Ownership of Australia's renewable energy assets

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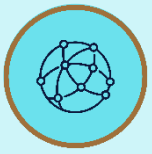
Executive Summary

Superannuation funds are substantial investors in domestic renewable energy assets. However, estimates of superannuation investments in renewable energy tend to focus on directly held assets even though much superannuation capital is invested indirectly. This paper applies a look-through ownership framework to estimate the ownership shares of installed utility-scale renewable generation capacity and battery power capacity.

Since FY2009-10, Australia's total renewable electricity generation has increased by almost 400 per cent, and now accounts for almost 40 per cent of total electricity generation – up from 9 per cent in FY2009-10.



The surge in Australia's renewable energy capacity has developed within a global investment market, and a high proportion of projects have been developed by global energy companies and global institutional investors.

On a look-through basis, Australian-based entities are estimated to account for 36 per cent of wind capacity; 19 per cent of solar capacity; 99 per cent of hydroelectric capacity (mostly government owned); and 38 per cent of battery storage capacity.

Historically, Australian superannuation funds have preferred investments in late-stage, or operational projects. However, increasingly, super funds are investing in earlier stage projects – including via domestic development platforms.

On a look-through basis, institutional superannuation is estimated to account for around one-third of the ownership of wind and solar capacity by Australian-based entities.

Estimating the ownership of Australia's renewable energy assets

Australia's renewable energy capacity has risen markedly over the past 15 years. Australia now has more than 250 operational wind and solar generation plants, and around 50 hydroelectric generation facilities, each with a capacity of 10 MW or more. While utility-scale battery storage is a newer technology, Australia already has more than 50 operational battery storage facilities.

1. Introduction

The ownership structure of Australia's renewable energy sector is complex. Typical asset owners include specialist private and public-sector developers, institutional investors such as superannuation funds, and private and public-sector utility companies. Many renewable energy assets have complex ownership arrangements – such as where an infrastructure platform invests on behalf of institutional investors – and can have multiple owners. Furthermore, ownership can change, particularly once projects reach financial close or commercial operation.

Australia's renewable energy sector has attracted significant foreign investment. Australia has high-quality renewable resources and large available land areas. Global developers and institutional investors have contributed development expertise and access to deep pools of financial capital, supporting the deployment of utility-scale renewable capacity in Australia.

This paper applies a look-through framework to estimate the ownership shares of installed utility-scale renewable generation capacity and battery power capacity, at the entity level. That is, the estimates distinguish between ownership by Australian and foreign-based entities, and between different types of entity. On this basis, as of 30 June 2026, the estimated ownership of Australia's renewable capacity by Australian-based entities is around 36 per cent for wind; 19 per cent for solar; 99 per cent for hydroelectricity (mostly government owned); and 38 per cent for battery storage.[1]

Australia's institutional superannuation system, with total investments of $3.2 trillion in June 2026,[2] represents a substantial pool of institutional capital. Superannuation funds are increasingly seeking exposure to renewable energy infrastructure. It is estimated that institutional superannuation accounts for around 12 per cent of wind capacity and 6 per cent of solar capacity. In each case, this is equivalent to around one-third of total ownership by Australian-based entities. Superannuation investment in battery storage – a newer technology – is estimated to account for 4 per cent of total ownership by Australian-based entities.[3]

