

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

<https://marketpublishers.com/r/V17E03A621FEN.html>

Date: May 2020

Pages: 182

Price: US\$ 5,370.00 (Single User License)

ID: V17E03A621FEN

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

Contents

CHAPTER 1:INTRODUCTION

- 1.1.Report description
- 1.2.Key benefits for stakeholders
- 1.3.Key market segments
- 1.4.Research methodology
 - 1.4.1.Primary research
 - 1.4.2.Secondary research
 - 1.4.3.Analyst tools and models

CHAPTER 2:EXECUTIVE SUMMARY

- 2.1.Key findings of the study
- 2.2.CXO perspective

CHAPTER 3:MARKET LANDSCAPE

- 3.1.Market definition and scope
- 3.2.Key findings
 - 3.2.1.Top investment pockets
 - 3.2.2.Top winning strategies
 - 3.2.3.Top winning strategies
- 3.3.Porter's five forces analysis
- 3.4.Market share analysis & Top player positioning, 2019
 - 3.4.1.Top player positioning, 2019
- 3.5.Market dynamics
 - 3.5.1.Drivers
 - 3.5.1.1.Rise in demand for renewable energy in power generation sector
 - 3.5.1.2.Changes in dynamic of power grids from centralized to distributed
 - 3.5.1.3.Moderating costs and easy accessibility of energy storage
 - 3.5.2.Restraint
 - 3.5.2.1.Limited options for complex design structure
 - 3.5.2.2.Health concerns over high-frequency human exposure of electromagnetic and radio waves
 - 3.5.3.Opportunity
 - 3.5.3.1.Emerging shift towards electric vehicles and promotion of intelligent office buildings and smart grids

3.6.Impact Of Covid-19 outburst on the Virtual Power plant market

CHAPTER 4:VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY

4.1.Overview

4.1.1.Market size and forecast

4.1.2.Distribution Generation

4.1.2.1.Key market trends, growth factors, and opportunities

4.1.2.2.Market size and forecast, by region

4.1.3.Demand Response

4.1.3.1.Key market trends, growth factors, and opportunities

4.1.3.2.Market size and forecast, by region

4.1.4.Mixed Asset

4.1.4.1.Key market trends, growth factors, and opportunities

4.1.4.2.Market size and forecast, by region

CHAPTER 5:VIRTUAL POWER PLANT MARKET, BY END USER

5.1.Overview

5.1.1.Market size and forecast

5.1.2.Industrial

5.1.2.1.Key market trends, growth factors, and opportunities

5.1.2.2.Market size and forecast, by region

5.1.3.Commercial

5.1.3.1.Key market trends, growth factors, and opportunities

5.1.3.2.Market size and forecast, by region

5.1.4.Residential

5.1.4.1.Key market trends, growth factors, and opportunities

5.1.4.2.Market size and forecast, by region

CHAPTER 6:VIRTUAL POWER PLANT MARKET, BY REGION

6.1.Overview

6.1.1.Market size and forecast

6.2.North America

6.2.1.Key market trends, growth factors, and opportunities

6.2.2.Market size and forecast, by technology

6.2.3.Market size and forecast, by end user

6.2.4.Market share analysis, by country

6.2.5.U.S.

