Australia Smart Grid Market Size, Share and Growth Report - Forecast Trends and Outlook (2025-2034)

Market Report | 2025-10-27 | 120 pages | EMR Inc.

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Report description:

Key Market Trends and Insights:- The Australian Capital Territory smart grid market is expected to grow at a CAGR of 16.7% over the forecast period.- The Western Australia smart grid market is anticipated to grow at a CAGR of 16.0% over the forecast period.- By offering, the software category is expected to record 15.7% CAGR over the forecast period.- Wireless communication technology is projected to grow at a CAGR of 15.4% during the forecast period.Market Size and Forecast:- Market Size in 2024: AUD 1.68 billion- Projected Market Size in 2034: AUD 6.74 billion- CAGR from 2025 to 2034: 14.90%- Dominant Regional Market: New South WalesThe market is gaining momentum with the rapid integration of renewable energy into the national grid. According to the Australia smart grid market analysis, the country sources more than 32% of its electricity from renewable energy, and this share is projected to rise significantly under the Renewable Energy Target 2030. This shift has intensified the demand for intelligent grid management systems to address stability challenges. The Australian Energy Market Operator (AEMO) has been rolling out advanced demand forecasting tools, while state governments are investing heavily in real-time grid balancing and distributed energy resources (DERs) integration.Government initiatives play a central role in shaping the Australia smart grid market dynamics. For instance, Australian Renewable Energy Agency (ARENA) funded over AUD 2 billion in clean energy projects in May 2023, including smart grid demonstrations and energy storage pilots. Similarly, the National Electricity Market (NEM) digitalization initiative is improving transparency and optimizing cross-border power flows, especially between Queensland, New South Wales, and Victoria. These efforts are accelerating the adoption of advanced metering, distribution automation, and AI-powered control systems. Australia Smart Grid Market Report Summary Description Value Base YearAUD billion2024Historical PeriodAUD billion2018-2024Forecast PeriodAUD billion2025-2034Market Size 2024AUD billion1.68Market Size 2034AUD billion6.74CAGR 2018-2024PercentageXX%CAGR 2025-2034Percentage14.90%CAGR 2025-2034 - Market by RegionAustralian Capital Territory16.7%CAGR 2025-2034 - Market by RegionWestern Australia16.0%CAGR 2025-2034 - Market by OfferingsSoftware15.7%CAGR 2025-2034 - Market by Communication TechnologyWireless15.4%2024 Market Share by RegionVictoria23.8%Recent Developments August 2025 Western Australia opened two Capacity Investment Scheme (CIS) competitions to generate 1.6GW of renewable energy in the Wholesale Electricity Market (WEM). Western Australia's CIS competitions boost renewable integration, reinforcing the need for advanced smart grid management. July 2025 StarCharge's

