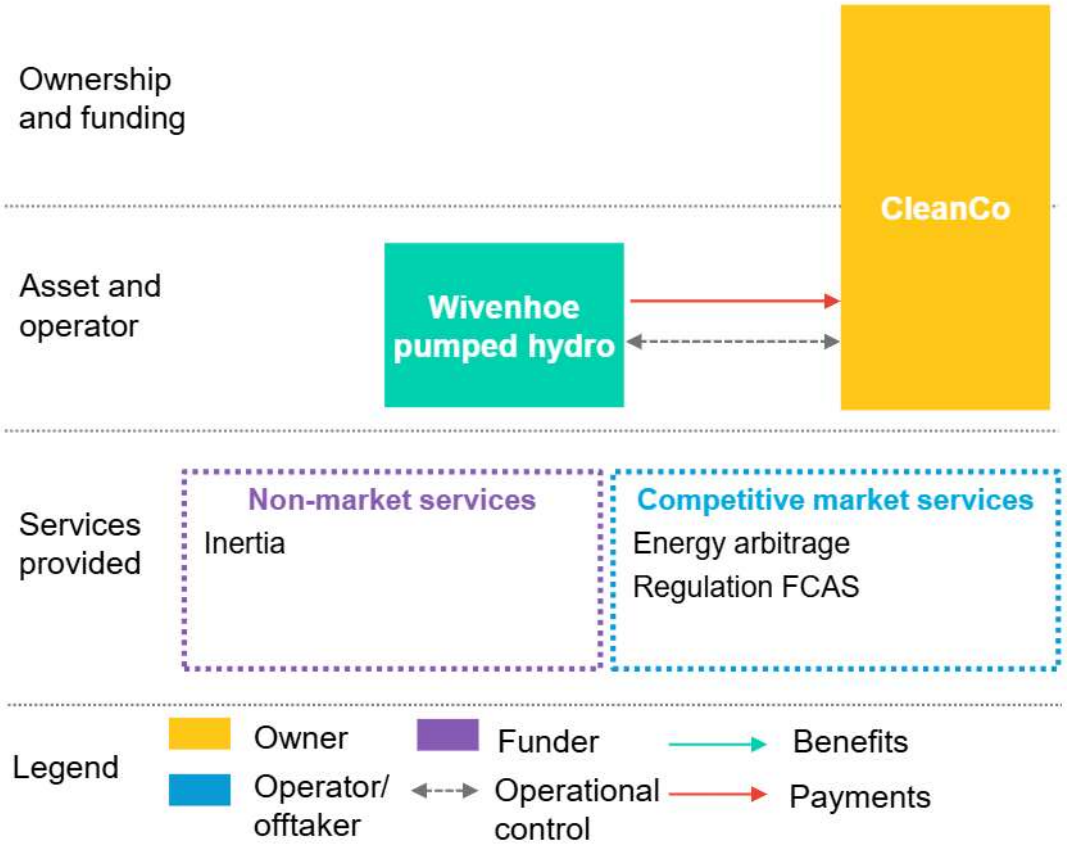
Project details

Size	570MW/5,700MWh
Start of operation	1984
Cost	Undisclosed
Owner	CleanCo (electricity retailer)
System integrator	N/A
Operator	CleanCo
Offtaker	N/A
Connection	275kV transmission level

