

Grid-Scale Battery Market based on By Product (Lead Acid, Li-ion) By Application (Renewable Integration, Ancillary Services), Regional Outlook– Global Forecast up to 2032

https://marketpublishers.com/r/G95DA1F664A9EN.html

Date: April 2024

Pages: 113

Price: US\$ 4,500.00 (Single User License)

ID: G95DA1F664A9EN

Abstracts

Utilizing a wide range of secondary sources, directories, and databases—including D&B, Factiva, and Bloomberg Businessweek—this research project aims to locate and gather data relevant to a technical, commercial, and market-oriented analysis of the market. The majority of primary sources are industry experts from the core and allied industries, preferred suppliers, manufacturers, distributors, service providers, technology developers, certification and standards bodies for businesses, and organizations involved in every step of the value chain in this industry.

The growing integration of renewable energy sources with battery storage is driving the grid scale battery market's compound annual growth rate. Grid-scale battery storage is another way that sustainable energy can be produced. Battery storage is one of various technology options that can improve power system flexibility and enable high renewable energy integration. Research and practical experience have demonstrated that substantial volumes of renewable energy from Variable Renewable Energy (VRE) sources may be safely and reliably integrated into interconnected energy networks without the need for additional energy storage facilities.

Additionally, demand for products is being driven by the need to increase grid stability, reliability, and resilience by incorporating energy supplied from renewable sources like solar photovoltaic and wind power. The market is growing as a feasible option to boost system flexibility because of its exceptional capacity to keep, absorb, and re-inject electricity. Global grid scale battery income is also probably driven by expanding consumer awareness of efficient energy use and a growing desire to save extra energy



generated at the grid location with efficient load control.

Research Methodology:

After secondary research provided a fundamental understanding of the worldwide Grid-Scale Battery Market scenario, extensive primary research was carried out. A number of primary interviews were carried out with industry experts from the supply and demand sides, including C- and D-level executives, product managers, and marketing and sales managers of major manufacturers, distributors, and channel partners from tier 1 and tier 2 companies offering Grid-Scale Battery Market, as well as personnel from academia, research, and CROs. These interviews were conducted across five major regions: North America, Europe, Asia Pacific, and the Rest of the World (Latin America & the Middle East & Africa). Participants from the supply-side and demand-side participated in about 70% and 30% of the primary interviews, respectively. Through the use of questionnaires, emails, online surveys, in-person interviews, and phone interviews, this main data was gathered. The primary participants share is given below:

The segmentation coverage of the study is provided below.

Grid-Scale Battery Market based on Type:

Lithium-Ion

Lead Acid

Others

Grid-Scale Battery Market based on Application:

Renewable Integration

Ancillary Services

Others

Grid-Scale Battery Market based on Geography:



North America	
US	
Canada	
Europe	
Germany	
UK	
France	
Italy	
Spain	
Rest of Europe (RoE)	
Asia Pacific (APAC)	
China	
Japan	
India	
Australia	
South Korea	
Rest of Asia Pacific (RoAPAC)	
Latin America (LATAM)	
Brazil	
Argentina	



Rest of South America

Middle East and Africa (MEA)

UAE

Turkey

Saudi Arabia

South Africa

Rest of Middle East & Africa

these goods, and this trend is expected to continue.

With a market share of over 84% in 2019, Li-ion batteries are expected to grow at the quickest rate during the forecast period. Because of advancements in technology and increased manufacturing capacity, these batteries are used extensively in a variety of applications. In the past six years, there has been a significant decrease in the cost of

Lithium-ion batteries are also lightweight and take up less room. In addition, they have a faster charging time and greater durability than other items on the market. Over the course of the projection period, the lead-acid segment is expected to grow at a moderate CAGR. It is possible to recycle and repurpose lead-acid batteries in the production of new batteries. Over the future years, their demand is anticipated to soar due to these favorable qualities.

With over 63% of the global market share in 2019, ancillary services led the way and are expected to rise significantly over the next several years. It is anticipated that grid-scale battery storage would become increasingly dependent on clean energy sources like solar and wind power. In order to reduce the unpredictability and fluctuation of the wind power projects on a grid-scale, the operator employs battery storage devices that are sized for the grid to provide ancillary services.

A new auxiliary service called Enhanced Frequency reaction was unveiled in 2016. It requires storage batteries to meet its increased reaction time. In some countries, developers of big wind farms are required to comply with frequency regulation rules in



order to reduce the need for increasing rotational reserve from conventional power plants. Large power plants are required to adhere to certain constraints in goods that are frequency regulated in countries that operate on improved frequency response (ancillary service) marketplaces.

