

# **EIA Publications Directory 1998**

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**Energy Information Administration**  
National Energy Information Center  
U.S. Department of Energy  
Washington, DC 20585

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This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should not be construed as advocating or reflecting any policy position of the Department of Energy or any other organization.

# Preface

Enacted in 1977, the Department of Energy (DOE) Organization Act established the Energy Information Administration (EIA) as the Department's independent statistical and analytical agency, with a mandate to collect and publish data and prepare analyses on energy production, consumption, prices, resources, and projections of energy supply and demand. This edition of the *EIA Publications Directory* contains titles and abstracts of periodicals and one-time reports produced by EIA from January through December 1998. The body of the *Directory* contains citations and abstracts arranged by broad subject categories; metadata, coal, petroleum and natural gas, nuclear and uranium, multi-fuel, electricity, end-use consumption, environmental, renewable energy and alternative fuels, forecasting, and model documentation. Questions concerning publications in the *Directory* should be directed to the National Energy Information Center (NEIC) at (202) 586-8800. Comments on the *Directory* itself should be directed to Karen Freedman at (202) 586-9254.

## How to Use the EIA Publications Directory

**Availability.** This directory contains abstracts and brief ordering information for individual issues of semiannual, annual, biennial, and triennial periodicals, analysis reports, Service Reports, and model documentation. (Service Reports are prepared by EIA upon special request and may be based on assumptions specified by the requestor.) Most publications are available from the National Technical Information Service (NTIS), U.S. Department of Commerce. Contact NTIS at (703) 605-6000 or 1-800-553-6847 for all specific ordering information.

Periodicals produced more frequently than semiannually -- quarterlies, monthlies, and weeklies -- are listed as single titles. Individual issues are not listed, and no ordering information is given. If the periodical is current, it is available by subscription from the U.S. Government Printing Office (GPO). Contact GPO at (202) 512-1800.

Some recent individual issues are also available from GPO. Most recent issues of current and discontinued periodicals are available from NTIS. For ordering information regarding these periodicals, call NTIS directly. Annual and one-time reports are available from GPO.

**Abstracts.** Publication abstracts are arranged by subject categories as listed in the table of contents.

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# Abstracts

## MetaData

### **Annual Report to Congress 1997**

Section 205 of the Department of Energy Organization Act of 1977 established the Energy Information Administration (EIA). One of the mandates in this legislation is that EIA prepare for Congress an annual report summarizing both activities and information collected and published. EIA's major 1997 accomplishments are profiled in the body of this edition of the *Annual Report to Congress*. Appendix A contains abstracts of significant reports issued by EIA in 1997, and a chart of all titles and a list of all feature articles published during the year. Appendix B contains graphs of selected performance measures. Appendix C lists contact information for EIA subject matter specialists. Appendix D lists the major laws, which form the basis of EIA's legislative mandate.

DOE/EIA-0173(97) Annual 78 pp. July 1998

### **EIA Publications Directory 1997**

Enacted in 1977, the Department of Energy Organization Act established the Energy Information Administration (EIA) as the Department's independent statistical and analytical agency, with a mandate to collect and publish data and prepare analyses on energy production, consumption, prices, resources and projections of energy supply and demand. This edition of the *EIA Publications Directory* contains titles and abstracts of periodicals and one-time reports produced by EIA from January through December 1997.

DOE/EIA-0149(97) Annual 37 pp. April 1998

## **Energy Education Resources: Kindergarten Through 12th Grade**

*Energy Education Resources: Kindergarten Through 12<sup>th</sup> Grade* is published by the National Energy Information Center (NEIC), a service of the Energy Information Administration (EIA), to provide students, educators, and other information users, a list of generally available free or low-cost energy-related educational materials. Each entry includes the address, telephone number, and description of the organization and the energy-related materials available. Most of the entries also include Internet (Web) and electronic mail (E-Mail) addresses. Each entry is followed by a number, which is referenced in the subject index in the back of this book.

DOE/EIA-0546(98) Annual 140 pp. September 1998

## **Energy Information Directory 1998**

The National Energy Information Center (NEIC), as part of its mission, provides energy information and referral assistance to Federal, State, and local governments, the academic community, business and industrial organizations, and the general public. The two principal functions related to this task are: 1) operating a general access telephone line, and 2) responding to energy-related correspondence addressed to the Energy Information Administration (EIA). The *Energy Information Directory* was developed to assist the NEIC staff, as well as other Department of Energy (DOE) staff, in directing inquiries to the proper offices within DOE, other Federal agencies, or energy-related trade associations.

DOE/EIA-0205(98) Annual 108 pp. November 1998

## **Energy Information Sheets 1996**

The National Energy Information Center (NEIC), as part of its mission, provides energy information and referral assistance to Federal, State, and local governments, the academic community, business and industrial organizations, and the public. The *Energy Information Sheets* were developed to provide general information on various aspects of fuel production, prices, consumption, and capability. Additional information on related subject matter can be found in other Energy Information Administration (EIA) publications as referenced at the end of each sheet.

DOE/EIA-0578(96) Annual 39 pp. July 1998



# Coal

## **Coal Industry Annual 1997**

*Coal Industry Annual 1997* provides comprehensive information about U.S. coal production, number of mines, prices, productivity, employment, productive capacity, and recoverable reserves. U.S. coal production for 1997 and previous years is based on the annual survey EIA-7A, "Coal Production Report." This report presents data on coal consumption, coal distribution, coal stocks, coal prices, coal quality for Congress, Federal and State agencies, the coal industry, and the general public. Appendix A contains a compilation of coal statistics for the major coal-producing States. This report does not include national total coal consumption data for nonutility power producers that are not in the manufacturing, agriculture, mining, construction, or commercial sectors.

DOE/EIA-0584(97) Annual 247 pp. November 1998

## **Quarterly Coal Report**

The *Quarterly Coal Report (QCR)* provides comprehensive information about U.S. coal production, distribution, exports, imports, receipts, prices, consumption, distribution, and stocks to a wide audience, including Congress, Federal and State agencies, the coal industry, and the general public. Coke production, consumption, distribution, imports, and export data are also provided.

DOE/EIA-0121 Quarterly

## **Weekly Coal Production**

The *Weekly Coal Production* provides national, regional, and State-level data on the production of bituminous coal and lignite and on the production of Pennsylvania anthracite. This data is reported for each of the two most recent weeks and a corresponding week in the previous year. Also shown is current year-to-date production, year-to-date production for a corresponding period in the previous year, production for the most recent 52-week period, and production for a corresponding period in the previous year. Also reported is the number of railroad cars loaded in each time period.