Market-based revenue and costs in 2024



Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

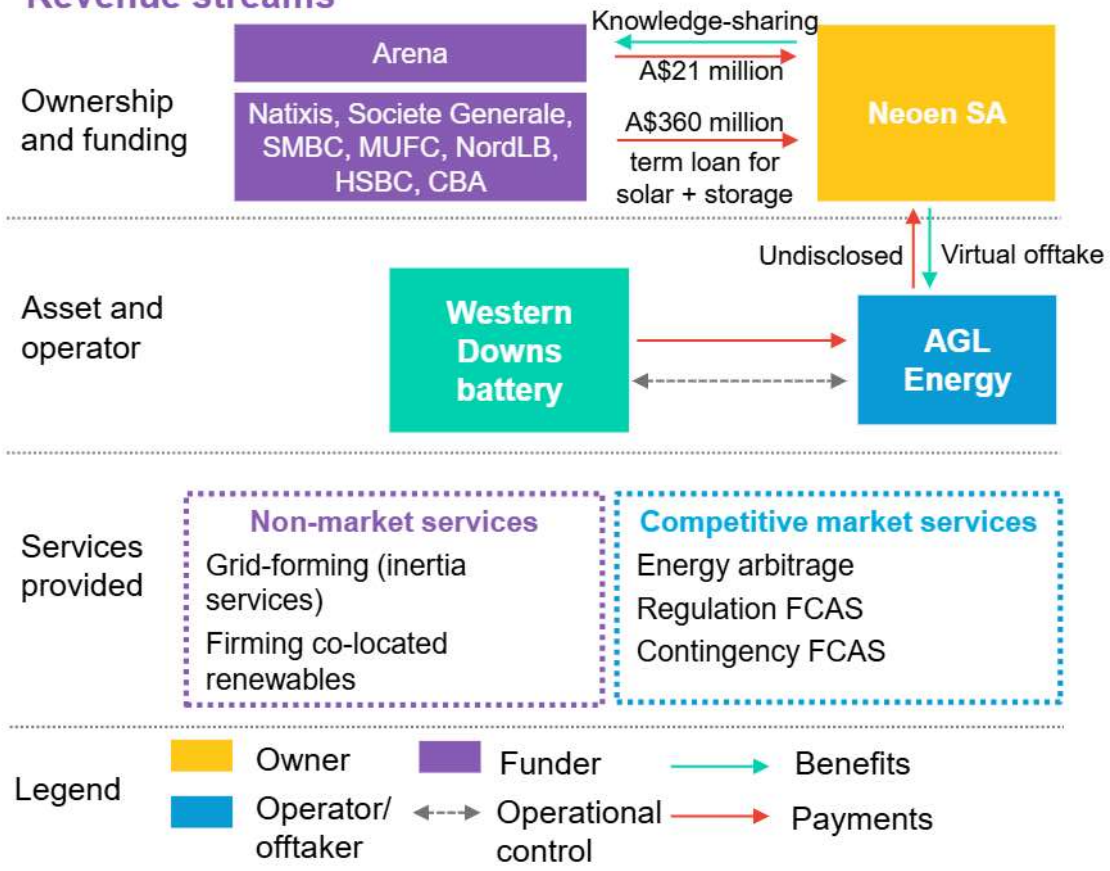
Queensland

Western Downs Stage 1

Project details

Size	270MW/540Wh (co-located with 460MW solar)
Start of operation	2025
Cost	A$243.88 million
Owner	Neoen (developer)
System integrator	Tesla, UGL
Operator	Neoen, AGL Energy (electricity retailer)
Offtaker	AGL Energy via a virtual offtake

Revenue streams



Source: Australian Energy Market Operator, Australian Renewable Energy Agency (Arena), BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