2. Australia's renewable energy sector

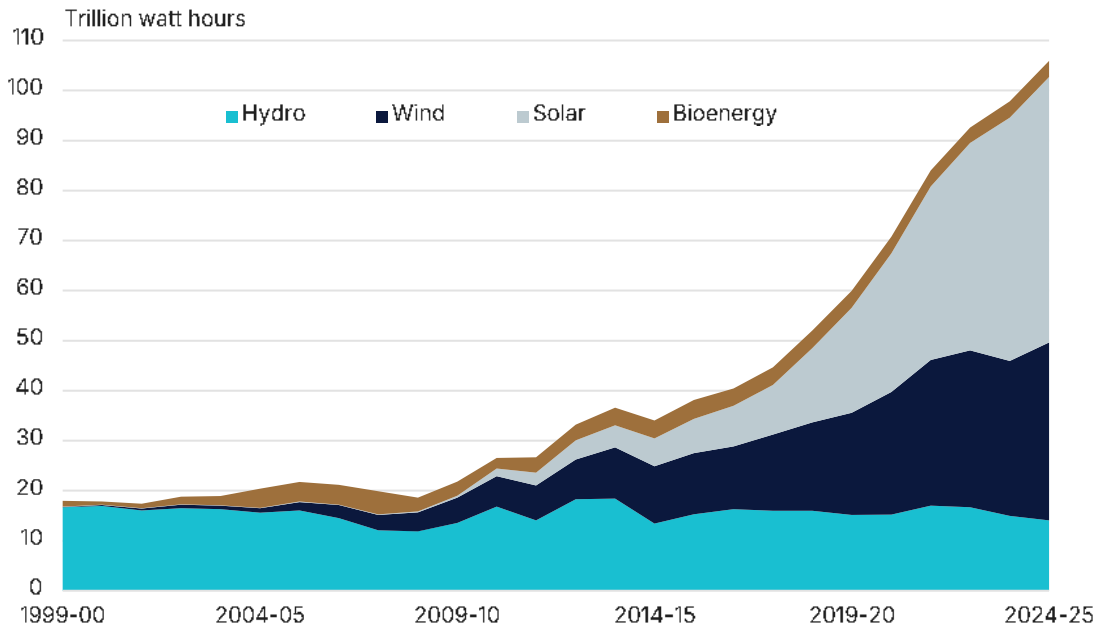
Australia's energy sector has undergone marked structural change over the past two decades.

Historically, Australia's electricity generation has been dominated by fossil fuel-based generation, primarily coal-fired power, complemented by hydroelectric generation (a component of renewable generation). However, since around 2010 renewable generation has risen sharply – driven by the rising cost-efficiency of utility-scale renewable technologies and supportive government policies.

From FY2009-10, total renewable electricity generation increased by almost 400 per cent to FY2024-25 (Chart 1).[4]

- Solar generation is the largest contributor to this rise – increasing 100-fold since FY2009-10. In FY2024-25, large-scale solar generation accounted for 19 per cent of total renewable generation, while small-scale solar generation (which includes rooftop solar) accounted for 31 per cent.
- Wind generation increased by around 7-fold from FY2009-10, and accounted for 34 per cent of total renewable generation in FY2024-25.
- Hydroelectric generation – once Australia's sole form of utility-scale renewable energy – has been steady since FY2009-10. Hydroelectric generation accounted for 13 per cent of total renewable generation in FY2024-25.[5]

Chart 1: Australian electricity generation, renewable sources[6]



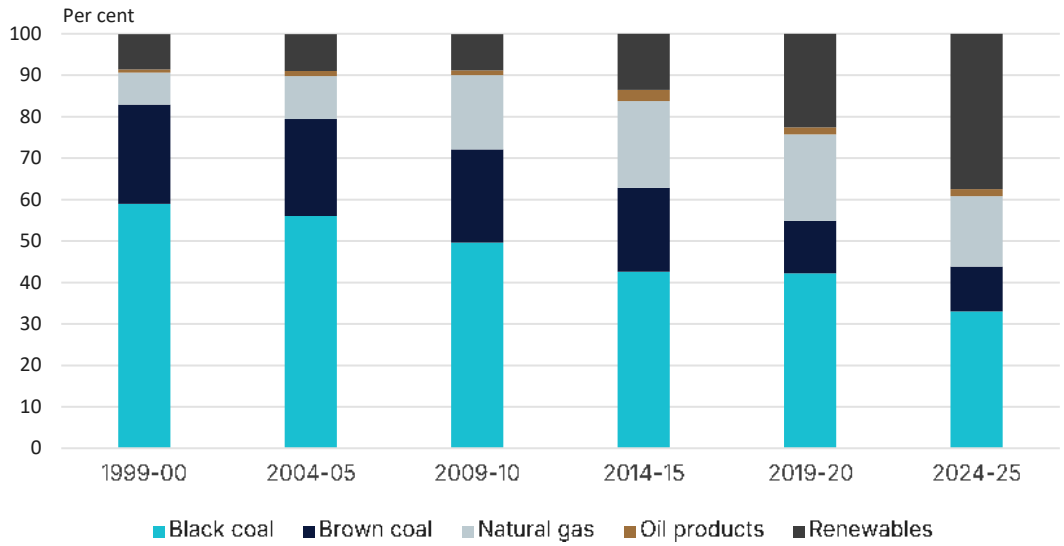
Source: Department of Climate Change, Energy, the Environment and Water, Australian Energy Statistics 2025.

