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Annual Report to Congress 1992

Energy Information Administration
U.S. Department of Energy
Washington, DC

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ENERGY INFORMATION ADMINISTRATION

Introduction

Created by Congress in 1977 as an independent entity within the Department of Energy, the Energy Information Administration (EIA) is the principal and authoritative source of comprehensive energy data for the Congress, the Federal Government, the States, and the public. With the mandate to "collect, assemble, evaluate, analyze, and disseminate data and information," EIA's mission has been defined to:

- Maintain a comprehensive data and information program relevant to energy resources and reserves, energy production, energy demand, energy technologies, and related financial and statistical information relevant to the adequacy of energy resources to meet the Nation's demands in the near and longer term future.
- Develop and maintain analytical tools and collection and processing systems; provide analy-

ses that are accurate, timely, and objective; and provide information dissemination services.¹

During 1992, EIA provided information and analysis in response to many energy-related issues and events, including Hurricane Andrew. In addition, EIA made substantial strides in a number of critical special projects, most notably development of the National Energy Modeling System, preparation of National Petroleum Council studies on petroleum refining and natural gas, and establishment of an oxygenate data program mandated by the Clean Air Act Amendments of 1990. Finally, EIA took advantage of new opportunities for international consultations and energy information exchanges.

The following pages chronicle a richly varied and successful year in the history of the Energy Information Administration.

¹ Public Law 95-91 (Department of Energy Organization Act), Section 205, 1977.

The Year In Review, 1992

Actions Taken During Hurricane Andrew

EIA played a major role in providing up-to-date information during the devastating August 23-26 Hurricane Andrew. The agency supplied information and support personnel to the Office of Emergency Planning and Operations (OE) during the disaster and provided the Department's Emergency Operations Center (EOC) with 24-hour-a-day coverage on the current status of offshore oil and gas production and refinery, petrochemical plant, and shipping operations in the affected areas. The information gathered was used in daily briefing papers to the Secretary of Energy and as input to the Federal Emergency Management Agency (FEMA) Situation Reports.

EIA published twice daily the "Hurricane Andrew-EIA Status Reports," which contained specific refinery facility, pipeline, and offshore drilling platform information. Employing the Energy Emergency Management System (EEMS), EIA provided relevant data and computer-generated maps of several energy resource types to OE. EIA was able to quickly identify the energy facilities that were affected by the hurricane by using EEMS and was then able to provide pertinent information about those facilities.

EIA monitored estimates of the damage and the impact of the damage on natural gas production, and evaluated related impacts on natural gas spot and futures prices. EIA also tracked changes in the level of underground natural gas storage and tracked natural gas, crude oil, and petroleum product prices daily.

EIA developed and prepared daily status reports on the effects of Hurricane Andrew on the electricity supply in Florida for several days following the hurricane. EIA obtained the information directly from the electric utilities. Two weeks after the hurricane, EIA provided the city of Homestead, Florida, with copies of the city's 1991 financial data submissions to EIA for its municipal utilities because the records were lost during the hurricane. The data were used by local authorities in preparation for refitting of plant equipment.

After Hurricane Andrew, EIA prepared a status report of the electric power situation as of late October. EIA provided information on the number of customer outages remaining, the timing necessary to correct outage situations, and the time for bringing plants back into operation.

EIA also responded to FEMA's urgent request for volunteers to aid in the Hurricane Andrew relief efforts. Some staff were sent to the FEMA telecommunications "hot line" center in Columbus, Ohio, where they accepted local and long-distance telephone calls from victims of the hurricane and their family and friends. They referred the victims to various relief organizations, such as the American Red Cross and State employment agencies. Other staff were first assigned to the teleregistration center in Baton Rouge, Louisiana, where they helped to disseminate information to the disaster victims about the availability of various types of governmental assistance. Later, one volunteer was sent to a Disaster Assistance Center in New Iberia, Louisiana, where immediate assistance was made available, and another was sent directly to the affected communities for the relief outreach program.

International Outreach Activities Increased

During 1992, Americans watched with interest the events taking place in Europe, including the gradual evolution of the Newly Independent States; the civil war in Bosnia in the former Yugoslavia; the severe economic problems plaguing the reunified Germany; the imminent sundering of Czechoslovakia on January 1, 1993; the agreement, also on January 1, between the 12 nations of the European Community to allow the free flow of people, goods and services, and money in the hopes of thereby establishing a "Europe without frontiers." They also continued to observe the economic development in Asia and oil issues, primarily production quotas, in the Middle East. Finally, the United States signed the North American Free Trade Agreement (NAFTA) with Canada and Mexico, an agreement that, perhaps, will significantly alter future trade among these three countries.

The United States became involved in these events -- all the more so when representatives of the emerging nations began to seek advice from us. When the subject was energy, they applied to EIA for help, and EIA responded. In doing so, it should be noted, EIA also benefitted, either by merely learning more in general about the energy situation in these countries or by agreeing to mutual exchanges of energy data and information.

Among other activities, EIA:

- Briefed a delegation of 40 Russian petroleum company executives and translators on how EIA forecasts energy prices and on how it uses its Financial Reporting System data base to monitor developments among major U.S. energy companies;
- Briefed a Russian and Ukrainian delegation, which included members of the Russian Ministry of Fuel and Energy and members of Transnet, the overall headquarters organization for Russian crude oil pipeline operations, on the U.S. regulatory environment for oil pipelines and the structure of American Federal and State agencies that deal with energy issues;
- Briefed a delegation from the Polish Academy of Sciences' Mineral and Energy Economic Research Center on EIA's coal-related activities and gave an overview of the American coal mining industry;
- Sent delegates to join a special International Energy Agency (IEA) study team that evaluated the energy industry and policy developments in Romania, at the request of the Romanian government;
- Participated in a meeting of the Uranium Group of the Organization for Economic Cooperation and Development (OECD) in Hanover, Germany, focusing on 1993 OECD reports on uranium resources, production, and demand;
- Participated with delegates from Australia, Canada, France, Russia, and South Africa, all of whom were uranium producers or traders, at the 1992 International Uranium Seminar in Nevada on the uncertainties of the international uranium market, the structure of uranium contracts, new mining and milling regulations, and reclamation projects;
- Represented the United States at the Joint Nuclear Energy Agency/International Energy Agency (IEA) Working Group on Electricity

Generating Costs at the OECD in Paris; the report the Group is preparing concerns the cost of generating electricity in the year 2000 with a nuclear, coal-fired, and natural gas-fired combined cycle power plant;

- Presented a paper in Vienna to delegates from Canada, the Commonwealth of Independent States (CIS), Czech and Slovak Federal Republics, France, Germany, Hungary, and Romania on the two models EIA utilizes to assess uranium reserves and potential resources -- the Uranium Reserves Estimation System (URES) and the Uranium Resources Assessment Data (URAD) system;
- Participated in an International Atomic Energy Agency meeting on international nuclear capacity forecasting in Vienna aimed at obtaining and exchanging the latest information on individual countries' nuclear programs and projecting each country's nuclear power capacity through 2010;
- Presented to the IEA's Standing Group on the Oil Market in Paris background information and preliminary projections from EIA's first quarter 1992 *Short-Term Energy Outlook* to help the Group assess the potential for wide swings in oil market conditions, as the United States enters a period of anticipated increases in oil demand;
- Provided presentations on energy market outlooks to representatives from Saudi Arabia, United Arab Emirates, Kuwait, Venezuela, Indonesia, South Korea, and Japan;
- Met with officials from the Agency for International Development and the World Bank on cooperative efforts to improve the energy information systems of various Eastern European countries and the CIS;
- Participated in the development of an energy data base by the Energy Data Experts Group of the Asia-Pacific Economic Cooperation program;
- Responded to increasing requests from international groups for information about the National Energy Modeling System, specifically from the Institute of Power Economy of Yugoslavia; the Ministry of Energy and Infrastructure in Jerusalem, Israel; the Chung-Hua Institute for Economic Research in Taiwan, the Republic of China; and from OPEC;

- Participated in the International Energy Agency's (IEA) periodic Allocation Systems Test (AST), designed to facilitate oil-sharing among member nations during energy emergencies, conducting several exercises beforehand to finalize exercise assumptions;
- Provided comments and suggestions to representatives from the IEA concerning IEA's forthcoming international energy outlook -- particularly with respect to U.S. projections; briefed IEA on the development of EIA's National Energy Modeling System (NEMS) and on the World Energy Projection System (WEPS); and agreed to continue exchange of modeling methods and data in the future.

EIA also participated in a series of unilateral and bilateral energy meetings with countries closer to home. For example, EIA:

- Held bilateral energy discussions with Venezuela, providing that country with forecasts on both international and domestic energy markets through the year 2010, focusing on historic changes occurring in Eastern Europe and the former Soviet Union, and presenting economic and price projections and the resulting short-term energy outlook for the United States;
- Met with officials of the Association for Latin American State Oil Companies (ARPEL) in Montevideo, Uruguay, to discuss sharing oil and gas information. Subsequently met with officials of the Commission for Regional Electricity Integration (CEIR), an electricity organization representing all of South America, which agreed to share its electricity data with EIA;
- Met with the National Energy Board (NEB) of Canada to discuss factors affecting the outlook for natural gas markets in North America, including the anticipated volume and characteristics of recoverable resources, discovery process methodologies, reserve appreciation in known fields, and the representation of technology -- all with an eye to enable the NEB to incorporate the information gleaned in the next edition of their *Canadian Energy: Supply and Demand 1990-2010*;
- Met with staff from the Canadian Ministry of Energy, Mines and Resources and the National Energy Board at the United States-Canada Natural Gas Trade Consultations where current and prospective natural gas markets were discussed; also met with staff from the United

States - Canada Electricity Trade Consultations where projections of electric power needs and prospects for growth in electricity trade were reviewed.

In short, EIA's activities during 1992 demonstrated EIA's increasing international role. EIA met with foreign dignitaries, as part of the Department's bilaterals, from the United Arab Emirates (UAE), Saudi Arabia, South Korea, Venezuela, Indonesia, and Japan. The meetings represented an open exchange of information on both the short- and midterm domestic and international energy outlooks. Particular interest was expressed concerning EIA's assessment of the Clean Air Act Amendments and the long-term viability of the domestic refining industry.

