

# On Grid PV Inverter Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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## Abstracts

The Global On Grid PV Inverter Market was valued at USD 29.5 billion in 2024 and is estimated to grow at a CAGR of 9.1% to reach USD 73.8 billion by 2034. This robust growth reflects the rapid acceleration of the global transition toward renewable energy sources. Governments and private sectors worldwide are prioritizing clean energy to reduce carbon footprints and meet sustainability targets. As a result, solar energy has emerged as a front-runner, driven by its scalability and decreasing costs. PV inverters, which play a crucial role in converting solar energy into usable electricity for the grid, are experiencing increased demand as installations rise globally.

The growing need for energy independence, coupled with volatile fossil fuel prices, is compelling homeowners, businesses, and utilities to adopt solar power systems. The integration of smart technologies and energy management systems is further strengthening the value proposition of on-grid PV inverters. Additionally, global initiatives for grid modernization and the increasing adoption of energy storage solutions are reshaping inverter requirements, encouraging innovation and wider deployment.

A significant driver for this growth is the ongoing advancement in photovoltaic (PV) technology. Innovations are making PV inverters more efficient, reliable, and cost-effective, incorporating features such as enhanced grid support capabilities and advanced energy management functions. As the cost of solar panels and related system components continues to fall, renewable energy systems are becoming more financially viable, thereby boosting demand for PV inverters. Ambitious government targets for clean energy transition, particularly those aimed at combating climate change, are expected to fuel further expansion. Policy incentives like net metering are also making solar power adoption more attractive, encouraging both residential and

commercial users to invest in PV infrastructure.

The market is segmented into string, micro, and central PV inverters. Among these, the string inverter segment is projected to grow at a CAGR of 10.1% from 2025 to 2034. Their affordability and scalability make them particularly popular in residential and commercial solar installations. Widespread product deployment and increased manufacturing activities are further propelling this segment forward. The market is also classified by phase into single-phase and three-phase inverters.

Single-phase inverters are anticipated to generate USD 9.3 billion by 2034, primarily due to their role in smaller-scale solar installations. These inverters offer cost-effective, easy-to-install, and space-efficient solutions, making them ideal for distributed solar generation, especially for homes and small businesses.

Europe On Grid PV Inverter Market is projected to expand at a CAGR of 12.4% between 2025 and 2034, driven by a surge in residential solar adoption and advancements in hybrid inverter technologies. Regional incentives, rising energy efficiency standards, and growing interest in smart inverters are pushing market penetration further.

Key players in the Global On Grid PV Inverter Market include Delta Electronics, Enphase Energy, Eaton, Fimer Group, Schneider Electric, GoodWe, SMA Solar Technology, Canadian Solar, Solis Inverters, V-Guard Industries, Statcon Energia, SolarEdge Technologies, Servotech Power Systems, Sungrow Power Supply, UTL Solar, and Darfon Electronics. These companies are actively enhancing their product lines through continuous innovation and R&D investments. Strategic alliances, expanded distribution networks, and integration of value-added services such as real-time monitoring and smart grid compatibility are helping leading firms strengthen their global presence and cater to a growing customer base.

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