Over the same period, non-renewable generation fell by around 20 per cent – led by black coal (down 25 per cent) and brown coal (down 46 per cent). As a result, renewable generation accounted for 38 per cent of total generation in FY2024-25 – up from 9 per cent in 2009-10 (Chart 2).[7]

Complementary battery storage has risen sharply over the two years since FY2023-24 (Chart 3). Battery Energy Storage Systems can charge when electricity supply is abundant or prices are lower, and discharge when demand or prices are higher –

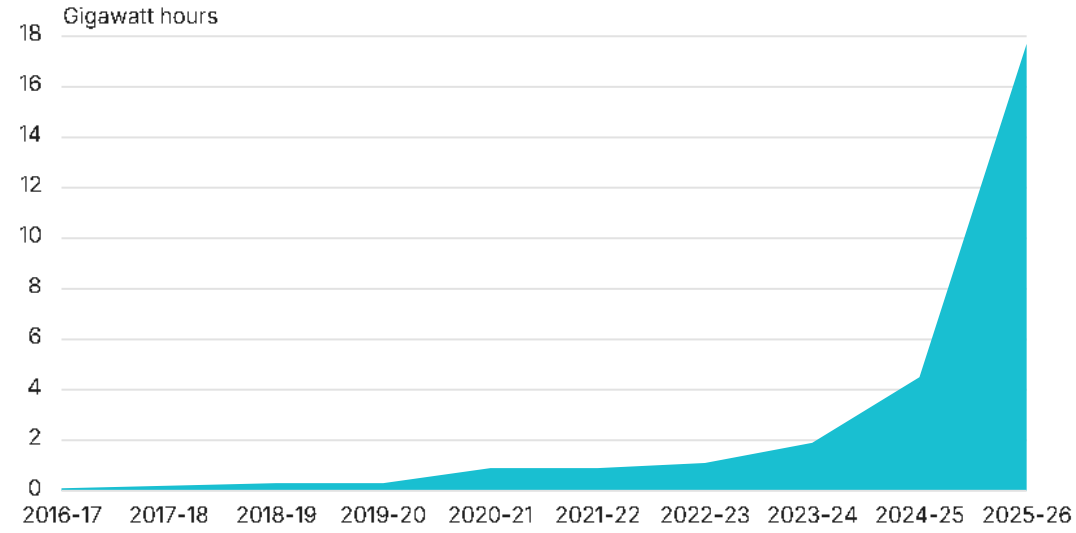
smoothing the inherent variability of wind and solar generation. Australia also has three major pumped hydro energy storage facilities in operation.

Chart 2: Australian electricity generation, by fuel type[8]



Source: Department of Climate Change, Energy, the Environment and Water, Australian Energy Statistics 2025.

Chart 3: Battery energy storage systems, total capacity (end of fiscal year)[9]



Source: Modo Energy.

3. Lifecycle of renewable energy assets

In Australia, specialist foreign-based entities have played an important role in the development of utility-scale renewable energy assets (see Section 5).[10] International energy companies such as Enel (Italy), Iberdrola (Spain), and RWE (Germany) have expertise in developing large renewable energy projects. In addition, some global institutional investors have acquired or seeded specialist development capability – for example, Brookfield Renewable and its institutional partners acquired control of the French developer Neoen – and can be best described as "institutional developers". That said, Australian-based entities – such as Squadron Energy, Tilt Renewables and Windlab – represent an increasingly important component of development activity.