DOE/EIA-0218 Weekly (WEB ONLY)

# **Petroleum and Natural Gas**

## **Assessment of Summer 1997 Motor Gasoline Price Increase**

The nature of the summer 1997 gasoline price increase raised questions regarding production and imports. Given very strong demand in July and August, the seemingly limited supply response required examination. In addition, the price increase that occurred on the West Coast during late summer exhibited behavior different than the increase east of the Rocky Mountains. Thus, the Petroleum Administration for Defense District (PADD) 5 region needed additional analysis (Appendix A). This report, *Assessment of Summer 1997 Motor Gasoline Price Increase*, is a study of this late summer gasoline market and some of the important issues surrounding that event.

DOE/EIA-0621 One-time 84 pp. May 1998

## **Costs and Indices for Domestic Oil and Gas Field Equipment and Production Operations, 1994 Through 1997**

*Costs and Indices for Domestic Oil and Gas Field Equipment and Production Operations, 1994 Through 1997* is the Energy Information Administration's (EIA's) fifteenth report in the series on domestic costs and indices for oil and gas field equipment and production expenses. The purpose of the series is to provide a continuing means of gauging changes in the oil and gas producing industry's costs. The cost data presented in this report is used by government agencies, the academic community, and the oil and gas industry.

DOE/EIA-0185(97) Biennial 113 pp. March 1998

## **Deliverability on the Interstate Natural Gas Pipeline System**

*Deliverability on the Interstate Natural Gas Pipeline System* examines the capability of the national pipeline grid to transport natural gas to various U.S. markets. The report quantifies the capacity levels and utilization rates of major interstate pipeline companies in 1996 and the changes since 1990, as well as changes in markets and end-use consumption patterns. It also discusses the effects of proposed capacity expansions on capacity levels.

DOE/EIA-0618(98) Annual 150 pp. May 1998

## **Fuel Oil and Kerosene Sales 1997**

The *Fuel Oil and Kerosene Sales 1997* report provides information, illustrations and State-level statistical data on end-use sales of kerosene; No. 1, No. 2, and No. 4 distillate fuel oil; and residual fuel oil. State-level kerosene sales include volumes for residential, commercial, industrial, farm, and all other uses. State-level distillate sales include volumes for residential, commercial, industrial, oil company, railroad, vessel bunkering, military, electric utility, farm, on-highway, off highway construction, and other uses. State-level residual fuel sales include volumes for commercial, industrial, oil company, vessel bunkering, military, electric utility, and other uses.

DOE/EIA-0535(97) Annual 59 pp. August 1998

## **Historical Natural Gas Annual, 1930 Through 1997**

The *Natural Gas Annual* provides information on the supply and disposition of natural gas to a wide audience including industry, consumers, Federal and State agencies, and educational institutions. This report, the *Historical Natural Gas Annual* presents historical data for the Nation from 1930-1997 and by State from 1967-1997.

DOE/EIA-0110(97) Annual 365 pp. October 1998 (WEB ONLY)

## **International Petroleum Statistics Report**

The *International Petroleum Statistics Report* is a monthly publication that provides current international oil data on international oil production, demand, imports, exports, and stocks.

DOE/EIA-0520 Monthly

## **Natural Gas Annual 1997**

The *Natural Gas Annual 1997* provides information on the supply and disposition of natural gas to a wide audience including industry, consumers, Federal and State agencies, and educational institutions. The 1997 data are presented in a sequence that follows natural gas (including supplemental supplies) from its production to its end use. This is followed by tables summarizing natural gas supply and disposition from 1993 to 1997 for each Census Division and each State. Annual historical data are shown at the national level.

DOE/EIA-0131(97) Annual 249 pp. October 1998

## **Natural Gas Monthly**

The *Natural Gas Monthly (NGM)* highlights activities, events, and analyses of interest to public and private sector organizations associated with the natural gas industry. Volume and price data are presented each month for natural gas production, distribution, consumption, and interstate pipeline activities. Producer-related activities and underground storage data are also reported.

DOE/EIA-0130 Monthly

## **Natural Gas Productive Capacity for the Lower 48 States 1986 Through 1998**

The *Natural Gas Productive Capacity for the Lower 48 States 1986 Through 1998* is the sixth in this series of reports prepared by the Energy Information Administration (EIA). The five previous reports were published in 1991, 1993, 1994, 1996, and 1997. {1,2,3,4,5} The EIA Dallas Field Office has prepared five earlier reports regarding natural gas productive capacity. These report, *Gas Deliverability and Flow Capacity of Surveillance Fields*, reported deliverability and capacity data for selected gas fields in major gas producing areas. {6,7,8,9,10} The data in the reports were based on gas-well back-pressure tests and estimates of gas-in-place for each field or reservoir. These reports use proven well testing theory, most of which has been employed by industry since 1936, when the Bureau of Mines first published *Monograph 7*. {11}

The publication is used by the Congress, Federal and State agencies, industry, and other interested parties to obtain accurate data of the lower 48 States' natural gas production history and wellhead productive capacity. Capacity projections from this report are used in EIA's *Short-Term Energy Outlook Quarterly Projections*. The report also contains a projection of lower 48 States' gas production requirements and wellhead productive capacity. These data are essential for the evaluation of the adequacy of future gas supplies, especially in periods of peak heating or cooling demand.

DOE/EIA-0542(98) Annual 79 pp. January 1998 (WEB ONLY)

## **Oil and Gas Field Code Master List 1997**

The *Oil and Gas Field Code Master List 1997* is the sixteenth annual listing of all identified oil and gas fields in the United States. It is updated with field information collected through October 1997. The purpose of this electronic publication is to provide unique, standardized codes for identification of domestic fields. Use of these field codes fosters consistency of field identification by government and industry. As a result of their widespread adoption, they have, in effect become a national standard.

DOE/EIA-0370(97) Annual 465 pp. February 1998

### **Petroleum Marketing Annual 1997**

The *Petroleum Marketing Annual 1997 (PMA)* provides information and statistical data on a variety of crude oils and refined petroleum products. The publication presents statistics on crude oil costs and refined petroleum products sales for use by industry, government, private sector analysts, educational institutions, and consumers. Data on crude oil include the domestic first purchase price, the f.o.b. and landed cost of imported crude oil, and the refiners' acquisition cost of crude oil. Refined petroleum product sales data include motor gasoline, distillates, residuals, aviation fuels, kerosene, and propane.

DOE/EIA-0487(97) Annual 512 pp. December 1998 (WEB ONLY)

### **Petroleum Marketing Monthly**

The *Petroleum Marketing Monthly (PMM)* provides information and statistical data on a variety of crude oils and refined petroleum products. The publication presents statistics on crude oil costs and refined petroleum products sales for use by industry, government, private sector analysts, educational institutions, and consumers. Data on crude oil include the domestic first purchase price, the f.o.b. and landed cost of imported crude oil, and the refiners' acquisition cost of crude oil. Refined petroleum product sales data include motor gasoline, distillates, residuals, aviation fuels, kerosene, and propane.