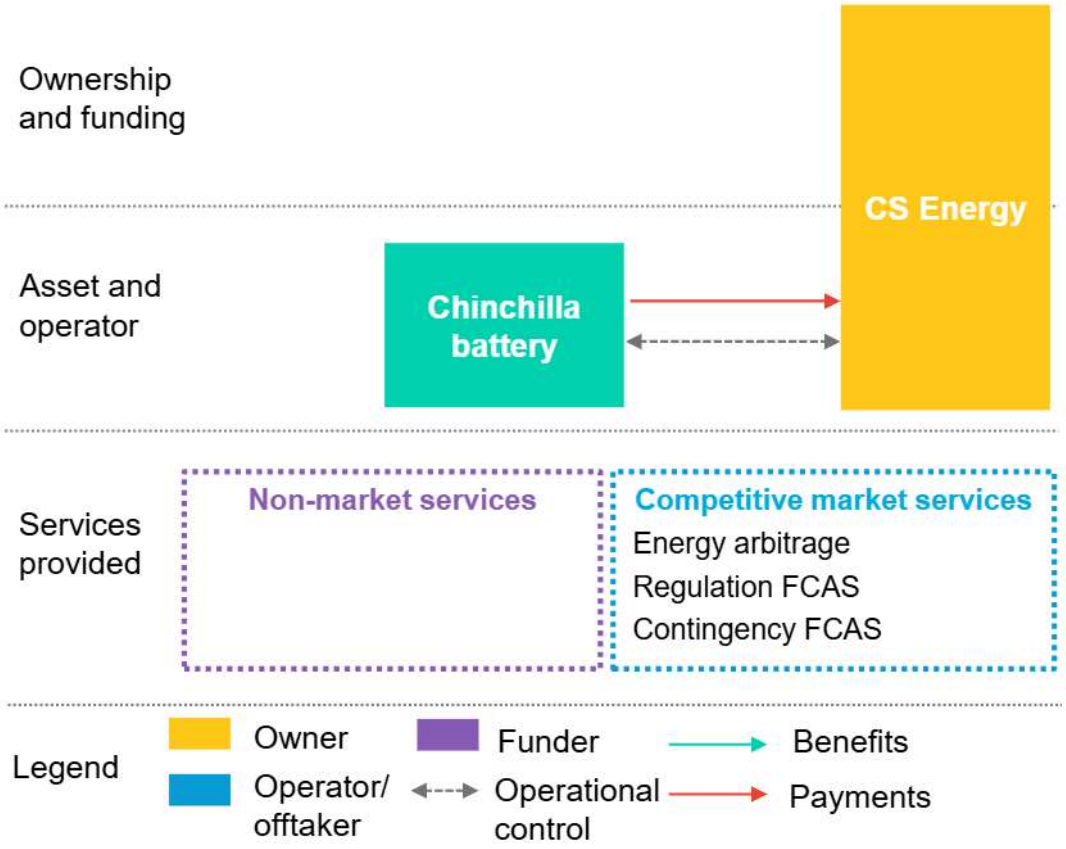
Queensland

Greenbank

Project details

Size	200MW/400MWh
Start of operation	Mid-2025
Cost	A$300 million
Owner	CS Energy (electricity retailer)
System integrator	Tesla
Operator	CS Energy
Offtaker	N/A