Halo V2G bidirectional charger was officially launched in Australia, marking the nation's shift to more intelligent and adaptable energy systems. The launch brought together representatives from utilities, government agencies, automakers, energy retailers, and project partners. This Australia smart grid market development accelerates EV-grid integration, highlighting industry alignment on vehicle-to-grid technologies in smart grid planning. May 2025 With Vehicle-to-Grid (V2G) technology becoming a reality for Australian consumers, AUSEV and Sigenergy formed a strategic agreement to provide one of Australia's most exciting energy advancements to date. This partnership expands consumer access to bi-directional charging, strengthening distributed energy resource participation in smart grids. April 2025 Essential Energy, an electrical distributor in Australia, announced that V2G charging technology is made available in the market, enabling utilities to deploy scalable smart grid-enabled EV charging solutions.Key Drivers and Trends Decentralized Energy and Virtual Power Plants (VPPs) The rise of decentralized energy resources is redefining Australia's power ecosystem. Programs such as South Australia's Virtual Power Plant, connecting over 3,000 homes with rooftop solar and batteries, are providing aggregated capacity equal to traditional generators. VPPs reduce grid stress during peak demand, lower costs for consumers, and improve stability in regions vulnerable to extreme weather. These Australia smart grid market developments are backed by ARENA's funding for DER orchestration trials, which explore how rooftop solar, electric vehicles, and home batteries can be integrated seamlessly. Energy Storage and Grid Flexibility Energy storage remains critical for grid reliability as renewable penetration surges rapidly. For example, the Victorian Big Battery, one of the world's largest lithium-ion storage projects, is capable of storing 450 MWh of electricity to stabilize supply. Storage allows renewable reserves to provide firm, dispatchable energy during peaks. Meanwhile, state governments are incentivizing both utility-scale and behind-the-meter batteries through grants and rebates. AEMO's Integrated System Plan highlights storage as a key enabler for balancing intermittent generation. This Australia smart grid market trend ensures smart grid investments extend beyond metering into intelligent storage management, where predictive analytics and automation reduce curtailment and optimize usage across regions. Advanced Metering Infrastructure Expansion Smart meters continue to be at the center of Australia's smart grid modernization. Victoria's mass deployment has set a benchmark, enabling real-time data sharing and energy-use optimization at the consumer level. Other states are following suit, with New South Wales committing to accelerate digital metering adoption in August 2019, as part of its electricity strategy. These devices are not only improving billing accuracy but also supporting demand response and time-of-use pricing models. With 100% of the country's households expected to have access to smart meters by 2030, utilities are leveraging them to build customer-centric services and optimize consumption patterns, accelerating demand in the Australia smart grid market. Digitalization and AI-Driven Grid Management The digital pillar of Australia's energy sector is being reshaped with AI, big data, and automation. Utilities are adopting predictive maintenance and anomaly detection tools to preempt outages and improve asset life cycles. AEMO's use of AI-driven forecasting has already enhanced accuracy in predicting renewable generation, reducing balancing costs. Cloud-based platforms are also streamlining market operations and enabling distribution control at scale, propelling the Australia smart grid market opportunities. In addition, blockchain pilots for peer-to-peer energy trading in Western Australia are showcasing how digitalization is empowering both producers and consumers. Electrification of Transport and EV Grid Integration Electric vehicles (EVs) are emerging as both a challenge and an opportunity in the market. The federal government's Driving the Nation Fund, with a budget of AUD 500 million, committed in November 2022, is expanding charging infrastructure throughout the nation. EVs add new demand but also act as mobile storage assets when integrated with vehicle-to-grid (V2G) technologies. Pilot projects in New South Wales and the ACT are testing how EV fleets can discharge power during peak hours to stabilize supply.The EMR's report titled "Australia Smart Grid Market Report and Forecast 2025-2034" offers a detailed analysis of the market based on the following segments:Market Breakup by Offerings- Hardware- Software- Services Key Insight: As per the offering categorization, hardware leads the Australia smart grid market value through large-scale smart metering programs and automation investments that modernize distribution networks. Software, on the other hand, is advancing in terms of market share as utilities embrace AI-driven orchestration, predictive analytics, and cloud platforms to optimize resources. Meanwhile, services remain essential, covering maintenance, integration, and consulting to ensure seamless deployment and reliable system performance.Market Breakup by Communication Technology- Wireline- Wireless Key Insight: Within communication technology domain considered in the Australia smart grid market report, the wireline category dominates with its robust infrastructure, delivering secure and reliable connectivity essential for utilities. Wireless communication experiences growth linking distributed energy devices, EV chargers, and microgrids with cost-effective flexibility. Both ensure resilience and adaptability, supporting Australia's evolving grid ecosystem by balancing the stability of wireline with the scalability

