

Freedonia Focus Reports
US Collection



Energy: United States

November 2017



CLICK TO ORDER
FULL REPORT

BROCHURE

CLICK TO ORDER
FULL REPORT

www.freedoniafocusreports.com

Table of Contents

| | |
|--|-----------|
| 1. Highlights | 3 |
| 2. Market Environment | 4 |
| Historical Trends | 4 |
| Key Economic Indicators | 6 |
| Trade | 7 |
| Environmental & Regulatory Factors | 8 |
| 3. Segmentation & Forecasts | 10 |
| Resources | 10 |
| Petroleum | 12 |
| Natural Gas | 14 |
| Coal | 16 |
| Renewables | 18 |
| Nuclear | 20 |
| Markets | 22 |
| Electric Power | 23 |
| Transport | 24 |
| Industrial | 25 |
| Residential | 26 |
| Commercial | 27 |
| 4. Industry Structure | 29 |
| Industry Characteristics | 29 |
| Market Leaders | 30 |
| Exxon Mobil Corporation | 30 |
| Peabody Energy Corporation | 31 |
| Valero Energy Corporation | 31 |
| 5. About This Report | 32 |
| Scope & Method | 32 |
| Sources | 33 |
| Industry Codes | 33 |
| Resources | 34 |

List of Tables & Figures

| | |
|--|----|
| Figure 1 Key Trends in US Energy Demand, 2016-2021 | 3 |
| Figure 2 US Energy Demand Trends, 2006-2016 | 4 |
| Figure 3 US Energy Production Trends, 2006-2016 | 5 |
| Table 1 Key Indicators for US Energy Demand; 2006, 2011, 2016, 2021 (2009US\$ bil) | 6 |
| Figure 4 US Energy Trade, 2006-2016 (quad Btu) | 7 |
| Table 2 US Energy Trade, 2006-2016 (quad Btu) | 7 |
| Figure 5 US Energy Demand by Resource; 2006-2016, 2021 (quad Btu) | 10 |
| Table 3 US Energy Demand by Resource; 2006-2016, 2021 (quad Btu) | 10 |
| Figure 6 US Energy Production by Resource; 2006-2016, 2021 (quad Btu) | 11 |
| Table 4 US Energy Production by Resource; 2006-2016, 2021 (quad Btu) | 11 |
| Figure 7 US Petroleum Demand by Market, 2016 (%) | 14 |
| Figure 8 US Natural Gas Demand by Market, 2016 (%) | 15 |
| Figure 9 US Coal Demand by Market, 2016 (%) | 17 |
| Figure 10 US Renewables Demand by Market, 2016 (%) | 19 |
| Figure 11 US Energy Demand by Product; 2006-2016, 2021 (%) | 21 |
| Figure 12 US Energy Demand by Market; 2006-2016, 2021 (quad Btu) | 22 |
| Table 5 US Energy Demand by Market; 2006-2016, 2021 (quad Btu) | 22 |
| Figure 13 US Electric Power Energy Demand by Resource, 2016 (%) | 23 |
| Figure 14 US Transport Energy Demand by Resource, 2016 (%) | 24 |
| Figure 15 US Industrial Energy Demand by Resource, 2016 (%) | 25 |
| Figure 16 US Residential Energy Demand by Resource, 2016 (%) | 26 |
| Figure 17 US Commercial Energy Demand by Resource, 2016 (%) | 27 |
| Figure 18 US Energy Demand by Market; 2006-2016, 2021 (%) | 28 |
| Table 6 Leading Suppliers to the US Energy Market by Resource | 30 |
| Table 7 Industry Codes Related to Energy | 33 |

About This Report

Scope & Method

This report forecasts US energy demand and production in British thermal units (Btu) to 2021. Total demand and production are segmented by resource in terms of:

- petroleum
- natural gas
- coal
- renewables
- nuclear.

For the purposes of this report, energy refers to primary energy. As defined by the US Energy Information Administration, primary energy is the form of energy first accounted for before any conversion to secondary or tertiary forms of energy. To recognize all primary energy consumed in the US, imports of secondary and tertiary forms of energy are included in primary energy demand. To avoid double-counting, market totals represent primary energy consumption only. For example, the electric power market represents the consumption of energy (eg, coal, natural gas) to produce electricity, but retail sales of that electricity to the other markets (eg, industrial, residential) are excluded. Petroleum and natural gas consumed as feedstock for chemical production are included in demand and production figures.

Total demand is also segmented by market as follows:

- electric power
- transport
- industrial
- residential
- commercial.

To illustrate historical trends, total demand, total production, the various segments, and trade are provided in annual series from 2006 to 2016.

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

About This Report

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

Energy: United States (FF45043) represents 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 Energy

| NAICS/SCIAN 2007 | | SIC | |
|---|--|-------------------------|---|
| North American Industry Classification System | | Standard Industry Codes | |
| 2111 | Oil and Gas Extraction | 122 | Bituminous Coal and Lignite Mining |
| 2121 | Coal Mining | 123 | Anthracite Mining |
| 2211 | Electric Power Generation, Transmission and Distribution | 131 | Crude Petroleum and Natural Gas |
| 2212 | Natural Gas Distribution | 132 | Natural Gas Liquids |
| 2213 | Water, Sewage and Other Systems | 286 | Industrial Organic Chemicals |
| 3241 | Petroleum and Coal Products Manufacturing | 291 | Petroleum Refining |
| 3251 | Basic Chemical Manufacturing | 492 | Gas Production and Distribution |
| | | 493 | Combination Electric and Gas, and Other Utility |

Source: US Census Bureau

Copyright & Licensing

The full report is protected by copyright laws of the United States of America and international treaties. The entire contents of the publication are copyrighted by The Freedonia Group.

Resources

The Freedonia Group

Freedonia Industry Studies

Oklahoma Oil & Gas Drilling Outlook, May 2017

Texas Oil & Gas Drilling Outlook, April 2017

Midstream Oil & Gas Equipment, February 2016

Oilfield Chemicals, November 2015

World Mining Equipment, November 2015

Electric Power Transmission & Distribution Equipment, February 2015

Freedonia Focus Reports

Coal: United States

Crude Petroleum: United States

Motor Vehicle Biofuels: United States

Natural Gas: United States

Refined Petroleum Products: United States

Renewable Energy: United States

Rubber: United States

Thermoplastic Resins: United States

Freedonia Custom Research

Trade Publications

Alternative Energy News

Biodiesel Magazine

Coal Age

Electricity Today

Energy Global

Oil & Gas Journal

Pipeline & Gas Journal

Agencies & Associations

American Petroleum Institute

International Energy Agency

US Army Corps of Engineers

US Department of Commerce

International Trade Administration

US Census Bureau

US Department of Energy

Federal Energy Regulatory Commission

About This Report

US Energy Information Administration
US Department of the Interior
US Department of Transportation
National Highway Traffic Safety Administration
US Environmental Protection Agency
US International Trade Commission
US Nuclear Regulatory Commission
World Coal Association
World Nuclear Association