

Global Flow Battery Market 2024 by Manufacturers, Regions, Type and Application, Forecast to 2030

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Abstracts

According to our (Global Info Research) latest study, the global Flow Battery market size was valued at USD 195.5 million in 2023 and is forecast to a readjusted size of USD 340.1 million by 2030 with a CAGR of 8.2% during review period.

A flow battery, or redox flow battery (after reduction–oxidation), is a type of rechargeable battery where recharge ability is provided by two chemical components dissolved in liquids contained within the system and separated by a membrane. Ion exchange (providing flow of electric current) occurs through the membrane while both liquids circulate in their own respective space. Cell voltage is chemically determined by the Nernst equation and ranges, in practical applications, from 1.0 to 2.2 volts. The performance of these devices is governed by the considerations of electrochemical engineering.

Global flow battery main players include Dalian Rongke Power, Primus Power, Sumitomo Electric, VRB ENERGY, Largo Clean Energy, etc., totally accounting for about 95%. Asia-Pacific is the largest market, with a share over 78%. As for the types of products, it can be divided into vanadium flow battery and hybrid flow battery. Vanadium flow battery is the largest segment, holding a share about 90%. In terms of application, it is widely used in utility facilities, renewable energy integration and others. The most common application is in utility facilities, taking a share over 80%.

The Global Info Research report includes an overview of the development of the Flow Battery industry chain, the market status of Utility Facilities (Vanadium Flow Battery, Hybrid Flow Battery), Renewable Energy Integration (Vanadium Flow Battery, Hybrid Flow Battery), and key enterprises in developed and developing market, and analysed the cutting-edge technology, patent, hot applications and market trends of Flow Battery.

Regionally, the report analyzes the Flow Battery markets in key regions. North America and Europe are experiencing steady growth, driven by government initiatives and increasing consumer awareness. Asia-Pacific, particularly China, leads the global Flow Battery market, with robust domestic demand, supportive policies, and a strong manufacturing base.

Key Features:

The report presents comprehensive understanding of the Flow Battery market. It provides a holistic view of the industry, as well as detailed insights into individual components and stakeholders. The report analysis market dynamics, trends, challenges, and opportunities within the Flow Battery industry.

The report involves analyzing the market at a macro level:

Market Sizing and Segmentation: Report collect data on the overall market size, including the sales quantity (MWh), revenue generated, and market share of different by Type (e.g., Vanadium Flow Battery, Hybrid Flow Battery).

Industry Analysis: Report analyse the broader industry trends, such as government policies and regulations, technological advancements, consumer preferences, and market dynamics. This analysis helps in understanding the key drivers and challenges influencing the Flow Battery market.

Regional Analysis: The report involves examining the Flow Battery market at a regional or national level. Report analyses regional factors such as government incentives, infrastructure development, economic conditions, and consumer behaviour to identify variations and opportunities within different markets.

Market Projections: Report covers the gathered data and analysis to make future projections and forecasts for the Flow Battery market. This may include estimating market growth rates, predicting market demand, and identifying emerging trends.

The report also involves a more granular approach to Flow Battery:

Company Analysis: Report covers individual Flow Battery manufacturers, suppliers, and other relevant industry players. This analysis includes studying their financial performance, market positioning, product portfolios, partnerships, and strategies.

Consumer Analysis: Report covers data on consumer behaviour, preferences, and attitudes towards Flow Battery. This may involve surveys, interviews, and analysis of consumer reviews and feedback from different by Application (Utility Facilities, Renewable Energy Integration).

Technology Analysis: Report covers specific technologies relevant to Flow Battery. It assesses the current state, advancements, and potential future developments in Flow Battery areas.

Competitive Landscape: By analyzing individual companies, suppliers, and consumers, the report present insights into the competitive landscape of the Flow Battery market. This analysis helps understand market share, competitive advantages, and potential areas for differentiation among industry players.

Market Validation: The report involves validating findings and projections through primary research, such as surveys, interviews, and focus groups.

Market Segmentation

Flow Battery market is split by Type and by Application. For the period 2019-2030, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value.

Market segment by Type

Vanadium Flow Battery

Hybrid Flow Battery

Market segment by Application

Utility Facilities

Renewable Energy Integration

Others

Major players covered

Dalian Rongke Power

Primus Power

Sumitomo Electric

VRB ENERGY

Largo Clean Energy

Market segment by region, regional analysis covers

North America (United States, Canada and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Flow Battery product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Flow Battery, with price, sales, revenue and global market share of Flow Battery from 2019 to 2024.