In terms of financing Australia's utility-scale renewable projects, debt has typically comprised more than half of the financing mix (at financial close).[11] Assets with contracted revenues, such as those supported by long-term power purchase agreements, generally support higher leverage. International banks, including from Europe and Japan, play a key role in financing large projects – particularly those developed by foreign-based entities.[12] A key trend in the Australian market is the institutional financing of multiple renewables projects under a single consolidated platform, rather than on a project-by-project basis.[13]

Initial equity capital is typically provided by the developer or, at the platform level, the platform sponsor/manager – plus any strategic equity partners. Early-stage development requires specialist skills and carries the highest risk of project failure. As projects proceed, additional equity capital can be drawn in from institutional co-investors – either at the project or platform level.[14]

For superannuation funds, the provision of equity financing for specific projects is uncommon. Where this does occur, it can involve co-investment (for a specific development-stage project) via an investment platform. Increasingly common is for a fund to have a stake in a development platform, where development risk is diversified across multiple projects. As discussed below, historically, superannuation funds have tended to prefer to invest in late-stage, or operational projects.

Once a renewable project reaches late-stage development or commercial operation, owners may sell-down some or all of their equity. Typically, this involves the transfer of equity interests in the project vehicle rather than the sale of the physical asset itself.[15] The vehicle continues to hold the asset, and project debt generally remains within the vehicle. This process enables sponsors to monetise mature assets and redeploy the proceeds to new developments, while providing other potential institutional investors with the opportunity to acquire equity interests in those assets.

Estimates for the ownership shares of installed utility-scale renewable generation capacity and battery power capacity are presented in Section 5.

4. Superannuation ownership of renewable energy assets

For an APRA-regulated superannuation fund, the overarching legal requirement on the trustee is to perform its duties and exercise its powers in the best financial interests of the beneficiaries – which includes investment decisions.[16]

For any superannuation investment option, there are numerous, sometimes competing factors that determine ultimate asset allocation at the portfolio level, and within asset classes, including: diversification of investments, liquidity management and regulatory and tax settings. To the extent that these factors tend to favour certain assets or asset classes, this will be reflected in funds' investment portfolios.

Established infrastructure assets can be attractive to long-term institutional investors where they offer relatively stable long-term cash flows and diversification characteristics. While there are numerous forms of investment and ownership, three key examples are:

- Direct acquisition of an equity interest from a developer. Typical for late-stage projects, where the developer sells all or part of its equity interest to an institutional investor.
- Indirect investment via an externally-managed specialised infrastructure fund that holds a portfolio of operational projects.
- Investment in development-stage projects via specialist platforms where development risk is diversified across multiple projects, or involves co-investment for a specific development-stage project via a platform.

5. A look-through analysis of Australian renewable energy ownership energy assets

Like many types of infrastructure, renewable energy assets can have complex ownership structures including multiple owners. Ownership can change, particularly once projects reach financial close or commercial operation.

For example, a wind generation asset may be held in a dedicated project vehicle, which is controlled by an international developer, while the underlying owners may include Australian superannuation funds that invest via a specialised fund manager. Australian banks may have provided some debt financing for development of the project, and continue to hold that debt, but have no ownership (equity) stake in the asset.

This section shows estimates for the ownership shares of installed utility-scale renewable generation capacity and battery power capacity, on a look-through basis, at the entity level (as of 30 June 2026). The estimates distinguish between ownership by Australian and foreign-based entities, and different types of entity. For the purposes of this analysis, ownership refers to beneficial equity ownership – where an asset is owned through a chain of entities, ownership is attributed proportionately to the identifiable equity holders. 'Australian-based' refers to entity domicile and should not be interpreted as Australian ultimate beneficial ownership or source of capital, except where the look-through methodology identifies underlying institutional investors.

