

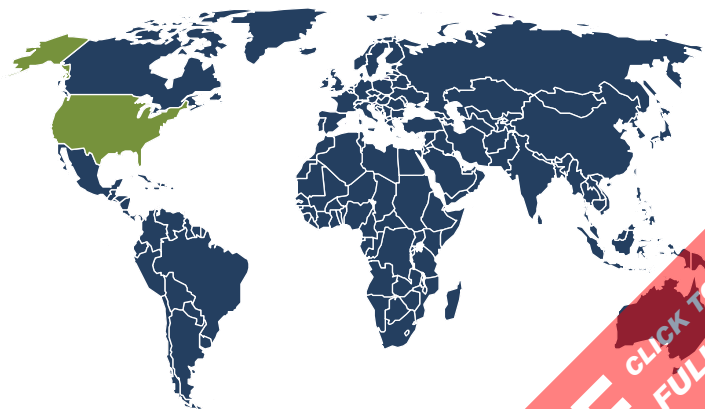


Freedonia Focus Reports
US Collection

Hydrogen:

United States

June 2014



Highlights

Industry Overview

Market Size and Trends | Market Segmentation | Source Segmentation
Hydrogen Energy | Environmental and Regulatory Issues | Global Overview

Demand Forecasts

Market Environment | Market Forecasts | Source Forecasts

Industry Structure

Industry Composition and Characteristics | Additional Companies Cited

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ABOUT THIS REPORT

Scope & Method

This report forecasts US demand for hydrogen in cubic meters and US dollars at the manufacturers' level to 2018. Total demand in cubic meters is segmented by market as follows:

- hydrocracking
- hydrotreating
- other petroleum refining
- chemical manufacturing
- other markets such as metal processing, glass manufacturing, and fuel cell power generation.

Total demand in cubic meters is also segmented by source in terms of:

- captive production
- merchant sales.

Throughout this report, the concepts of value and price are distinct, though both are used to evaluate the hydrogen market in terms of US dollars. A "value" is assigned to the captive or "on-purpose" consumption of hydrogen, a "price" to a merchant transaction. Merchant gas consumption is evaluated at the suppliers' level – taking into account costs of production but excluding gross margins.

Hydrogen consumed in the form of synthesis gas for the production of ammonia (for fertilizer) and methanol is excluded from the scope of this report. Hydrogen in this form is produced and immediately consumed in an integrated process, and therefore has no effect on the merchant market. In addition, byproduct hydrogen is only included when separated for further use. Hydrogen flared, burned as fuel gas, or discharged into the atmosphere as waste is excluded.

To illustrate historical trends, total demand in cubic meters is provided in an annual series from 2003 to 2013; total demand in US dollars and the various segments are reported at five-year intervals for 2008 and 2013. Forecasts are developed via the identification and analysis of pertinent statistical relationships and other historical trends/events as well as their expected progression/impact over the forecast period. Changes in quantities between reported years of a given total or segment are typically provided in terms of five-year compound annual growth rates (CAGRs). For the sake of brevity, forecasts are generally stated in smoothed CAGR-based descriptions to the forecast year, such as "demand is projected to rise 3.2% annually through 2018". The result of any particular year over that period, however, may exhibit volatility and depart from a smoothed, long-term trend, as historical data typically illustrate.

Key macroeconomic indicators are also provided at five-year intervals with CAGRs for the years corresponding to other reported figures. 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

Hydrogen: United States is based on [World Hydrogen](#), a comprehensive industry study published by The Freedonia Group in June 2014. 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
- The Freedonia Group Consensus Forecasts dated December 2013 and January 2014
- the findings of other industry 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

The topic of this report is related to the following industry codes:

NAICS/SCIAN 2007		SIC	
North American Industry Classification System		Standard Industry Codes	
325120	Industrial Gas Manufacturing	2813	Industrial Gases
325188	All Other Basic Inorganic Chemical Manufacturing	2819	Industrial Inorganic Chemicals, NEC
424690	Other Chemical and Allied Products Merchant Wholesalers	5169	Chemicals and Allied Products, NEC (merchant wholesalers)

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