Because the Middle East and Southeast Asia remained areas of concern to the United States, EIA kept abreast of energy developments in these areas primarily by means of meetings here and abroad. For example, EIA:

- Went on an information-gathering mission to the Middle East, traveling to Kuwait, Saudi Arabia, Oman, Qatar, UAE, and Yemen, holding meetings with local officials and focusing on the status of petroleum and natural gas production, reserves, sales, consumption, capacity, storage, transportation, exports, environmental concerns, and the necessity of foreign investment;
- Participated as the U.S. representative in Tokyo in a new cooperative effort, the Asia-Pacific Economic Cooperative (APEC) program involving the United States, Canada, Australia, Brunei, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand; the program is specifically designed to help foster economic cooperation in and development of the regions, especially focusing on such projects as clean coal technology, conservation, energy efficiency, and an energy data base, the ultimate goal being to establish regular quarterly and annual information systems for APEC countries;
- Represented the Department of Energy at the United Nations/Economic Commission for Europe Meeting of Experts on Coal Trade, Statistics and Transport, in Sydney, Australia, where 14 other nations and 3 world organizations were represented. At this meeting, EIA presented information on the latest trends in the U.S. coal industry and the projected short-term future of the industry. Other countries also

provided similar information for their countries. Major decisions of the members were: to monitor the Uniform Code of Standards and Procedures for the Performance of Draft Surveys; to continue to exchange information on coal industries in the economies in transition in Eastern and Central Europe; to monitor the application of the International Codification System for Medium- and High-Rank Coals in International Trade; and to begin collecting information on existing and emerging coal transport systems in importing and exporting countries.

Administrator Convened Press Conferences on Oil and Gas Profits and Federal Subsidies

In mid-September, the EIA Administrator held a press briefing at a meeting of the Texas Mid-Continent Oil and Gas Association on topics of great interest to the attendees: U.S. oil and gas profits during the first 6 months of 1992.

According to the Administrator, U.S. petroleum companies registered reduced earnings in all segments of the industry for the first 6 months of 1992. Every segment of the petroleum industry reported declines in net income of 20 percent or more, while net income for the 19 major integrated petroleum companies dropped by an even greater amount -- 37 percent. Modestly higher U.S. oil and gas prices in the second quarter of 1992 were insufficient to offset the lower prices in the first quarter, thus reducing net income for U.S. independent oil and gas producers by 24 percent.

Lower product margins and reduced profits for the majors' and independents' U.S. refining and marketing operations resulted from weak economic growth, which restrained petroleum product demand. Profits of the majors' and independents' U.S. operations fell by 51 percent and 22 percent, respectively. Income from the majors' foreign refining operations was also affected by lower margins, falling 65 percent in the first half of 1992. In spite of the modest upswing in prices in the second quarter, domestic drilling activity also continued to slide and, measured by the average rig count, reached a record low of 621 in June. The Administrator noted that, for the first 6 months of 1992, income from oil field service companies dropped by 24 percent.

However, in contrast to the performance of the U.S. petroleum industry, the financial performance of nonenergy corporations registered double-digit increases in net income in each of the first two quarters of 1992. These increases followed more than 2 years of nearly unabated quarterly declines. Moreover, the major petroleum companies' shift toward foreign upstream investment targets and away from U.S. prospects continued in the first half of 1992. The majors' exploration and development expenditures for the United States were down 33 percent from the first half of 1991, while their foreign spending was up by 6 percent.

Later, at a press conference held at the Department, the Administrator discussed the findings of a report mandated by Congress in EIA's fiscal year 1992 appropriations entitled *Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets*. The Administrator described the report as the "most comprehensive investigation undertaken since 1980 of how the Federal Government intervenes in energy markets." The report showed that energy subsidies for 1992 were between \$5 billion and \$13 billion, depending on the valuation method used. However, the value of energy subsidies is relatively small compared to annual spending of \$475 billion on energy in the U.S. economy; moreover, the Administrator noted, subsidies are vital to the creation of markets for particular fuels, such as "gasohol" (supported by tax credits) and methane produced from coal seams.

The Administrator stressed that there is no universally accepted definition of "subsidy," nor a valuation method applicable to every Federal program. The variation in estimates of the value of Federal energy subsidies in the report occurred because there are different methods of estimating the costs of indirect subsidies; the report, therefore, considered several alternative approaches.

Other highlights from the report include:

- Federal subsidies are widely distributed across forms of energy. Coal and nuclear power are the primary recipients of R&D subsidies, while oil and gas receive tax preferences. Renewable energy receives benefits through tax preferences and R&D spending, while conservation receives benefits both through direct outlays and through R&D. Subsidies to electric power favor customers of publicly owned utilities and rural electric cooperatives.

- Direct expenditures for most types of Federal energy programs have declined since the early 1980's, while many tax preferences were reduced by the Tax Reform Act of 1986.
- The impact of energy regulation is more important than either direct or indirect energy subsidies.
- There have been significant shifts in the focus of Federal subsidies and regulations. Prior to the 1980's, most programs were aimed at increasing energy production or protecting consumers from market power exercised by producers. Recent Federal subsidies and energy regulations, by contrast, have focused on environmental, safety, and health issues.

Progress Made in Assuring Equal Employment Opportunities for All

In keeping with the Secretary of Energy's commitment to equal employment opportunities, EIA has made considerable progress in this area. In September 1992, the EIA Administrator issued an implementation plan. This plan was designed to fulfill responsibilities for the achievement of equality of opportunity for all employees in EIA. As of year-end 1992, all scheduled tasks listed in EIA's Implementation Plan have been completed. Most notably, EIA has:

- Established an Equal Employment Opportunity (EEO) Advisory Committee
- Established an EEO Affirmative Action Plan
- Published an Equal Employment Opportunity policy statement
- Established and filled the position of Human Resource Manager (HRM)

- Established a critical element for EEO/Affirmative Action in the performance plan of managers and supervisors
- Provided information to managers on the special appointing authorities for employees with disabilities and disabled veterans, authorities for intern programs, and cooperative education opportunities to increase the representation of target groups
- Issued a notice to EIA employees: (1) informing employees of the availability and services of the HRM; (2) emphasizing cooperation during informal EEO/Affirmative Action complaint process; and (3) informing employees that, under the law, the filing of a complaint shall have no bearing on the subsequent treatment an employee receives
- Requested a quarterly report from the DOE Office of Civil Rights concerning EEO/Affirmative Action complaints that have been filed by EIA employees.

In addition to the above, all EIA managers and supervisors have been required to participate in a minimum of 8 hours of EEO-related activities annually. Annual performance records also reflect this requirement.

EIA's ultimate goal is to identify, recruit, hire, and retain qualified minorities, women, and the disabled, and to provide the most current adaptive technology and equipment available to support disabled employees. The HRM will work with EIA managers in expanding opportunities for the employment of these segments of the population. EIA's commitment to equal opportunity for all employees will continue to be a priority until all goals have been achieved.

Program Highlights, 1992

Petroleum

Anticipated Increase In Demand for Oxygenated Gasolines Addressed

The passage of the Clean Air Act Amendments of 1990 (CAAA) had a significant impact on EIA's petroleum supply and marketing data collection programs. The weekly and monthly petroleum supply survey forms were modified to collect oxygenated, reformulated, and other finished motor gasolines. Distillate fuel oil was broken out by sulfur categories of less than or equal to .05 percent and greater than .05 percent in order to distinguish highway diesel fuel uses from other distillate fuel uses. In addition, breakouts of individual oxygenates (e.g., ethanol, MTBE, TBA, etc.) were included on the monthly survey forms.

Because of concerns about an adequate production capacity for, and inventories of, oxygenates to meet the demand for new oxygenated gasolines required beginning November 1, 1992, EIA took several steps to provide timely, authoritative statistics on oxygenates. These included a frames survey (Form EIA-822) that provided the best available list of oxygenate producers, importers, storers, and blenders. EIA also implemented a Monthly Oxygenate Telephone Survey (Form EIA-819M) to provide timely statistics on oxygenate production and stocks and an Annual Oxygenate Capacity Report (Form EIA-819A) to collect data on oxygenate production capacity. As a result of the high quality of the information provided from these surveys, Government, producer, and consumer fears of insufficient oxygenate availability were alleviated.

Finally, the EIA expanded the Form EIA-878, "Motor Gasoline Price Survey" to collect unleaded regular gasoline price data for attainment and nonattainment areas. This survey provides DOE with timely, weekly data to analyze the impact of the oxygenated gasoline requirements on gasoline prices. EIA completed a study entitled "Impact of Clean Air Act Amendments (CAAA) on Petroleum Marketing Division Surveys," which provided an in-depth analysis of the impacts of the CAAA on petroleum product markets. This study led to articles for marketing publications and the proposed changes to the petroleum product surveys to measure the impacts of the CAAA on markets. The

proposed changes include collecting price and sales volume data on oxygenated gasoline, reformulated gasoline, desulfurized diesel fuel, and propane sales by sales type. The collection of detailed propane data will also support new information requirements on alternative fuels mandated by the Energy Policy Act of 1992.

National Petroleum Council Study on Refining Supported

On June 25, 1990, the Secretary of Energy formally requested the National Petroleum Council to conduct a study on U.S. refining in the 1990's. He asked that the study effort assess the capability of the U.S. refining industry to produce the quantity and quality of products required in 1995, 2000, and 2010 in light of new environmental legislation and regulations. He further asked that the Council assess the effects of these changing conditions on the U.S. refining industry; the ability of industry to respond to these changes in a timely manner; regulatory and other factors that impede the construction of new capacity; and the potential impacts of the responses on American consumers.

The Council appointed a Coordinating Subcommittee to oversee and guide the development of the study under the guidance of the Council's Refining Committee. The Coordinating Subcommittee is co-chaired by EIA's Director of the Office of Oil and Gas. Four Task Groups, three of them co-chaired by EIA staff members, were formed to conduct the data collection, analysis, and report writing facets of the study.

To date, a survey of the refining and related petroleum industries has been conducted to obtain historical and projected information on all facets of supply, demand, logistics, facilities, and products, both foreign and domestic. The data have been processed and provided to the appropriate task groups for use in conducting their analyses. The task groups are now involved in modeling how the refining industry will compete in the worldwide marketplace through the year 2010; analyzing the impacts on the industry and the consumer; and preparing the report, which is to be delivered to the Secretary in the spring of 1993. This report will constitute a very significant input to both

the Government's and industry's future decisionmaking processes.

