

Quarterly investment report: Large-scale renewable generation and storage

Q3 2025



About this report

The Clean Energy Council's quarterly investment report tracks utility-scale projects from the financial investment commitment stage through to the completion and operation of the plant.

The financial investment commitment stage – in which projects receive agreement for access to debt and equity, based on the necessary project development and connection approvals and contracting arrangements being in place – is a crucial lead indicator for new capacity build.

The Clean Energy Council is aware that variations exist in development stage definitions across the industry, and as such the Clean Energy Council's data may differ from other datasets for the same period.

The Clean Energy Council's project data is retrospective and so is subject to change depending on updated public information.

Investment figures for specific projects and quarterly/annual totals within the report are expressed in nominal terms (not adjusted for inflation). When a chart references investment trends beyond 12 months, it is expressed in real terms to adjust for inflation. **The base month used with a CPI value of 100 is September 2017**, and is drawn from the Australian Bureau of Statistic's Monthly Consumer Price Index Indicator.

Acknowledgement of Country

We respect and acknowledge the diversity of communities, identities, and clan groups for all First Nations peoples throughout Australia and recognise the continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures; and to Elders past and present.

As a collective of diverse businesses operating on a national scale, we understand that the success of our endeavours is intrinsically linked to the wellbeing and prosperity of the communities we operate within. We acknowledge that Aboriginal and Torres Strait Islander communities are rich and diverse, reflecting a tapestry of cultures and backgrounds. This diversity underscores the importance of embracing a range of holistic solutions to address the unique challenges and opportunities that lie ahead.

We recognise the impact of human activity on the cultural landscape of Australia. We understand that these practices have not always been in harmony with the profound attachment and cultural custodianship that First Nations peoples have with the land.

We are committed to forging strong relationships with First Nations communities and stakeholders, recognising their unique perspectives and aspirations. We strive to engage in genuine, meaningful partnerships that honour their rights, culture, and self-determination.

← Cover image:
MacIntyre Wind Farm
Warwick, QLD
Gidhabal Country
(Acciona)

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Highlights

- The third quarter of the 2025 calendar year (Q3) saw energy storage projects continue to charge ahead with new records set, while momentum for renewable energy investment activity continued to slow for large-scale electricity generation.

Energy storage

- Five storage projects worth 1,199 MW (capacity) / 4,062 MWh (energy output) reached financial close, marking the third highest quarterly result seen for new storage projects while 3 storage projects were commissioned in the quarter, for a total of 541 MW / 1,766 MWh, representing new records. The rolling average energy output for commissioned storage projects continued to reach new heights at 975 MWh for the quarter, also a new record.
- There are currently 74 committed storage projects (either standalone or hybrid projects) in the financial commitment or under construction pipeline, equivalent to 13.3 GW / 35.0 GWh in capacity / energy output.

Electricity generation

- Three generation projects were commissioned in Q3 2025 with a total operating capacity of 104 MW, and one generation project - worth 27 MW of capacity - secured financial commitment in the period.
- There are currently 80 renewable electricity generation projects in the financial commitment or under construction pipeline, representing 12.4 GW of capacity.

CEC definitions

Financial commitment: Publicly available information stating that a project's financing agreements have been signed, and the owner can begin drawing on the financing to commence work on the project. Typically this aligns with execution of a connection agreement and generator performance standards with the relevant network service provider and AEMO.

Under construction: Publicly available information that a project has started construction work.

Commissioned: Publicly available information that a project is fully completed and operational (a project that is currently operational but not commissioned falls under the category under construction).



○ Wathagar Solar Farm
 Moree, NSW
 Kamilaroi Country

A surge in energy storage, while momentum in new generation continues to slow despite strong pipeline

Five storage projects representing 1,199 MW (capacity) / 4,062 MWh (energy output) reached financial commitment in Q3, marking the third highest quarterly growth in new large-scale storage projects on record. This result marks 10 consecutive quarters in which the energy output of newly financially committed storage projects has exceeded 1,000 MWh. Year-to-date investment decisions for utility scale storage also remain on track to meet and beat the deployment levels required by the Australian Energy Market Operator's (AEMO) Step Change scenario.

The largest storage project to reach an investment decision was the four-hour Tomago Battery Energy Storage System (BESS) in New South Wales, with a size of 500 MW / 2,000 MWh. This was one of three storage projects to reach financial close in New South Wales. The Goulburn River Solar Farm BESS with a size of 49 MW / 562 MWh has a duration of 11.5 hours. This project is the only hybrid BESS project, while the other four are standalone BESS projects.