Chapter 3, the Flow Battery competitive situation, sales quantity, revenue and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Flow Battery breakdown data are shown at the regional level, to show

the sales quantity, consumption value and growth by regions, from 2019 to 2030.

Chapter 5 and 6, to segment the sales by Type and application, with sales market share and growth rate by type, application, from 2019 to 2030.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value and market share for key countries in the world, from 2017 to 2023. and Flow Battery market forecast, by regions, type and application, with sales and revenue, from 2025 to 2030.

Chapter 12, market dynamics, drivers, restraints, trends and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Flow Battery.

Chapter 14 and 15, to describe Flow Battery sales channel, distributors, customers, research findings and conclusion.

Contents

1 MARKET OVERVIEW

- 1.1 Product Overview and Scope of Flow Battery
- 1.2 Market Estimation Caveats and Base Year
- 1.3 Market Analysis by Type
 - 1.3.1 Overview: Global Flow Battery Consumption Value by Type: 2019 Versus 2023 Versus 2030
 - 1.3.2 Vanadium Flow Battery
 - 1.3.3 Hybrid Flow Battery
- 1.4 Market Analysis by Application
 - 1.4.1 Overview: Global Flow Battery Consumption Value by Application: 2019 Versus 2023 Versus 2030
 - 1.4.2 Utility Facilities
 - 1.4.3 Renewable Energy Integration
 - 1.4.4 Others
- 1.5 Global Flow Battery Market Size & Forecast
 - 1.5.1 Global Flow Battery Consumption Value (2019 & 2023 & 2030)
 - 1.5.2 Global Flow Battery Sales Quantity (2019-2030)
 - 1.5.3 Global Flow Battery Average Price (2019-2030)

2 MANUFACTURERS PROFILES

- 2.1 Dalian Rongke Power
 - 2.1.1 Dalian Rongke Power Details
 - 2.1.2 Dalian Rongke Power Major Business
 - 2.1.3 Dalian Rongke Power Flow Battery Product and Services
 - 2.1.4 Dalian Rongke Power Flow Battery Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2019-2024)
 - 2.1.5 Dalian Rongke Power Recent Developments/Updates
- 2.2 Primus Power
 - 2.2.1 Primus Power Details
 - 2.2.2 Primus Power Major Business
 - 2.2.3 Primus Power Flow Battery Product and Services
 - 2.2.4 Primus Power Flow Battery Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2019-2024)
 - 2.2.5 Primus Power Recent Developments/Updates
- 2.3 Sumitomo Electric

- 2.3.1 Sumitomo Electric Details
- 2.3.2 Sumitomo Electric Major Business
- 2.3.3 Sumitomo Electric Flow Battery Product and Services
- 2.3.4 Sumitomo Electric Flow Battery Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2019-2024)
- 2.3.5 Sumitomo Electric Recent Developments/Updates
- 2.4 VRB ENERGY
 - 2.4.1 VRB ENERGY Details
 - 2.4.2 VRB ENERGY Major Business
 - 2.4.3 VRB ENERGY Flow Battery Product and Services
 - 2.4.4 VRB ENERGY Flow Battery Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2019-2024)
 - 2.4.5 VRB ENERGY Recent Developments/Updates
- 2.5 Largo Clean Energy
 - 2.5.1 Largo Clean Energy Details
 - 2.5.2 Largo Clean Energy Major Business
 - 2.5.3 Largo Clean Energy Flow Battery Product and Services
 - 2.5.4 Largo Clean Energy Flow Battery Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2019-2024)
 - 2.5.5 Largo Clean Energy Recent Developments/Updates

3 COMPETITIVE ENVIRONMENT: FLOW BATTERY BY MANUFACTURER

- 3.1 Global Flow Battery Sales Quantity by Manufacturer (2019-2024)
- 3.2 Global Flow Battery Revenue by Manufacturer (2019-2024)
- 3.3 Global Flow Battery Average Price by Manufacturer (2019-2024)
- 3.4 Market Share Analysis (2023)
 - 3.4.1 Producer Shipments of Flow Battery by Manufacturer Revenue (\$MM) and Market Share (%): 2023
 - 3.4.2 Top 3 Flow Battery Manufacturer Market Share in 2023
 - 3.4.2 Top 6 Flow Battery Manufacturer Market Share in 2023
- 3.5 Flow Battery Market: Overall Company Footprint Analysis
 - 3.5.1 Flow Battery Market: Region Footprint
 - 3.5.2 Flow Battery Market: Company Product Type Footprint
 - 3.5.3 Flow Battery Market: Company Product Application Footprint
- 3.6 New Market Entrants and Barriers to Market Entry
- 3.7 Mergers, Acquisition, Agreements, and Collaborations