State Heating Oil and Propane Program (SHOPP) Expanded

EIA continued to coordinate and direct a cooperative State grant program, expanded this year to include 25 State energy offices, which, in turn, collect price data on residential heating oil and propane. The results are published in the *Winter Fuels Report (WFR)*. In addition, EIA sponsored a conference in August to review supplies for the upcoming winter season. The conference was attended by State energy office staff and industry representatives. EIA presented the results of a heating fuel analysis of the buildup in heating oil and propane stocks at the conference, together with a projection of stockdraws and prices through the winter, based on alternative scenarios. The analysis underlying this presentation was expanded and formed EIA's contribution to two articles published in the first issue of the *WFR* and also EIA's presentation at the October 15, 1992, Winter Fuels Conference, sponsored jointly by the Department and the National Association of State Energy Officials.

Petroleum Electronic Data Reporting Option Technology Shared

In 1992 EIA's Petroleum Electronic Data Reporting Option (PEDRO) was supplied to the National Science Foundation and the Environmental Protection Agency for adaptation to their data collection requirements. PEDRO was also provided to the government of South Korea. Numerous demonstrations were provided to government and industry groups interested in the state-of-the-art technology used in the electronic data collection system. EIA was also invited by the American Petroleum Institute to demonstrate PEDRO at its annual Electronic Data Interchange Conference in New Orleans. The conference was attended by over 1000 industry and government officials interested in reducing their information processing burden.

Interaction with Other Professional/Government Organizations Expanded

EIA expanded its role by providing technical expertise to decisionmakers on energy futures from the Commodity Futures Trading Commission (CFTC). EIA interpreted for the Department the effect the different energy futures were having on oil and gas

markets, thereby playing a role similar to the one it played during Desert Shield. For CFTC, EIA was able to explain the peculiarities of oil and gas demand and supply to enable CFTC to better judge the nature of the hedging and speculative activity in those respective markets. This technical liaison has proven to be very beneficial to both EIA and CFTC.

Natural Gas

Environmental Protection Agency Request Answered

The Environmental Protection Agency (EPA) requested that EIA estimate the cost of compliance with proposed EPA regulations to limit the oil and grease content of discharged water produced from oil and gas reservoirs. The resulting Service Report, *Water Treatment Technology Costs Associated with Offshore Oil and Gas Production*, focuses on currently available processes which are used to reduce the volume of oil and grease in treated waste water in the Gulf of Mexico. The processes investigated include multimedia filtration, hydrocyclones, reinjection of produced water, pumping waste water through pipelines to shore, and the erection of platforms for the sole purpose of water treatment.

National Petroleum Study on Natural Gas Completed

On June 25, 1990, the Secretary of Energy formally requested the National Petroleum Council to conduct a comprehensive analysis of the technical, economic, and regulatory constraints to expanding the production, distribution and utilization of natural gas. The study was completed in December 1992 and contained the work of some 200 individuals from all segments of the natural gas industry, as well as end-users and members of Federal and State Governments. EIA played a major role in this important study through data collection, data base development, development of a peak-day model, and analysis of specific facets of the natural gas industry.

Two Analysis Reports Prepared and Annual Publications Expanded

EIA prepared the analysis report *Capacity and Service on the Interstate Natural Gas Pipeline System 1990*, which identifies and quantifies the capability of the natural gas pipeline infrastructure to transport natural gas to major market areas. The study examines the capacity of 42 interstate pipeline companies in 1990 to transport

natural gas to and within various geographic regions and the average utilization of the pipeline network. In addition, recently completed or planned capacity expansions are assessed relative to the needs of the current and near-term marketplace.

In addition, EIA prepared the report *Geologic Distributions of U.S. Oil and Gas*, the second in an ongoing series. It presents field size distributions that encompass most domestic oil and gas fields at year-end 1989 by geologic provinces. The report also provides partial volumetric distributions of petroleum liquid and natural gas ultimate recoveries.

EIA expanded the recurring report *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves -- 1991 Annual Report* to include listings of the 100 largest oil fields and the 100 largest gas fields in the United States in terms of proved reserves. These top fields account for 66 percent of our domestic oil reserves and 44 percent of our gas reserves. The listings also provide information on annual production, cumulative production, and ultimate recovery for each of the fields.

Integrated Analysis and Forecasting

Development of National Energy Modeling System Continued

In response to an extensive review of EIA modeling and analysis systems by the National Academy of Sciences, the development of the National Energy Modeling System (NEMS) continued. This project will allow analysts and policymakers to benefit from a unified modeling system that builds on and enhances the capabilities of EIA's existing models. NEMS will provide new detail on new technologies, environmental issues, conservation, and renewable sources of energy.

This modeling effort relies heavily on extensive review and comment from sources outside of EIA. Component design reports have been prepared for each module of NEMS. These 39 reports present a detailed design of the modeling system and have been distributed to over 3,000 individuals and corporations interested in energy and modeling, thus achieving widespread academic and industry review of the model. Comments are requested from all interested parties and are being incorporated into revisions of the original designs.

Within the Department, 10 working groups have been organized around the subject areas covered by the modeling system. These working groups, consisting of representatives from EIA and other offices within the Department, meet monthly to provide briefings on the component design reports, review the status of the modeling, and solicit comments and feedback.

The component design reports are also receiving technical review under EIA's Independent Expert Review Program administered by the Office of Statistical Standards. This program draws upon the expertise of renowned industry and academic specialists, who meet with the model designers to discuss their findings after reviewing the available material. They will later provide recommendations for model testing and will review draft documentation reports.

Two other forums for review have been established. First, there is a review group under the auspices of the Energy Modeling Forum of Stanford University. These energy modeling specialists have met several times with the model developers to provide in-depth technical advice. Second, a users' group comprised of members of other government organizations, trade associations, and private industry with interest in energy analysis and modeling was created. Formal briefings have been provided on two occasions to this users' group. Other briefings to external organizations have been provided, including one to the Federal Forecasters' Conference and several to industry trade associations, such as the National Coal Association's and the Edison Electric Institute's Economic Committees.

A public conference was also scheduled to be held in early 1993 to draw upon the expertise of the modeling community, industry, and academia. Presentations by EIA model designers, in 15 subject areas, were to follow formal review and comment by invited speakers who will provide advice and comparison to other modeling efforts.

The initial design phase of NEMS has been completed. The implementation phase has begun with the completion of a prototype, or "test bed," which links the components together for integrated testing. The mid-term operational version of NEMS is scheduled for completion in fiscal year 1995 and will be used to produce the *Annual Energy Outlook 1994*.

Responded to Congressional Request Concerning Carbon Emission Estimates

At the request of the Chairman of the House Committee on Energy and Commerce, a two-part analysis of carbon emissions was performed. The request was in response to pending legislation aimed at stabilizing carbon emissions as a deterrent to global warming. The first part of the analysis provided estimates of projected carbon emissions based on the *Annual Energy Outlook 1992* projections and included the comparison of several different sources of emissions estimates per unit of combusted fuel.

The second part of the Chairman's request focussed on the Energy Modeling Forum (EMF) study on controlling carbon emissions. This 12th EMF study from Stanford University considered the energy sector impacts and costs of various measures designed to control carbon emissions across 14 participating models. The as-yet unpublished study included 12 standardized scenarios, with different levels and rates of emissions controls. Preliminary results indicated widely divergent results on the costs of stabilizing carbon emissions at their 1990 levels by the year 2000, a divergence EIA was asked to comment upon. The analysis of the results explained that the variations were due to differences in input assumptions by the participating modelers and fundamental differences in model structures.

Nuclear Regulatory Commission Briefed on Electricity Forecasts

EIA briefed the Chairman and Commissioners of the Nuclear Regulatory Commission on EIA's national and regional electricity forecasts. The Commissioners were interested in future gas use by electric utilities, reserve margin assumptions, impact of demand-side management programs on electricity demand, and the major sources of uncertainty in the forecasts.

EIA also participated on a panel on the needs for electric power conducted by the Nuclear Regulatory Commission as part of its Generic Environmental Impact Statement for license renewal of commercial nuclear plants.

Costs and Expenditures of the Trojan Nuclear Plant Analyzed

EIA prepared an analysis of the projected operating costs and post-operational capital expenditures of the Trojan nuclear plant for the Bonneville Power

Administration which was used for the analysis of the early shutdown of the plant.

Electricity

New Data Collected from Nonutility Power Procedures

Nonutility power producers comprise all facilities other than traditional electric utilities that generate electric power for their own use and/or to supply to the grid. These include cogenerators, small power producers, and other nonutility generators. The results of the 1989 and 1990 surveys were published in the feature article "Nonutility Power Producers" in the April 1992 issue of the *Electric Power Monthly*.

In 1991, EIA began collecting nonutility capacity and generation of electricity data for the years 1989 and 1990 on the Form EIA-867, "Annual Nonutility Power Producer Report." This collection enabled EIA to supplement its electric utility production data and to fill the information gap on this increasingly important alternative to electricity generated by traditional electric utilities.

Two of EIA's energy consumption surveys measure end users' generation of electricity. The Commercial Buildings Energy Consumption Survey (CBECS), conducted triennially, collects data on commercial building generation of electricity. The 1983 CBECS survey was the first to collect such data.

In addition, the Manufacturing Energy Consumption Survey (MECS), also conducted triennially, produced detailed estimates on manufacturing electricity generation by industry and Census Region and on the growth in manufacturing on-site generation that occurred between 1985 and 1988. Preliminary 1991 MECS estimates are presently scheduled for publication in late 1993.

Data Published on Demand-Side Management

EIA published data on demand-side management (DSM) for the first time in the feature article "Electric Utility Demand-Side Management" in the April 1992 issue of the *Electric Power Monthly*. Demand-side management is the planning, implementation, and monitoring of utility activities designed to encourage consumers to modify electricity usage, including the timing and level of demand. This involves "load building" or "load shifting" activities that can improve

the efficiency of power plants that are underutilized. These data included actual and potential reductions in peak load, energy savings, and expenditures from utility-implemented DSM programs for 1990.