DOE/EIA-0380 Monthly

## **Petroleum Supply Annual 1997, Volume 1**

The *Petroleum Supply Annual (PSA)* contains information on the supply and disposition of crude oil and petroleum products. The publication reflects data that were collected from the petroleum industry during 1997 through annual and monthly surveys. The *PSA* is divided into two volumes. The first volume contains three sections: Summary Statistics, Detailed Statistics, and Refinery Capacity; each with final annual data. The summary statistics section contains a summary of the data presented each month in the *Petroleum Supply Monthly (PSM)*. Graphs and tables are provided which show 16 years of data depicting the balance between supply, disposition and ending stocks for various commodities including crude oil, motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, propane/propylene, and liquefied petroleum gases. The detailed statistics section provides 1997 detailed statistics on supply and disposition, refinery operations, imports and exports, stocks, and transportation of crude oil and petroleum products. In most cases, the statistics are presented for several geographic areas -- the United States (50 States and the District of Columbia), five Petroleum Administration for Defense (PAD) Districts, and 12 Refining Districts.

DOE/EIA-0340(97)/1 Annual 131 pp. June 1998

## **Petroleum Supply Annual 1997, Volume 2**

The *Petroleum Supply Annual (PSA)* contains information on the supply and disposition of crude oil and petroleum products. The publication reflects data that were collected from the petroleum industry during 1997 through annual and monthly surveys. The second volume contains final statistics for each month of 1997, and replace data previously published in the *Petroleum Supply Monthly (PSM)*. The tables in Volumes 1 and 2 are similarly numbered to facilitate comparison between them.

DOE/EIA-0340(97)/2 Annual 600 pp. June 1998

## **Petroleum Supply Monthly**

The *Petroleum Supply Monthly (PSM)* is one of a family of four petroleum supply publications produced by the Petroleum Division within the Energy Information Administration (EIA) reflecting different levels of data timeliness and completeness. Data presented in the *PSM* describe the supply and disposition of petroleum products in the United States and major U.S. geographic areas. The data series describe production, imports and exports, inter-Petroleum Administration for Defense (PAD) District movements, and inventories by the primary suppliers of petroleum products in the United States (50 States and the District of Columbia). The reporting universe includes those petroleum sectors in primary supply. Included are: petroleum refiners, motor gasoline blenders, operators of natural gas processing plants and fractionators, inter-PAD transporters, importers, and major inventory holders of petroleum products and crude oil.

DOE/EIA-0109 Monthly

## **U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 1997 Annual Report**

The *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 1997 Annual Report* is the 21<sup>st</sup> prepared by the Energy Information Administration (EIA) to fulfill its responsibility to gather and report annual proved reserves estimates. The EIA annual reserves report series is the only source of comprehensive domestic proved reserves estimates. This publication is used by the Congress, Federal and State agencies, industry, and other interested parties to obtain accurate estimates of the Nation's proved reserves of crude oil, natural gas, and natural gas liquids. These data are essential to the development, implementation, and evaluation of energy policy and legislation. This report presents estimates of proved reserves of crude oil, natural gas, and natural gas liquids as of December 31, 1997, as well as production volumes for the United States and selected States and State subdivisions for the year 1997. Estimates of natural gas are presented for total gas (wet after lease separation), non-associated gas and associated dissolved gas, and total dry gas.

DOE/EIA-0216(97) Annual 150 pp. December 1998

## **Weekly Petroleum Status Report**

The *Weekly Petroleum Status Report (WPSR)* provides timely information on supply and selected prices of crude oil and principal petroleum products in the context of historical data and forecasts. It serves the industry, the press, planners, policymakers, consumers, analysts, and State and local governments with a ready, reliable source of current information. The supply data contained in this report are based primarily on company submissions for the week ending 7:00 a.m. the preceding Friday. Weekly price data are collected as of 8:00 a.m. every Monday. The daily spot and futures prices are provided by Reuters, Inc. Data are released electronically after 9:00 a.m. each Wednesday, and hard copies of the publication are available for distribution on Friday. For some weeks which include holidays, publication of the *WPSR* is delayed by one day.

DOE/EIA-0208 Weekly

## **25<sup>th</sup> Anniversary of the 1973 Oil Embargo – Energy Trends Since the First Major U.S. Energy Crisis**

The purpose of this publication is not to assess the causes of the 1973 energy crisis or the measures that were adopted to resolve it. The Energy Information Administration's intent is to present some data on which such analyses can be based. Those interested in a fuller set of statistics are urged to consult the *Annual Energy Review*. Many of the trends presented fall into two distinct periods. From 1973 to the mid-1980's, prices continued at very high levels, in part because of a second oil shock in 1979-80. During this period, rapid progress was made in raising American oil production, reducing dependence on oil imports, and improving end-use efficiency. After the oil price collapse in the mid-1980's, however, prices retreated to more moderate levels, the pace of efficiency gains slowed, American oil production fell, and the share of imports rose.

DOE/EIA-0624 One-time 34 pp. August 1998



# Nuclear and Uranium

## **Commercial Nuclear Fuel from U.S. and Russian Surplus Defense Inventories: Materials, Policies, and Market Effects**

The purpose of this report is to analyze the effects on the commercial nuclear fuel market that would likely result from current plans to sell U.S. and Russian government surplus inventories. Although governments, especially in Russia, are substantially involved in civilian nuclear power programs, this report considers only uranium and plutonium that were produced and stockpiled for defense purposes and subsequently declared as surplus. Because current plans to commercialize U.S. and Russian surplus defense inventories are expected to displace principally uranium supplies, conversion, and enrichment from traditional sources, only those stages of the fuel cycle are considered in this report; however, the analysis is focused on the uranium market.

DOE/EIA-0619 One-time 113 pp. May 1998

## **Uranium Industry Annual 1997**

The *Uranium Industry Annual 1997 (UIA 1997)* provides current statistical data on the U.S. uranium industry's activities relating to uranium raw materials and uranium marketing. The *UIA 1997* is prepared for use by the Congress, Federal and State agencies, the uranium and nuclear electric utility industries, and the public. It contains data for the period 1988 through 2007.

DOE/EIA-0478(97) Annual 78 pp. April 1998

# Multi-Fuel

## **Annual Energy Review 1997**

The *Annual Energy Review (AER)* is a historical data report that tells many stories. It describes, in numbers, the changes that have occurred in U.S. energy markets since the midpoint of the 20<sup>th</sup> century. In many cases, those markets differ from those of a half-century ago. By studying the graphs and data tables presented in this report, readers can learn about past energy supply and usage in the United States and gain an understanding of the issues in energy and the environment now before us. Energy markets will continue to evolve, and those who know the history of our Nation's energy markets will be better prepared to address the future. The *AER* presents the Energy Information Administration's historical energy statistics. For most series, statistics are given for every year from 1949 through 1997. The statistics cover all major energy activities, including consumption, production, trade, stocks, and prices, for all major energy commodities, including fossil fuels, electricity, and renewable energy sources.