Records were broken for commissioned storage projects in the quarter, with three projects worth 541 MW / 1,766 MWh coming online – a record in both measures. The rolling quarterly average for energy generated of

commissioned storage projects increased by 67 per cent to 975 MWh, another record.

Meanwhile, 2025 has seen momentum slow for new generation projects, with just 1.1 GW reaching financial commitment. This quarter saw that trend continue with just one electricity generation project, the Wathagar Solar Farm – Stage 2, representing 27 MW in new capacity, secure financial commitment. This DC current project will be used to power the Good Earth Green Hydrogen and Ammonia project in New South Wales.

The rolling quarterly average of generation capacity reaching financial close plummeted by 34 per cent to 680 MW.

No onshore wind farms have been financially committed in 2025, underscoring the impacts of lengthy and inconsistent planning, permitting and environmental assessment processes, delays in transmission roll-out and a lack of long-term offtake and revenue certainty.

The total investment for generation projects reaching financial close so far in 2025 is \$960 million. In comparison, the running total at this stage in 2024 was \$6.6 billion, highlighting the impact of delays to economies and communities across Australia.

With 80 projects representing 12.4 GW of capacity in the pipeline, addressing these issues is key.

Q3 2025

Project pipeline

There are 80 renewable electricity generation projects that have either reached financial commitment or are under construction, representing more than 12.4 GW of capacity. There are 74 storage projects (either standalone or hybrid projects) in the pipeline, equivalent to 13.3 GW / 35.0 GWh in capacity / energy output.

Since 2017, 249 generation and storage projects have been commissioned, representing 19 GW of installed electricity generation capacity and 3.2 GW / 6.6 GWh of energy storage.

A breakdown of all projects currently in financial commitment or under construction stages across the states and territories is shown below.

Current generation and storage projects either in financial commitment or under construction, by state

State	Project count	Total project capital investment (\$M)	Generation project capacity (MW)	Storage project capacity (MW)	Storage project energy output (MWh)
ACT	2	471	0	350	700
NSW	40	9,240	3,543	4,524	11,962
NT	5	102	45	41	39
QLD	28	9,752	4,210	3,120	7,902
SA	16	2,335	813	1,895	4,830
TAS	1	50	21	-	-
VIC	28	9,399	2,962	2,218	5,992
WA	22	6,497	937	1,137	3,567
TOTAL	142	37,845	12,442	13,285	34,992

Project pipeline

Current onshore wind projects either in financial commitment or under construction

State	Project count	Total project capital investment (\$M)	Generation project capacity (MW)
ACT	0	-	-
NSW	1	820	414
NT	0	-	-
QLD	7	5,071	2,432
SA	1	435	412
TAS	1	50	21
VIC	2	4,000	1,333
WA	2	913	208
TOTAL	14	11,289	4,820

Current solar projects either in financial commitment or under construction

State	Project count	Total project capital investment (\$M)	Generation project capacity (MW)
ACT	0	-	-
NSW	17	3,479	3,044
NT	3	49	45
QLD	7	1,130	1,352
SA	6	534	401
TAS	0	-	-
VIC	15	2,275	1,624
WA	3	712	374
TOTAL	51	8,178	6,840