Moreover, three of EIA's energy consumption surveys measure end users' participation in electric utility, natural gas utility, and other demand-side management programs. The 1990 Residential Energy Consumption Survey (RECS) collected data on household participation in demand-side management programs, and the results were published in *Housing Characteristics 1990*. In addition, RECS data on energy consumption and expenditures by participating households will appear in *Household Energy Consumption and Expenditures 1990*, due out in early 1993.

The 1989 Commercial Buildings Energy Consumption Survey (CBECS) collected data on commercial buildings' participation in demand-side management programs. Those results were published in *Commercial Buildings Characteristics 1989* and *Commercial Buildings Energy Consumption and Expenditures 1989*. Both the 1993 RECS and the 1992 CBECS will be expanded to cover respondents' participation in demand-side management programs in more detail.

The 1991 Manufacturing Energy Consumption Survey (MECS) was the first to collect data on manufacturers' involvement in demand-side management programs. The MECS determines what kinds of demand-side management projects manufacturers are engaged in, the characteristics of those manufacturers, and the extent of their involvement. The results will be included in the series of MECS publications scheduled for release at the beginning of 1993.

Utilities and regulators are counting on DSM programs to help enable the Nation to meet its ever-increasing need for electric energy. Key issues are: (1) the development of cost-effective tests for measuring DSM program effects, and (2) the establishment of regulatory strategies for encouraging sustained commitments to DSM programs. The potential for DSM programs will be realized only if they are sustained over time and become a reliable utility strategy for balancing the Nation's supply of and demand for electricity use.

New National Allowance Data Base Developed

EIA, under an interagency agreement with the U.S. Environmental Protection Agency (EPA), played a

major role in developing version 2.1 of the National Allowance Data Base (NADB). The NADB was developed to formulate the implementation of the acid deposition provisions of the Clean Air Act Amendments of 1990. The EIA compiled data for all utility fossil-steam power plants operating from 1985 through 1987 and new utility units that have announced plans to come on line by December 31, 1995. These data are being used by EPA to calculate the allocation of sulfur dioxide emission allowances among all affected generating units in the United States.

Coal

Information Provided to Assist Funding of Coal Miners Health and Benefits Funds

EIA evaluated the impact on coal consumers, primarily utilities, of a threatened coal strike by the United Mine Workers of America over health benefits for retired mine workers. The information was then provided to the Secretary of Energy and the Office of Emergency Operations. The impact was evaluated by using information on the current days of coal supply at electric and manufacturing facilities and on ways in which the utilities might be impacted by a strike.

Subsequently, EIA provided coal production and reserves data and background information to the General Accounting Office (GAO) and the Office of Management and Budget (OMB) to aid in the assessment of proposed legislation to fully fund the 1950 and 1975 Coal Miners Health and Benefits Funds. This effort resulted in Title XIX, Subtitle C, of the National Energy Policy Act of 1992 and the GAO report *Employee Benefits-Financing Health Benefits of Coal Industry Retirees* (July 1992).

Major Events Impacting U.S. Coal Industry Analyzed

The major events that had an impact on the U.S. coal industry were analyzed in a new report, *The Coal Industry 1970-1990: Two Decades of Change*. The report explains that the growth in coal production, primarily in the West, was in response to electric utility demand for low sulfur coal. Other analyses are also provided which deal with coal mine productivity, prices, production by mine type and land ownership, consumption by sector, and exports.

New PC-Based System for Coal Production Report Implemented

EIA implemented a new PC-based data processing system for Form EIA-7A, "Coal Production Report." This PC system was used to process and edit 1991 annual coal production survey and related data. The new system provided for enhanced automated editing, thereby reducing processing time and saving costs associated with manual editing.

Energy Markets and End Use

1991 Manufacturing Energy Consumption Survey Expanded

During 1992, EIA implemented the 1991 Manufacturing Energy Consumption Survey (MECS). The subject matter coverage of this survey was greatly expanded from that of previous cycles. New sections of the MECS questionnaire provide data on (1) energy consumption by broad end use categories (e.g., boiler fuel, direct process heat, machine drive, and building lighting); (2) total and heated/cooled square footage of onsite buildings; (3) participation in, sponsorship of, and categorization of energy management programs; and (4) presence of selected state-of-the-art and advanced technologies. As with previous cycles of the MECS, the Census Bureau is the data collection agent. It is anticipated that first tabulations of these new data will be available in mid-1993.

New Consumption Publication Series Inaugurated

EIA has inaugurated a new publication series, named the "Energy Consumption Series," to supplement the report series that present data from its end-use consumption survey systems. This new series is designed to present methodological and analytical information to supplement the basic results from the consumption surveys. A major goal is to present analysis that is more subject-matter related and makes innovative use of outside data sources in combination with consumption survey data. The first four reports in the series were issued in 1992; they covered lighting in commercial buildings, methodology of the 1991 MECS, user needs for the 1992 Commercial Buildings Energy Consumption Survey, and derived estimates of missing years of purchased fuel consumption in manufacturing.

New Emphasis Placed on Features

In 1992, EIA expanded its effort to provide information to the public about significant work underway in EIA. In addition to feature articles and "Highlights" in published reports, EIA added two new categories of features to the *Monthly Energy Review*: "Energy Previews," which provide brief overviews of EIA's preliminary data, and "EIA Data News," which present information on changes in the scope, methodology, and other aspects of EIA's surveys and data bases. Both new feature categories are intended to get important information out to the public faster and to provide a concise explanation of its relevance in the analysis of energy markets. For example, "EIA Data News" items were published on oxygenates, demand-side management of electricity, and nonutility power production; and an "Energy Preview" was released on the Residential Energy Consumption and Expenditures 1990 preliminary estimates.

Energy Industry Analysis Publication Improved

The annual energy analysis publication *Performance Profiles of Major Energy Producers 1990*, released to the public in January 1992, incorporated a 10-year historical perspective, worldwide, of the petroleum industry in the 1980's, so that the publication now has two parts: Part I presents the new annual data, along with an analysis of changes from the previous year's data; Part II presents longer-term analyses of issues of current importance and provides a 10-year analytical perspective on the underlying causes of shifts in investment strategies and trends in financial performance.

Joint Venture Data Base Compiled with EIA's Help

Because of the potential long-term impacts on the world energy market, EIA, in cooperation with other U.S. departments and agencies, has helped compile a data base of potential joint venture foreign investments in the petroleum sector between of the Newly Independent States of the former Soviet Union and other foreign governments and agencies. The data base distinguishes operating ventures and signed agreements. As of October 1992, there were 16 operating ventures and 122 signed agreements.

Emergency Preparedness Activities Continued

EIA continues to maintain a high visibility in the energy emergency preparedness area. EIA has prepared a manual which identifies key analysts and organizational responsibilities during an energy emergency; continued its participation in Departmental energy emergency tests, such as Global War Games (GLOBEX) and the International Energy Agency's Allocations System Test (AST); continued to chair the Interagency Data Base and Projections Working Group of the Standing Subcommittee on Energy and has prepared its semiannual update to the ongoing study, *An Energy Evaluation*; and continued to provide a monthly oil market assessment, Questionnaire C, to the International Energy Agency.

Fuels Analyses Featured in *Short-Term Energy Outlook*

The Energy Information Administration continued to provide assessments of the summer gasoline outlook and winter fuels outlook in a special summary analysis section of its quarterly forecast publication, *Short-Term Energy Outlook*.

EIA prepared an analysis of the impact on demand, supply, and prices of oxygenated gasoline for its *Short-Term Energy Outlook* for the carbon monoxide season beginning in the 1992-1993 winter. The special analysis was published in detail in the Annual Supplement to the *Short-Term Energy Outlook* and in summary form in the August 1992 *Monthly Energy Review*.

Publications Expanded to Include Global Oil Markets

EIA expanded its international petroleum supply and demand balances in the *International Petroleum Statistics Report* and the *Short-Term Energy Outlook* from Market Economy totals to world totals. The new balances include all countries and will help analysts assess developments in global oil markets.

Nuclear

U.S. Uranium Information Provided to International Trade Commission and General Accounting Office

EIA provided information on U.S. imports of natural and enriched uranium from Russia to the

International Trade Commission and the General Accounting Office. The information included the quantity shipped to the United States, the receiver of the material, and the quantities reexported after processing (enriching, producing uranium oxide pellets, or fabricating) in the United States. This information was used to evaluate the impact of these imports on the U.S. uranium industry in light of a suit brought by the U.S. Oil, Chemical, and Atomic Workers Union against the former Soviet Union for alleged unfair trade practices.

More Information on Nuclear Energy Published

EIA published a comprehensive summary and analysis of uranium exploration, resources, mining, and production in the feature article "The Uranium Industry of the Commonwealth of Independent States (CIS)" for the *Uranium Industry Annual 1991*. The CIS was described as the world's largest producer of uranium in 1991, with production coming from Kazakhstan, Russia, Ukraine, and Uzbekistan. The article provides estimates of uranium resources as of January 1, 1992, an update to those published by other sources. The analysis indicates that the CIS uranium industry will need to implement cost reductions, such as the increased use of solution, or *in situ* mining, to make it competitive under a market economy.

EIA expanded the annual report *World Nuclear Capacity and Fuel Cycle Requirements 1992* this year to include projections of nuclear capacity and generation and fuel cycle requirements for all the countries in the world with nuclear power, including Eastern Europe, the Commonwealth of Independent States, the Peoples Republic of China, and Cuba. The report also contains a special chapter on the nuclear capacity, fuel processing facilities, and fuel cycle requirements in the Commonwealth of Independent States. Information in this report is used by the Office of Civilian Radioactive Waste Management to plan for the disposal of spent fuel discharges from nuclear power plants.

Statistical Standards

Quality Program Maintained

EIA has recognized since its inception that a strong statistical and model quality program is essential to achieving our primary goal of providing accurate, pertinent, and timely energy information and analysis. During 1992, EIA maintained its efforts to

ensure that necessary quality assurance tools are current, reflect the latest technology, and meet the needs of EIA and our stakeholders, both in the public and private sectors.

This program consists of quality assurance, quality control, and quality maintenance investments. As a general rule, the Office of Statistical Standards performs overall quality assurance, while the individual program offices shoulder the responsibility of quality control and quality maintenance activities.

