

Virtual Power Plant Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

Market Overview:

The global virtual power plant market size reached US\$ 1.4 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 5.6 Billion by 2028, exhibiting a growth rate (CAGR) of 25.2% during 2023-2028.

A virtual power plant (VPP) is a decentralized network that aggregates heterogeneous distributed energy resources (DER) capacities to enhance the power generation process. It offers a smooth power supply to generate the electricity from renewable energy sources by amalgamating the energy in the battery for circulation. VPP includes a central control system that processes excessive data regarding current power exchange rates, grid information, and weather forecasts. As a result, they offer various benefits, such as optimized power generation from existing sources, reliability, and reduced carbon footprints.

Virtual Power Plant Market Trends:

The widespread adoption of various renewable energy sources, such as biomass, hydropower, and solar energy, for power generation represents one of the key factors driving the global virtual power plant market growth. The integration of several advanced technologies, such as cloud-based solutions and the Internet of Things (IoT) and the gradual shift from centralized to distributed power generation is contributing to the market growth. Additionally, numerous initiatives undertaken by the governments of various countries for deploying renewable technologies to curb greenhouse gas (GHG) emissions on account of the growing environmental consciousness and an enhanced focus on sustainable development are creating a positive outlook for the market. The

market is also driven by strategic collaborations between the key players and the increasing investments in the research and development (R&D) activities to introduce upgraded versions of virtual power plants. Other factors, such as the rising demand for electric vehicles (EVs), upgradation of the existing smart grid infrastructure, and initiatives undertaken for power sector reforms, especially in the emerging economies, are creating a positive outlook for the market further across the globe.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global virtual power plant market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on technology, source and end user.

Breakup by Technology:

- Distribution Generation
- Demand Response
- Mixed Asset

Breakup by Source:

- Renewable Energy
- Cogeneration
- Energy Storage

Breakup by End User:

- Industrial
- Commercial
- Residential

Breakup by Region:

- North America
 - United States
 - Canada
- Asia-Pacific
 - China
 - Japan

India
South Korea
Australia
Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being ABB Ltd., AGL Energy Ltd., Autogrid Systems Inc., Enel Spa, Flexitricity Limited (Reserve Power Holdings (Jersey) Limited), General Electric Company, Hitachi Ltd., Next Kraftwerke GmbH, Osisoft LLC (AVEVA Group plc), Schneider Electric SE, Siemens Aktiengesellschaft and Sunverge Energy Inc.

Key Questions Answered in This Report

1. What was the size of the global virtual power plant market in 2022?
2. What is the expected growth rate of the global virtual power plant market during 2023-2028?
3. What are the key factors driving the global virtual power plant market?
4. What has been the impact of COVID-19 on the global virtual power plant market?
5. What is the breakup of the global virtual power plant market based on the technology?
6. What is the breakup of the global virtual power plant market based on the end user?
7. What are the key regions in the global virtual power plant market?
8. Who are the key players/companies in the global virtual power plant market?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