4 CONSUMPTION ANALYSIS BY REGION

4.1 Global Flow Battery Market Size by Region

4.1.1 Global Flow Battery Sales Quantity by Region (2019-2030)

4.1.2 Global Flow Battery Consumption Value by Region (2019-2030)

4.1.3 Global Flow Battery Average Price by Region (2019-2030)

4.2 North America Flow Battery Consumption Value (2019-2030)

4.3 Europe Flow Battery Consumption Value (2019-2030)

4.4 Asia-Pacific Flow Battery Consumption Value (2019-2030)

4.5 South America Flow Battery Consumption Value (2019-2030)

4.6 Middle East and Africa Flow Battery Consumption Value (2019-2030)

5 MARKET SEGMENT BY TYPE

5.1 Global Flow Battery Sales Quantity by Type (2019-2030)

5.2 Global Flow Battery Consumption Value by Type (2019-2030)

5.3 Global Flow Battery Average Price by Type (2019-2030)

6 MARKET SEGMENT BY APPLICATION

6.1 Global Flow Battery Sales Quantity by Application (2019-2030)

6.2 Global Flow Battery Consumption Value by Application (2019-2030)

6.3 Global Flow Battery Average Price by Application (2019-2030)

7 NORTH AMERICA

7.1 North America Flow Battery Sales Quantity by Type (2019-2030)

7.2 North America Flow Battery Sales Quantity by Application (2019-2030)

7.3 North America Flow Battery Market Size by Country

7.3.1 North America Flow Battery Sales Quantity by Country (2019-2030)

7.3.2 North America Flow Battery Consumption Value by Country (2019-2030)

7.3.3 United States Market Size and Forecast (2019-2030)

7.3.4 Canada Market Size and Forecast (2019-2030)

7.3.5 Mexico Market Size and Forecast (2019-2030)

8 EUROPE

8.1 Europe Flow Battery Sales Quantity by Type (2019-2030)

8.2 Europe Flow Battery Sales Quantity by Application (2019-2030)

8.3 Europe Flow Battery Market Size by Country

- 8.3.1 Europe Flow Battery Sales Quantity by Country (2019-2030)
- 8.3.2 Europe Flow Battery Consumption Value by Country (2019-2030)
- 8.3.3 Germany Market Size and Forecast (2019-2030)
- 8.3.4 France Market Size and Forecast (2019-2030)
- 8.3.5 United Kingdom Market Size and Forecast (2019-2030)
- 8.3.6 Russia Market Size and Forecast (2019-2030)
- 8.3.7 Italy Market Size and Forecast (2019-2030)

9 ASIA-PACIFIC

- 9.1 Asia-Pacific Flow Battery Sales Quantity by Type (2019-2030)
- 9.2 Asia-Pacific Flow Battery Sales Quantity by Application (2019-2030)
- 9.3 Asia-Pacific Flow Battery Market Size by Region
 - 9.3.1 Asia-Pacific Flow Battery Sales Quantity by Region (2019-2030)
 - 9.3.2 Asia-Pacific Flow Battery Consumption Value by Region (2019-2030)
 - 9.3.3 China Market Size and Forecast (2019-2030)
 - 9.3.4 Japan Market Size and Forecast (2019-2030)
 - 9.3.5 Korea Market Size and Forecast (2019-2030)
 - 9.3.6 India Market Size and Forecast (2019-2030)
 - 9.3.7 Southeast Asia Market Size and Forecast (2019-2030)
 - 9.3.8 Australia Market Size and Forecast (2019-2030)

10 SOUTH AMERICA

- 10.1 South America Flow Battery Sales Quantity by Type (2019-2030)
- 10.2 South America Flow Battery Sales Quantity by Application (2019-2030)
- 10.3 South America Flow Battery Market Size by Country
 - 10.3.1 South America Flow Battery Sales Quantity by Country (2019-2030)
 - 10.3.2 South America Flow Battery Consumption Value by Country (2019-2030)
 - 10.3.3 Brazil Market Size and Forecast (2019-2030)
 - 10.3.4 Argentina Market Size and Forecast (2019-2030)

