

Onsite Solar Electric Vehicle (EV) Charging Market Forecasted to Achieve US \$2.79 Billion by 2029

The Business Research Company's Onsite Solar Electric Vehicle (EV) Charging Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

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/EINPresswire.com/ -- How Big Is The [Onsite Solar Electric Vehicle \(EV\) Charging Market In 2025?](#)

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In the past few years, there has been a significant increase in the size of the onsite solar electric vehicle (EV) charging market. It is projected to expand from \$0.97 billion in 2024 to \$1.21 billion in 2025, exhibiting a compound annual growth rate (CAGR) of 23.7%. This growth in previous

years is mainly due to factors such as the heightened availability of energy storage solutions, more policy support for green energy, increasing requirement for dependable charging infrastructure, a rise in the availability of energy storage solutions, and a growing need for energy self-sufficiency.

The market for onsite solar-powered electric vehicle (EV) charging is anticipated to experience tremendous expansion within the coming years. The market is predicted to reach \$2.79 billion by 2029, growing at a

compound annual growth rate (CAGR) of 23.4%. This surge during the projected period is due to the escalating need for off-grid and remote charging options, the intensification of both commercial and residential solar setups, the uplift in corporate sustenance initiatives, mounting consumer preference towards environmentally friendly mobility, and heightened cognizance about carbon footprint decrease. Predominant trends expected during the forecast period encompass enhancements in battery storage efficiency, progress in solar panel assimilation, novel developments in bi-directional charging systems, advancements in off-grid solar resolutions, and upgraded infrastructure for fleet charging systems.



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What Are The Key Driving Factors For The Growth Of The Onsite Solar Electric Vehicle (EV) Charging Market?

The surge in utilization of renewable energy sources is anticipated to fuel the expansion of the onsite solar electric vehicle (EV) charging market in the future. Renewable energy sources are naturally replenishing resources like sunlight, wind, water (hydropower), biomass, and geothermal heat, which can be harnessed to produce sustainable energy. Due to mounting environmental concerns, the acceptance of renewable energy is on the rise, as both individuals and governments are on the quest for cleaner substitutes to decrease greenhouse gas emissions, fight against climate change, and lessen reliance on fossil fuels. This increasing adoption of renewable energy aids onsite solar EV charging by providing clean, renewable energy - allowing the electric vehicle charging infrastructure to function efficiently while reducing environmental effects. For instance, the Luxembourg-based government agency - Eurostat, reported in December 2024 that renewable energy accounted for 24.5% of the total energy use in the European Union (EU) in 2023, seeing a hike from 23.0% in 2022. Hence, the increasing use of renewable energy resources fuels the expansion of the onsite solar electric vehicle (EV) charging market.

Who Are The Key Players In The Onsite Solar Electric Vehicle (EV) Charging Industry?

Major players in the Onsite Solar Electric Vehicle (EV) Charging Global Market Report 2025 include:

- TotalEnergies SE
- Tesla Inc.
- ENGIE SA
- Siemens AG
- Schneider Electric SE
- Asea Brown Boveri Ltd
- Delta Electronics Inc.
- Solaredge Technologies Inc.
- Enphase Energy Inc.
- Tata Power Solar Systems Ltd.

What Are The Major Trends That Will Shape The Onsite Solar Electric Vehicle (EV) Charging Market In The Future?

Leading corporations in the onsite solar electric vehicle (EV) charging market are utilizing novel technologies such as remote monitoring and control enabled by the internet of things (IoT), aiming to maximize energy efficiency, minimize costs, and improve charging efficiency. The IoT-enabled remote monitoring allows devices like EV chargers to connect to the internet, giving users the capability to manage and control them distantly. It facilitates the optimization of

energy consumption, the scheduling of charging, overload prevention, and cost reduction in operations. In May 2025, for example, SolarEdge Technologies Inc., an Israel-based manufacturer, introduced the One EV Charger, a 22 kW electric vehicle charger designed for combining with local solar energy systems. This charger, compatible with both single and three-phase connections, prioritizes solar power over grid charging automatically, and allows users to manage and control charging schedules from a distance through SolarEdge applications. The device includes IoT-powered features that lead to enhanced energy utilization, decreased operational expense, and improved charging efficiency in commercial, industrial, and residential settings. Suitable for both interior and exterior installations, the charger comes in both standard and Pro versions, with the Pro version equipped with an eSIM card, an OLED display, and added smart capabilities. Furthermore, users can set the charger for wise scheduling to exploit lower electricity prices, apply peak shaving via import limitations, and guarantee surge protection.

What Segments Are Covered In The Onsite Solar Electric Vehicle (EV) Charging Market Report?
The onsite solar electric vehicle (EV) charging market covered in this report is segmented as

- 1) By Component: Solar Panels, Electric Vehicle Chargers, Energy Storage Systems, Power Management Systems, Other Components
- 2) By Installation Type: New Installations, Retrofit Installations
- 3) By Application: Commercial, Residential, Industrial, Public Charging Stations, Other Applications

Subsegments:

- 1) By Solar Panels: Monocrystalline, Polycrystalline, Thin-Film, Bifacial
- 2) By Electric Vehicle Chargers: Level 1 Chargers (AC), Level 2 Chargers (AC), DC Fast Chargers (DCFC), Wireless Or Inductive Chargers
- 3) By Energy Storage Systems: Lithium-Ion Batteries, Lead-Acid Batteries, Flow Batteries, Solid-State Batteries
- 4) By Power Management Systems: Energy Management Software, Smart Inverters, Load Controllers, Grid-Tied Controllers
- 5) By Other Components: Mounting Structures And Racks, Cables And Connectors, Monitoring And Sensors, Cooling Systems

View the full [onsite solar electric vehicle \(ev\) charging market report](https://www.thebusinessresearchcompany.com/report/onsite-solar-electric-vehicle-ev-charging-global-market-report):
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Which Region Is Expected To Lead The Onsite Solar Electric Vehicle (EV) Charging Market By 2025?

In 2024, North America led the global market for onsite solar electric vehicle (EV) charging, and it's expected that Asia-Pacific will experience the most rapid growth during the forecast period. The report on the global market for onsite solar EV charging includes the regions of Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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