Table 1: Estimates of ownership share of renewable energy assets, 30 June 2026
Share of total capacity (total power capacity for batteries)**

Australian-based entities	Wind	Solar	Hydro	Battery
Listed entities	3	4	10	10
Institutional investors	19	12	1	5
of which, superannuation funds	*12*	*6*	*1*	*2*
Private companies	10	1	0	1
Government	4	2	88	22
Sub-total*	**36**	**19**	**99**	**38**

Foreign-based entities	Wind	Solar	Hydro	Battery
Listed entities	23	25	0	5
Institutional investors	20	33	1	56
Private companies	10	16	0	0
Government	11	7	1	1
Sub-total*	**64**	**81**	**1**	**62**

*Sub-totals may not equal the sum of components due to rounding.
**The cut-off for capacity (power capacity for batteries) for inclusion in the set of assets is 10 MW.
Source: See the box on Page 11 for notes on methodology.

Key points on methodology (see page 11 for details)

- **Asset universe**: operational assets ≥10 MW, as of 30 June 2026.
- **Measure:** installed MW (batteries measured by MW power capacity).
- **Ownership**: beneficial equity look-through where identifiable, at the entity-level.
- **Geography**: entity domicile.
- **Opaque pooled vehicles**: estimated using disclosed investors, mandates and manager information. Estimates involve judgement.

For Australian renewable energy assets, Table 1 disaggregates look-through ownership – at the entity level – between public (listed) companies, private (unlisted) companies, institutional investors (including institutional developers), and government entities. The shares relate to capacity in respect of wind, solar and hydroelectric assets, and storage capacity in respect of battery energy storage systems.

With respect to ownership by Australian-based entities, institutional investors comprise the largest cohort for wind and solar capacity. Indeed, it is estimated that superannuation funds account for around one-third of the ownership of wind and solar capacity by Australian-based entities. As noted in Section 4, superannuation holdings can involve direct ownership, investments in domestic development platforms, co-investment arrangements and indirect stakes via investment managers.

- Australian-based development entities – such as Squadron Energy and Windlab – tend to build and retain ownership of assets. Such developers comprise a mix of listed and unlisted companies in Table 1.

Australian-based institutional investors own only a relatively small share of battery storage capacity, a newer technology, where deployment in Australia has been led by global institutional developers – reflected in 'institutional investors' in Table 1. Superannuation investment in battery storage is estimated to account for 4 per cent of total ownership by Australian-based entities.

Hydroelectric generation represents a distinct ownership model. Australia's major hydroelectric assets were largely developed by state and federal governments as strategic electricity infrastructure and continue to be predominantly government-owned.

Ownership by foreign-based entities of wind, solar and battery capacity ranges from around 60 to 80 per cent. Australia's wind, solar and battery assets have been developed within a global renewable investment market, and as noted in Section 2, a high proportion of projects are developed by global energy companies and institutional developers.

APPENDIX: Alternative look-through ownership for foreign-based ownership

An alternative disaggregation of ownership by foreign-based entities relates to the role of entities within the asset lifecycle of renewable energy assets. There is no one-size-fits-all corporate structure, and many corporate structures comprise complex layers of ownership. For simplicity, entities are allocated to three broad categories – as described below.

Table 2: Estimates of ownership share of renewable energy assets, 30 June 2026
Foreign-based entities only
Share of total capacity (total power capacity for batteries)**

Foreign-based entities	Wind	Solar	Hydro	Battery
1. Developers	41	44	1	4
2. Institutional developers	12	32	0	55
3. Institutional investors	9	4	0	1
4. Other	2	1	0	2
Sub-total*	**64**	**81**	**1**	**62**

*Sub-totals may not equal the sum of components due to rounding.
** The cut-off for capacity (power capacity for batteries) for inclusion in the set of assets is 10 MW.
Source: See the box on Page 11 for notes on methodology.

1. **Developers**. Listed or unlisted entities (in both the private and public sectors) that develop renewable energy assets. Typically, these are specialists in developing utility-scale energy infrastructure. They favour a "develop-to-own" model, fund projects using their own corporate balance sheets combined with equity from joint partners or co-investors and bank debt.