11 MIDDLE EAST & AFRICA

- 11.1 Middle East & Africa Flow Battery Sales Quantity by Type (2019-2030)
- 11.2 Middle East & Africa Flow Battery Sales Quantity by Application (2019-2030)
- 11.3 Middle East & Africa Flow Battery Market Size by Country
 - 11.3.1 Middle East & Africa Flow Battery Sales Quantity by Country (2019-2030)
 - 11.3.2 Middle East & Africa Flow Battery Consumption Value by Country (2019-2030)

- 11.3.3 Turkey Market Size and Forecast (2019-2030)
- 11.3.4 Egypt Market Size and Forecast (2019-2030)
- 11.3.5 Saudi Arabia Market Size and Forecast (2019-2030)
- 11.3.6 South Africa Market Size and Forecast (2019-2030)

12 MARKET DYNAMICS

- 12.1 Flow Battery Market Drivers
- 12.2 Flow Battery Market Restraints
- 12.3 Flow Battery Trends Analysis
- 12.4 Porters Five Forces Analysis
 - 12.4.1 Threat of New Entrants
 - 12.4.2 Bargaining Power of Suppliers
 - 12.4.3 Bargaining Power of Buyers
 - 12.4.4 Threat of Substitutes
 - 12.4.5 Competitive Rivalry

13 RAW MATERIAL AND INDUSTRY CHAIN

- 13.1 Raw Material of Flow Battery and Key Manufacturers
- 13.2 Manufacturing Costs Percentage of Flow Battery
- 13.3 Flow Battery Production Process
- 13.4 Flow Battery Industrial Chain

14 SHIPMENTS BY DISTRIBUTION CHANNEL

- 14.1 Sales Channel
 - 14.1.1 Direct to End-User
 - 14.1.2 Distributors
- 14.2 Flow Battery Typical Distributors
- 14.3 Flow Battery Typical Customers

15 RESEARCH FINDINGS AND CONCLUSION

16 APPENDIX

- 16.1 Methodology
- 16.2 Research Process and Data Source
- 16.3 Disclaimer

List Of Tables

LIST OF TABLES

- Table 1. Global Flow Battery Consumption Value by Type, (USD Million), 2019 & 2023 & 2030
- Table 2. Global Flow Battery Consumption Value by Application, (USD Million), 2019 & 2023 & 2030
- Table 3. Dalian Rongke Power Basic Information, Manufacturing Base and Competitors
- Table 4. Dalian Rongke Power Major Business
- Table 5. Dalian Rongke Power Flow Battery Product and Services
- Table 6. Dalian Rongke Power Flow Battery Sales Quantity (MWh), Average Price (US\$/KWh), Revenue (USD Million), Gross Margin and Market Share (2019-2024)
- Table 7. Dalian Rongke Power Recent Developments/Updates
- Table 8. Primus Power Basic Information, Manufacturing Base and Competitors
- Table 9. Primus Power Major Business
- Table 10. Primus Power Flow Battery Product and Services
- Table 11. Primus Power Flow Battery Sales Quantity (MWh), Average Price (US\$/KWh), Revenue (USD Million), Gross Margin and Market Share (2019-2024)
- Table 12. Primus Power Recent Developments/Updates
- Table 13. Sumitomo Electric Basic Information, Manufacturing Base and Competitors
- Table 14. Sumitomo Electric Major Business
- Table 15. Sumitomo Electric Flow Battery Product and Services
- Table 16. Sumitomo Electric Flow Battery Sales Quantity (MWh), Average Price (US\$/KWh), Revenue (USD Million), Gross Margin and Market Share (2019-2024)
- Table 17. Sumitomo Electric Recent Developments/Updates
- Table 18. VRB ENERGY Basic Information, Manufacturing Base and Competitors
- Table 19. VRB ENERGY Major Business
- Table 20. VRB ENERGY Flow Battery Product and Services
- Table 21. VRB ENERGY Flow Battery Sales Quantity (MWh), Average Price (US\$/KWh), Revenue (USD Million), Gross Margin and Market Share (2019-2024)
- Table 22. VRB ENERGY Recent Developments/Updates
- Table 23. Largo Clean Energy Basic Information, Manufacturing Base and Competitors
- Table 24. Largo Clean Energy Major Business
- Table 25. Largo Clean Energy Flow Battery Product and Services
- Table 26. Largo Clean Energy Flow Battery Sales Quantity (MWh), Average Price (US\$/KWh), Revenue (USD Million), Gross Margin and Market Share (2019-2024)
- Table 27. Largo Clean Energy Recent Developments/Updates
- Table 28. Global Flow Battery Sales Quantity by Manufacturer (2019-2024) & (MWh)