6.2.5.1.Market size and forecast, by technology

6.2.5.2.Market size and forecast, by end user

6.2.6.Canada

6.2.6.1.Market size and forecast, by technology

6.2.6.2.Market size and forecast, by end user

6.2.7.Mexico

6.2.7.1.Market size and forecast, by technology

6.2.7.2.Market size and forecast, by end user

6.3.Europe

6.3.1.Key market trends, growth factors, and opportunities

6.3.2.Market size and forecast, by technology

6.3.3.Market size and forecast, by end user

6.3.4.Market share analysis, by country

6.3.5.Germany

6.3.5.1.Market size and forecast, by technology

6.3.5.2.Market size and forecast, by end user

6.3.6.UK

6.3.6.1.Market size and forecast, by technology

6.3.6.2.Market size and forecast, by end user

6.3.7.France

6.3.7.1.Market size and forecast, by technology

6.3.7.2.Market size and forecast, by end user

6.3.8.Italy

6.3.8.1.Market size and forecast, by technology

6.3.8.2.Market size and forecast, by end user

6.3.9.Rest of Europe

6.3.9.1.Market size and forecast, by technology

6.3.9.2.Market size and forecast, by end user

6.4.Asia-Pacific

6.4.1.Key market trends, growth factors, and opportunities

6.4.2.Market size and forecast, by technology

6.4.3.Market size and forecast, by end user

6.4.4.Market share analysis, by country

6.4.5.China

6.4.5.1.Market size and forecast, by technology

6.4.5.2.Market size and forecast, by end user

6.4.6.Japan

6.4.6.1.Market size and forecast, by technology

- 6.4.6.2. Market size and forecast, by end user
- 6.4.7. India
 - 6.4.7.1. Market size and forecast, by technology
 - 6.4.7.2. Market size and forecast, by end user
- 6.4.8. Australia
 - 6.4.8.1. Market size and forecast, by technology
 - 6.4.8.2. Market size and forecast, by end user
- 6.4.9. Rest of Asia-Pacific
 - 6.4.9.1. Market size and forecast, by technology
 - 6.4.9.2. Market size and forecast, by end user
- 6.5. LAMEA
 - 6.5.1. Key market trends, growth factors, and opportunities
 - 6.5.2. Market size and forecast, by end user
 - 6.5.3. Market share analysis, by country
 - 6.5.4. Brazil
 - 6.5.4.1. Market size and forecast, by technology
 - 6.5.4.2. Market size and forecast, by end user
 - 6.5.5. Saudi Arabia
 - 6.5.5.1. Market size and forecast, by technology
 - 6.5.5.2. Market size and forecast, by end user
 - 6.5.6. South Africa
 - 6.5.6.1. Market size and forecast, by technology
 - 6.5.6.2. Market size and forecast, by end user
 - 6.5.7. REST OF LAMEA
 - 6.5.7.1. Market size and forecast, by technology
 - 6.5.7.2. Market size and forecast, by end user

CHAPTER 7:COMPETITIVE LANDSCAPE

- 7.1. Introduction
- 7.2. Product mapping of top 10 players
- 7.3. Competitive heatmap
- 7.4. Key development
 - 7.4.1. Business Expansion
 - 7.4.2. New Product
 - 7.4.3. Partnership

CHAPTER 8:COMPANY PROFILES

8.1.ABB LTD.

- 8.1.1.Company overview
- 8.1.2.Company snapshot
- 8.1.3.Product Portfolio
- 8.1.4.Business performance
- 8.1.5.Key strategic moves and developments

8.2.AGL ENERGY LIMITED

- 8.2.1.Company overview
- 8.2.2.Company snapshot
- 8.2.3.Operating business segments
- 8.2.4.Product portfolio
- 8.2.5.Business performance
- 8.2.6.Key strategic moves and developments

8.3.AUTOGRID SYSTEMS, INC.

- 8.3.1.Company overview
- 8.3.2.Company snapshot
- 8.3.3.Operating business segments
- 8.3.4.Product Portfolio
- 8.3.5.Key strategic moves and developments

8.4.ENBALA POWER NETWORKS

- 8.4.1.Company overview
- 8.4.2.Company snapshot
- 8.4.3.Operating business segments
- 8.4.4.Product Portfolio
- 8.4.5.Key strategic moves and developments

8.5.Enel x, INC.

- 8.5.1.Company overview
- 8.5.2.Company snapshot
- 8.5.3.Operating business segments
- 8.5.4.Product Portfolio
- 8.5.5.Business performance
- 8.5.6.Key strategic moves and developments

8.6.General Electric Company

- 8.6.1.Company overview
- 8.6.2.Company snapshot
- 8.6.3.Operating business segments
- 8.6.4.Product Portfolio
- 8.6.5.Business performance
- 8.6.6.Key strategic moves and developments

8.7.Limejump Energy Ltd.