of wireless solutions.Market Breakup by Application- Generation- Transmission- Distribution- Consumption Key Insight: Generation applications advance their share in the market with improved forecasting and automation, enabling efficient renewable integration. Transmission benefits from interconnection upgrades that strengthen reliability. Distribution dominates the market, supported by automation investments enhancing stability and flexibility. Meanwhile, consumption applications experience fast-paced growth in the Australia smart grid market revenue share as digital energy management, smart meters, and demand response tools reshape how consumers actively engage with grid operations.Market Breakup by Region- New South Wales- Victoria- Queensland- Australian Capital Territory- Western Australia- Others Key Insight: Regional trends in the Australia smart grid market indicate that New South Wales leads the industry with widespread digital metering and strong infrastructure modernization. The Victorian market is driven by large-scale storage integration and ambitious renewable targets. Queensland advances through renewable energy corridor projects that enhance transmission and reliability. The Australian Capital Territory emphasizes sustainability, focusing on 100% renewable electricity. Western Australia prioritizes microgrids to serve remote communities.Australia Smart Grid Market Share By offerings, hardware accounts for the largest market share driven by smart meters rollout Hardware currently dominates the industry due to large-scale smart meter rollouts and distribution automation equipment investments. The Victorian program alone transformed electricity monitoring for millions of households, while states such as New South Wales are accelerating adoption. Hardware components, including sensors, control devices, and communication modules, form the foundation for smart infrastructure, making them indispensable. Demand for high-voltage equipment is also rising as utilities upgrade transmission lines to accommodate renewable integration.As per the Australia smart grid market report, software is growing at the fastest pace, fueled by digital grid orchestration, predictive analytics, and cybersecurity solutions. Utilities are investing in platforms that integrate diverse resources like EVs, rooftop solar, and community batteries into unified control systems. AI-driven forecasting tools by AEMO highlight how software solutions directly improve reliability and reduce operating costs. Cloud-based energy management platforms also support consumer engagement, enabling time-of-use tariffs and personalized energy plans. By communication technology, wirelines secure the largest share due to established utility infrastructure Wireline holds the largest share in communication technology as utilities rely on established fiber optic and broadband networks to connect substations, meters, and control centers. These technologies provide secure, high-bandwidth connections essential for handling massive data flows. Utilities prefer wireline technology for reliable long-distance communication and its ability to support real-time monitoring and control functions. While it requires significant upfront investment, wireline's stability and speed make it indispensable for managing Australia's geographically dispersed but interconnected electricity infrastructure.Wireless communication is rapidly expanding its share in the Australia smart grid market, supported by IoT-enabled devices and the need for flexibility in connecting distributed resources. Rooftop solar systems, EV chargers, and microgrids often require cost-effective and scalable connectivity, making wireless communication an attractive solution. By application, distribution accounts for the largest share due to critical network modernization investments Distribution holds the dominant share in Australia's smart grid applications as utilities prioritize grid modernization to manage renewable integration and reduce outage risks. Distribution networks are being equipped with advanced automation, fault detection, and intelligent switches, enabling faster restoration and improved resilience. Utilities also deploy voltage optimization systems and real-time monitoring across feeders to enhance efficiency. Additionally, the surge of distributed energy resources, such as rooftop solar and community batteries, has intensified the need for smarter distribution systems, fueling demand in the Australia smart grid market.The growth of the consumption application is powered by the rapid adoption of smart meters, home energy management systems, and demand response technologies. Consumers are increasingly seeking digital control of energy usage, supported by utilities offering dynamic pricing and time-of-use tariffs. Rising electric vehicle charging and smart appliance penetration are driving energy intelligence at the household and commercial scale.Australia Smart Grid Market Regional Analysis CAGR 2025-2034 - Market by Region Australian Capital Territory16.7%Western Australia16.0%New South WalesXX%VictoriaXX%QueenslandXX%OthersXX% New South Wales clocks in substantial share of the market due to widespread digital metering rollouts New South Wales is leading the market, supported by comprehensive policy frameworks and strong digital metering adoption. Utilities in the region are investing heavily in substation automation and demand response programs to manage peak loads. With its large population base and high electricity consumption, the region requires continuous upgrades to distribution and transmission networks. The government's push for renewable integration and efficient electricity markets has further accelerated investments into digitalization.Victoria emerges to be the fastest-growing smart grid market in Australia,

