SMART LIFESTYLE AUSTRALIA

Market Data Report

Australia's Clean Energy & Electrification Market Forecast, 2024–2030

Prepared for:

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1. Introduction: Purpose

Australia is entering a decisive decade of energy transformation, driven by rapid electrification, supportive government policies, and the accelerating adoption of clean technologies. From households shifting to energy-efficient heat pumps and rooftop solar with batteries, to businesses investing in electric vehicle infrastructure and advanced energy management systems, the market is poised for significant expansion.

By 2030, Australia's clean energy and electrification market is projected to grow from AUD 8.8 billion in 2024 to approximately AUD 19 billion.

This forecast provides a comprehensive analysis of Australia's clean energy and electrification landscape from 2024 to 2030, examining sector-specific growth drivers, projected adoption rates, and the policy frameworks underpinning this transition. The report aims to deliver a clear, evidence-based outlook for investors, policymakers, and industry stakeholders seeking to understand and participate in Australia's path to a net-zero future.

2. Substantiation of Total Market Forecast (2024–2030)

The overarching market forecast is a product of segment-by-segment analysis. The total market size for Australia's clean energy and electrification sector is projected to expand from an estimated AUD 8.8 billion in 2024 to AUD 19.0 billion by 2030.

This expansion represents a total growth of approximately 115% over the six-year forecast period. The calculation of this total market growth is derived from the aggregation of individual market segment forecasts, each of which is underpinned by its own unique drivers and Compound Annual Growth Rate (CAGR).

2.1. Calculation Methodology

The forecast for each segment's 2030 market size is determined by applying its specific CAGR over the six years from 2024 to 2030.

The following formula is used:

2030 Market Size=2024 Market Size×(1+CAGR)**6

The total market forecast for 2030 is then the sum of the individual segment forecasts.

The methodology is summarised in the table below, which formally presents the model for the aggregated market forecast.

Table 1.1

Segment	2024 Market Size (AUD)	CAGR (%)	Calculated 2030 Market Size (AUD)	Rounded 2030 Market Size (AUD)	Justification Reference
Electric Hot Water Heat Pumps	0.54B	18%	1.47B	1.5B	Section 3.1
Residential Solar & Battery Storage	1.8B	18%	4.86B	4.9B	Section 3.2
Electric Vehicles (EVs) & Charging	1.0B	25%	3.81B	3.8B	Section 3.3
Home Energy Management Software	0.6B	14%	1.32B	1.3B	Section 3.4
Other Electrification & Efficiency Technologies	1.3B	12%	2.56B	2.6B	Section 3.5
Airconditioning units*	3.56B	5.60%	4.93B	4.9B	Section 3.6
Total Market	8.8B	13.69%	18.95B	19.0B	

Table 1.1 Note: The total of the rounded figures (19.0B) is used for the headline forecast to simplify presentation, as the granular calculation of AUD 18.95B is approximated to the nearest hundred million in the original report. ***Table 1.1 Note**: Air conditioning market valuation excludes broader HVAC (ventilation, heating, and industrial systems). Figures represent residential and light-commercial air conditioning units only.

3. Segment Specific Analysis

The following analysis provides a detailed analysis of the compound annual growth rate (CAGR) assigned to each market segment, linking the financial projections to verifiable market data, causal relationships, and recent policy developments.

3.1. Electric Hot Water Heat Pumps

The 18% CAGR for the residential hot water heat pump segment is substantially higher than the 8.2% to 8.4% CAGRs observed in the broader Australian heat pump market, which includes commercial, industrial, and non-water-heating applications.

This apparent discrepancy is not a contradiction but a reflection of the specific market dynamics at play within the residential sector. The higher rate is attributable to a profound, policy-driven technological transition from traditional electric and gas hot water systems to modern heat pumps.

This transition is being accelerated by a convergence of state and federal incentives that create a financial catalyst for consumer adoption. Programs such as the NSW Home Energy Efficiency Retrofits (HEER) scheme and Victoria's Solar Home program provide significant upfront discounts and rebates for heat pump installations.

In some cases, homeowners can "double-dip" into both state and federal incentive schemes, dramatically reducing the effective cost of a new system.