Over the course of the forecast period, Asia Pacific is expected to have the greatest CAGR, coming in at 27.0%. China's revenue share was the highest in the area because of the government's continuous efforts and investments to support industrial growth.

The most developed and competitive geographic market is North America. The US market is now led by the lithium-ion battery category. These batteries' prices have dropped by more than 70% in the last few years due to advancements in technology and increased production capacity, and more price declines are anticipated.

Market players are placing a strong emphasis on R&D to create cutting-edge goods and obtain a competitive advantage. Innovative products have been developed in the field of battery manufacture and storage thanks to the efforts of well-established companies. Additionally, integration by businesses like Samsung SDI, GE, and ABB enables high-productivity, low-cost manufacturing. One of the main strategies being used by market participants is expanding the product line to increase base into new application markets.

This report illustrates the most vital attributes of the Grid-Scale Battery Market, which are driving and providing opportunities.

This research gives an in-depth analysis of the Grid-Scale Battery Market growth on the basis of several segments in the market.

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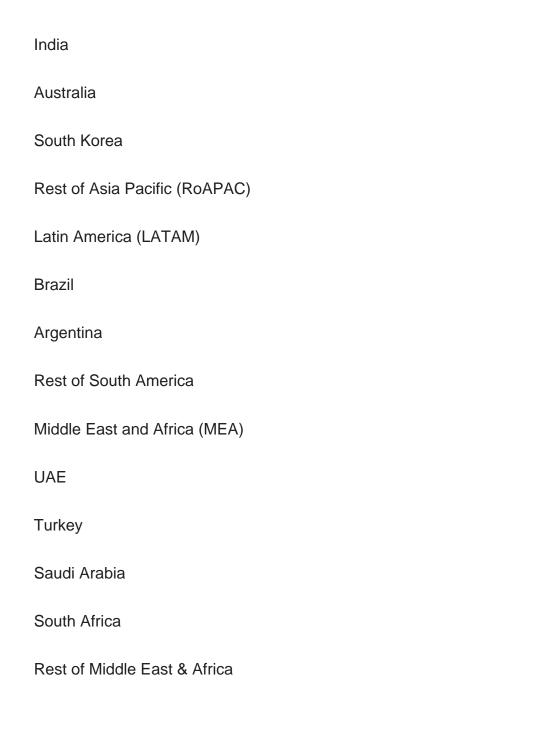
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Others



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Ancillary Services		
Others		
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Europe		
Germany		
UK		
France		
Italy		
Spain		
Rest of Europe (RoE)		
Asia Pacific (APAC)		
China		
Japan		





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This report illustrates the most vital attributes of the Grid-Scale Battery Market, which are driving and providing opportunities.

This research gives an in-depth analysis of the Grid-Scale Battery Market growth on the basis of several segments in the market.



This report presents the predictions of the past and present trends of the Grid-Scale Battery Market.

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Contents

1. EXECUTIVE SUMMARY

2. INDUSTRY OUTLOOK

- 2.1. Industry Overview
- 2.2. Industry Trends

3. MARKET SNAPSHOT

- 3.1. Market Definition
- 3.2. Market Outlook
- 3.2.1. Porter Five Forces
- 3.3. Related Markets

4. MARKET CHARACTERISTICS

- 4.1. Market Overview
- 4.2. Market Segmentation
- 4.3. Market Dynamics
 - 4.3.1. Drivers
 - 4.3.2. Restraints
 - 4.3.3. Opportunities
- 4.4. DRO Impact Analysis

5. TYPE: MARKET SIZE & ANALYSIS

- 5.1. Overview
- 5.2. Lithium-Ion
- 5.3. Lead Acid
- 5.4. Others

6. APPLICATION: MARKET SIZE & ANALYSIS

- 6.1. Overview
- 6.2. Renewable Integration
- 6.3. Ancillary Services
- 6.4. Others



7. GEOGRAPHY: MARKET SIZE & ANALYSIS

- 7.1. Overview
- 7.2. North America (U.S., Mexico, Canada)
- 7.3. Europe (France, Germany, UK, Italy, Netherlands, Spain, Russia, Rest of Europe)
- 7.4. Asia Pacific (Japan, China, India, Australia, South East Asia, Rest of APAC)
- 7.5. Latin America (Brazil, Argentina)
- 7.6. Middle East & Africa (Saudi Arabia, UAE, South Africa, Rest of Middle East and Africa)

8. COMPETITIVE LANDSCAPE

- 8.1. Competitor Comparison Analysis
- 8.2. Market Developments
 - 8.2.1. Mergers and Acquisitions, Legal, Awards, Partnerships
 - 8.2.2. Product Launches and execution

