

Vehicle-to-Grid (V2G): Global Market

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Abstracts

Summary:

The global market for Vehicle-to-Grid (V2G) is expected to grow from \$6.3 billion in 2025 and is projected to reach \$16.9 billion by the end of 2030, at a compound annual growth rate (CAGR) of 21.7% during the forecast period of 2025 to 2030.

V2G is a smart charging technology that allows car batteries to put energy back into the power grid. V2G uses bidirectional charging stations to push and pull energy to and from connected vehicles based on the demand for electricity at any given time. It offers grid support, demand-side management, reduced costs for EV owners, and enhanced renewable energy integration. It provides consumers with fuel cost savings and households and commercial fleet operators with additional revenues.

The growing demand for EVs, supportive government initiatives for the development of EV charging infrastructure, and ongoing advances in technology are the factors driving the demand for V2G. Also, the growing expansion of charging infrastructure for EVs and smart grids is being integrated into V2G systems to manage energy flow efficiently.

Companies such as Ford, Toyota and Volkswagen are working on V2G pilot programs with utility providers. For example, IoTecha, a technology company offering IoT and EV charging infrastructure, has developed an IoT cloud-based platform that enables V2G integration through its smart charging software. In November 2024, the company introduced the Mobilize PowerBox, an AC V2G charger that charges and discharges to the grid, supporting peak demand and sustainability.

Report Scope

This report analyzes the global market for vehicle-to-grid (V2G) by four segments:

vehicle type, charger type, components and services. The report also discusses the technological, regulatory, competitive aspects, and economic trends that impact the market. It includes an analysis of patents related to V2G, a look at ESG trends and a discussion of the competitive landscape. The report concludes with profiles of the leading companies in the market.

The report also includes a regional and country analysis that covers North America, Europe, Asia-Pacific, and the Rest of the World (South America, the Middle East and Africa). It examines the factors influencing demand, with 2024 as the base year, estimates for 2025, and forecasts through 2030. All market values are in dollars (\$) millions.

Report Includes

50 data tables and 48 additional tables

An analysis of the global market for vehicle-to-grid (V2G) smart charging technology

Analyses of global market trends, with revenue data for 2024, estimates for 2025, forecast for 2027, and projected CAGRs through 2030

Estimates of the market's size and revenue prospects, accompanied by a market share analysis by vehicle type, charging type, component, service and region

Facts and figures pertaining to market dynamics, technological advancements, regulations, prospects, industry structure and the impacts of macroeconomic variables

Insights derived from Porter's Five Forces model, global value chain and case studies

Patent analysis and emerging trends and developments in patent activity

Overview of sustainability trends and ESG developments, with emphasis on consumer attitudes, and the ESG scores and practices of leading companies

Analysis of the industry structure, including companies' market shares and

rankings, strategic alliances, M&A activity and a venture funding outlook

Profiles of the leading companies, including Nissan Motor Corp., Renault Group, Mitsubishi Motor Corp., Engie, and Nuvve Holding Corp.

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COMPANY PROFILES

ABB
DENSO CORP.
ENGIE
FERMATA ENERGY
HONDA MOTOR CO. LTD.
MITSUBISHI MOTORS CORP.
NISSAN MOTOR CO. LTD.
NUVVE HOLDING CORP.
OCTOPUS ENERGY LTD.
OVO ENERGY LTD.
RENAULT GROUP
THE MOBILITY HOUSE GMBH
VEOLIA
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