Q3 2025

Generation projects

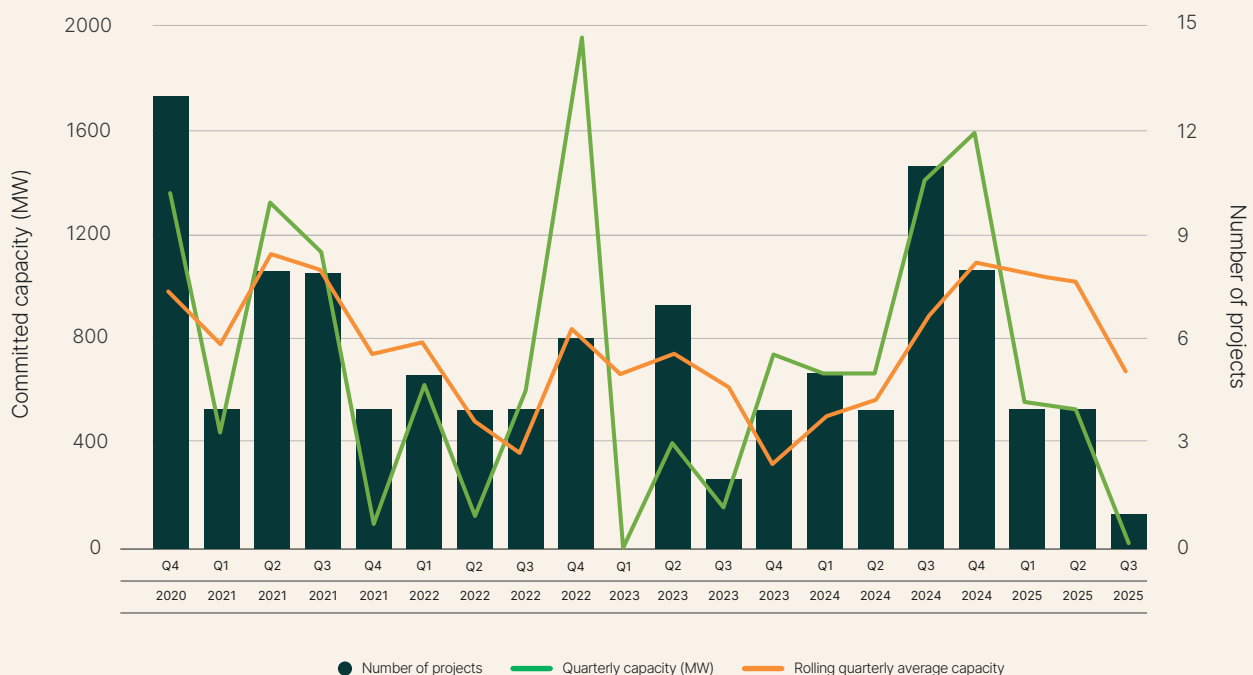
Q3 2025 analysis

One generation project, the Wathagar Solar Farm – Stage 2, worth 27 MW of capacity secured financial commitment in the quarter.

Three generation projects worth 104 MW were commissioned in the quarter. The largest of these was Western Australia's Bellevue Gold Hybrid Power Station at 88 MW.

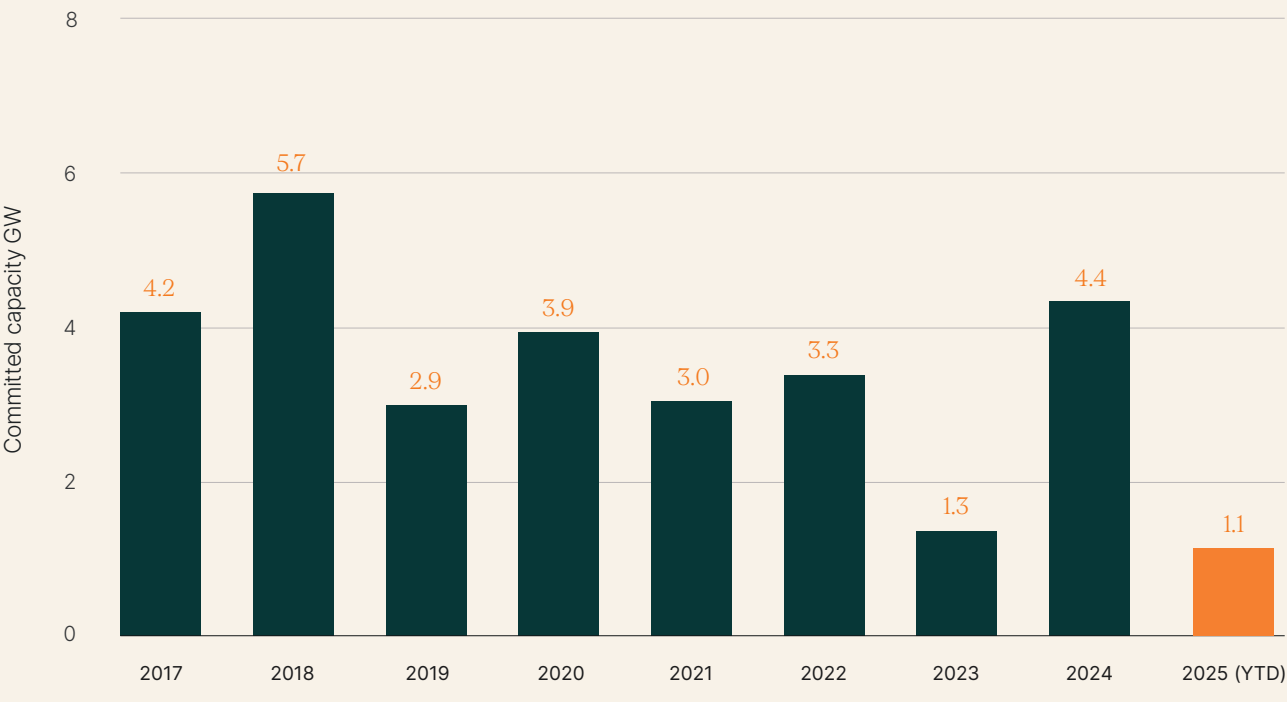
No onshore wind farm has as yet been financially committed in 2025. It is critical that specific issues impacting wind investment, such as the impacts of lengthy and inconsistent planning, permitting and environmental assessment processes, delays in transmission roll-out and a lack of long-term offtake and revenue certainty are addressed to support timely investment decisions for wind projects.