8.7.1.Company overview

8.7.2.Company snapshot

8.7.3.Operating business segments

8.7.4.Product portfolio

8.8.SCHNEIDER ELECTRIC SE

8.8.1.Company overview

8.8.2.Company snapshot

8.8.3.Operating business segments

8.8.4.Product Portfolio

8.8.5.Business performance

8.9.SIEMENS AG

8.9.1.Company overview

8.9.2.Company snapshot

8.9.3.Operating business segments

8.9.4.Product portfolio

8.9.5.Business performance

8.9.6.Key strategic moves and developments

8.10.SUNVERGE ENERGY INC.

8.10.1.Company overview

8.10.2.Company snapshot

8.10.3.Operating business segments

8.10.4.Product portfolio

List Of Tables

LIST OF TABLES

TABLE 01.VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027
(\$MILLION)

TABLE 02.VIRTUAL POWER PLANT DISTRIBUTION GENERATION MARKET, BY
REGION, 2019–2027 (\$MILLION)

TABLE 03.VIRTUAL POWER PLANT DEMAND RESPONSE MARKET, BY REGION,
2019–2027 (\$MILLION)

TABLE 04.VIRTUAL POWER PLANT PLASTICS MARKET, BY REGION, 2019–2027
(\$MILLION)

TABLE 05.VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
((\$MILLION)

TABLE 06.VIRTUAL POWER PLANT MARKET FOR INDUSTRIAL, BY REGION,
2019–2027 (\$MILLION)

TABLE 07.VIRTUAL POWER PLANT MARKET FOR COMMERCIAL, BY REGION,
2019–2027 (\$MILLION)

TABLE 08.VIRTUAL POWER PLANT MARKET FOR RESIDENTIAL, BY REGION,
2019–2027 (\$MILLION)

TABLE 09.VIRTUAL POWER PLANT MARKET, BY REGION, 2019-2027
(\$MILLION)68

TABLE 10.NORTH AMERICA VIRTUAL POWER PLANT MARKET, BY
TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 11.NORTH AMERICA VIRTUAL POWER PLANT MARKET, BY END USER,
2019–2027 (\$MILLION)

TABLE 12.NORTH AMERICA VIRTUAL POWER PLANT MARKET, BY COUNTRY,
2019–2027 (\$MILLION)

TABLE 13.U.S. VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027
(\$MILLION)

TABLE 14.U.S. VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
(\$MILLION)

TABLE 15.CANADA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 16.CANADA VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
(\$MILLION)

TABLE 17.MEXICO VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 18.MEXICO VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027

(\$MILLION)

TABLE 19. EUROPE VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 20. EUROPE VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 21. EUROPE VIRTUAL POWER PLANT MARKET, BY COUNTRY, 2019–2027 (\$MILLION)

TABLE 22. GERMANY VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 23. GERMANY VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 24. UK VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 25. UK VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 26. FRANCE VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 27. FRANCE VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 28. ITALY VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 29. ITALY VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 30. REST OF EUROPE VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 31. REST OF EUROPE VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 32. ASIA-PACIFIC VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 33. ASIA-PACIFIC VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 34. ASIA-PACIFIC VIRTUAL POWER PLANT MARKET, BY COUNTRY, 2019–2027 (\$MILLION)

TABLE 35. CHINA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 36. CHINA VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILLION)

TABLE 37. JAPAN VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 38.JAPAN VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
(\$MILLION)

TABLE 39.INDIA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027
(\$MILLION)

TABLE 40.INDIA VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
(\$MILLION)

TABLE 41.AUSTRALIA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 42.AUSTRALIA VIRTUAL POWER PLANT MARKET, BY END USER,
2019–2027 (\$MILLION)

TABLE 43.REST OF ASIA-PACIFIC VIRTUAL POWER PLANT MARKET, BY
TECHNOLOGY, 2019–2027 (\$MILLION)

TABLE 44.REST OF ASIA-PACIFIC VIRTUAL POWER PLANT MARKET, BY END
USER, 2019–2027 (\$MILLION)