DOE/EIA-0384(97) Annual 396 pp. July 1998

## **International Energy Annual 1996**

The *International Energy Annual (IEA)* presents an overview of key international energy trends for production, consumption, imports, and exports of primary energy commodities in over 220 countries, dependencies, and areas of special sovereignty. Also included are population and gross domestic product data, as well as prices for crude oil and petroleum products in selected countries. Renewable energy reported in the *IEA* includes hydroelectric power, geothermal, solar, and wind electric power, biofuels energy for the United States, and biofuels electric power for Brazil. This report is published to keep the public and other interested parties fully informed of primary energy suppliers on a global basis. The data presented have been derived from published sources. The data have been converted to units of measurement and thermal values (Appendices E and F) familiar to the American public.

DOE/EIA-0219(96) Annual 233 pp. January 1998

## **Monthly Energy Review**

The *Monthly Energy Review (MER)* presents an overview of the Energy Information Administration's recent monthly energy statistics. The statistics cover the major activities of U.S. production, consumption, trade, stocks, and prices for petroleum, natural gas, coal, electricity, and nuclear energy. Also included are international energy and thermal and metric conversion factors. The *MER* is intended for use by Congress, Federal and State agencies, energy analysts, and the general public.

DOE/EIA-0035 Monthly

## **Performance Profiles of Major Energy Producers 1996**

The publication, *Performance Profiles of Major Energy Producers 1996*, examines developments in the operations of the major U.S. energy-producing companies on a corporate level, by major line of business, by major function within each line of business, and by geographic area. This report presents financial and operating data collected on Form EIA-28 for the calendar year 1996. Trends in foreign direct investment in U.S. energy are analyzed for the year 1995. In 1996, 24 companies filed Form EIA-28. The analysis and data presented in this report represent the operations of the Financial Reporting System (FRS) companies in the context of their worldwide operations and in the context of the major energy markets which they serve. Both energy and nonenergy developments of these companies are analyzed. Although the focus is on developments in 1996, important trends prior to that time are also featured.

DOE/EIA-0206(96) Annual 200 pp. January 1998

## **State Energy Price and Expenditure Report 1995**

The *State Energy Price and Expenditure Report (SEPER)* presents energy price and expenditure estimates individually for the 50 States and the District of Columbia and in aggregate for the United States. The estimates developed in the State Energy Price and Expenditure Data System (SEPEDS) are provided by energy source and economic sector and are published for the years 1970 through 1995.

DOE/EIA-0376(95) Annual 434 pp. August 1998

# Electricity

## **Challenges of Electric Power Industry Restructuring for Fuel Suppliers**

The purpose of this report, *Challenges of Electric Power Industry Restructuring for Fuel Suppliers*, is to provide an assessment of the changes in other energy industries that could occur as the result of restructuring in the electric power industry. Included in this report are brief reviews of electric power industry restructuring already in progress at the Federal and State levels; detailed discussions of the major qualitative issues for each of the major fuel supply markets; and a presentation of a range of possible quantitative results, based on the Energy Information Administration's (EIA) National Energy Modeling System (NEMS). This report is prepared for a wide audience, including Congress, Federal and State agencies, the electric power industry, and the general public.

DOE/EIA-0623 One-time 142 pp. September 1998

## **Changing Structure of the Electric Power Industry: Selected Issues, 1998, The**

To assist in meeting these responsibilities in the area of electric power, EIA has prepared this report, *The Changing Structure of the Electric Power Industry: Selected Issues, 1998*. This report is one in a series of reports meant to provide a comprehensive analysis of key issues brought forth by the movement of the U.S. electric power industry toward competition. This report provides an assessment of the changes taking place in the electric power industry, including market structure, consumer choice, and rate setting and transition costs. The publication is intended for a wide audience, including Congress, Federal and State agencies, the electric power industry, and the general public. The report also presents Federal and State initiatives in promoting competition.

DOE/EIA-0562 One-time 175 pp. July 1998

## **Cost and Quality of Fuels for Electric Utility Plants 1997 Tables**

These tables provide comprehensive information concerning the quality, quantity, and cost of fossil fuels used to produce electricity in the United States.

DOE/EIA-0191(97) Annual 139 pp. May 1998 (WEB ONLY)

## **Electric Power Annual 1996, Volume II**

The *Electric Power Annual 1996, Volume II*, presents a summary of electric power industry statistics at national, regional, and State levels. The objective of the publication is to provide industry decisionmakers, government policymakers, analysts, and the general public with historical data that may be used in understanding U.S. electricity markets. Volume II contains statistics for the electric power industry, including information on both electric utilities and nonutility power producers. Included are data for electric utility retail sales of electricity, associated revenue, and average revenue per kilowatthour of electricity sold; financial statistics; environmental statistics; power transactions; and demand-side management. Also included are data for U.S. nonutility power producers on installed capacity; gross generation; emissions; and supply and disposition of energy.

DOE/EIA-0348(96)/2 Annual 147 pp. February 1998

## **Electric Power Annual 1997, Volume I**

The *Electric Power Annual 1997, Volume I* presents a summary of electric power industry statistics at national, regional, and State levels. The objective of the publication is to provide industry decisionmakers, government policymakers, analysts, and the general public with data that may be used in understanding U.S. electricity markets. Volume I contains final 1997 data on net generation and fossil fuel consumption, stocks, receipts, and cost; preliminary 1997 data on generating unit capability, and retail sales of electricity, associated revenue, and the average revenue per kilowatthour of electricity sold. Additionally, information on net generation from renewable energy sources and on the associated generating capability is also included.

DOE/EIA-0348(97)/1 Annual 72 pp. July 1998

## **Electric Power Annual 1997, Volume II**

The *Electric Power Annual 1997, Volume II*, presents a summary of electric power industry statistics at national, regional, and State levels. The objective of the publication is to provide industry decisionmakers, government policymakers, analysts, and the general public with historical data that may be used in understanding U.S. electricity markets. Volume II contains annual summary statistics for the electric power industry, including information on both electric utilities and nonutility power producers. Included are data for electric utility retail sales of electricity, associated revenue, and average revenue per kilowatthour of electricity sold; financial statistics; environmental statistics; power transactions; and demand-side management. Also included are data for U.S. nonutility power producers on installed capacity; gross generation; emissions; and supply and disposition of energy.