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

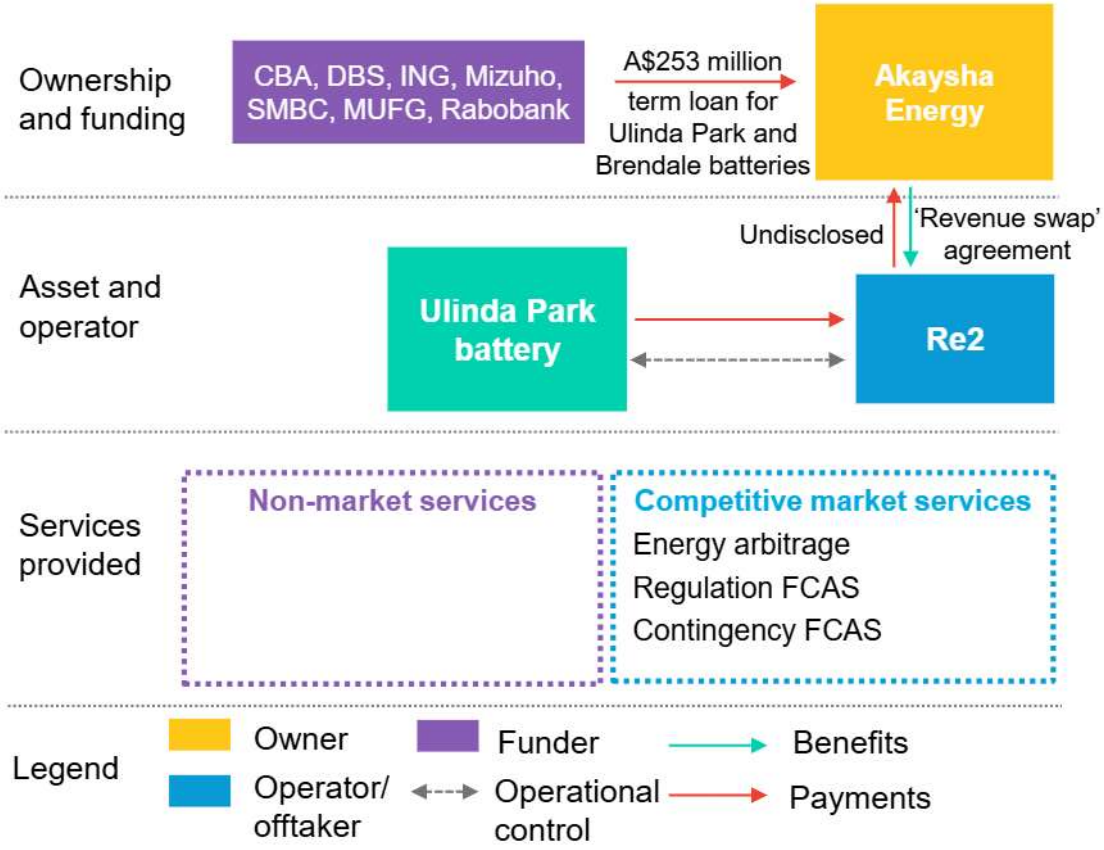
Queensland

Ulinda Park

Project details

Size	150MW/300MWh
Start of operation	3Q 2025
Cost	Undisclosed
Owner	Akaysha Energy (developer)
System integrator	Powin, Consolidated Power Projects
Operator	Akaysha Energy
Offtaker	Re2 via a revenue swap agreement