9. VENDOR PROFILES

- 9.1. NGK INSULATORS LTD.
 - 9.1.1. Overview
 - 9.1.2. Financial Overview
 - 9.1.3. Product Offerings
 - 9.1.4. Developments
 - 9.1.5. Business Strategy
- 9.2. BYD CO. LTD.
 - 9.2.1. Overview
 - 9.2.2. Financial Overview
 - 9.2.3. Product Offerings
 - 9.2.4. Developments
 - 9.2.5. Business Strategy
- 9.3. GENERAL ELECTRIC
 - 9.3.1. Overview
 - 9.3.2. Financial Overview
 - 9.3.3. Product Offerings
 - 9.3.4. Developments
 - 9.3.5. Business Strategy
- 9.4. GS YUASA CORP.



- 9.4.1. Overview
- 9.4.2. Financial Overview
- 9.4.3. Product Offerings
- 9.4.4. Developments
- 9.4.5. Business Strategy
- 9.5. LG CHEM LTD.
 - 9.5.1. Overview
 - 9.5.2. Financial Overview
 - 9.5.3. Product Offerings
 - 9.5.4. Developments
 - 9.5.5. Business Strategy
- 9.6. MITSUBISHI ELECTRIC CORP.
 - 9.6.1. Overview
 - 9.6.2. Financial Overview
 - 9.6.3. Product Offerings
 - 9.6.4. Developments
 - 9.6.5. Business Strategy
- 9.7. PANASONIC CORP.
 - 9.7.1. Overview
 - 9.7.2. Financial Overview
 - 9.7.3. Product Offerings
 - 9.7.4. Developments
 - 9.7.5. Business Strategy
- 9.8. ABB GROUP
 - 9.8.1. Overview
 - 9.8.2. Financial Overview
 - 9.8.3. Product Offerings
 - 9.8.4. Developments
 - 9.8.5. Business Strategy
- 9.9. HITACHI LTD.
 - 9.9.1. Overview
 - 9.9.2. Financial Overview
 - 9.9.3. Product Offerings
 - 9.9.4. Developments
 - 9.9.5. Business Strategy
- 9.10. FLUENCE ENERGY
 - 9.10.1. Overview
 - 9.10.2. Financial Overview
 - 9.10.3. Product Offerings



- 9.10.4. Developments
- 9.10.5. Business Strategy

10. ANALYST OPINION

11. ANNEXURE

- 11.1. Report Scope
- 11.2. Market Definitions
- 11.3. Research Methodology
- 11.3.1. Data Collation and In-house Estimation
- 11.3.2. Market Triangulation
- 11.3.3. Forecasting
- 11.4. Report Assumptions
- 11.5. Declarations
- 11.6. Stakeholders

Tables

TABLE 1. GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 2. GRID-SCALE BATTERY MARKET VALUE FOR LITHIUM-ION, BY GEOGRAPHY, 2021-2030 (USD BILLION)

TABLE 3. GRID-SCALE BATTERY MARKET VALUE FOR LEAD ACID, BY GEOGRAPHY, 2021-2030 (USD BILLION)

TABLE 4. GRID-SCALE BATTERY MARKET VALUE FOR OTHERS, BY GEOGRAPHY, 2021-2030 (USD BILLION)

TABLE 5. GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 6. GRID-SCALE BATTERY MARKET VALUE FOR RENEWABLE INTEGRATION, BY GEOGRAPHY, 2021-2030 (USD BILLION)

TABLE 7. GRID-SCALE BATTERY MARKET VALUE FOR ANCILLARY SERVICES, BY GEOGRAPHY, 2021-2030 (USD BILLION)

TABLE 8. GRID-SCALE BATTERY MARKET VALUE FOR OTHERS, BY GEOGRAPHY, 2021-2030 (USD BILLION)

TABLE 9. NORTH AMERICA GRID-SCALE BATTERY MARKET VALUE, BY COUNTRY, 2021-2030 (USD BILLION)

TABLE 10. NORTH AMERICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 11. NORTH AMERICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)



- TABLE 12. U.S GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 13. U.S GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 14. CANADA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 15. CANADA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 16. MEXICO GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 17. MEXICO GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 18. EUROPE GRID-SCALE BATTERY MARKET VALUE, BY COUNTRY, 2021-2030 (USD BILLION)
- TABLE 19. EUROPE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 20. EUROPE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 21. GERMANY GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 22. GERMANY GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 23. U.K GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 24. U.K GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 25. FRANCE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 26. FRANCE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 27. ITALY GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 28. ITALY GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 29. SPAIN GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)
- TABLE 30. SPAIN GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)
- TABLE 31. ROE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030



