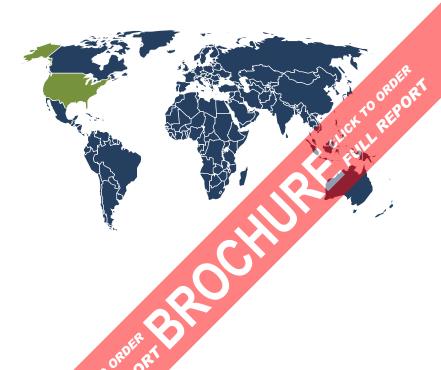




Freedonia Focus Reports
US Collection

Batteries: United States

June 2018



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About This Report

Scope & Method

This report forecasts to 2022 US battery demand and shipments in nominal US dollars at the manufacturer level. Total demand is segmented by product in terms of:

- secondary lead-acid
- secondary lithium-ion
- other secondary batteries such as nickel-based, sodium-sulfur, and sodiumnickel chloride
- primary alkaline
- other primary batteries such as lithium, zinc-carbon, and zinc-air

Total demand is also segmented by market as follows:

- automotive
- consumer
- industrial and other markets such as grid storage systems, uninterruptible power supply systems, and telecom backup systems

Total shipments are segmented by product:

- secondary
- primary

To illustrate historical trends, total demand is provided in annual series from 2007 to 2017; shipments and the various segments are reported at five-year intervals for 2007, 2012, and 2017.

This report quantifies trends in various measures of growth and volatility. Growth (or decline) expressed as an average annual growth rate (AAGR) is the least squares growth rate, which takes into account all available datapoints over a period. The volatility of datapoints around a least squares growth trend over time is expressed via the coefficient of determination, or r^2 . The most stable data series relative to the trend carries an r^2 value of 1.0; the most volatile – 0.0. Growth calculated as a compound annual growth rate (CAGR) employs, by definition, only the first and last datapoints over a period. The CAGR is used to describe forecast growth, defined as the expected trend beginning in the base year and ending in the forecast year. Readers are encouraged to consider historical volatility when assessing particular annual values along the forecast trend, including in the forecast year.

Key macroeconomic indicators are also provided with quantified trends. Other various topics, including profiles of pertinent leading suppliers, are covered in this report. A full outline of report items by page is available in the Table of Contents.

Sources

Batteries: United States (FF45011) is based on *Global Batteries*, a comprehensive industry study published by The Freedonia Group. Reported findings represent the synthesis and analysis of data from various primary, secondary, macroeconomic, and demographic sources including:

- firms participating in the industry, and their suppliers and customers
- government/public agencies
- national, regional, and international non-governmental organizations
- trade associations and their publications
- the business and trade press
- indicator forecasts by The Freedonia Group
- the findings of other reports and studies by The Freedonia Group

Specific sources and additional resources are listed in the Resources section of this publication for reference and to facilitate further research.

Industry Codes

Table 6 NAICS & SIC Codes Related to Batteries				
NAICS/SCIA	N 2007	SIC		
North Ame	rican Industry Classification System	Standard I	Standard Industrial Classification	
335911	Storage Battery Manufacturing	3691	Storage Batteries	
335912	Primary Battery Manufacturing	3692	Primary Batteries	

Source: US Census Bureau

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Resources

The Freedonia Group

Global Batteries, June 2018

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Power Tools in the US, June 2018

Global Hybrid & Electric Vehicles, May 2018

Recreational Vehicles in the US, April 2018

Solar Roofing in the US, April 2018

Global Power Lawn & Garden Equipment, December 2017

Global Power Tools Market, May 2017

Power Lawn & Garden Equipment Market in the US, February 2017

Battery Markets in the US, December 2016

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Batteries International

Battery Power

Energy Storage Journal

Agencies & Associations

Battery Council International

Energy Storage Association

Rechargeable Battery Association

United States Census Bureau

United States Department of Transportation

United States Geological Survey

United States International Trade Commission