DOE/EIA-0348(97)/2 Annual 140 pp. October 1998

## **Electric Power Monthly**

The *Electric Power Monthly (EPM)* presents monthly electricity statistics for a wide audience including Congress, Federal and State agencies, the electric utility industry, and the general public. The purpose of this publication is to provide energy decisionmakers with accurate and timely information that may be used in forming various perspectives on electric issues that lie ahead. The *EPM* includes monthly statistics at the State, Census division, and U.S. levels for net generation, fossil fuel consumption and stocks, quantity and quality of fossil fuels, cost of fossil fuels, electricity sales, revenue, and average revenue per kilowatthour of electricity sold. Data on net generation, fuel consumption, fuel stocks, quantity and cost of fossil fuels are also displayed for the North American Electric Reliability Council (NERC) regions.

DOE/EIA-0226 Monthly

## **Electric Sales and Revenue 1997**

The *Electric Sales and Revenue 1997* provides information on electricity sales, associated revenue, average revenue per kilowatthour sold, and number of consumers throughout the United States. The data provided are presented at the national, Census division, State, and electric utility levels. The information is based on annual data reported by electric utilities for the calendar year ending December 31, 1997.

DOE/EIA-0540(97) Annual 236 pp. October 1998

### **Electric Trade in the United States 1994**

The *Electric Trade in the United States 1994* presents information on bulk power transactions by investor-owned utilities, Federal and other publicly owned utilities, and cooperative utilities.

DOE/EIA-0531(94) Biennial 370 pp. September 1998

### **Financial Statistics of Major U.S. Publicly Owned Electric Utilities 1996**

The 1996 edition of the *Financial Statistics of Major U.S. Publicly Owned Electric Utilities* publication presents 5 years (1992 through 1996) of summary financial data and current year detailed financial data on the major publicly owned electric utilities. The objective of the publication is to provide Federal and State governments, industry, and the general public with current and historical data that can be used for policymaking and decisionmaking purposes related to publicly owned electric utility issues.

DOE/EIA-0437(96)/2 Annual 559 pp. March 1998

### **Financial Statistics of Major U.S. Publicly Owned Electric Utilities 1997**

The 1997 edition of the *Financial Statistics of Major U.S. Publicly Owned Electric Utilities* publication presents 5 years (1993 through 1997) of summary financial data and current year detailed financial data on the major publicly owned electric utilities. The objective of the publication is to provide Federal and State governments, industry, and the general public with current and historical data that can be used for policymaking and decisionmaking purposes related to publicly owned electric utility issues.

DOE/EIA-0437(97)/2 Annual 583 pp. December 1998

## **End-Use Consumption**

### **A Look at Commercial Buildings in 1995: Characteristics, Energy Consumption, and Energy Expenditures**

The commercial sector consists of business establishments and other organizations that provide services. The sector includes service businesses, such as retail and wholesale stores, hotels and motels, restaurants, and hospitals, as well as a wide range of facilities that would not be considered “commercial” in a traditional economic sense, such as public schools, correctional institutions, and religious and fraternal organizations. Excluded from the sector are the goods-producing industries: manufacturing, agriculture, mining, forestry and fisheries, and construction. In-depth information about how energy is used by commercial buildings is provided by the Energy Information Administration (EIA) in this analysis of its 1995 Commercial Buildings Energy Consumption Survey results. Energy use and costs are analyzed by using the buildings’ energy-related characteristics, such as size, age, location, and activity (for example, retail sales). Energy uses and sources are also covered.

DOE/EIA-0625(95) Triennial 402 pp. September 1998



# Environmental

## **Emissions of Greenhouse Gases in the United States 1997**

The Energy Information Administration (EIA) is required by the Energy Policy Act of 1992 to prepare a report on aggregate U.S. national emissions of greenhouse gases for the period 1987-1990, with annual updates thereafter. This report, *Emissions of Greenhouse Gases in the United States 1997*, is the sixth annual update, covering national emissions over the period 1990-1996, with preliminary estimates of emissions for 1997. The estimates contained in this report have been revised from those in last year's report. Emission estimates for carbon dioxide are reported in metric tons of gas, but can be converted to carbon equivalents using the factors provided in this report. This report presents background information about global climate change and the greenhouse effect and discusses important developments in global climate change activities. It also covers emissions of carbon dioxide, methane, nitrous oxide, halocarbons, and criteria pollutants, respectively.

DOE/EIA-0573(97) Annual 159 pp. October 1998

## **Emissions of Greenhouse Gases in the United States 1997 – Executive Summary**

The Energy Information Administration (EIA) is required by the Energy Policy Act of 1992 to prepare a report on aggregate U.S. national emissions of greenhouse gases for the period 1987-1990, with annual updates thereafter. This executive summary document summarizes the sixth annual update of the report, *Emissions of Greenhouse Gases in the United States 1997*, covering national emissions over the period 1990-1996, with preliminary estimates of emissions for 1997.

DOE/EIA-0573(97)/ES One-time 10 pp. October 1998

# Renewable Energy and Alternative Fuels

## Renewable Energy Annual 1997, Volume 1

This report, *Renewable Energy Annual 1997, Volume 1*, is the third in a series of annual reports published by the Energy Information Administration (EIA) to provide current information on renewable energy. In doing so, this report provides detailed explanations of summary renewable energy information originally published in EIA's *Annual Energy Review 1996*, released in July 1997. It also constitutes an annual update of renewable energy data presented in the *Renewable Energy Annual 1996*.

The publication of this report marks a change in the publication format of the *Renewable Energy Annual*. The prior two issues contained both renewable data and analytical material. This year, EIA has split the *Renewable Energy Annual* into two volumes in order to make data available more quickly. Volume 1 includes renewable energy consumption, capacity, and generation data, along with a brief description test. It also includes a chapter on solar (thermal and photovoltaic) manufacturing activity, and an appendix on the direct use of geothermal energy.

DOE/EIA-0603(97)/1 Annual 85 pp. February 1998

# Forecasting

## **Analysis of S.687, the Electric System Public Benefits Protection Act of 1997**

The study was requested by Senator James Jeffords of Vermont. Senator Jeffords requested that the Energy Information Administration (EIA) analyze the provisions of Senate Bill 687, the Electric System Public Benefits Protection Act of 1997, particularly the provisions calling for the creation of a renewable portfolio standard and emissions caps on carbon dioxide, sulfur dioxide, and nitrogen oxide. In subsequent discussions with Senator Jeffords' staff the renewable portfolio provision of the bill was reduced to a 10 percent requirement rather than a 20 percent requirement. This report presents the results of this analysis using the National Energy Modeling System (NEMS). It discusses the methodology used in NEMS, defines the cases analyzed, and describes the results with respect to changes in capacity selection, generation by fuel, emissions of carbon dioxide, sulfur dioxide, and nitrogen dioxide, and average electricity prices under both cost-of-service regulation and competition (for the renewable portfolio case only).