This financial support, combined with rising energy costs and a growing consumer desire for energy efficiency, is expected to drive a sharp, non-linear uptake from an emerging market base to a more mature and mainstream segment by 2030. This transition is a direct response to government mandates and targets for decarbonization.

3.2. Residential Solar & Battery Storage

The 18% CAGR for this segment is a conservative blend that balances the high-growth residential battery storage market with the more mature rooftop solar market.
The high-growth component is demonstrably linked to new government policies and evolving consumer behaviour.

Data from the Clean Energy Regulator, analysed by SunWiz, confirms a record-breaking surge in battery installations in mid-2025. The primary driver for this surge is the Australian Government's new "Cheaper Home Batteries Program," which commenced on 1 July 2025 and provides a national discount of approximately 30% on the upfront cost of eligible small-scale batteries.

This program is a direct, causal link between policy and market acceleration, making batteries more affordable and accessible to a broader range of consumers. The market is also being propelled by consumer demand for energy independence and a desire to maximise self-consumption of rooftop solar, particularly as average solar system sizes continue to increase.

The 18% CAGR for the blended segment accounts for potential constraints, such as installation bottlenecks and grid capacity issues, which are already emerging in the broader clean energy transition.16 This measured rate is a responsible projection, particularly when professional forecasts for residential battery storage alone range from 19.8% to 40.5%.

3.3. Electric Vehicles (EVs) & Charging

The forecast of a 25% CAGR for the EV and charging market is not merely a statistical extrapolation but a direct projection of the market's response to a powerful regulatory catalyst: the New Vehicle Efficiency Standard (NVES).

Historically, Australia has been seen by some as a less important market for fuel-efficient vehicles due to the absence of a strong emissions standard. The NVES, which became effective on 1 July 2025, changes this dynamic fundamentally.

It incentivises car manufacturers to increase the supply of low and zero-emission vehicles to the Australian market by setting average fleet emissions targets. To avoid financial penalties, manufacturers must either sell more efficient petrol and diesel cars or, more strategically, increase the volume of hybrids and EVs available for sale.

This regulatory pressure is expected to normalise the supply and pricing of EVs in Australia, bringing them more in line with global markets and providing consumers with a wider range of more affordable options.

The Electric Vehicle Council (EVC) has already reported a strong start to 2025, with EVs accounting for over 12% of new car sales in the first half of the year, a substantial increase from 9.6% in the same period of 2024. This early market response confirms that the NVES is acting as the causal mechanism for growth. The 25% CAGR is therefore a defensible and well-supported projection, aligning with professional forecasts that range from 26.5% to 26.7%.

3.4. Home Energy Management Software

The 14% CAGR for the Home Energy Management Software (HEMS) segment is not a standalone trend but a direct and necessary consequence of the robust growth in the other segments. As households integrate multiple electrified assets, including solar panels, batteries, heat pumps, and EV chargers, the complexity of managing these systems to optimise energy use and cost increases exponentially.

The HEMS market provides the critical software layer required to orchestrate these decentralised energy assets, enabling real-time monitoring, intelligent control, and participation in programs such as Virtual Power Plants (VPPs).

This is a fundamental shift from a simple consumption model to a dynamic management model. The forecast for this segment is a conservative estimate when compared to the broader energy management systems market, which includes industrial and commercial applications and has a higher projected CAGR of 19%. The growth is tied to the increasing need for cost reduction and grid stability, confirming that the expansion of this segment is directly supported by the consumer and policy-driven growth of the other major categories in the report.

3.5. Other Electrification & Efficiency Technologies

This segment encompasses a range of crucial, foundational technologies that enable the broader clean energy transition, including smart lighting, induction cooking, and new energy infrastructure upgrades. The 12% CAGR is based on long-term trends and national requirements for the energy system.

Government and industry reports underscore that meeting Australia's ambitious renewable energy targets requires substantial investment beyond just new generation capacity.

The CSIRO's GenCost report emphasises that the lowest-cost pathway to a decarbonised grid is dependent on the continuous deployment of efficiency, distributed resources, and grid-scale storage.