Financially committed generation projects and capacity, quarterly MW



Generation projects

Total capacity of financially committed generation projects, annual GW



Generation projects by development stage reached, capacity

		Financially committed	Under construction	Commissioned
Q3 results	Projects	1	0	3
	Total capacity	27MW	-	104MW

Note - Projects that reach multiple stages have been included in each stage.

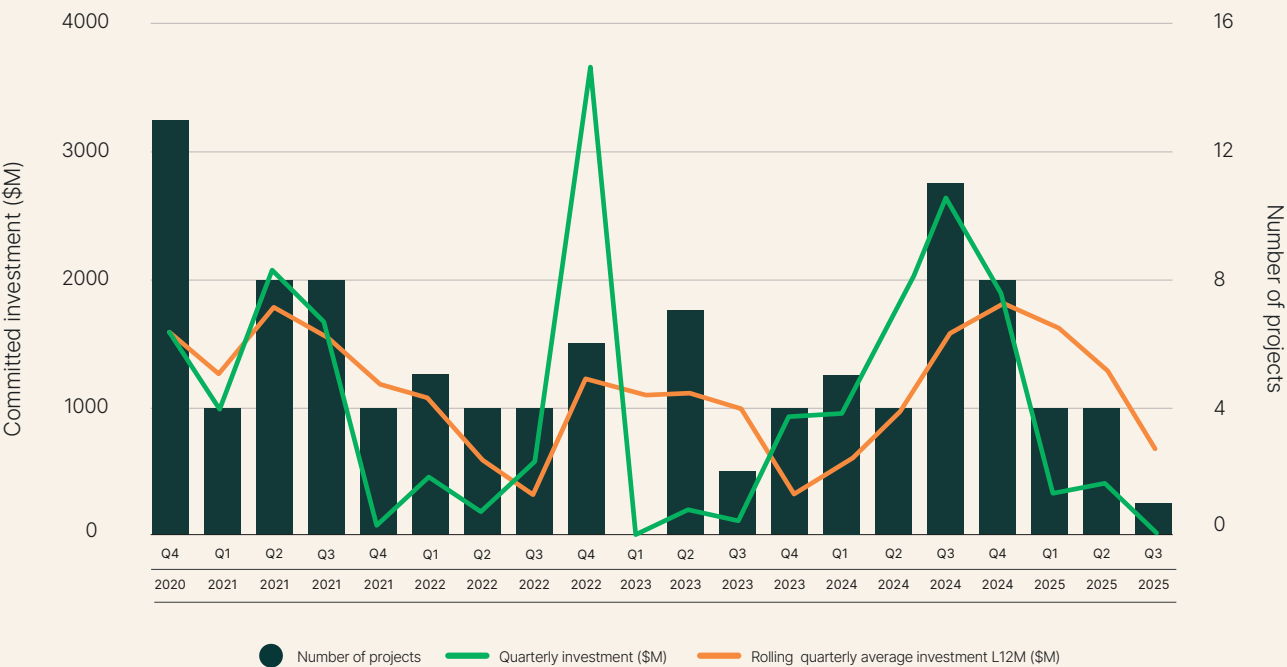
Generation projects

Generation project investment

The total investment for generation projects reaching financial close so far in 2025 is \$960 million. In comparison, the running total at this stage in 2024 was \$6.6 billion.

