

Solar Carport Market to Hit \$1.7 Billion by 2032, Driven by Rising EV Adoption and Clean Energy Demand

Solar carports transform parking spaces into clean power hubs, enabling EV charging and boosting sustainability.

WILMINGTON, DE, UNITED STATES, October 7, 2025 /EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "[Solar Carport Market](#) Size, Share, Competitive Landscape and Trend Analysis Report, by Design Type (T-Shape, V-Shape, L-Shape, Y-Shape), by Vehicle Arrangement (One-Row, Double-Row), by Application (Commercial, Residential, Industrial): Global Opportunity Analysis and Industry Forecast, 2022 - 2032" The global solar carport market size was valued at \$ 0.8 billion in 2022, and is projected to reach \$1.7 billion by 2032, growing at a CAGR of 8.1% from 2023 to 2032.

Solar carports combine photovoltaic (PV) systems with covered parking structures to deliver dual benefits: on-site renewable electricity generation and sheltered vehicle parking. Used across commercial, residential, and public sectors, solar carports improve land-use efficiency by converting otherwise underutilized parking areas into clean-energy assets, while offering additional advantages like reduced heat island effect, EV charging integration, and potential revenue or operational cost reductions for site owners.

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Key findings include:

- Demand drivers: Rising corporate sustainability targets, government incentives for distributed generation, and growing uptake of electric vehicles are pushing businesses, retailers, universities, and municipalities to adopt solar carports as a visible, multipurpose clean-energy solution. Integration with EV charging and demand for resilience (on-site generation during outages) further accelerate interest.
- Technology & cost trends: Improvements in PV module efficiency, longer-lasting racking and canopy materials, and falling balance-of-system costs have made solar carports more economically attractive. Modular designs and pre-fabricated systems shorten installation time and lower labour costs, improving project IRRs for owners and developers.
- Regulatory & financing influence: Permitting complexity, building codes, and interconnection

procedures remain challenges in some jurisdictions, but policy mechanisms such as tax credits, rebates, and green procurement rules often tip the business case in favor of deployment. Innovative financing (PPAs, leases, green bonds) is expanding access for organizations that prefer off-balance-sheet solutions.

- Operational & lifecycle considerations: Owners increasingly evaluate lifecycle costs — maintenance of canopy structures, module cleaning, and inverter replacements — alongside performance guarantees and warranties. O&M service offerings, performance monitoring, and battery or vehicle-to-grid pairings are evolving to maximize lifetime value and grid benefits.
- Barriers & risks: High upfront capex for large canopy fleets, site-specific structural or shading constraints, and lengthy approval cycles can impede projects. Competition with rooftop or ground-mounted PV for limited incentive pools, and the need for coordination with parking layout/lighting/ADA requirements, add complexity that developers must manage.

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The market segments by end-user (commercial & industrial, retail, public sector, residential complexes), by system type (single-span, double-span, integrated EV charging), by deployment model (owner-installed, PPA/third-party owned), and by module type (standard crystalline, bifacial, thin-film). Commercial & industrial fleets and retail/parking operators remain the largest adopters due to scale and visible branding opportunities, while EV-ready carports are the fastest-growing subsegment.

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North America leads in commercial deployments driven by corporate sustainability programs, large retail parking assets, and growing EV infrastructure, with favourable incentives in many U.S. states. Europe shows strong adoption in dense urban areas and public projects where dual-use land solutions and strict emissions targets support carport installations.

Asia-Pacific exhibits rapid growth potential driven by high urbanization, large-scale retail and transit hubs, and government drives for renewable capacity — though adoption varies widely by country depending on policy support, grid tariffs, and local manufacturing capacity. Emerging markets prioritize cost-effective modular solutions that can combine energy access and shading benefits.

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Competitive analysis and profiles of the major global [solar carport industry](#) players that have been provided in the report include Antai Solar, Enerparc, Ganges International, Mahindra Solarize, Positive Energy Solar, Reenergy, Schletter, Himzen, Quest Renewables, INC., and

Mahindra Solarize. The key strategies adopted by the major players of the global market are product launch and mergers & acquisitions.

The competitive landscape includes specialized carport integrators, PV mounting and racking manufacturers expanding into canopy systems, EPC firms offering turnkey solutions, and new entrants bundling EV chargers and energy management software. Companies compete on engineering flexibility, warranty terms, speed of installation, and ability to deliver integrated energy services (storage, charging, monitoring).

Strategic partnerships between racking manufacturers, inverter/energy management providers, and financial players are common; differentiation is increasingly achieved through modular standardization, integrated permitting support, digital O&M platforms, and proven track records in large, complex parking installations.

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- Solar carports maximize land-use efficiency by turning parking into energy-producing assets.
- EV integration and resilience-driven demand are primary near-term growth accelerants.
- Falling BOS costs and modular designs improve project economics and deployment speed.
- Permitting, structural constraints, and upfront capital remain the main barriers.
- Competitive advantage goes to firms offering turnkey, EV-ready, and O&M-backed solutions.

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