Technical Workshops

To help assure the quality of its endeavors, EIA provides its staff with a wide range of in-house opportunities for professional development and training. In 1992, EIA conducted technical workshops covering the following topics: "Model Standards and Documentation Acceptance," "Energy-Environmental Interactions" (2 sessions), "Energy Relevant Environmental Indicators," "World Oil Model," "Statistics for Energy Professionals" (2 sessions), "Applied Data Analysis" (12 sessions), and "NEMS Renewable Fuels Workshop."

Meetings with the American Statistical Association

In March and November 1992, EIA met with the American Statistical Association's (ASA) Committee on Energy Statistics to obtain technical advice on statistical and energy-related data and analysis efforts. The Committee currently consists of 18 renowned experts from industry, academia, energy research organizations, and Statistics Canada. Topics included technical and statistical training for EIA staff; the National Energy Modeling System (NEMS) and related issues; the Energy Policy Act; studies by the National Petroleum Council; the response to Hurricane Andrew; and demand-side management.

In addition, there were numerous roundtable discussions on such issues as EIA's data needs regarding the Clean Air Act; measuring uncertainty in NEMS; and energy efficiency and survey methodology used in EIA's "Annual Electric Utility Report."

Metric Program Accelerated

President Bush, on July 25, 1991, signed Executive Order 12770, Metric Usage in Federal Government Programs. In keeping with this order and with the

Omnibus Trade and Competitiveness Act of 1988, EIA's Metric Transition Committee is coordinating a framework for plans to affect a transition to the metric system.

As part of this transition, EIA, in a number of its publications, presents data in metric units where they are commonly used by the industry. In coming years, as conditions warrant, more of EIA's reports will present selected data in metric or dual units.

Other activities and plans include helping the public to become more familiar with the metric system and with what the Federal Government is doing in this area -- for example, incorporating "metric flyers" into EIA's periodic publications. By coordinating all such efforts with the Department's Metric Program, the U.S. Department of Commerce's Metric Office, other Federal agencies, and with standards groups in both the public and private sectors, EIA expects to be fully responsive to the needs and capabilities of the users and providers of its information.

Other Technical Outreach

EIA is and has been very active in outreach efforts with other public and private institutions, such as the ASA, the Committee on National Statistics of the National Academy of Sciences, the National Science Foundation, the National Petroleum Council, the Bureau of Economic Analysis, the Office of Management and Budget, and other components within the Department of Energy. By having its staff participate on panels, provide statistical and survey advice, present scholarly papers, and act as discussants on papers prepared by others, EIA is able to generate a mutually advantageous interchange of ideas and information with other organizations, both private and public.

Information Services

Information Dissemination Channels Expanded

EIA expanded its Electronic Publication System (EPUB) to include all 80 tables from the *Monthly Energy Review*. This is the first time all of the data from a major EIA report have been available on EPUB. Selected EIA data, including the Monthly Energy Review Data Base, are now also available on the newly established Government Printing Office's Federal Bulletin Board. In addition, time series data and text from the *Annual Energy Review* are now available on CD-ROM as part

of the Department of Commerce's National Economic, Social, and Environmental Data Bank.

Marketing Program of Publications and Services Begun

EIA began an intensive marketing program in 1992 to widen exposure of EIA publications and services to audiences currently unaware of EIA. In 1992, EIA exhibited at six energy and information-related conferences: the American Economic Association in New Orleans; the Edison Electric Institute in Columbus, Ohio; the Special Libraries Association in San Francisco; the American Gas Association in Chicago; the Petroleum Marketers Association in Kansas City; and the Defense Technical Information Center Users Conference in Alexandria, Virginia. Attendees at these six conferences totaled over 9,000.

Energy Information Directory Updated

In 1992, EIA revised and expanded its *Energy Information Directory*, which is used by EIA energy information specialists to refer clients to the proper information sources for answers to their questions. It is also given to clients to assist them in their energy research. Included for the first time were descriptions of all DOE headquarters offices, field offices, project offices, laboratories, and power marketing administrations; nine other Federal executive departments; energy Congressional committees; six independent Federal agencies; State energy offices, governors' offices, and public service commissions; and 48 energy-related trade associations.

In addition to the paper version, the *Directory* is also available on the Department of Commerce's National Economic, Social, and Environmental Data Bank on CD-ROM.

EIA Special Reports on Current Issues, 1992

EIA analysis reports result from analysts' examinations of current and projected U.S. economic, regulatory, technological, and marketing trends and their impact on energy supply and demand. EIA Service Reports are also analyses, but they are

prepared, as the name implies, as a service, upon specific request from other Executive Branch agencies or Congress. Service Reports are often based on assumptions provided by the requestor. During 1992, EIA produced 4 analysis reports and 4 Service Reports.

Analytical Reports

Capacity and Service on the Interstate Natural Gas Pipeline System 1990: Regional Profiles and Analyses

This report identifies and quantifies the capability of the national natural gas pipeline infrastructure to transport natural gas to the natural gas markets of the country. The report examines the capabilities of the pipelines that make up this network to move gas across regional and State borders and compares these levels to 1990 levels of natural gas flow to and within regional markets. In addition, envisioned and currently approved plans to construct major new pipelines and expand existing systems are presented and are assessed relative to the needs of the current and near-term marketplace. (Published: June 1992).

Energy Consumption Series: Derived Annual Estimates of Manufacturing Energy Consumption, 1974-1988

This report presented a complete series of annual estimates of purchased energy used by the manufacturing sector of the U.S. economy for the years 1974 to 1988. These estimates interpolate over gaps in the actual data collections by deriving estimates for the missing years 1982-1984 and 1986-1987. For the purposes of this report, "purchased" energy is energy brought from offsite for use at manufacturing establishments, whether the energy is purchased from an energy vendor or procured from some other source. The actual data on purchased energy comes from two sources, the U.S. Department of Commerce, Bureau of the Census's *Annual Survey of Manufactures* (for 1974-1981) and EIA's *Manufacturing Energy Consumption Survey* (for 1985 and 1988). Estimates of consumption for the missing years are provided for the manufacturing sector as a whole and at the two-digit Standard Industrial Classification level for total energy consumption and for individual fuels consumption. The methodology for the report entails a fairly simple linear interpolation using the available energy data and production data provided by the Federal Reserve Board. (Published: August 1992)

Energy Consumption Series: Lighting in Commercial Buildings

This report provides a statistical profile of commercial lighting in order to permit an examination of the potential for energy conservation in lighting commercial buildings. The analysis was performed by using data from the Energy Information Administration's 1986 Nonresidential Buildings Energy Consumption Survey. Estimates of the potential savings depend heavily on assumptions regarding the types of lamps and fixtures to be replaced, the effectiveness of various lighting conservation measures, and how strong a lighting level is to be maintained. The analysis, therefore, created estimates of maximum potential savings under various scenarios. The scenarios differ, depending on what conservation features are in use and on the level and type of replacement that takes place. The principal conclusion from this analysis is that energy use for commercial lighting could be reduced by as much as 80 percent by using the best currently available technologies. (Published: March 1992)

The U.S. Coal Industry, 1970-1990: Two Decades of Change

This report provides a comprehensive overview of the U.S. coal industry during the past two decades with emphasis on the major changes that occurred, their causes, and their effects. The report presents and analyzes data compiled by EIA on the U.S. coal industry, as well as EIA data on other energy sources and information from non-EIA sources where relevant. These data are used to reveal trends in coal production, consumption, distribution, and prices. Trends in coal mining productivity and employment are also examined, and the profitability of major energy companies' coal operations is tracked over the 1977 through 1990 period. Analysis of the data indicates the impact on the coal industry of major events, such as the oil embargo, technological breakthroughs, and Federal and State laws and regulations affecting the industry. (Published: November 1992)

Service Reports

Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets explores the definition of a subsidy, ultimately incorporating a broad definition of subsidization which includes most governmental actions which had as their function alteration of energy markets by benefiting some group of producers or consumers. The report shows that direct expenditures from the Federal Budget account for only a fraction of the total impact of Federal Government intervention in energy markets. Specifically considered are tax incentives received by producers or consumers of various forms of energy; governmental utilities, such as the Tennessee Valley Authority and the Bonneville Power Administration; subsidies received by certain Government utilities via tax-exempt municipal bonds; lower interest rates received by Rural Electric Cooperatives; Government grants for energy R&D activities. The report concludes that it is regulation and not subsidization that has the greatest impact on energy markets. As a result, selected energy regulations are discussed to illustrate their significant impact.

Spent Nuclear Fuel Discharges from U.S. Reactors 1990 was prepared by the Energy Information Administration under a Memorandum of Understanding with the Office of Civilian Radioactive Waste Management in support of their program. The Nuclear Waste Policy Act of 1982, as amended, established the framework for a comprehensive Federal program to manage spent nuclear fuel and high-level radioactive waste. This report covers discharged nuclear fuel assemblies, their shipments and storage, including storage site capacities and inventories as of December 31, 1990, but reflecting data collected and processed by September 3, 1991. The report also presents information and crucial elements of the nuclear fuel cycle: discharges of spent fuel and interim storage of spent fuel.

State Energy Price Projections for the Residential Sector, 1992 - 1993 was provided at the request of the Administrator for Children and Families, U.S. Department of Health and Human Services, which provides State Grants to assist eligible households in meeting the costs of home energy use for space heating or cooling under the Low Income Home Energy Assistance Program. The report provides projections of State-level residential prices for 1992 and 1993 for electricity, natural gas, heating oil, liquefied petroleum gas, kerosene, and coal. The price projections presented in the report's tables represent trends in relationships between State prices and the U.S. price because it is assumed that an annual State residential energy price can be adequately estimated as a function of the national average price (a volume-weighted average price for the United States). The conclusion is that State prices move more or less in tandem with the movement of the corresponding U.S. average price.

Water Treatment Technology Costs Associated with Offshore Oil and Gas Production is a cooperative effort between the Energy Information Administration's Dallas Field Office and the Environmental Protection Agency, which collects cost data related to its proposed waste water cleanliness regulations, which will limit the oil and grease content of discharged water produced from oil and gas well operators working in Federally-controlled waters off the coastlines of the United States, including those of Alaska and California; the bulk of the data, however, comes from the Gulf of Mexico area. The processes investigated include multimedia filtration and hydrocyclones -- the two most popular processes -- as well as reinjection of produced water, pumping waste water to shore via pipelines, and erection of platforms for the sole purpose of water treatment -- three options that are costlier and are thus less likely solutions.