The Australian Energy Market Operator (AEMO) similarly notes that the energy transition requires fundamental upgrades to the grid to manage a highly distributed system with variable generation. The forecast for this segment is therefore not based on a single market driver but on the systemic, national-level requirement for a wide array of technologies to support the overall energy transition. This segment represents the necessary, large-scale, and often mandated investments that are foundational to the growth of all other segments.

3.6 Airconditioning Units: Segment Analysis and Justification

The Australian air conditioning market is a critical and rapidly expanding segment within the clean energy landscape. It is centrally positioned to address both consumer comfort in a changing climate and the growing demand for efficient energy solutions.

The Australian air conditioning market was valued at AUD 3.56 billion in 2024. This valuation is distinct from the broader heating, ventilation, and air conditioning (HVAC) market, which encompasses other technologies and is valued at a higher figure. The market is projected to expand at a compound annual growth rate (CAGR) of 5.60% from 2025 to 2034. This growth rate is well-supported by other professional forecasts for the Australian market, which range from 5.51% to 6.81%. Applying this CAGR over the six years from 2024 projects the market size to reach AUD 4.93 billion by 2030.

The primary drivers of this market are a direct response to fundamental environmental and demographic shifts. Rising temperatures and more frequent heatwaves, intensified by climate change, are making air conditioning a necessity rather than a luxury.

The country’s rapid urbanisation and a boom in new residential and commercial developments further fuel this demand, as new construction projects routinely include climate control systems.

5. Comprehensive Review of Assumptions, Risks, and Caveats

The market size projection is contingent upon a range of assumptions and is subject to material risks. A transparent disclosure of these factors is critical to providing a balanced and defensible forecast. The primary assumptions and the risks to their realisation are detailed below.

Assumption	Supporting Evidence	Associated Risks
Policy Continuity	The forecast relies on the continuation of existing supportive government policies and incentives, such as the New Vehicle Efficiency Standard (NVES) and the Cheaper Home Batteries Program.	The 2025 federal election presents a material risk, as the major political parties have fundamentally divergent energy policies. A shift from a renewables-led transition to a nuclear-backed grid could redirect funding and alter the investment landscape, challenging the underlying assumptions of this forecast.
Economic Conditions	The forecast assumes a stable macroeconomic environment and continued improvement in consumer confidence and disposable income, which is supported by recent interest rate cuts and rising real incomes.	A slower-than-expected interest rate cutting cycle or external economic shocks could dampen consumer confidence and suppress spending on large, discretionary home upgrades, such as solar and battery systems.
Supply Chain and Workforce Scaling	The forecast presumes the manufacturing and installation supply chains, particularly for heat pumps and batteries, are able to scale up to meet projected demand.	There are well-documented workforce shortages and supply chain constraints in Australia that could slow the pace of the energy transition. This could lead to project delays, cost blowouts, and a failure to meet the forecast's growth trajectory within the specified timeframe.
Consumer Acceptance	Consumer adoption of key electrification technologies continues at a steady pace, driven by rising energy costs and energy price volatility.	The high-growth segments (heat pumps, batteries, EVs) are heavily dependent on government subsidies, which may gradually decrease until 2030. A faster-than-anticipated reduction or an abrupt withdrawal of these incentives could directly impact consumer purchasing decisions and market growth.

6. Conclusion: Summary of Substantiation and Final Assessment

Electrification is no longer a luxury choice, but a practical, money-saving investment. Homeowners who leverage smart technologies like heat pumps, solar, and home energy management systems now will be the first to reap the substantial savings, comfort, and security benefits that define the

The market, projected to grow from AUD 8.8 billion in 2024 to AUD 19.0 billion by 2030 (115% growth), is moving from a niche pursuit to a mainstream necessity. This isn't just about reducing your carbon footprint; it's about future-proofing your financial security against volatile energy prices.

While the forecast is a defensible and evidence-based projection, its realisation is subject to the assumptions and material risks outlined in this report. These include potential changes in government energy policy, macroeconomic volatility, and, most critically, the market's ability to overcome supply chain and workforce constraints.

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