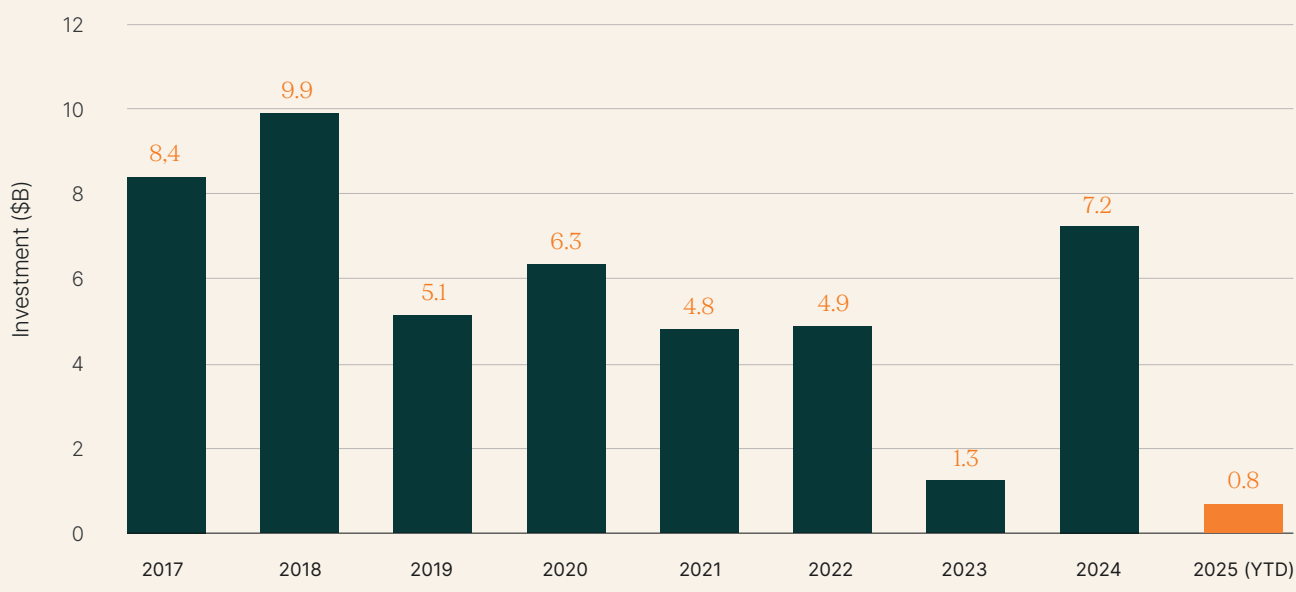
The following graphs are expressed in real investment values to better reflect trends over time, with 2017 as the base year.

Financially committed generation projects
quarterly investment, real \$AUD (million)



Generation projects

Total real investment of financially committed generation projects, annual \$AUD (billion)



Project completion time by state

South Australia leads all states when it comes to average time from financial commitment to commissioning for generation technology types, with only a two-month difference between wind and solar. Victoria takes the shortest time for storage projects to progress between these stages at 19 months. Western Australia is the only

state with a sufficient sample size for hybrid projects to be included in the data, where it takes 17 months to progress from financial commitment to commissioning. Across Australia, it takes, on average, solar projects eight months less than wind projects to progress from financial commitment through to the final commissioned stage.

Project completion time – from financial commitment to commissioning

State	Solar	Onshore wind	Battery	Hybrid
VIC	22	28	19	N/A
NSW	20	31	N/A	N/A
QLD	23	37	N/A	N/A
SA	19	21	20	N/A
WA	21	N/A	26	17
Total average by tech:	21	29	22	17

Notes - Average based on solar, onshore wind and storage projects that have reached commission since 2017.

The stated timeframe excludes the project development phases (e.g. project design, planning & environmental assessments etc.) prior to financial commitment.

Each technology type needs to have at least five commissioned projects in a state for the average to be included.

Q3 2025

Energy storage projects

Q3 2025 analysis

The third quarter of 2025 produced one of the strongest quarters on record for new utility-scale storage projects. Five projects totalling 1,199 MW / 4,062 MWh reached financial commitment, with an investment value of over \$1.7 billion. This was the third highest quarterly result for new energy generation potential (MWh) in utility batteries on record.

Further along the utility-scale storage pipeline, three projects totalling 541 MW / 1,766 MWh became operational. The 12-month quarterly average for potential energy generation of commissioned battery projects increased by 67 per cent to 975 MWh. The largest battery to come online in Q3 was Western Australia's Stage 2 of the Collie Battery, with a size of 341 MW / 1,363 MWh, and duration of four hours.