2.1 Objectives of the Study

2.2 Stakeholders

2.3 Data Sources

2.3.1 Primary Sources

2.3.2 Secondary Sources

2.4 Market Estimation

2.4.1 Bottom-Up Approach

2.4.2 Top-Down Approach

2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

4.1 Overview

4.2 Key Industry Trends

5 GLOBAL VIRTUAL POWER PLANT MARKET

5.1 Market Overview

5.2 Market Performance

5.3 Impact of COVID-19

5.4 Market Forecast

6 MARKET BREAKUP BY TECHNOLOGY

6.1 Distribution Generation

6.1.1 Market Trends

6.1.2 Market Forecast

6.2 Demand Response

6.2.1 Market Trends

6.2.2 Market Forecast

6.3 Mixed Asset

6.3.1 Market Trends

6.3.2 Market Forecast

7 MARKET BREAKUP BY SOURCE

7.1 Renewable Energy

7.1.1 Market Trends

7.1.2 Market Forecast

7.2 Cogeneration

7.2.1 Market Trends

7.2.2 Market Forecast

7.3 Energy Storage

7.3.1 Market Trends

7.3.2 Market Forecast

8 MARKET BREAKUP BY END USER

8.1 Industrial

8.1.1 Market Trends

8.1.2 Market Forecast

8.2 Commercial

8.2.1 Market Trends

8.2.2 Market Forecast

8.3 Residential

8.3.1 Market Trends

8.3.2 Market Forecast

9 MARKET BREAKUP BY REGION

9.1 North America

9.1.1 United States

9.1.1.1 Market Trends

9.1.1.2 Market Forecast

9.1.2 Canada

9.1.2.1 Market Trends

9.1.2.2 Market Forecast

9.2 Asia-Pacific

9.2.1 China

9.2.1.1 Market Trends

- 9.2.1.2 Market Forecast
- 9.2.2 Japan
 - 9.2.2.1 Market Trends
 - 9.2.2.2 Market Forecast
- 9.2.3 India
 - 9.2.3.1 Market Trends
 - 9.2.3.2 Market Forecast
- 9.2.4 South Korea
 - 9.2.4.1 Market Trends
 - 9.2.4.2 Market Forecast
- 9.2.5 Australia
 - 9.2.5.1 Market Trends
 - 9.2.5.2 Market Forecast
- 9.2.6 Indonesia
 - 9.2.6.1 Market Trends
 - 9.2.6.2 Market Forecast
- 9.2.7 Others
 - 9.2.7.1 Market Trends
 - 9.2.7.2 Market Forecast
- 9.3 Europe
 - 9.3.1 Germany
 - 9.3.1.1 Market Trends
 - 9.3.1.2 Market Forecast
 - 9.3.2 France
 - 9.3.2.1 Market Trends
 - 9.3.2.2 Market Forecast
 - 9.3.3 United Kingdom
 - 9.3.3.1 Market Trends
 - 9.3.3.2 Market Forecast
 - 9.3.4 Italy
 - 9.3.4.1 Market Trends
 - 9.3.4.2 Market Forecast
 - 9.3.5 Spain
 - 9.3.5.1 Market Trends
 - 9.3.5.2 Market Forecast
 - 9.3.6 Russia
 - 9.3.6.1 Market Trends
 - 9.3.6.2 Market Forecast
 - 9.3.7 Others

9.3.7.1 Market Trends

9.3.7.2 Market Forecast

9.4 Latin America

9.4.1 Brazil

9.4.1.1 Market Trends

9.4.1.2 Market Forecast

9.4.2 Mexico

9.4.2.1 Market Trends

9.4.2.2 Market Forecast

9.4.3 Others

9.4.3.1 Market Trends

9.4.3.2 Market Forecast

9.5 Middle East and Africa

9.5.1 Market Trends

9.5.2 Market Breakup by Country

9.5.3 Market Forecast

10 SWOT ANALYSIS

10.1 Overview

10.2 Strengths

10.3 Weaknesses

10.4 Opportunities

10.5 Threats

11 VALUE CHAIN ANALYSIS

12 PORTERS FIVE FORCES ANALYSIS

12.1 Overview

12.2 Bargaining Power of Buyers

12.3 Bargaining Power of Suppliers

12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes

13 PRICE ANALYSIS

14 COMPETITIVE LANDSCAPE

14.1 Market Structure

14.2 Key Players

14.3 Profiles of Key Players

14.3.1 ABB Ltd.

14.3.1.1 Company Overview

14.3.1.2 Product Portfolio

14.3.1.3 Financials

14.3.1.4 SWOT Analysis

14.3.2 AGL Energy Ltd.

14.3.2.1 Company Overview

14.3.2.2 Product Portfolio

14.3.2.3 Financials

14.3.2.4 SWOT Analysis

14.3.3 Autogrid Systems Inc.

14.3.3.1 Company Overview

14.3.3.2 Product Portfolio

14.3.4 Enel Spa

14.3.4.1 Company Overview

14.3.4.2 Product Portfolio

14.3.4.3 Financials

14.3.4.4 SWOT Analysis

14.3.5 Flexitricity Limited (Reserve Power Holdings (Jersey) Limited)

14.3.5.1 Company Overview

14.3.5.2 Product Portfolio

14.3.6 General Electric Company

14.3.6.1 Company Overview

14.3.6.2 Product Portfolio

14.3.6.3 Financials

14.3.6.4 SWOT Analysis

14.3.7 Hitachi Ltd.

14.3.7.1 Company Overview

14.3.7.2 Product Portfolio

14.3.7.3 Financials

14.3.7.4 SWOT Analysis

14.3.8 Next Kraftwerke GmbH

14.3.8.1 Company Overview

14.3.8.2 Product Portfolio

14.3.9 Osisoft LLC (AVEVA Group plc)

- 14.3.9.1 Company Overview
- 14.3.9.2 Product Portfolio
- 14.3.10 Schneider Electric SE
 - 14.3.10.1 Company Overview
 - 14.3.10.2 Product Portfolio
 - 14.3.10.3 Financials
 - 14.3.10.4 SWOT Analysis
- 14.3.11 Siemens Aktiengesellschaft
 - 14.3.11.1 Company Overview
 - 14.3.11.2 Product Portfolio
 - 14.3.11.3 Financials
 - 14.3.11.4 SWOT Analysis
- 14.3.12 Sunverge Energy Inc.
 - 14.3.12.1 Company Overview
 - 14.3.12.2 Product Portfolio