(USD BILLION)

TABLE 32. ROE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 33. ASIA PACIFIC GRID-SCALE BATTERY MARKET VALUE, BY COUNTRY, 2021-2030 (USD BILLION)

TABLE 34. ASIA PACIFIC GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 35. ASIA PACIFIC GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 36. CHINA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 37. CHINA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 38. INDIA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 39. INDIA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 40. JAPAN GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 41. JAPAN GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 42. REST OF APAC GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 43. REST OF APAC GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 44. LATIN AMERICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 45. LATIN AMERICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 46. BRAZIL GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 47. BRAZIL GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 48. ARGENTINA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 49. ARGENTINA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 50. MIDDLE EAST AND AFRICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)



TABLE 51. MIDDLE EAST AND AFRICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 52. SAUDI ARABIA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 53. SAUDI ARABIA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 54. UAE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 55. UAE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 56. REST OF MIDDLE EAST AND AFRICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

TABLE 57. REST OF MIDDLE EAST AND AFRICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

TABLE 58. NGK INSULATORS LTD.: FINANCIALS

TABLE 59. NGK INSULATORS LTD.: PRODUCTS & SERVICES

TABLE 60. NGK INSULATORS LTD.: RECENT DEVELOPMENTS

TABLE 61. BYD CO. LTD.: FINANCIALS

TABLE 62. BYD CO. LTD.: PRODUCTS & SERVICES

TABLE 63. BYD CO. LTD.: RECENT DEVELOPMENTS

TABLE 64. GENERAL ELECTRIC: FINANCIALS

TABLE 65. GENERAL ELECTRIC: PRODUCTS & SERVICES

TABLE 66. GENERAL ELECTRIC: RECENT DEVELOPMENTS

TABLE 67. GS YUASA CORP.: FINANCIALS

TABLE 68. GS YUASA CORP.: PRODUCTS & SERVICES

TABLE 69. GS YUASA CORP.: RECENT DEVELOPMENTS

TABLE 70. LG CHEM LTD.: FINANCIALS

TABLE 71. LG CHEM LTD.: PRODUCTS & SERVICES

TABLE 72. LG CHEM LTD.: RECENT DEVELOPMENTS

TABLE 73. MITSUBISHI ELECTRIC CORP.: FINANCIALS

TABLE 74. MITSUBISHI ELECTRIC CORP.: PRODUCTS & SERVICES

TABLE 75. MITSUBISHI ELECTRIC CORP.: RECENT DEVELOPMENTS

TABLE 76. PANASONIC CORP.: FINANCIALS

TABLE 77. PANASONIC CORP.: PRODUCTS & SERVICES

TABLE 78. PANASONIC CORP.: DEVELOPMENTS

TABLE 79. ABB GROUP: FINANCIALS

TABLE 80. ABB GROUP: PRODUCTS & SERVICES

TABLE 81. ABB GROUP: RECENT DEVELOPMENTS

TABLE 82. HITACHI LTD.: FINANCIALS



TABLE 83. HITACHI LTD.: PRODUCTS & SERVICES

TABLE 84. HITACHI LTD.: RECENT DEVELOPMENTS

TABLE 85. FLUENCE ENERGY: FINANCIALS

TABLE 86. FLUENCE ENERGY: PRODUCTS & SERVICES

TABLE 87. FLUENCE ENERGY: RECENT DEVELOPMENTS

Charts

CHART. 1. GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 2. GRID-SCALE BATTERY MARKET VALUE FOR LITHIUM-ION, BY GEOGRAPHY, 2021-2030 (USD BILLION)

CHART. 3. GRID-SCALE BATTERY MARKET VALUE FOR LEAD ACID, BY

GEOGRAPHY, 2021-2030 (USD BILLION)

CHART. 4. GRID-SCALE BATTERY MARKET VALUE FOR OTHERS, BY

GEOGRAPHY, 2021-2030 (USD BILLION)

CHART. 5. GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 6. GRID-SCALE BATTERY MARKET VALUE FOR RENEWABLE INTEGRATION, BY GEOGRAPHY, 2021-2030 (USD BILLION)

CHART. 7. GRID-SCALE BATTERY MARKET VALUE FOR ANCILLARY SERVICES, BY GEOGRAPHY, 2021-2030 (USD BILLION)

CHART. 8. GRID-SCALE BATTERY MARKET VALUE FOR OTHERS, BY GEOGRAPHY, 2021-2030 (USD BILLION)

