

Virtual Power Plant Market by Technology (Distribution Generation, Demand Response, and Mixed Asset) and by End User (Commercial, Industrial, and Residential): Global Opportunity Analysis and Industry Forecast, 2020–2027

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Abstracts

The global virtual power plant market was valued at \$1.3 billion in 2019, and is projected to reach \$5.9 billion by 2027, growing at a CAGR of 21.3% from 2020 to 2027.

Virtual power plant, an aggregated decentralized power plant, consisting of decentralized power systems with the purpose to integrate different distributed energy sources such as solar PV cells, wind turbines, and hydroelectric plants. Additionally, virtual power plant offers efficient power generation even at peak load periods with a scope to trade or sell power in trading market. Virtual power plant is medium scale power generating unit integrating different renewable energy sources for solar, wind and other flexible power consumers and storage systems. A virtual power plant consists of different mixed assets that are connected via central control system processing wide range of information, such as current prices at the power exchange, price and weather forecasts, and grid information of the system operators.

Growing penetration for renewable energy in power generation sector coupled with shifting trend of power grids from centralized to distributed is expected to drive the market growth. Further reduction in energy cost and easy accessibility of energy storage will boost the market demand. For instance, Tesla reported in their recent virtual power plant project 70% decrease in grid consumption, while bills have been reduced by up to 30%. Additionally, VPP is highly efficient and flexible to deliver during the peak load electricity in a short notice period compared to conventional power plant set up that will further drive the market growth. Flexibility in trading with virtual power plant due to

price volatility attracted lot of new participants. Customers can sell excess energy at trade market as well as buy energy at lower price. Such features of virtual power plant is expected to further fuel the demand. However, high-frequency of electromagnetic and radio waves leads to health concerns in infants and old people, which may hamper this growth. Nonetheless, stringent government regulations regarding eco-friendly power generation will further enhance the market for renewable energy, thus fueling the demand for virtual power plant market.

The global virtual power plant market is segmented based on technology, end user, and region. Based on technology, it is categorized into distribution generation, demand response, and mixed asset. Based on end user, it is divided into commercial, industrial, and residential. Based on region, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

Major players have adopted product launch, business expansion, and partnerships to sustain the intense market competition. The key players profiled in the report include ABB Ltd., AGL Energy, AutoGrid Systems, Inc., Enbala Power Networks, Enel X Inc., General Electric Company, Siemens AG, Schneider Electric SE, Limejump Ltd., and others.

KEY BENEFITS FOR STAKEHOLDERS

The global virtual power plant market analysis covers in-depth information of major industry participants.

Porter's five forces analysis helps to analyze the potential of buyers & suppliers and the competitive scenario of the industry for strategy building.

Major countries have been mapped according to their individual revenue contribution to the regional market.

The report provides an in-depth analysis of the global virtual power plant market forecast for the period 2020–2027.

The report outlines the current global virtual power plant market trends and future estimations of the global virtual power plant market from 2019 to 2027 to understand the prevailing opportunities and potential investment pockets.

The key drivers, restraints, and global virtual power plant market opportunity and their detailed impact analysis is elucidated in the study.

KEY MARKET SEGMENTS

By Technology

Distribution Generation

Demand Response

Mixed Asset

By End User

Commercial

Industrial

Residential

By Region

North America

U.S.

Canada

Mexico

Europe

Germany

France

UK

Italy

Rest of Europe

Asia-Pacific

China

Japan

India

Australia

Rest of Asia-Pacific

LAMEA

Brazil

Saudi Arabia

South Africa

Rest of LAMEA

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