List Of Tables

LIST OF TABLES

Table 1: Global: Virtual Power Plant Market: Key Industry Highlights, 2022 and 2028

Table 2: Global: Virtual Power Plant Market Forecast: Breakup by Technology (in Million US\$), 2023-2028

Table 3: Global: Virtual Power Plant Market Forecast: Breakup by Source (in Million US\$), 2023-2028

Table 4: Global: Virtual Power Plant Market Forecast: Breakup by End User (in Million US\$), 2023-2028

Table 5: Global: Virtual Power Plant Market Forecast: Breakup by Region (in Million US\$), 2023-2028

Table 6: Global: Virtual Power Plant Market: Competitive Structure

Table 7: Global: Virtual Power Plant Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Virtual Power Plant Market: Major Drivers and Challenges

Figure 2: Global: Virtual Power Plant Market: Sales Value (in Billion US\$), 2017-2022

Figure 3: Global: Virtual Power Plant Market Forecast: Sales Value (in Billion US\$), 2023-2028

Figure 4: Global: Virtual Power Plant Market: Breakup by Technology (in %), 2022

Figure 5: Global: Virtual Power Plant Market: Breakup by Source (in %), 2022

Figure 6: Global: Virtual Power Plant Market: Breakup by End User (in %), 2022

Figure 7: Global: Virtual Power Plant Market: Breakup by Region (in %), 2022

Figure 8: Global: Virtual Power Plant (Distribution Generation) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 9: Global: Virtual Power Plant (Distribution Generation) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 10: Global: Virtual Power Plant (Demand Response) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 11: Global: Virtual Power Plant (Demand Response) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 12: Global: Virtual Power Plant (Mixed Asset) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 13: Global: Virtual Power Plant (Mixed Asset) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 14: Global: Virtual Power Plant (Renewable Energy) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 15: Global: Virtual Power Plant (Renewable Energy) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 16: Global: Virtual Power Plant (Cogeneration) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 17: Global: Virtual Power Plant (Cogeneration) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 18: Global: Virtual Power Plant (Energy Storage) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 19: Global: Virtual Power Plant (Energy Storage) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 20: Global: Virtual Power Plant (Industrial) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 21: Global: Virtual Power Plant (Industrial) Market Forecast: Sales Value (in

Million US\$), 2023-2028

Figure 22: Global: Virtual Power Plant (Commercial) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 23: Global: Virtual Power Plant (Commercial) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 24: Global: Virtual Power Plant (Residential) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 25: Global: Virtual Power Plant (Residential) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 26: North America: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 27: North America: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 28: United States: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 29: United States: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 30: Canada: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 31: Canada: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 32: Asia-Pacific: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 33: Asia-Pacific: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 34: China: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 35: China: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 36: Japan: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 37: Japan: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 38: India: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 39: India: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 40: South Korea: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 41: South Korea: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 42: Australia: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 43: Australia: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 44: Indonesia: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 45: Indonesia: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 46: Others: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 47: Others: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 48: Europe: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 49: Europe: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 50: Germany: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 51: Germany: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 52: France: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 53: France: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 54: United Kingdom: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 55: United Kingdom: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 56: Italy: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 57: Italy: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 58: Spain: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 59: Spain: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 60: Russia: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 61: Russia: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 62: Others: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 &

2022

Figure 63: Others: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 64: Latin America: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 65: Latin America: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 66: Brazil: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 67: Brazil: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 68: Mexico: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 69: Mexico: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 70: Others: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 71: Others: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 72: Middle East and Africa: Virtual Power Plant Market: Sales Value (in Million US\$), 2017 & 2022

Figure 73: Middle East and Africa: Virtual Power Plant Market: Breakup by Country (in %), 2022

Figure 74: Middle East and Africa: Virtual Power Plant Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 75: Global: Virtual Power Plant Industry: SWOT Analysis

Figure 76: Global: Virtual Power Plant Industry: Value Chain Analysis

Figure 77: Global: Virtual Power Plant Industry: Porter's Five Forces Analysis

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