   Such entities can span a number of the categories listed in Table 1, for example:

   - Acciona (Spain) is listed, but is majority owned by the Entrecanales family.
   - Engie (France) is listed, but is quarter-owned by the French Government.
   - Pacific Blue is wholly-owned by a Chinese state-owned enterprise.

   The asset-ownership data show that, in most cases, a current ownership stake in an asset means that an entity has developed and retained that asset, rather than purchased the asset. Further, in most cases, such entities are the sole owners of assets. In the minority of cases where there is more than one owner, additional owners are either development partners (including Australian developers), or late-stage institutional investors.

2. **Institutional developers**. This group includes global institutional investors that have acquired established developers (e.g. Brookfield Renewable and its institutional partners acquired control of the French developer Neoen), or seeded development capability. This facilitates "develop-to-own" projects, increasingly within platform-based structures.

   A current ownership stake in an asset implies that an institutional developer has developed and retained that asset – but the asset-ownership data show that this is not always the case. For wind and solar capacity, around one-half of the capacity owned by institutional developers in Table 2 was developed by the current owners. For battery storage, the share is around three-quarters.

For assets where there is more than one owner, the additional owners can be other foreign institutional developers, or providers of global institutional equity capital – such as pension funds and sovereign wealth funds.

3. **Institutional investors.** Foreign institutional investors that have indirect exposure via platforms and investment managers.

A note on methodology

The look-through ownership framework applied in this paper operates at the entity level. That is, the analysis distinguishes between ownership by Australian and foreign-based entities, and between different types of entity.

'Ownership' refers to beneficial equity ownership – where an asset is owned through a chain of entities, ownership is attributed proportionately to the identifiable equity holders.

The distinction between an Australian-based and a foreign-based entity is equivalent to whether the entity is domiciled in Australia, or not. Thus, 'Australian-based' refers to entity domicile and should not be interpreted as Australian ultimate beneficial ownership or source of capital, except where the look-through methodology identifies underlying institutional investors.

The set of operational wind, solar and hydro assets was derived from the Clean Energy Regulator's Large-scale Renewable Energy Data publication, which is updated monthly (https://cer.gov.au/markets/reports-and-data/large-scale-renewable-energy-data). This data set provides the details of operational renewable energy assets, including capacity. The cut-off for capacity, for inclusion in the set of assets, is 10 MW.

For battery storage systems, the set of operational assets was derived from the Australian Energy Market Operator's (AEMO's) NEM Generation Information publication (https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information), and (for WA data) from AEMO's Wholesale Electricity Market Electricity Statement of Opportunities (https://www.aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2025/2025-wem-electricity-statement-of-opportunities.pdf). The cut-off for power capacity, for inclusion in the set of assets, is 10 MW.

For hybrid assets – such as a solar generation facility coupled with a battery energy storage system – capacity/power capacity is separated to avoid double counting.

The time cut-off for inclusion in the data set was 30 June 2026. Information on assets that became operational in the period between publication of the above, and 30 June 2026, was sourced from media articles and company websites. Note that while archived versions of the data sets are not readily available, assets are sortable by accreditation start date.

For each asset, details of the ownership structure were derived from company websites and other relevant sources (for example, the Mortlake South Wind Farm in Victoria is 100 per cent owned by ACCIONA Energía through a local subsidiary), as was domicile and form of the entity (for example, ACCIONA Energía's parent ACCIONA is a Spanish company that is listed, but majority owned by the Entrecanales family).

For platform structures, the equity structure can be more opaque. In each case, the structure was derived from a combination of media reports, information published by platform managers and information published by cornerstone investors that can include institutional investors, government entities, and sovereign wealth funds. Where there is a broader investor base – that can include many institutional investors – this information is generally not published. For the purposes of this paper, the key issue relates to the remaining equity split between Australian-based and foreign-based institutional investors.