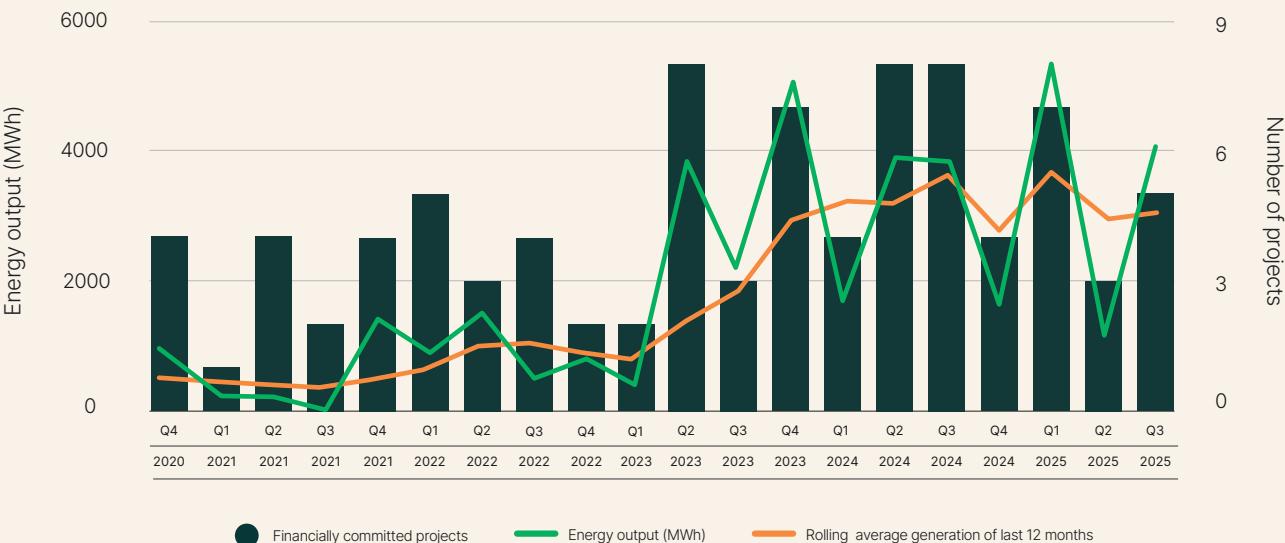
Battery energy storage system projects by development stage reached, Q3 2025

Battery Storage	Financially committed	Under construction	Commissioned
Project count	5	3	3
Project capacity	1,199 MW	449 MW	541 MW
Q3 results			
Project energy output	4,062 MWh	1,562 MWh	1,766 MWh
Project investment	\$1.7 billion	\$560 million	\$400 million

- Notes - Includes hybrid projects with a storage component
- Projects that reach multiple stages have been included in each stage.
 - Project investment is underrepresented as not all projects have publicly available information.

Energy storage projects

Financially committed storage projects by energy output, quarterly MWh



Commissioned storage projects by year

Commissioned energy storage projects

	2017	2018	2019	2020	2021	2022	2023	2024	2025
Number of projects	1	3	3	1	4	4	8	5	8
Investment (AUD \$M)	90	129	72	42	353	87	960	1,325	780
MW	150	90	130	13	426	69	724	619	1,022
Average MW	150	30	43	13	107	17	91	124	128
MWh	194	115	135	4	647	101	947	1,677	2,824
Average MWh	194	38	45	4	162	25	118	335	353
Average storage duration (hours)	1.3	1.3	1.0	0.3	1.5	1.5	1.3	2.7	2.8

Energy storage projects

Pumped hydro energy storage (PHES)

While no pumped hydro projects reached financial close in Q3, there are two projects under construction. Kidston Pumped Storage Hydro Project is anticipated to be

completed and energised this year. While the Goat Hill PHES has been labelled as under construction since 2021, there has been minimal news on its progress. As a result, it has been removed from our pipeline of PHES projects.

Pumped hydro energy storage (PHES)
projects currently under construction

Project name	State	Owner	Capacity (MW)	Energy generation (MWh)	Duration
Kidston Pumped Storage Hydro Project	Queensland	Genex Power	250	2,000	8
Snowy 2.0	New South Wales	Snowy Hydro	2,000	350,000	175

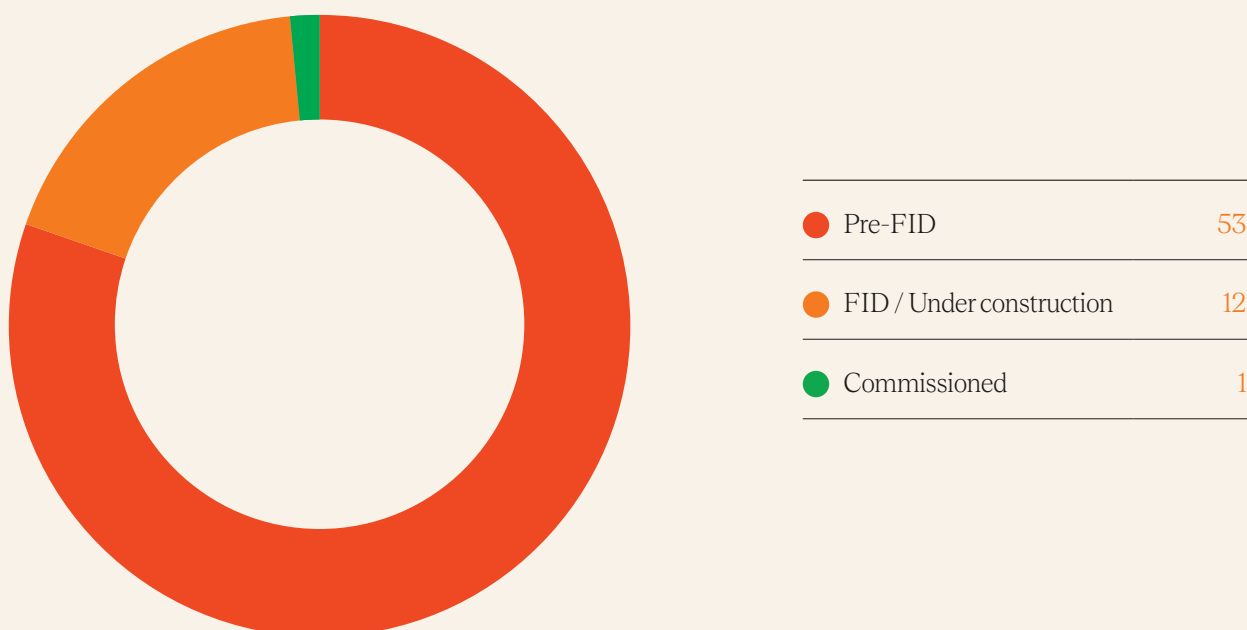
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Capacity Investment Scheme and NSW Long-Term Energy Services Agreements tracker