TABLE 45.LAMEA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 46.LAMEA VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
(\$MILLION)

TABLE 47.LAMEA VIRTUAL POWER PLANT MARKET, BY COUNTRY, 2019–2027
(\$MILLION)

TABLE 48.BRAZIL VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 49.BRAZIL VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027
(\$MILLION)

TABLE 50.SAUDI ARABIA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 51.SAUDI ARABIA VIRTUAL POWER PLANT MARKET, BY END USER,
2019–2027 (\$MILLION)

TABLE 52.SOUTH AFRICA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 53.SOUTH AFRICA VIRTUAL POWER PLANT MARKET, BY END USER,
2019–2027 (\$MILLION)

TABLE 54.REST OF LAMEA VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY,
2019–2027 (\$MILLION)

TABLE 55.REST OF LAMEA VIRTUAL POWER PLANT MARKET, BY END USER,
2019–2027 (\$MILLION)

TABLE 56.KEY BUSINESS EXPANSION

TABLE 57.KEY NEW PRODUCT

TABLE 58.KEY PARTNERSHIP

List Of Figures

LIST OF FIGURES

- FIGURE 01.KEY MARKET SEGMENTS
- FIGURE 02.EXECUTIVE SUMMARY, BY SEGMENT
- FIGURE 03.EXECUTIVE SUMMARY, BY COUNTRY
- FIGURE 04.TOP INVESTMENT POCKETS
- FIGURE 05.TOP WINNING STRATEGIES (2015-2019)
- FIGURE 06.TOP WINNING STRATEGIES BY COMPANY (2015-2019)
- FIGURE 07.MODERATE BARGAINING POWER OF SUPPLIERS
- FIGURE 08.MODERATE THREAT OF NEW ENTRANTS
- FIGURE 09.HIGH THREAT OF SUBSTITUTES
- FIGURE 10.MODERATE INTENSITY OF RIVALRY
- FIGURE 11.MODERATE BARGAINING POWER OF BUYERS
- FIGURE 12.TOP PLAYER POSITIONING, 2018
- FIGURE 13.VIRTUAL POWER PLANT MARKET DYNAMICS
- FIGURE 14.VIRTUAL POWER PLANT MARKET, BY TECHNOLOGY, 2019–2027 (\$MILILION)
- FIGURE 15.VIRTUAL POWER PLANT MARKET, BY END USER, 2019–2027 (\$MILILION)
- FIGURE 16.U.S. VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 17.CANADA VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 18.MEXICO VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 19.GERMANY VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 20.UK VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 21.FRANCE VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 22.ITALY VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 23.REST OF EUROPE VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)
- FIGURE 24.CHINA VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027 (\$MILLION)

FIGURE 25.JAPAN VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027
(\$MILLION)

FIGURE 26.INDIA VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027
(\$MILLION)

FIGURE 27.AUSTRALIA VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027
(\$MILLION)

FIGURE 28.REST OF ASIA-PACIFIC VIRTUAL POWER PLANT MARKET REVENUE,
2019–2027 (\$MILLION)

FIGURE 29.BRAZIL VIRTUAL POWER PLANT MARKET REVENUE, 2019–2027
(\$MILLION)

FIGURE 30.SAUDI ARABIA VIRTUAL POWER PLANT MARKET REVENUE,
2019–2027 (\$MILLION)

FIGURE 31.SOUTH AFRICA VIRTUAL POWER PLANT MARKET REVENUE,
2019–2027 (\$MILLION)

FIGURE 32.REST OF LAMEA VIRTUAL POWER PLANT MARKET REVENUE,
2019–2027 (\$MILLION)

FIGURE 33.PRODUCT MAPPING OF TOP 10 PLAYERS

FIGURE 34.COMPETITIVE HEATMAP

I would like to order

Product name: 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

Product link: <https://marketpublishers.com/r/V17E03A621FEN.html>

Price: US\$ 5,370.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/V17E03A621FEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970