DOE/EIA-OIAF/98-01 One-time 54 pp. February 1998

## **Annual Energy Outlook 1999**

The *Annual Energy Outlook 1999 (AEO99)* presents midterm forecasts of energy supply, demand, and prices through 2020 prepared by the Energy Information Administration (EIA). The projections are based on results from EIA's National Energy Modeling System (NEMS).

DOE/EIA-0383(99) Annual 242 pp. November 1998

## **Assumptions to the Annual Energy Outlook 1999**

This document, *Assumptions to the Annual Energy Outlook 1999*, presents the major assumptions of the National Energy Modeling System (NEMS) used to generate the projections in the *Annual Energy Outlook 1999 (AEO99)*, including general features of the model structure, assumptions concerning energy markets, and the key input data and parameters that are most significant in formulating the model results.

DOE/EIA-0554(99) Annual 120 pp. December 1998 (WEB ONLY)

## **Impacts of Increased Diesel Penetration in the Transportation Sector, The**

This study was undertaken at the request of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Transportation Technologies (OTT). OTT requested that the Energy Information Administration (EIA) examine the impacts on supply and prices of assumed increased penetration of diesel fuel in the U.S. transportation sector. Specifically, OTT requested that EIA examine cases in which diesel technology penetrated new U.S. light duty vehicle (LDV) sales at rates of 10, 20, and 30 percent by 2010. In addition, it was requested that EIA analyze a 30-percent penetration case in which the diesel fuel required would have a sulfur content of 50 parts per million (ppm) compared to a current specification of 500 ppm, in order to examine some of the impacts of requiring a much lower-sulfur diesel fuel. In each of the cases, OTT requested that EIA assume that the diesel technology to be used is 50 percent more efficient than that of conventional gasoline-powered internal combustion engines, based on the best currently available technology. This study analyzes the impacts on petroleum prices, demand, and refinery operations of a projected increase in demand for diesel fuel stemming from greater penetration of diesel-fueled engines in the light-duty vehicle fleet of the U.S. transportation sector.

DOE/EIA-OIAF/98-02 One-time 53 pp. August 1998

## **Impacts of the Kyoto Protocol on Energy Markets and Economic Activity**

From December 1 through 11, 1997, more than 160 nations met in Kyoto, Japan, to negotiate binding limitations on greenhouse gases for the developed nations, pursuant to the objectives of the Framework Convention on Climate Change of 1992. The outcome of the meeting was the Kyoto Protocol, in which the developed nations agreed to limit their greenhouse gas emissions, relative to the levels emitted in 1990. The United States agreed to reduce emissions from 1990 levels by 7 percent during the period 2008 to 2012. The analysis in this report was undertaken at the request of the Committee on Science of the U.S. House of Representatives. In its request, the Committee asked the Energy Information Administration (EIA) to analyze the Kyoto Protocol, “focusing on U.S. energy use and prices and the economy in the 2008-2012 time frame,” as noted in the first letter in Appendix D. The Committee specified that EIA consider several cases for energy-related carbon reductions in its analysis, with sensitivities evaluating some key uncertainties: U.S. economic growth, the cost and performance of energy-using technologies, and the possible construction of new nuclear power plants.

DOE/EIA-OIAF/98-03 One-time 246 pp. September 1998

## **International Energy Outlook 1998**

The *International Energy Outlook 1998 (IEO98)* presents an assessment by the Energy Information Administration (EIA) of the outlook for international energy markets through 2020. The report is an extension of the EIA's *Annual Energy Outlook 1998 (AEO98)*, which was prepared using the National Energy Modeling System (NEMS). U.S. projections appearing in *IEO98* are consistent with those published in *AEO98*. *IEO98* is provided as a statistical service to energy managers and analysts, both in government and in the private sector. The projections are used by international agencies, Federal and State government, trade associations, and other planners and decisionmakers. They are published pursuant to the Department of Energy Organization Act of 1977 (Public Law 95-91), Section 205(c). The *IEO98* projections are based on U.S. and foreign government policies in effect on October 1, 1997.

DOE/EIA-0484(98) Annual 139 pp. March 1998

## **Issues in Midterm Analysis and Forecasting 1998**

*Issues in Midterm Analysis and Forecasting 1998 (Issues)* presents a series of nine papers covering topics in analysis and modeling that underlie the *Annual Energy Outlook 1998 (AEO98)*, as well as other significant issues in midterm energy markets. *AEO98* published in December 1997, presents national forecasts of energy production, demand, imports, and prices through the year 2020 for five cases – a reference case and four additional cases that assume higher and lower economic growth and higher and lower world oil prices than in the reference case. The forecasts were prepared by the Energy Information Administration (EIA), using EIA's National Energy Modeling System (NEMS). The papers included in the *Issues* describe underlying analyses for the projections in *AEO98* and the forthcoming *Annual Energy Outlook 1999 (AEO99)* and for other products of EIA's Office of Integrated Analysis and Forecasting. Their purpose is to provide public access to analytical work done in preparation for the midterm projections and other unpublished analyses. Specific topics were chosen for their relevance to current energy issues or to highlight modeling activities in NEMS.

DOE/EIA-0607(98) Annual 131 pp. July 1998

## **National Energy Modeling System: An Overview 1998**

The *National Energy Modeling System: An Overview* provides a summary description of the National Energy Modeling System (NEMS), which was used to generate the forecasts of energy production, demand, imports, and prices through the year 2020 for the *Annual Energy Outlook 1998 (AEO98)*, released in December 1997. This document presents an overview of the structure and methodology of the National Energy Modeling System (NEMS) and each of its components. NEMS is a computer-based, energy-economy modeling system of U.S. energy markets for the midterm period through 2020.

DOE/EIA-0581(98) Annual 63 pp. February 1998

## **Short-Term Energy Outlook: Quarterly Projections**

The *Short-Term Energy Outlook Quarterly Projections (STEO)* presents quarterly forecasts of energy supply, demand, stock, and prices for each quarter. The forecasts are produced by using the Short-Term Integrated Forecasting System, which uses two principal driving variables; a macroeconomic forecast and world oil price assumptions. The three projections for petroleum supply and demand are based on low, middle, and high economic growth scenarios that incorporate high, middle and low crude oil price trajectories. The tables and discussion refer primarily to the middle or base case scenario and to the domestic situation. Other cases, which examine the sensitivity of total petroleum, demand to varying assumptions about prices, weather and economic activity are presented. The petroleum outlook includes data projections of domestic crude oil production, motor gasoline, distillate fuel oil, residual fuel oil, and other products and inventories. Also included are natural gas, coal and electric power projections. Additionally, the international petroleum situation is discussed.

