

Global Virtual Power Plant Market Size study & Forecast, by Technology (Demand Response, Distributed Generation, Mixed Asset), by End-user (Residential, Commercial, Industrial) and Regional Analysis, 2023-2030

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Abstracts

Global Virtual Power Plant Market is valued at approximately USD 1.17 billion in 2022 and is anticipated to grow with a healthy growth rate of more than 32.89% over the forecast period 2023-2030. Virtual Power Plants combines the production capabilities of several distributed energy sources to improve power generation and trade or sell power on the electricity market. It makes it possible to have a steady supply of electricity and permits utilities to produce electricity using renewable energy sources, store it in battery banks, and then provide it to users. It offers real-time information on the networked units' capacity utilization. The market is growing due to factors such as the rising share of renewable energy in the mix of energy sources, falling solar generation prices, and improvements in energy storage. The power industry is increasing the use of cutting-edge technologies such as cloud platforms and Internet of Things (IoT) applications is also boosting the market growth for virtual power plants. The Virtual Power Plant market is expanding because of factors such as increasing demand for renewable power generation, and a growing shift towards distributed generation.

Renewable power generation, such as solar and wind, often occurs in a decentralized manner, with small-scale installations spread across various locations. Virtual Power Plants can effectively integrate these distributed energy resources into a unified system, optimizing their collective output and enhancing grid stability. The International European Agency predicts that by 2026, worldwide renewable electricity capacity would have increased by more than 60% from 2020 levels to more than 4 800 GW. Thus, rising demand for renewable power generation is driving market growth. In addition, the

increasing development of smart grids, increasing demand for combined renewable energy & growing investments in energy storage are creating new opportunities for the market. However, the high cost of virtual power plants and inadequate infrastructure stifles market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Virtual Power Plant Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the dominance of key market players, an increase in renewable energy installations, such as solar and wind power, increasing penetration of energy storage technologies, and a growing trend towards decentralized energy generation, with more consumers adopting rooftop solar panels. Whereas, Asia Pacific is projected to have significant growth owing to factors such as rising investment in renewable energy power generation, and rising government support in the industry.

Major market player included in this report are:

ABB, Ltd.

Autogrid Systems, Inc.

Cisco Systems, Inc.

Cpower Energy Management

Enbala Power Networks, Inc.

Enernoc, Inc

Flexitricity Limited

General Electric Company

Hitachi, Ltd.

Robert Bosch GmbH

Recent Developments in the Market:

In February 2023, -SolarEdge Technologies, Inc. launched Battery Virtual Power Plant. The service is available to thousands of SolarEdge Home Battery owners across Great Britain with eligible smart meters, that are now able to earn financial incentives utilizing their stored battery energy during DFS peak demand events, which would be used to stabilize the grid.

In April 2023, - SunPower provider, and OhmConnect, launched a new virtual power plant (VPP) offering for SunPower customers across California. The homeowners in select locations with solar and SunVault battery storage can connect with OhmConnect directly through the mySunPower app to earn rewards for managing their electricity use during periods of peak demand.

Global Virtual Power Plant Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered – Technology, End-user, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Technology:

Demand Response

Distributed Generation

Mixed Asset

By End-user:

Residential

Commercial

Industrial

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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