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

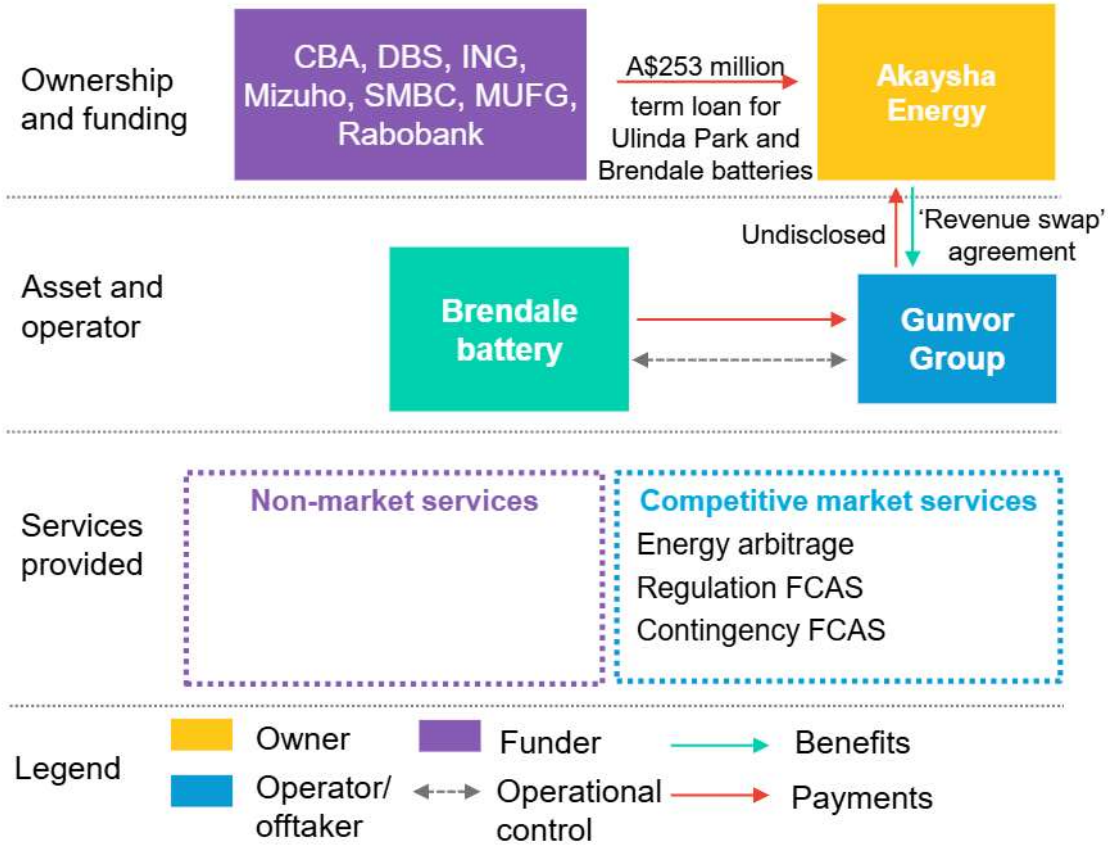
Queensland

Brendale

Project details

Size	205MW/410MWh
Start of operation	2026
Cost	A$200 million
Owner	Akaysha Energy (developer)
System integrator	Tesla, Consolidated Power Projects
Operator	Akaysha Energy
Offtaker	Gunvor via a revenue swap agreement

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

Financing secured/under construction

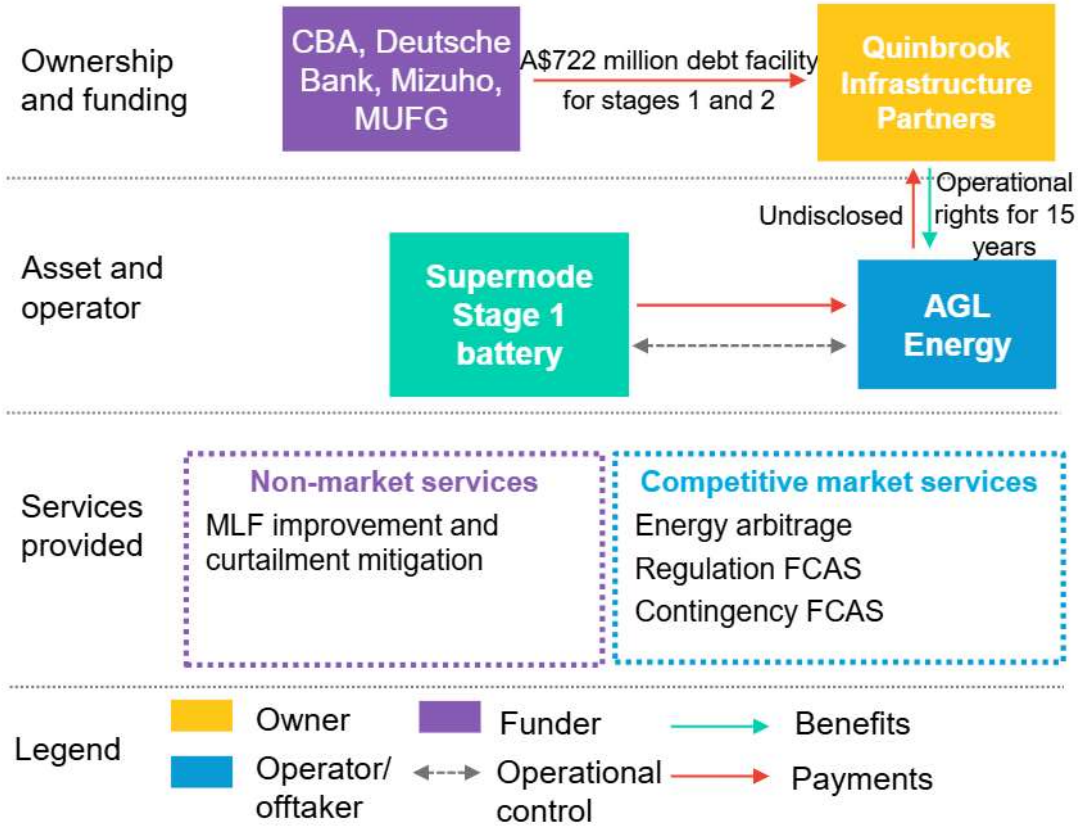
Queensland

Supernode Stage 1

Project details

Size	250MW/500MWh
Start of operation	1H 2026
Cost	Undisclosed
Owner	Quinbrook Infrastructure Partners
System integrator	Private Energy Partners
Operator	Origin Energy (electricity retailer)
Offtaker	Origin Energy

Revenue streams



Source: Australian Energy Market Operator, BloombergNEF. Note: Reg = Regulation, FCAS = frequency control and ancillary services.

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