DOE/EIA-0202 Quarterly

## **What Does the Kyoto Protocol Mean to U.S. Energy Markets and the U.S. Economy?**

This service report is a briefing paper on the EIA's analysis and report prepared for the Committee on Science, U.S. House of Representatives.

DOE/EIA-OIAF/98-03(S) One-time 23 pp. October 1998

# Model Documentation

## **Integrating Module of the National Energy Modeling System, EIA Model Documentation 1999**

This documentation provides an overview of the complete NEMS model, and includes brief descriptions of the modules with which the Integrating Module interacts. The emphasis and focus, however, is on the structure and function of the Integrating Module of NEMS. Publication of this document is supported by Public Law 93-275, Federal Energy Administration Act of 1974, Section 57(B)(1) (as amended by Public Law 94-385, Energy Conservation and Production Act), which states in part

*...that adequate documentation for all statistical and forecast reports prepared...is made available to the public at the time of publication of such reports.*

In particular, this report is designed to meet EIA's model documentation standards established in accordance with these laws. For documentation purposes, the individual components of NEMS are considered distinct models and documented individually. While the NEMS integrating module is a distinct component of NEMS, the integrating module is not by itself, a model. Rather, it is a component of the overall NEMS model and implements specific aspects of the overall modeling methodology that are not documented elsewhere. The documentation is organized accordingly.

DOE/EIA-M057(99) Annual 88 pp. December 1998

## **Petroleum Market Model of the National Energy Modeling System, Part 1, EIA Model Documentation 1998**

The purpose of this report is to define the objectives of the Petroleum Market Model (PMM), describe its basic approach, and provide detail on how it works. This report is intended as a reference document for model analysts, users, and the public. Documentation of the model is in accordance with the Energy Information Administration's (EIA's) legal obligation to provide adequate documentation in support of its models (Public Law 94-385, Section 57(B)(2)). This volume documents the version of the PMM used for the *Annual Energy Outlook 1998 (AEO98)* and thus supersedes all previous versions of the documentation.

DOE/EIA-M059(98)P1 Annual 182 pp. January 1998

## **Petroleum Market Model of the National Energy Modeling System, Part 2, EIA Model Documentation 1998**

The purpose of this report is to define the objectives of the Petroleum Market Model (PMM), describe its basic approach, and provide detail on how it works. This report is intended as a reference document for model analysts, users, and the public. Documentation of the model is in accordance with the Energy Information Administration's (EIA) legal obligation to provide adequate documentation in support of its models (Public Law 94-385, Section 57(B)(2)). This volume documents the version of the PMM used for the *Annual Energy Outlook 1998 (AEO98)* and thus supersedes all previous versions of the documentation.

DOE/EIA-M059(98)P2 Annual 154 pp. January 1998

## **Petroleum Market Model of the National Energy Modeling System, EIA Model Documentation 1999**

The purpose of this report is to define the objectives of the Petroleum Market Model (PMM), describe its basic approach, and provide detail on how it works. This report is intended as a reference document for model analysts, users, and the public. Documentation of the model is in accordance with the Energy Information Administration's (EIA's) legal obligation to provide adequate documentation in support of its models (Public Law 94-385, Section 57(B)(2)). This volume documents the version of the PMM used for the *Annual Energy Outlook 1999 (AEO99)* and thus supersedes all previous versions of the documentation.

DOE/EIA-M059(99) Annual 347 pp. December 1998



## **Coal Market Module of the National Energy Modeling System, EIA Model Documentation 1998**

This report documents the objectives and the conceptual and methodological approach used in the development of the National Energy Modeling System's (NEMS) Coal Market Module (CMM) used to develop the *Annual Energy Outlook 1998 (AEO98)*. This report catalogues and describes the assumptions, methodology, estimation techniques, and source code of CMM's two submodules. These are the Coal Production Submodule (CPS) and the Coal Distribution Submodule (CDS). This document has three purposes. It is a reference document providing a description of CMM for model analysts and the public. It meets the legal requirement of the Energy Information Administration (EIA) to provide adequate documentation in support of its statistical and forecast reports (Public Law 93-275, Federal Energy Administration Act of 1974, Section 57(B)(1), as amended by Public Law 94-385). Finally, it facilitates the continuity in model development by providing documentation from which energy analysts can undertake model enhancements, data updates, and parameter refinements as future goals to improve the quality of the module.

DOE/EIA-M060(98) Annual 144 pp. January 1998

## **Natural Gas Transmission and Distribution Model of the National Energy Modeling System, Volume I, EIA Model Documentation 1998**

This report documents the archived version of the Natural Gas Transmission and Distribution Model (NGTDM) that was used to produce the natural gas forecasts used in support of the *Annual Energy Outlook 1998 (AEO98)*. The purpose of this report is to provide a reference document for model analysts, users, and the public that defines the objectives of the model, describes its basic design, provides detail on the methodology employed, and describes the model inputs, outputs, and key assumptions. It is intended to fulfill the legal obligation of the Energy Information Administration (EIA) to provide adequate documentation in support of its models (Public Law 94-385, Section 57(B)(2)).

DOE/EIA-M062(98)/1 Annual 237 pp. January 1998

### **Documentation of the Oil and Gas Supply Module (OGSM), EIA Model Documentation 1998**

The purpose of this report is to define the objectives of the Oil and Gas Supply Model (OGSM), to describe the model's basic approach, and to provide detail on how the model works. This report is intended as a reference document for model analysts, users, and the public. It is prepared in accordance with the Energy Information Administration's (EIA's) legal obligation to provide adequate documentation in support of its statistical and forecast reports (Public Law 93-275, Section 57(B)(2)).

DOE/EIA-M063(98) Annual 268 pp. January 1998

### **Oil and Gas Supply Module (OGSM), EIA Model Documentation 1998, Errata**

This one-page errata revises equations 10 and 12 as presented in the EIA report, Oil and Gas Supply Module (OGSM), Model Documentation 1998.

DOE/EIA-M063(98)E One-time 1 pp. January 1998

### **Commercial Sector Demand Module of the National Energy Modeling System, EIA Model Documentation Report 1998**

This report documents the objectives, analytical approach and development of the National Energy Modeling System (NEMS) Commercial Sector Demand Module. The report catalogues and describes the model assumptions, computational methodology, parameter estimation techniques, model source code, and forecast results generated through the synthesis and scenario development based on these components. This document serves three purposes. First, it is a reference document providing a detailed description for model analysts, users, and the public. Second, this report meets the legal requirement of the Energy Information Administration (EIA) to provide adequate documentation in support of its models (Public Law 93-275, Section 57(B)(1)). Third, it facilitates continuity in model development by providing documentation from which energy analysts can undertake model enhancements, data updates, and parameter refinements as future projects.