Table 29. Global Flow Battery Revenue by Manufacturer (2019-2024) & (USD Million)

Table 30. Global Flow Battery Average Price by Manufacturer (2019-2024) & (US\$/KWh)

Table 31. Market Position of Manufacturers in Flow Battery, (Tier 1, Tier 2, and Tier 3), Based on Consumption Value in 2023

Table 32. Head Office and Flow Battery Production Site of Key Manufacturer

Table 33. Flow Battery Market: Company Product Type Footprint

Table 34. Flow Battery Market: Company Product Application Footprint

Table 35. Flow Battery New Market Entrants and Barriers to Market Entry

Table 36. Flow Battery Mergers, Acquisition, Agreements, and Collaborations

Table 37. Global Flow Battery Sales Quantity by Region (2019-2024) & (MWh)

Table 38. Global Flow Battery Sales Quantity by Region (2025-2030) & (MWh)

Table 39. Global Flow Battery Consumption Value by Region (2019-2024) & (USD Million)

Table 40. Global Flow Battery Consumption Value by Region (2025-2030) & (USD Million)

Table 41. Global Flow Battery Average Price by Region (2019-2024) & (US\$/KWh)

Table 42. Global Flow Battery Average Price by Region (2025-2030) & (US\$/KWh)

Table 43. Global Flow Battery Sales Quantity by Type (2019-2024) & (MWh)

Table 44. Global Flow Battery Sales Quantity by Type (2025-2030) & (MWh)

Table 45. Global Flow Battery Consumption Value by Type (2019-2024) & (USD Million)

Table 46. Global Flow Battery Consumption Value by Type (2025-2030) & (USD Million)

Table 47. Global Flow Battery Average Price by Type (2019-2024) & (US\$/KWh)

Table 48. Global Flow Battery Average Price by Type (2025-2030) & (US\$/KWh)

Table 49. Global Flow Battery Sales Quantity by Application (2019-2024) & (MWh)

Table 50. Global Flow Battery Sales Quantity by Application (2025-2030) & (MWh)

Table 51. Global Flow Battery Consumption Value by Application (2019-2024) & (USD Million)

Table 52. Global Flow Battery Consumption Value by Application (2025-2030) & (USD Million)

Table 53. Global Flow Battery Average Price by Application (2019-2024) & (US\$/KWh)

Table 54. Global Flow Battery Average Price by Application (2025-2030) & (US\$/KWh)

Table 55. North America Flow Battery Sales Quantity by Type (2019-2024) & (MWh)

Table 56. North America Flow Battery Sales Quantity by Type (2025-2030) & (MWh)

Table 57. North America Flow Battery Sales Quantity by Application (2019-2024) & (MWh)

Table 58. North America Flow Battery Sales Quantity by Application (2025-2030) & (MWh)

Table 59. North America Flow Battery Sales Quantity by Country (2019-2024) & (MWh)

Table 60. North America Flow Battery Sales Quantity by Country (2025-2030) & (MWh)

Table 61. North America Flow Battery Consumption Value by Country (2019-2024) & (USD Million)

Table 62. North America Flow Battery Consumption Value by Country (2025-2030) & (USD Million)

Table 63. Europe Flow Battery Sales Quantity by Type (2019-2024) & (MWh)

Table 64. Europe Flow Battery Sales Quantity by Type (2025-2030) & (MWh)

Table 65. Europe Flow Battery Sales Quantity by Application (2019-2024) & (MWh)

Table 66. Europe Flow Battery Sales Quantity by Application (2025-2030) & (MWh)

Table 67. Europe Flow Battery Sales Quantity by Country (2019-2024) & (MWh)

Table 68. Europe Flow Battery Sales Quantity by Country (2025-2030) & (MWh)

Table 69. Europe Flow Battery Consumption Value by Country (2019-2024) & (USD Million)

Table 70. Europe Flow Battery Consumption Value by Country (2025-2030) & (USD Million)