underpinned by its pioneering approach to battery storage and renewable integration. The state already hosts one of the largest grid-scale batteries, demonstrating leadership in energy resilience. Victoria has also set aggressive renewable targets, pushing utilities to adopt advanced digital platforms for grid orchestration.Competitive LandscapeLeading Australia smart grid market players are competing to anchor capabilities in distributed energy resource management, adaptive protection, and grid-edge analytics. Opportunity lies in clustering around dynamic operating envelopes, flexible export limits for rooftop PV, and aggregated community batteries that behave like firm capacity. Vendors are integrating SCADA, ADMS, DERMS, and markets interfaces, while proving cyber-hardened, cloud-ready stacks that pass utility procurement hurdles.Advanced metering data is being fused with feeder models to generate near-real-time hosting capacity maps, giving developers clearer cues and lowering interconnection delays. Australia smart grid companies that bundle software with field-tested edge devices and support open APIs are expected to lead the industry over the coming years. In addition, the market boasts several opportunities in cybersecurity managed services, grid simulation twins, and automated compliance reporting, especially as regulations evolve across states. ABB Australia Pty Ltd ABB Australia Pty Ltd, established 1988, headquartered in Switzerland, serves utilities with modular distribution automation, grid-edge devices, and IEC-61850 substations. It integrates RELION protection, Ability digital services, and hybrid microgrid controllers to stabilize feeder voltage and host more rooftop PV. GE Vernova Inc. GE Vernova Inc, established 2023, headquartered in the United States, offers GridOS software, ADMS, and high-voltage equipment engineered for renewable-heavy grids. It enables utilities to orchestrate DER fleets, optimize switching, and simulate contingencies using network models. Siemens AG Siemens AG, established 1847, headquartered in Germany, serves Australia with Spectrum Power ADMS, IoT analytics, and grid automation for renewable intermittency. It delivers protection, STATCOMs, and grid-forming inverters with edge gateways harmonizing meter, inverter, and substation data. Schneider Electric SE Schneider Electric SE, established 1836, headquartered in Rueil-Malmaison, France, competes in Australia with EcoStruxure ADMS, DERMS, and digital substations integrating renewables and storage. It equips utilities with feeder automation, FLISR, Volt/VAR optimization, and microgrid controllers for communities and industry.Other key players in the market are Eaton Corp. Pty. Ltd., Cisco Systems Australia Pty Limited, Oracle Corp., Honeywell International Inc., and Mitsubishi Electric Australia Pty Ltd., among others.Key Highlights of the Australia Smart Grid Market Report:- Comprehensive evaluation of Australia's transition to digitally enabled energy networks.- Detailed analysis of government-led initiatives like dynamic operating envelopes and VPP pilots.- Coverage of technology innovations such as AI-driven forecasting, blockchain-enabled energy trading, and digital twins.- Assessment of state-wise adoption patterns, from Victoria's storage-first strategy to Western Australia's microgrid focus.- Investment-centric outlook linking policy incentives, infrastructure upgrades, and commercial viability across utilities and enterprises.Why Rely on Expert Market Research?- Specialized expertise in energy infrastructure and digital utility transformation.- Tailored advisory delivering insights aligned with regional policy shifts and investor needs.- Holistic research approach combining regulatory analysis, technology roadmaps, and consumer adoption studies.- Commitment to uncovering emerging innovation spaces such as cybersecurity for utilities, IoT-driven grid automation, and rural resilience solutions.- Trusted by stakeholders seeking clarity on complex markets and guidance for strategic decisions.Call to ActionExplore the latest trends shaping the Australia smart grid market 2025-2034 with our in-depth report. Gain strategic insights, future forecasts, and key market developments that can help you stay competitive. Download a free sample report or contact our team for customized consultation on Australia smart grid market trends 2025 .

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