Appendix A

**Data Collection Surveys of
the Energy Information
Administration**

Appendix A

Data Collection Surveys of the Energy Information Administration

This Appendix describes 75 energy data-gathering surveys operated by the Energy Information Administration (EIA) in 1992. These forms are listed sequentially by form number, current title, any previous form number(s) and title(s), collection frequency, and a brief description of the collection. The report number and titles of publications which are derived from the collected data (including several publications issued by the Department of Energy elements outside of EIA) are also listed.

Information on the surveys and their availability and single, blank copies of forms may be obtained from the National Energy Information Center, whose address and telephone number are listed in the introduction to Appendix C. Additional information about EIA's forms is available in the *Directory of Energy Data Collection Forms* (DOE/EIA-0249).

Forms CE-63A/B, Annual Solar Thermal Collector Manufacturers Survey and Annual Photovoltaic Module/Cell Manufacturers Survey

Previous Forms: EIA-63, Annual Solar Thermal Collector and Photovoltaic Module Manufacturing Survey

Collection Frequency: Annually

Forms CE-63A/B are designed to gather data for publication on shipments of solar thermal collectors and photovoltaic modules. Data are collected by end use and market sector. Collector types include low-temperature, medium-temperature air, medium-temperature liquid, thermosiphon, flat plate, concentrator, integral collector storage, and evacuated tube and concentrators. Respondents are manufacturers, importers, and exporters of solar thermal collectors and photovoltaic modules.

Resulting Publications:

DOE/EIA-0174, *Solar Collector Manufacturing Activity*
DOE/EIA-0384, *Annual Energy Review*

Form EIA-1, Weekly Coal Monitoring Report-General Industries and Blast Furnaces (Standby Form)

Previous Forms: None

Collection Frequency: Weekly

Standby Form EIA-1 is used to track coal and coke stocks, receipts, and consumption in the manufacturing sector during coal supply disruptions. In conjunction with data on Forms EIA-4 and EIA-20, EIA-1 data are used for supply forecasts and to inform the public, the industry, and the Government of aggregated coal consumption and inventories. Respondents are a selected sample of manufacturing plants that consume coal for all uses other than coke production.

Resulting Publications: Data not published

Form EIA-3, Quarterly Coal Consumption Report-Manufacturing Plants

Previous Forms: BOM-6-1400-M-1, Monthly Fuel Consumption Report - Manufacturing Plants

Collection Frequency: Quarterly

Form EIA-3 is used to collect data related to coal consumption by rank at U.S. manufacturing plants. Information on coal consumption, stocks, and receipts (quantity and cost) is collected to provide Congress with basic statistics concerning coal consumption, stocks, prices, and quality (coal rank), as required by the Federal Energy Administration Act of 1974 (Public Law 93-275). The data are also used for coal demand analyses and in short-term modeling efforts that produce forecasts of energy (coal) demand and prices. Respondents are all manufacturing companies that consume in excess of 1000 short tons of anthracite, bituminous, subbituminous coal or lignite for uses other than coke production during the year, defined by the current reporting quarter and the previous three reporting quarters.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0121, *Quarterly Coal Report*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0383, *Annual Energy Outlook*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-4, Weekly Coal Monitoring Report-Coke Plants (Standby Form)

Previous Forms: None

Collection Frequency: Weekly

Standby Form EIA-4 is used to track coal stocks, receipts and consumption, and coke stocks during a coal supply disruption. In conjunction with Forms EIA-1 and EIA-20 data, EIA-4 data are used for supply forecasts and to inform the public, the industry, and the Government of aggregated coal consumption and inventories. Respondents are producers of coke.

Resulting Publications: Data not published

Form EIA-5, Coke Plant Report-Quarterly

Previous Forms: BOM-6-1365-M, Coke and Coal Chemical Materials

Collection Frequency: Quarterly

Form EIA-5 is designed to provide data used for statistical reports, publications, and analyses. Data collected include production, transfers, consumption, sales, and stocks of coal, coke, and breeze. Respondents include all companies operating coke plants.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0121, *Quarterly Coal Report*

DOE/EIA-0202, *Short-Term Energy Outlook*

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0383, *Annual Energy Outlook*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-6, Coal Distribution Report

Previous Forms: BOM-6-1419-Q, Distribution of Bituminous Coal and Lignite Shipments

Collection Frequency: Quarterly

Form EIA-6 is designed to provide coal distribution data for publications, analyses, and statistical reports. Data cover the origin of coal produced and purchased,

distribution by mode of transportation and consumer category, sales to other coal distributors, and end-of-quarter stocks. Respondents are all companies that owned or purchased and distributed in excess of 50,000 short tons of coal during the report year defined by the current reporting quarter and the three previous reporting quarters.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0121, *Quarterly Coal Report*

DOE/EIA-0202, *Short-Term Energy Outlook*

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0218, *Weekly Coal Production*

DOE/EIA-0292, *An Assessment of the Quality of Selected EIA Data Series: Coal and Electric Power Data from 1977 to 1982*

DOE/EIA-0383, *Annual Energy Outlook*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-7A, Coal Production Report

Previous Forms: EIA-7, Bituminous Coal and Lignite Production and Mine Operation; BOM-6-1401-A, Bituminous Coal and Lignite Production and Mine Operation

Collection Frequency: Annually

Form EIA-7A is designed to provide information on current and prospective coal production, capacity, prices, reserves, and labor productivity. It is also used to investigate the performance of and competition in the coal industry. Data collected include company identification, types of mining operations, recoverable reserves, production quantity and value, productive capacity, employment, and projected production. Respondents are all U.S. coal mining operations that produce 10,000 short tons or more during the report year.

Resulting Publications:

DOE/EIA-0118, *Coal Production*

DOE/EIA-0121, *Quarterly Coal Report*

DOE/EIA-0292, *An Assessment of the Quality of Selected EIA Data Series: Coal and Electric Power Data from 1977 to 1982*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0383, *Annual Energy Outlook*

DOE/EIA-0218, *Weekly Coal Production*

Form EIA-14, Refiners' Monthly Cost Report

Previous Forms: FEA-P110-M-1, Refiners' Monthly Cost Allocation Report; FEO-96, Monthly Cost Allocation Report

Collection Frequency: Monthly

Form EIA-14 is used to provide data on the cost of crude oil purchased by refiners. These data are used for publications and statistical reports. Respondents are refiners.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0202, *Short-Term Energy Outlook*

DOE/EIA-0208, *Weekly Petroleum Status Report*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0380, *Petroleum Marketing Monthly*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0487, *Petroleum Marketing Annual*

Form EIA-20, Weekly Telephone Survey of Coal Burning Utilities (Standby Form)

Previous Forms: None

Collection Frequency: Weekly

Standby Form EIA-20 is designed to track coal stocks, receipts, and consumption at electric utilities during coal supply disruptions. In conjunction with Forms EIA-1 and EIA-4 data, EIA-20 data are used to inform the public, the industry, and the Government of aggregate coal data. Respondents are coal-consuming electric utilities.

Resulting Publications: Data not published

Form EIA-23, Annual Survey of Domestic Oil and Gas Reserves

Previous Forms: FPC-40, Annual Report of Proved Domestic Reserves

Collection Frequency: Annually

Form EIA-23 is designed to provide national and regional data on the reserves of crude oil, natural gas, and natural gas liquids. These data are used to develop national and regional estimates of proved reserves of domestic crude oil, natural gas, and natural gas liquids, and to facilitate national energy policy decisions. Data are provided on proved reserves and production of crude oil, natural gas (associated-dissolved and nonassociated), and lease condensate by State and geographic subdivision. Respondents are well operators who produce at least 400,000 barrels of crude oil,

or 2 billion cubic feet of gas, annually. A sample of smaller operators is required to submit brief summary reports.

Resulting Publications:

DOE/EIA-0216, *United States Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0534, *U.S. Oil and Gas Reserves by Year of Field Discovery*

DOE/EIA-0577, *Geologic Distribution of U.S. Oil and Gas*

Form EIA-23P, Oil and Gas Well Operator List Update Report

Previous Forms: None

Collection Frequency: Annually

Form EIA-23P is used to determine the status, active or inactive, and approximate level of production for domestic oil and gas well operators currently listed by EIA as respondents to Form EIA-23. These data are then used to update the EIA-23 list of well operators. Removal from the list of inactive firms and knowledge of the production level of active operators are necessary to maintain an accurate frame and reduce sampling errors of future EIA-23 surveys.

Resulting Publications: Data not published

Form EIA-28, Financial Reporting System

Previous Forms: None

Collection Frequency: Annually

Form EIA-28 is the basis for a financial reporting system as set forth in Section 205(h)(2) of the DOE Organization Act. Data gathered are revenues, profits, funds flow, costs, and investments by line of energy business (separately for foreign and domestic operations). The energy business lines are petroleum, coal, other energy (including uranium), and nonenergy. Petroleum is further broken down into production, refining, marketing, international marine, and domestic pipelines. Respondents each account for at least 1 percent of domestic production or reserves of oil, gas, coal, or uranium; or 1 percent of domestic oil production, refining capacity, or petroleum product sales.

Resulting Publications:

DOE/EIA-0206, *Performance Profiles of Major Energy Producers*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-64A, Annual Report of the Origin of Natural Gas Liquids Production

Previous Forms: None

Collection Frequency: Annually

Form EIA-64A is designed to provide data that are used to estimate natural gas plant liquids production and reserves by State and region. Data collected are plant and respondent identification, origin of natural gas received and natural gas plant liquids produced, and gas shrinkage resulting from natural gas plant liquids extracted. Respondents are natural gas processing plant operators.