Table 71. Asia-Pacific Flow Battery Sales Quantity by Type (2019-2024) & (MWh)

Table 72. Asia-Pacific Flow Battery Sales Quantity by Type (2025-2030) & (MWh)

Table 73. Asia-Pacific Flow Battery Sales Quantity by Application (2019-2024) & (MWh)

Table 74. Asia-Pacific Flow Battery Sales Quantity by Application (2025-2030) & (MWh)

Table 75. Asia-Pacific Flow Battery Sales Quantity by Region (2019-2024) & (MWh)

Table 76. Asia-Pacific Flow Battery Sales Quantity by Region (2025-2030) & (MWh)

Table 77. Asia-Pacific Flow Battery Consumption Value by Region (2019-2024) & (USD Million)

Table 78. Asia-Pacific Flow Battery Consumption Value by Region (2025-2030) & (USD Million)

Table 79. South America Flow Battery Sales Quantity by Type (2019-2024) & (MWh)

Table 80. South America Flow Battery Sales Quantity by Type (2025-2030) & (MWh)

Table 81. South America Flow Battery Sales Quantity by Application (2019-2024) & (MWh)

Table 82. South America Flow Battery Sales Quantity by Application (2025-2030) & (MWh)

Table 83. South America Flow Battery Sales Quantity by Country (2019-2024) & (MWh)

Table 84. South America Flow Battery Sales Quantity by Country (2025-2030) & (MWh)

Table 85. South America Flow Battery Consumption Value by Country (2019-2024) & (USD Million)

Table 86. South America Flow Battery Consumption Value by Country (2025-2030) & (USD Million)

Table 87. Middle East & Africa Flow Battery Sales Quantity by Type (2019-2024) & (MWh)

Table 88. Middle East & Africa Flow Battery Sales Quantity by Type (2025-2030) & (MWh)

Table 89. Middle East & Africa Flow Battery Sales Quantity by Application (2019-2024) & (MWh)

Table 90. Middle East & Africa Flow Battery Sales Quantity by Application (2025-2030) & (MWh)

Table 91. Middle East & Africa Flow Battery Sales Quantity by Region (2019-2024) & (MWh)

Table 92. Middle East & Africa Flow Battery Sales Quantity by Region (2025-2030) & (MWh)

Table 93. Middle East & Africa Flow Battery Consumption Value by Region (2019-2024) & (USD Million)

Table 94. Middle East & Africa Flow Battery Consumption Value by Region (2025-2030) & (USD Million)

Table 95. Flow Battery Raw Material

Table 96. Key Manufacturers of Flow Battery Raw Materials

Table 97. Flow Battery Typical Distributors

Table 98. Flow Battery Typical Customers

List Of Figures

LIST OF FIGURES

Figure 1. Flow Battery Picture

Figure 2. Global Flow Battery Consumption Value by Type, (USD Million), 2019 & 2023 & 2030

Figure 3. Global Flow Battery Consumption Value Market Share by Type in 2023

Figure 4. Vanadium Flow Battery Examples

Figure 5. Hybrid Flow Battery Examples

Figure 6. Global Flow Battery Consumption Value by Application, (USD Million), 2019 & 2023 & 2030

Figure 7. Global Flow Battery Consumption Value Market Share by Application in 2023

Figure 8. Utility Facilities Examples

Figure 9. Renewable Energy Integration Examples

Figure 10. Others Examples

Figure 11. Global Flow Battery Consumption Value, (USD Million): 2019 & 2023 & 2030

Figure 12. Global Flow Battery Consumption Value and Forecast (2019-2030) & (USD Million)

Figure 13. Global Flow Battery Sales Quantity (2019-2030) & (MWh)

Figure 14. Global Flow Battery Average Price (2019-2030) & (US\$/KWh)

Figure 15. Global Flow Battery Sales Quantity Market Share by Manufacturer in 2023

Figure 16. Global Flow Battery Consumption Value Market Share by Manufacturer in 2023

Figure 17. Producer Shipments of Flow Battery by Manufacturer Sales Quantity (\$MM) and Market Share (%): 2023

Figure 18. Top 3 Flow Battery Manufacturer (Consumption Value) Market Share in 2023

Figure 19. Top 6 Flow Battery Manufacturer (Consumption Value) Market Share in 2023

Figure 20. Global Flow Battery Sales Quantity Market Share by Region (2019-2030)