CHART. 9. NORTH AMERICA GRID-SCALE BATTERY MARKET VALUE, BY COUNTRY, 2021-2030 (USD BILLION)

CHART. 10. NORTH AMERICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 11. NORTH AMERICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 12. U.S GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 13. U.S GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 14. CANADA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 15. CANADA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 16. MEXICO GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 17. MEXICO GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION,



2021-2030 (USD BILLION)

CHART. 18. EUROPE GRID-SCALE BATTERY MARKET VALUE, BY COUNTRY, 2021-2030 (USD BILLION)

CHART. 19. EUROPE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 20. EUROPE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 21. GERMANY GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 22. GERMANY GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 23. U.K GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 24. U.K GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 25. FRANCE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 26. FRANCE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 27. ITALY GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 28. ITALY GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 29. SPAIN GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 30. SPAIN GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 31. ROE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 32. ROE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 33. ASIA PACIFIC GRID-SCALE BATTERY MARKET VALUE, BY COUNTRY, 2021-2030 (USD BILLION)

CHART. 34. ASIA PACIFIC GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 35. ASIA PACIFIC GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 36. CHINA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)



CHART. 37. CHINA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 38. INDIA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 39. INDIA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 40. JAPAN GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 41. JAPAN GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 42. REST OF APAC GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 43. REST OF APAC GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 44. LATIN AMERICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 45. LATIN AMERICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 46. BRAZIL GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 47. BRAZIL GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 48. ARGENTINA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 49. ARGENTINA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 50. MIDDLE EAST AND AFRICA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 51. MIDDLE EAST AND AFRICA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 52. SAUDI ARABIA GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 53. SAUDI ARABIA GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 54. UAE GRID-SCALE BATTERY MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART. 55. UAE GRID-SCALE BATTERY MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 56. REST OF MIDDLE EAST AND AFRICA GRID-SCALE BATTERY



MARKET VALUE, BY TYPE, 2021-2030 (USD BILLION)

CHART, 57, REST OF MIDDLE EAST AND AFRICA GRID-SCALE BATTERY

MARKET VALUE, BY APPLICATION, 2021-2030 (USD BILLION)

CHART. 58. NGK INSULATORS LTD.: FINANCIALS

CHART. 59. NGK INSULATORS LTD.: PRODUCTS & SERVICES

CHART. 60. NGK INSULATORS LTD.: RECENT DEVELOPMENTS

CHART, 61, BYD CO, LTD.: FINANCIALS

CHART, 62, BYD CO. LTD.: PRODUCTS & SERVICES

CHART, 63, BYD CO. LTD.: RECENT DEVELOPMENTS

CHART, 64. GENERAL ELECTRIC: FINANCIALS

CHART. 65. GENERAL ELECTRIC: PRODUCTS & SERVICES

CHART. 66. GENERAL ELECTRIC: RECENT DEVELOPMENTS

CHART, 67, GS YUASA CORP.: FINANCIALS

CHART, 68, GS YUASA CORP.: PRODUCTS & SERVICES

CHART. 69. GS YUASA CORP.: RECENT DEVELOPMENTS

CHART. 70. LG CHEM LTD.: FINANCIALS

CHART, 71, LG CHEM LTD.: PRODUCTS & SERVICES

CHART. 72. LG CHEM LTD.: RECENT DEVELOPMENTS

CHART. 73. MITSUBISHI ELECTRIC CORP.: FINANCIALS

CHART. 74. MITSUBISHI ELECTRIC CORP.: PRODUCTS & SERVICES

CHART. 75. MITSUBISHI ELECTRIC CORP.: RECENT DEVELOPMENTS

CHART. 76. PANASONIC CORP.: FINANCIALS

CHART, 77, PANASONIC CORP.: PRODUCTS & SERVICES

CHART. 78. PANASONIC CORP.: DEVELOPMENTS

CHART. 79. ABB GROUP: FINANCIALS

CHART, 80. ABB GROUP: PRODUCTS & SERVICES

CHART. 81. ABB GROUP: RECENT DEVELOPMENTS

CHART. 82. HITACHI LTD.: FINANCIALS

CHART. 83. HITACHI LTD.: PRODUCTS & SERVICES

CHART. 84. HITACHI LTD.: RECENT DEVELOPMENTS

CHART. 85. FLUENCE ENERGY: FINANCIALS

CHART, 86, FLUENCE ENERGY: PRODUCTS & SERVICES

CHART. 87. FLUENCE ENERGY: RECENT DEVELOPMENTS



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