Resulting Publications:

DOE/EIA-0131, *Natural Gas Annual*

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0216, *United States Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-176, Annual Report of Natural and Supplemental Gas Supply and Disposition

Previous Forms: BOM-6-1340-A, Supply and Distribution of Natural Gas-Distributors; BOM-6-1341-A, Supply and Distribution of Natural Gas-Producers

Collection Frequency: Annually

Form EIA-176 is designed to provide data on the consumption of natural gas by major end-use category, demand, and prices by State for various analyses and publications. Data collected include the origin of natural gas supplies and the disposition of natural gas on a State basis. Respondents include natural and synthetic gas producers, processors, distributors, storage operators, and pipeline operators.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0130, *Natural Gas Monthly*

DOE/EIA-0131, *Natural Gas Annual, Volumes I and II*

DOE/EIA-0131, *Natural Gas Annual Supplement: Company Profiles*

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0383, *Annual Energy Outlook*

DOE/EIA-0383, *Annual Energy Review*

Form EIA-182, Domestic Crude Oil First Purchase Report

Previous Forms: ERA-182, Domestic Crude Oil First

Purchaser's Report

Collection Frequency: Monthly

Form EIA-182 is designed to provide data on the first marketed price of domestic crude oil after production. Federal agencies and market analysts incorporate the data in diverse time-series, models, and cost indices. State-level data are sought for estimating current and proposed tax revenues and crude oil production volumes. Corporate planners and industry consultants use the data to forecast market response. Data are supplied by all firms that acquire domestic crude oil through a first purchase and assume ownership at or near the lease (location) on which crude oil was produced.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0109, *Petroleum Supply Monthly*

DOE/EIA-0380, *Petroleum Marketing Monthly*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0487, *Petroleum Marketing Annual*

Form EIA-191, Underground Gas Storage Report

Previous Forms: FEA-G318-M-0, Underground Gas Storage Report

Collection Frequency: Monthly

Data from operators of all underground natural gas storage facilities are combined at the State level to help EIA assess the supplies of natural gas in storage fields in regions of the United States and to identify the location of the supplies. Specific data collected are respondent identification, co-owner name (if any), working and base gas in reservoirs, injections, withdrawals, and location and capacity of reservoirs.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0130, *Natural Gas Monthly*

DOE/EIA-0131, *Natural Gas Annual*

DOE/EIA-0202, *Short-Term Energy Outlook*

DOE/EIA-0383, *Annual Energy Outlook*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0538, *Winter Fuels Report*

Form EIA-191S, Weekly Underground Gas Storage Report (Standby Form)

Previous Forms: None

Collection Frequency: Weekly

Form EIA-191S is designed to fill gaps in the natural gas data collections where monthly data are not sufficient for responses to natural disasters, severe

weather, or other catastrophic events. The data would permit EIA to monitor the impact of regional disruptions on a weekly basis when the EIA Administrator determines that conditions or events warrant more frequent data. All companies that operate underground natural gas storage fields in specific geographic areas must provide the information requested.

Resulting Publications: Data not published

Form EIA-254, Semiannual Report on Status of Reactor Construction

Previous Forms: ERDA-HQ-254, Quarterly Progress Report on Status of Reactor Construction
Collection Frequency: Semiannually

Form EIA-254 is designed to provide data on nuclear units planned or under construction by electric utilities, including data on cost, date of first fuel loading, and date the unit is scheduled for commercial operation. Costs for land acquisition and equipment are also gathered. Respondents are all U.S. electric utilities that have ordered nuclear steam supply systems and have not yet completed nuclear facility construction.

Resulting Publications: Data not published

Form EIA-412, Annual Report of Public Electric Utilities
Previous Forms: EP-412, Annual Report for Municipal Electric Utilities with Annual Revenues of \$250,000 or More; FPC-1-M, Annual Report for Municipal Electric Utilities Having Annual Revenues of \$250,000 or More

Collection Frequency: Annually

Form EIA-412 is designed to provide accounting, financial, and operating data from publicly owned electric utilities whose annual sales to ultimate consumers, or sales for resale, are 120,000 megawatts or greater for each of the two previous years. These data are published and used in EIA studies and analyses of the electric power industry. Data collected include balance sheets, income statements, expense data, electric sales and purchases, generating plant data by type of plants, and transmission line data.

Resulting Publications:

DOE/EIA-0348, *Electric Power Annual*
 DOE/EIA-0376, *State Energy Price and Expenditure Report*
 DOE/EIA-0437/2, *Financial Statistics of Selected Pub-*

licly Owned Electric Utilities in the United States
 DOE/EIA-0455, *Electric Plant Cost and Power Production Expenses*
 DOE/EIA-0531, *Electric Trade in the United States*

Forms EIA-457A/G, Residential Energy Consumption Survey

Previous Forms: EIA-84, National Energy Consumption Interim Survey; EIA-410A, Survey of Residential Fuel Consumption-Fuel Oil Households; EIA-410B, Survey of Residential Fuel Consumption-Rental Agents; EIA-410C, Survey of Residential Fuel Consumption-Utilities

Collection Frequency: Triennially

Forms EIA-457A through G are used to collect comprehensive national and regional data on both the consumption of and expenditures for energy in the residential sector of the economy. Data are used for analyzing and forecasting residential energy consumption. Housing, appliance, and demographic characteristics data are collected via personal interviews with households, and consumption and expenditure billing data are collected from the energy suppliers. End use intensities are produced for space heating, water heating, air conditioning, refrigerators, and appliances. Rental agents are contacted by telephone to check on fuels used in rented apartments. Previous surveys were conducted in 1978, 1979, 1980, 1981, 1982, 1984, 1987, and 1990.

Resulting Publications:

DOE/EIA-0314(90), *Housing Characteristics*
 DOE/EIA-0321/1(90), *Household Energy Consumption and Expenditures, Part I: National Data*
 DOE/EIA-0321/2(90), *Household Energy Consumption and Expenditures 1990 Supplement: Regional Data*
 DOE/EIA-0384, *Annual Energy Review*
 DOE/EIA-0482, *Residential Energy Consumption Survey: Trends in Consumption and Expenditures 1978 - 1984*

Form EIA-627, Annual Quantity and Value of Natural Gas Report

Previous Forms: None

Collection Frequency: Annually

Form EIA-627 provides information on natural gas production, the value of natural gas, and the number of producing gas wells. Monthly data are collected annually on an aggregate basis from State agencies already collecting these data.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0130, *Natural Gas Monthly*
DOE/EIA-0131, *Natural Gas Annual*
DOE/EIA-0384, *Annual Energy Review*

Form EIA-759, Monthly Power Plant Report

Previous Forms: FPC-4, Monthly Power Plant Report

Collection Frequency: Monthly

Form EIA-759 is designed to provide net generation, fuel consumption, and end-of-month fuel stocks for all electric generating plants. Specific data also include prime mover and fuel type. These data are used in EIA publications and forecasting models. Respondents are all U.S. electric utilities engaged in the production of electric power for public use.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0121, *Quarterly Coal Report*
DOE/EIA-0214, *State Energy Data Report*
DOE/EIA-0131, *Natural Gas Annual*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0226, *Electric Power Monthly*
DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0348, *Electric Power Annual*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0531, *Electric Trade in the United States*
DOE/EIA-0538, *Winter Fuels Report*
DOE/EIA-0455, *Electric Plant Cost and Power Production Expenses*

Form EIA-767, Steam-Electric Plant Operation and Design Report

Previous Forms: FPC-67, Steam-Electric Plant Air and Water Quality Control Data

Collection Frequency: Annually

Form EIA-767 is designed to provide information on air and water quality from steam-electric power plants with generating capacity of 100 megawatts or greater. A subset of these data are provided from steam-electric power plants with generating capacity between 10 and 100 megawatts. The data collection is jointly sponsored and shared by the Environmental Protection Agency, the Bureau of Economic Analysis (Department of Commerce), DOE's Office of Environmental Analysis, and the Office of Fossil Energy. Data are used by these agencies to evaluate fuel use in rate proceedings; to develop, assess, reform, and enforce regulations under the Clean Air Act, the Federal Water Pollution Act, and the Resource Conservation and

Recovery Act of 1976; to assess the impact of pollution abatement and control expenditures on the GNP; and to assess the effect of environmental regulations on the generation of electric power. The Form EIA-767 was cited in the Clean Air Act Amendments of 1990 as the source of data establishing a baseline used to calculate allowances of sulfur dioxide. Data are also used to perform analyses pursuant to the Interagency Acid Precipitation Task Force and are available on tape from the National Technical Information Service.

Resulting Publications:

DOE/EIA-0348, *Electric Power Annual*

Form EIA-782A, Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report

Previous Forms: EIA-460, Petroleum Industry Monthly Report for Product Prices; EIA-9A, No. 2 Distillate Price Monitoring Report

Collection Frequency: Monthly

Form EIA-782A is designed to provide monthly information on sales prices and volumes of certain petroleum products from a universe of refiners and gas plant operators. This information is published at various aggregation levels and is used by EIA to perform analyses and make projections related to energy supplies, demand, and prices.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0376, *State Energy Price and Expenditure Report*
DOE/EIA-0380, *Petroleum Marketing Monthly*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0487, *Petroleum Marketing Annual*

Form EIA-782B, Resellers'/Retailers' Monthly Petroleum Product Sales Report

Previous Forms: EIA-9A, No. 2 Distillate Price Monitoring Report; EIA-460, Petroleum Industry Monthly Report for Product Prices

Collection Frequency: Monthly

Form EIA-782B is designed to provide monthly State sales volumes and prices for motor gasoline, No. 2 distillate, and residual fuel oil from a sample of distillate fuel oil resellers and retailers, motor gasoline wholesalers, and residual fuel oil resellers and retailers. This information is published at various aggregate levels and is used by EIA to perform analyses and

make projections related to energy supplies, demand, and prices.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0376, *State Energy Price and Expenditure Report*
DOE/EIA-0380, *Petroleum Marketing Monthly*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0487, *Petroleum Marketing Annual*

Form EIA-782C, Monthly Report of Petroleum Products Sold into States for Consumption

Previous Forms: EIA-25, Prime Supplier's Monthly Report

Collection Frequency: Monthly

Form EIA-782C is designed to provide monthly information on the sale of selected petroleum products into a State for consumption in that State. Prime suppliers who make the first sale of selected petroleum products to local distributors, retailers, and end-users must complete EIA-782C. Respondents include refiners, importers, petroleum product resellers, petroleum product retailers, and gas plant operators. This information is published at various aggregate levels and is used by EIA to perform analyses and make projections related to energy supplies and demand.

