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# Hybrid & Electric Vehicles: United States

May 2018



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# About This Report

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## Scope & Method

This report forecasts US hybrid and electric vehicle (HEV) demand and production in units to 2022 and 2027. Total demand is segmented by product in terms of:

- full hybrid
- plug-in hybrid
- battery electric
- fuel cell electric

Total demand is also segmented by market as follows:

- light vehicles
- medium- and heavy-duty vehicles

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

Excluded from the scope of this report are micro hybrids, in which vehicle propulsion is generated from an internal combustion engine but some technological features found in hybrid vehicles – specifically start-stop systems – are used to improve fuel economy. Because these vehicles do not use an electric motor for propulsion, they fall outside the scope of this report.

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

*Hybrid & Electric Vehicles: United States* (FF85023) is based on [Global Hybrid & Electric Vehicles](#), 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 7 | Industry Codes Related to Hybrid & Electric Vehicles

NAICS/SCIAN 2007		SIC	
North American Industry Classification System		Standard Industrial Classification	
336111	Automobile Manufacturing	3711	Motor Vehicles and Car Bodies
336112	Light Truck and Utility Vehicle Manufacturing		
336120	Heavy Duty Truck Manufacturing		

Source: US Census Bureau

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## Resources

### The Freedonia Group

*Global Hybrid & Electric Vehicles*, May 2018

### Freedonia Industry Studies

*Global Batteries*, June 2018

*Global Motorcycles*, May 2018

*Recreational Vehicles in the US*, April 2018

*Global Automotive Lubricants*, December 2017

*North America Automotive Aftermarket*, November 2017

*Automotive Aftermarket for Electronic Components in North America*, September 2017

*Global Bus Market*, May 2017

*Automotive Aftermarket for Powertrain Components in North America*, March 2017

*Global Diesel Engines Market*, January 2017

*Battery Markets in the US*, December 2016

*Single-Use (Primary) Batteries in the US*, November 2016

*Rechargeable (Secondary) Batteries*, September 2016

### Freedonia Focus Reports

*Automotive Repair & Maintenance Services: United States*

*Batteries: United States*

*Buses: United States*

*Diesel Engines: United States*

*Energy: United States*

*Medium- & Heavy-Duty Trucks & Buses: United States*

*Motorcycles: United States*

*Motor Vehicles: United States*

*Recreational Vehicles: United States*

*Transport Equipment: United States*

### Freedonia Custom Research

### Trade Publications

*Automotive Industries*

*Automotive News*

*CleanTechnica*

*EV World*

*Green Car Congress*

*Green Car Reports*

*HybridCars.com*

*Ward's AutoWorld*

### **Agencies & Associations**

Alliance of Automobile Manufacturers  
American Public Transportation Association  
California Fuel Cell Partnership  
Electric Drive Transportation Association  
International Council on Clean Transportation  
International Energy Agency  
National Automobile Dealers Association  
National Highway Traffic Safety Administration  
United States Census Bureau  
United States Department of Energy  
United States Department of Transportation  
United States Energy Information Administration  
United States Environmental Protection Agency  
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