The Capacity Investment Scheme (CIS) is an Australian Government revenue underwriting scheme to accelerate investment in renewable energy generation and storage. The CIS aims to support 40 GW of new capacity nationally. There are currently three Open tenders in progress to support projects in the National Energy

Market (NEM) and the WA Wholesale Electricity Market (WEM). Meanwhile, successful bids have been announced for six tenders. As at end of October 2025, 66 projects had been awarded a CIS Agreement. Their status by lifecycle stage is summarised below.

All projects that have received a CIS Agreement since scheme commencement by current lifecycle stage, as of October 2025

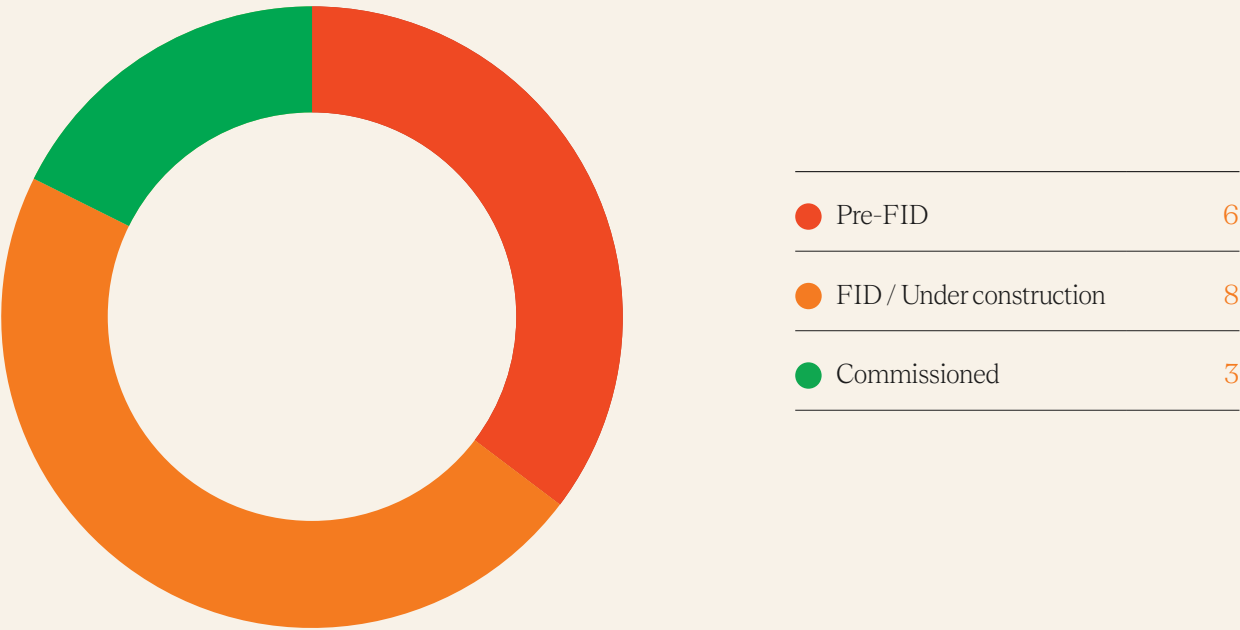


Capacity Investment Scheme and NSW
Long-Term Energy Services Agreements tracker

Long-Term Energy Services Agreements (LTESAs) support the New South Wales Government's Electricity Infrastructure Roadmap by offering generation, storage and firming projects the right to access minimum cash flows for periods within a long contract term. This reduces price uncertainty for investors, bringing forward investment

in new sources of renewable energy projects. To date, seven tenders have been held to support projects in NSW. Successful bids have been announced for five tenders. To date, 17 projects have been awarded an LTESA. Their status by lifecycle stage is summarised below.