In such cases, a split of the remaining equity was assumed based on whether the platform is marketed to global fund managers (where involvement by Australian-based institutional investors is assumed to be zero), and those that are marketed to, or associated with domestic investment managers (e.g. IFM's Australian Infrastructure Fund), where involvement by Australian-based institutional investors would be expected to be significant.

With respect to the former, where a platform is marketed globally and the underlying investor base is not disclosed, Australian-based institutional ownership is assumed to be zero. This is a conservative assumption: to the extent that Australian institutional investors participate in such global vehicles, the methodology will understate Australian-based institutional ownership.

With respect to the former, the allocation between Australian-based and foreign-based institutional investors was estimated using available information on platform mandates, cornerstone investors and investor domicile. These estimates involve judgement and are a limitation of the analysis.

[1] For figures, see Table 1.
[2] Note, total investments should not be confused with total assets, which were $3.4 trillion as of 30 June 2026. APRA, *Quarterly Superannuation Industry Publication*, June 2026 (https://www.apra.gov.au/news-and-publications/quarterly-superannuation-industry-publication).
[3] For figures, see Table 1.
[4] Department of Climate Change, Energy, the Environment and Water, *Australian Energy Statistics 2025*. Derived from Table O1: Australian electricity generation, by fuel type, physical units, financial year (https://www.energy.gov.au/publications/australian-energy-statistics-table-o-electricity-generation-fuel-type-2024-25-and-2025).
[5] Department of Climate Change, Energy, the Environment and Water, *Australian Energy Statistics 2025*. Derived from Table O1: Australian electricity generation, by fuel type, physical units, financial year (https://www.energy.gov.au/publications/australian-energy-statistics-table-o-electricity-generation-fuel-type-2024-25-and-2025).
[6] Department of Climate Change, Energy, the Environment and Water, *Australian Energy Statistics 2025*. Derived from Table O1: Australian electricity generation, by fuel type, physical units, financial year (https://www.energy.gov.au/publications/australian-energy-statistics-table-o-electricity-generation-fuel-type-2024-25-and-2025).
[7] Department of Climate Change, Energy, the Environment and Water, *Australian Energy Statistics 2025* (https://www.energy.gov.au/publications/australian-energy-statistics-table-o-electricity-generation-fuel-type-2024-25-and-2025).
[8] Department of Climate Change, Energy, the Environment and Water, *Australian Energy Statistics 2025* (https://www.energy.gov.au/publications/australian-energy-statistics-table-o-electricity-generation-fuel-type-2024-25-and-2025), and ASFA calculations.
[9] Modo Energy, *NEM BESS Buildout Report: 2 GW goes live in Q2 2026* (https://modoenergy.com/research/en/australia-nem-bess-buildout-q2-2026).
[10] See Tables 1 and 2.
[11] Nicholas Gohdes et al (2023), *Renewable Investments in Hybridised Energy Markets: Optimising the CfD-Merchant Revenue Mix*, Centre for Applied Energy Economics & Policy Research: Working Paper Series 2023-03 (https://www.griffith.edu.au/__data/assets/pdf_file/0029/1784162/No_2023-03-Renewable_investments_in_hybridised_energy_markets_Semi-Merchant_Wind-76.pdf).
[12] For two recent examples see: (https://www.pv-tech.org/seven-bank-syndicate-backs-potentia-energys-au830-million-renewables-expansion-in-australia/) and (https://reneweconomy.com.au/acen-secures-750m-to-help-bankroll-one-of-australias-biggest-pipelines-of-solar-wind-and-storage/).
[13] Cambers and Partners (2025), *Renewable Energy 2025* (https://practiceguides.chambers.com/practice-guides/renewable-energy-2025/australia/trends-and-developments).
[14] Gilbert and Tobin (2025), Unlocking Scale: How Renewables Developers are Reengineering Capital Structures (https://www.gtlaw.com.au/insights/key-topics/beyond-transition/unlocking-scale).
[15] Where the vehicle is a separate legal entity established to hold the asset.
[16] Superannuation Industry (Supervision) Act 1993 (https://www.legislation.gov.au/C2004A04633/latest/text).