Figure 21. Global Flow Battery Consumption Value Market Share by Region (2019-2030)

Figure 22. North America Flow Battery Consumption Value (2019-2030) & (USD Million)

Figure 23. Europe Flow Battery Consumption Value (2019-2030) & (USD Million)

Figure 24. Asia-Pacific Flow Battery Consumption Value (2019-2030) & (USD Million)

Figure 25. South America Flow Battery Consumption Value (2019-2030) & (USD Million)

Figure 26. Middle East & Africa Flow Battery Consumption Value (2019-2030) & (USD Million)

Figure 27. Global Flow Battery Sales Quantity Market Share by Type (2019-2030)

- Figure 28. Global Flow Battery Consumption Value Market Share by Type (2019-2030)
- Figure 29. Global Flow Battery Average Price by Type (2019-2030) & (US\$/KWh)
- Figure 30. Global Flow Battery Sales Quantity Market Share by Application (2019-2030)
- Figure 31. Global Flow Battery Consumption Value Market Share by Application (2019-2030)
- Figure 32. Global Flow Battery Average Price by Application (2019-2030) & (US\$/KWh)
- Figure 33. North America Flow Battery Sales Quantity Market Share by Type (2019-2030)
- Figure 34. North America Flow Battery Sales Quantity Market Share by Application (2019-2030)
- Figure 35. North America Flow Battery Sales Quantity Market Share by Country (2019-2030)
- Figure 36. North America Flow Battery Consumption Value Market Share by Country (2019-2030)
- Figure 37. United States Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 38. Canada Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 39. Mexico Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 40. Europe Flow Battery Sales Quantity Market Share by Type (2019-2030)
- Figure 41. Europe Flow Battery Sales Quantity Market Share by Application (2019-2030)
- Figure 42. Europe Flow Battery Sales Quantity Market Share by Country (2019-2030)
- Figure 43. Europe Flow Battery Consumption Value Market Share by Country (2019-2030)
- Figure 44. Germany Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 45. France Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 46. United Kingdom Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 47. Russia Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 48. Italy Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 49. Asia-Pacific Flow Battery Sales Quantity Market Share by Type (2019-2030)
- Figure 50. Asia-Pacific Flow Battery Sales Quantity Market Share by Application (2019-2030)

- Figure 51. Asia-Pacific Flow Battery Sales Quantity Market Share by Region (2019-2030)
- Figure 52. Asia-Pacific Flow Battery Consumption Value Market Share by Region (2019-2030)
- Figure 53. China Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 54. Japan Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 55. Korea Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 56. India Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 57. Southeast Asia Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 58. Australia Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 59. South America Flow Battery Sales Quantity Market Share by Type (2019-2030)
- Figure 60. South America Flow Battery Sales Quantity Market Share by Application (2019-2030)
- Figure 61. South America Flow Battery Sales Quantity Market Share by Country (2019-2030)
- Figure 62. South America Flow Battery Consumption Value Market Share by Country (2019-2030)
- Figure 63. Brazil Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 64. Argentina Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 65. Middle East & Africa Flow Battery Sales Quantity Market Share by Type (2019-2030)
- Figure 66. Middle East & Africa Flow Battery Sales Quantity Market Share by Application (2019-2030)
- Figure 67. Middle East & Africa Flow Battery Sales Quantity Market Share by Region (2019-2030)
- Figure 68. Middle East & Africa Flow Battery Consumption Value Market Share by Region (2019-2030)
- Figure 69. Turkey Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)
- Figure 70. Egypt Flow Battery Consumption Value and Growth Rate (2019-2030) &

(USD Million)

Figure 71. Saudi Arabia Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)

Figure 72. South Africa Flow Battery Consumption Value and Growth Rate (2019-2030) & (USD Million)

Figure 73. Flow Battery Market Drivers

Figure 74. Flow Battery Market Restraints

Figure 75. Flow Battery Market Trends

Figure 76. Porters Five Forces Analysis

Figure 77. Manufacturing Cost Structure Analysis of Flow Battery in 2023

Figure 78. Manufacturing Process Analysis of Flow Battery

Figure 79. Flow Battery Industrial Chain

Figure 80. Sales Quantity Channel: Direct to End-User vs Distributors

Figure 81. Direct Channel Pros & Cons

Figure 82. Indirect Channel Pros & Cons

Figure 83. Methodology

Figure 84. Research Process and Data Source

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