DOE/EIA-M066(98) Annual 238 pp. January 1998

## **Commercial Sector Demand Module of the National Energy Modeling System, EIA Model Documentation 1999 – Part 1--Report**

This report documents the objectives, analytical approach and development of the National Energy Modeling System (NEMS) Commercial Sector Demand Module. The report catalogues and describes the model assumptions, computational methodology, parameter estimation techniques, model source code, and forecast results generated through the synthesis and scenario development based on these components. This document serves three purposes. First, it is a reference document providing a detailed description for model analysts, users, and the public. Second, this report meets the legal requirement of the Energy Information Administration (EIA) to provide adequate documentation in support of its models (Public Law 93-275, Section 57(B)(1)). Third, it facilitates continuity in model development by providing documentation from which energy analysts can undertake model enhancements, data updates, and parameter refinements as future projects.

DOE/EIA-M066(99)/Part 1 Annual 84 pp. December 1998

## **Commercial Sector Demand Module of the National Energy Modeling System, EIA Model Documentation 1999 – Part 2--Appendices**

This Appendix describes the input data, parameter estimates, variables, and data calibrations that currently reside on EIA's computing platform for the execution of the NEMS Commercial Module. These data provide a detailed representation of commercial sector energy consumption and technology descriptions that support the module. Appendix A also discusses the primary module outputs. Table A-1 references the input data, parameter estimates, variables, and module outputs documented in this report. For each item, Table A-1 lists an equation reference to Appendix B of this report, a subroutine reference, the item definition and dimensions, a subroutine reference, the item classification, and units. Note that all variables classified as "Calculated Variable" can also be considered to fall into the "Output" classification, as they are located in common blocks accessible to other NEMS modules and external programs. Following Table A-1 are profiles of the data items. Each profile describes the data sources, analytical methodologies, and parameter estimates corresponding to the table. The remainder of Appendix A contains supporting discussion including data selection and calibration procedures, required transformations, levels of disaggregation, and model input files.

DOE/EIA-M066(99)/Part 2 Annual 150 pp. December 1998

### **Electricity Market Module, Modeling Renewable Portfolio Standards for the Annual Energy Outlook 1998, EIA Model Documentation 1998**

The Electricity Market Module (EMM) is the electricity supply component of the National Energy Modeling System (NEMS). The EMM represents the generation, transmission, and pricing of electricity. It consists of four submodules: the Electricity Capacity Planning (ECP) Submodule, the Electricity Fuel Dispatch (EFD) Submodule, the Electricity Finance and Pricing (EFP) Submodule, and the Load and Demand-Side Management (LDSM) Submodule.

DOE/EIA-M068E(98) One-time 26 pp. March 1998

### **Electricity Market Module, Modifications to Incorporate Competitive Electricity Prices in the Annual Energy Outlook 1998, EIA Model Documentation 1998**

The purpose of this report is to describe modifications to the Electricity Market Module (EMM) for the *Annual Energy Outlook 1998 (AEO98)*. It describes revisions necessary to derive competitive electricity prices and the corresponding reserve margins.

DOE/EIA-M068F(98) One-time 38 pp. March 1998

### **Renewable Fuels Module of the National Energy Modeling System, EIA Model Documentation 1998**

This report documents the objectives, analytical approach, and design of the National Energy Modeling System (NEMS) Renewable Fuels Module (RFM) as it relates to the production of the *Annual Energy Outlook 1998 (AEO98)* forecasts. This report catalogues and describes modeling assumptions, computational methodologies, data inputs, and parameter estimation techniques. A number of offline analyses used in lieu of RFM modeling components are also described. This documentation report serves three purposes. First, it is a reference document for model analysts, model users, and the public interested in the construction and application of the RFM. Second, it meets the legal requirement of the Energy Information Administration (EIA) to provide adequate documentation in support of its models (Public Law 93-275, Federal Energy Administration Act of 1974, Section 57(B)(1)). Finally, such documentation facilitates continuity in EIA model development by providing information sufficient to perform model enhancements and data updates as EIA's ongoing mission to provide an analytical and forecasting information system.

DOE/EIA-M069(98) Annual 156 pp. January 1998

### **Transportation Sector Model of the National Energy Modeling System, EIA Model Documentation (Volume 1) 1998**

This report documents the objectives, analytical approach and development of the National Energy Modeling System (NEMS) Transportation Model (TRAN). The report catalogues and describes the model assumptions, computational methodology, parameter estimation techniques, model source code, and forecast results generated by the model. This documentation serves three purposes. First, it is a reference document providing a detailed description of TRAN for model analysts, users, and the public. Second, this report meets the legal requirements of the Energy Information Administration (EIA) to provide adequate documentation in support of its statistical and forecast report (Public Law 93-275, Section 57(B)(1)). Third, it permits continuity in model development by providing documentation from which energy analysts can undertake model enhancements, data updates, and parameter refinements.

DOE/EIA-M070/1(98) Annual 190 pp. January 1998

### **Transportation Sector Model of the National Energy Modeling System, EIA Model Documentation (Volume 2 – Appendices, Part 1) 1998**

This documentation contains supplement information to Volume 1 of the Transportation Sector Model Documentation Report. This report describes the input data and parameters, model abstract, data quality and estimation, as well as attachments to the model.

DOE/EIA-M070/2(98)/Part 1 Annual 291 pp. January 1998

### **Transportation Sector Model of the National Energy Modeling System, EIA Model Documentation (Volume 2 – Appendices, Part 2) 1998**

The attachments contained within this appendix provide additional details about the model development and estimation process which do not easily lend themselves to incorporation in the main body of the model documentation report. The information provided in these attachments is not integral to the understanding of the model's operation, but provides the reader with the opportunity to gain a deeper understanding of some of the model's underlying assumptions. There will be a slight degree of replication of materials found elsewhere in the documentation, made avoidable by the dictates of internal consistency. Each attachment is associated with a specific component of the transportation model; the presentation follows the same sequence of modules employed in Volume 1.

DOE/EIA-M070/2(98)/Part 2 Annual 218 pp. January 1998

**Transportation Sector Model of the National Energy Modeling System, EIA Model Documentation (Volume 2 – Appendices, Part 3) 1998**

This Appendix consists of two unpublished reports produced by Energy and Environmental Analysis, Inc., under contract to Oak Ridge National Laboratory. These two reports formed the basis for the subsequent development of the Fuel Economy Model described in Volume 1. They are included in order to document more completely the efforts undertaken to construct a comprehensive model of automobile fuel economy. The supplemental reports are as follows:

Supplement 1: *Documentation of Attributes of Technologies to Improve Automotive Fuel Economy*

Supplement 2: *Analysis of the Fuel Economy Boundary for 2010 and Comparison to Prototypes*

DOE/EIA-M070/2(98)/Part 3 Annual 201 pp. January 1998

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