All projects that have received an LTESA since scheme commencement by lifecycle stage, as at October 2025



Q3 2025

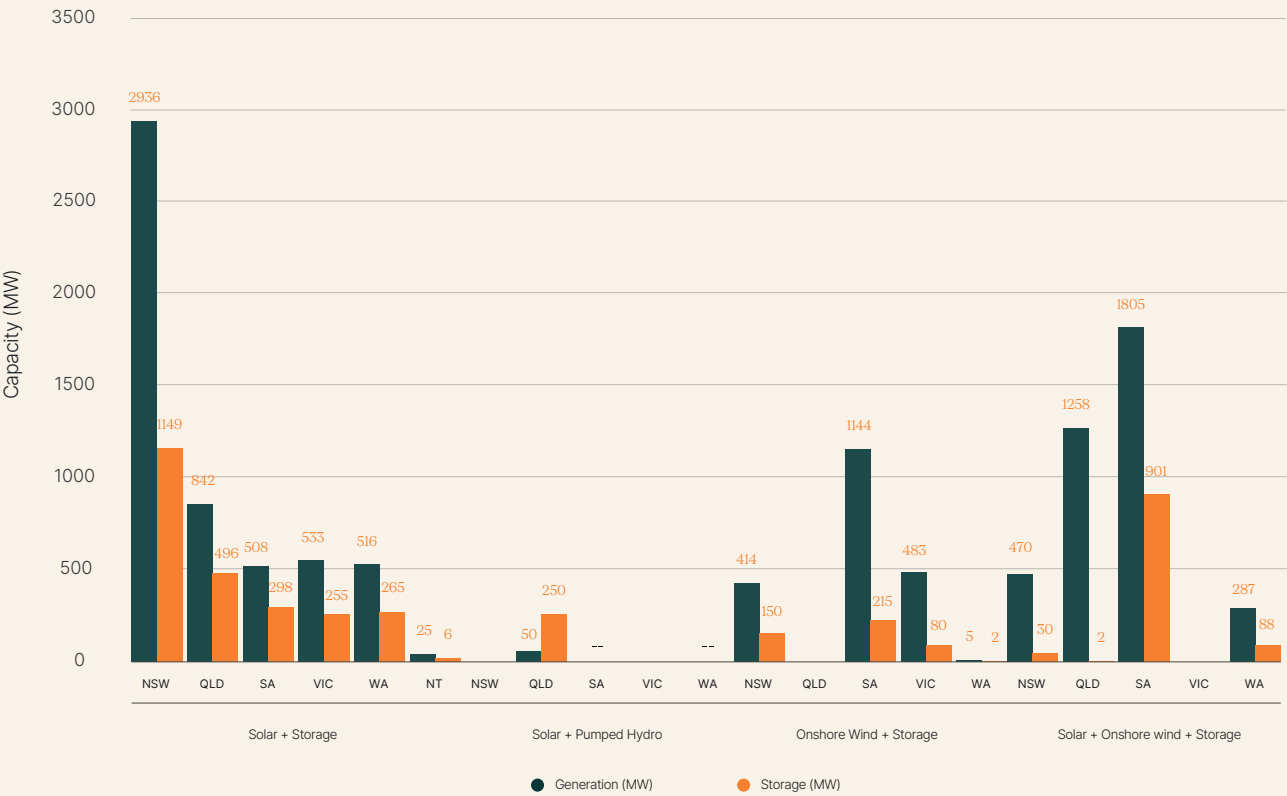
Hybrid projects

Hybrid projects are becoming more prevalent, with systems comprising solar and storage, wind and storage, solar and PHES, or a combination of these. Across the nation, there are 63 hybrid projects in development. Close to two thirds of these projects are solar and storage systems. Four projects offer energy output durations of at least four-hours.

Project breakdown of hybrid projects

		Solar + Battery	Solar + PHES	Wind + Battery	Wind + Solar + Battery
Generation component	Solar capacity (MW)	5,360	50	-	1,315
	Wind capacity (MW)	-	-	2,046	2,509
	PHES (MW)	-	250	-	-
Storage component	Capacity (MW)	2,468	250	447	1,021
	Energy (MWh)	5,496	2,000	720	3,935
Average duration (hrs)		2.2	8.0	1.6	3.9
Total number of projects		41	1	8	13
Total build cost (\$AUD billion)		\$7.8	\$0.9	\$2.3	\$2.5

Hybrid project capacity breakdown by state and type, MW





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