Resulting Publications:

DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0214, *State Energy Data Report*
DOE/EIA-0380, *Petroleum Marketing Monthly*
DOE/EIA-0466, *Profiles of Foreign Direct Investment in U.S. Energy*
DOE/EIA-0487, *Petroleum Marketing Annual*

Form EIA-800, Weekly Refinery Report

Previous Forms: EIA-161, Refinery Report

Collection Frequency: Weekly

Form EIA-800 is designed to provide data on the operations of petroleum refineries and blending plants. Data are collected from a sample of operators of refineries and blending plants. Data include input and stocks of refinery feedstocks and net production and stocks of selected finished petroleum products.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-801, Weekly Bulk Terminal Report

Previous Forms: EIA-162, Bulk Terminal Report

Collection Frequency: Weekly

Form EIA-801 is designed to provide data on end-of-week stock levels of selected finished petroleum products. Data are collected from a sample of bulk terminal operators on a Petroleum Administration for Defense (PAD) District and sub-PAD District basis. Specific product stock data collected include finished leaded and unleaded motor gasoline, motor gasoline blending components, naphtha- and kerosene-type jet fuels, distillate fuel oil, and residual fuel oil.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-802, Weekly Product Pipeline Report

Previous Forms: EIA-163, Product Pipeline Stocks Report

Collection Frequency: Weekly

Form EIA-802 is designed to provide data on end-of-week stock levels of selected petroleum products that are held in custody by the reporting pipeline companies. Data are collected from a sample of petroleum product pipeline companies on PAD and sub-PAD District basis. Data collected include stocks of finished leaded and unleaded motor gasoline, motor gasoline blending components, naphtha- and kerosene-type jet fuels, and distillate fuel oil.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-803, Weekly Crude Oil Stocks Report
Previous Forms: EIA-164, Crude Oil Stocks Report
Collection Frequency: Weekly

Form EIA-803 is designed to provide data on end-of-week crude oil stocks. Reported data include crude oil stocks by PAD District and stocks of Alaskan crude oil in transit by water. Data are reported by a sample of companies that transport or store 1,000 barrels or more of crude oil. Respondents are gathering and trunk pipeline companies (interstate, intrastate, and intra-company pipelines), crude oil producers, terminal operators, storers of crude oil (except refineries), and transporters of Alaskan crude oil by water.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0383, *Annual Energy Outlook*

Form EIA-804, Weekly Imports Report
Previous Forms: EIA-165, Imports Report
Collection Frequency: Weekly

Form EIA-804 is designed to provide data on imports of crude oil and selected petroleum products by PAD District or sub-PAD District. These data are provided by a sample of importers of record who import petroleum into the 50 States and the District of Columbia. Specific products addressed are crude oil, finished leaded and unleaded motor gasoline, motor gasoline blending components, naphtha- and kerosene-type jet fuels, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and other petroleum products. In addition, imports of crude oil by country of origin are collected.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-806, Weekly Crude Watch Report
Previous Forms: EIA-739, Crude Watch Weekly Tele-

phone Report; EP-739, Crude Watch Weekly Telephone Report; ERA-739, Crude Watch Weekly Telephone Report
Collection Frequency: Weekly

Form EIA-806 is designed to provide the only timely source of cost and volume loading data for crude oil purchases destined for the United States. This information assists DOE in monitoring trends in the world energy market in order to be able to anticipate problems that might impede the exercise of DOE's responsibilities under the Defense Production Act. Form EIA-806 is the source of noncompany-specific market information provided to the Department of Defense's Defense Fuel Supply Center. Respondents include 19 companies among the largest importers of crude oil into the United States.

Resulting Publications: Data not published

Form EIA-807, Propane Telephone Survey
Previous Forms: None
Collection Frequency: Weekly, Monthly

The EIA-807 survey is designed to provide data on production, stocks, and imports of propane during the heating season. Data collected will be used to monitor the supply of propane and to report to Congress and others on propane supplies when requested. Respondents are a sample of refineries, bulk terminals, petroleum product pipelines, petroleum product importers, and natural gas processing plants located in PAD Districts I, II, or III.

Resulting Publications:

DOE/EIA-0538, *Winter Fuels Report*

Form EIA-810, Monthly Refinery Report
Previous Forms: FEA-P320-M-0, Refinery Report; EIA-87, Refinery Report
Collection Frequency: Monthly

Form EIA-810 is designed to provide information regarding the balance between the supply (beginning stocks, receipts, and production) and disposition (input, shipments, fuel use and losses, and ending stocks) of crude oil and refined products. Data are provided by all operating and idle refineries and blending plants.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
 DOE/EIA-0109, *Petroleum Supply Monthly*
 DOE/EIA-0202, *Short-Term Energy Outlook*
 DOE/EIA-0208, *Weekly Petroleum Status Report*
 DOE/EIA-0214, *State Energy Data Report*
 DOE/EIA-0340, *Petroleum Supply Annual*
 DOE/EIA-0383, *Annual Energy Outlook*
 DOE/EIA-0384, *Annual Energy Review*
 DOE/EIA-0538, *Winter Fuels Report*

Form EIA-811, Monthly Bulk Terminal Report

Previous Forms: FEA-P321-M-0, Bulk Terminal Stocks of Finished Petroleum Products; EIA-88, Bulk Terminal Stocks Report

Collection Frequency: Monthly

Form EIA-811 is designed to provide data on end-of-month stock levels of finished leaded and unleaded motor gasoline, motor gasoline blending components, finished aviation gasoline, special naphthas, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil by sulfur content, lubricants, asphalt and road oil, pentanes plus, liquefied petroleum and refinery gases, and miscellaneous products. Data are reported at the State level, including the District of Columbia, and for Puerto Rico and the Virgin Islands on a custody basis by bulk terminal operating companies.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
 DOE/EIA-0109, *Petroleum Supply Monthly*
 DOE/EIA-0202, *Short-Term Energy Outlook*
 DOE/EIA-0208, *Weekly Petroleum Status Report*
 DOE/EIA-0214, *State Energy Data Report*
 DOE/EIA-0340, *Petroleum Supply Annual*
 DOE/EIA-0383, *Annual Energy Outlook*
 DOE/EIA-0384, *Annual Energy Review*
 DOE/EIA-0538, *Winter Fuels Report*

Form EIA-812, Monthly Product Pipeline Report

Previous Forms: FEA-P322-M-0, Pipeline Products Report; EIA-89, Pipeline Products Report

Collection Frequency: Monthly

Form EIA-812 is designed to provide data on end-of-month stock levels and movements of petroleum products transported by pipeline. Data are reported on a custody basis by all product pipeline companies. Data include stocks of products in pipelines and working tanks, as well as movements of products between PAD Districts.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
 DOE/EIA-0109, *Petroleum Supply Monthly*
 DOE/EIA-0202, *Short-Term Energy Outlook*
 DOE/EIA-0208, *Weekly Petroleum Status Report*
 DOE/EIA-0214, *State Energy Data Report*
 DOE/EIA-0340, *Petroleum Supply Annual*
 DOE/EIA-0383, *Annual Energy Outlook*
 DOE/EIA-0384, *Annual Energy Review*
 DOE/EIA-0538, *Winter Fuels Report*

Form EIA-813, Monthly Crude Oil Report

Previous Forms: FEA-P323-M-0, Crude Oil Stocks; EIA-90, Crude Oil Stocks Report

Collection Frequency: Monthly

Form EIA-813 is designed to provide data on end-of-month stocks of crude oil by PAD District, consumption of crude oil during the month by pipelines and on leases, stocks of Alaskan crude oil in transit by water, and movements of crude oil by pipeline between PAD Districts. Data are collected from all companies which carry or store 1,000 barrels or more of crude oil. Respondents are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators and storers of crude oil (except refineries), and companies transporting crude oil by water in the 50 States and the District of Columbia.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
 DOE/EIA-0109, *Petroleum Supply Monthly*
 DOE/EIA-0202, *Short-Term Energy Outlook*
 DOE/EIA-0208, *Weekly Petroleum Status Report*
 DOE/EIA-0214, *State Energy Data Report*
 DOE/EIA-0340, *Petroleum Supply Annual*
 DOE/EIA-0383, *Annual Energy Outlook*
 DOE/EIA-0384, *Annual Energy Review*

Form EIA-814, Monthly Imports Report

Previous Forms: ERA-60, Monthly Imports Report; FEA-P126-M-0, Domestic Crude Oil Entitlements Program Importers Monthly Report; FEA-P113-M-0, Report of Oil Imports into the U.S. and Puerto Rico

Collection Frequency: Monthly

Form EIA-814 is designed to provide data on imports of crude oil and petroleum products. Data are filed by each importer of record who imports petroleum into the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and other U.S. Territories; and from Puerto Rico, the Virgin Islands and U.S. Territories into 50 States and the District of Columbia.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0214, *State Energy Data Report*
DOE/EIA-0340, *Petroleum Supply Annual*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-816, Monthly Natural Gas Liquids Report

Previous Forms: EIA-64, *Natural Gas Liquids Operations Report*

Collection Frequency: Monthly

Form EIA-816 is designed to provide information regarding the balance between the supply (beginning stocks, receipts, and production) and disposition (input, shipments, fuel use and losses, and ending stocks) of natural gas liquids. The data are used to report aggregate statistics on, and conduct analyses of, the operation of U.S. natural gas processing plants and fractionators. Data are supplied by operators of facilities designed to extract liquid hydrocarbons from a natural gas stream (natural gas processing plants) or to separate a liquid hydrocarbon stream into its component products (fractionators).

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0131, *Natural Gas Annual*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0208, *Weekly Petroleum Status Report*
DOE/EIA-0214, *State Energy Data Report*
DOE/EIA-0340, *Petroleum Supply Annual*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-817, Monthly Tanker and Barge Movement Report

Previous Forms: EIA-170, *Tanker and Barge Shipments of Crude Oil and Petroleum Products Between PAD Districts*

Collection Frequency: Monthly

Form EIA-817 is designed to provide data on the shipments of crude oil and petroleum products between PAD Districts. The information is used in computing domestic demand for petroleum products by PAD Districts and to forecast short-term petroleum demand.

Resulting Publications:

DOE/EIA-0109, *Petroleum Supply Monthly*
DOE/EIA-0214, *State Energy Data Report*
DOE/EIA-0340, *Petroleum Supply Annual*

Form EIA-818, Monthly International Energy Agency Imports/Stocks-at-Sea Report

Previous Forms: EIA-142, *International Energy Agency Imports/Stocks-at-Sea Report*

Collection Frequency: Monthly

Form EIA-818 is designed to provide data from selected major importers of crude oil, natural gas liquids, and petroleum products. These data aid in determining projected oil imports. During petroleum supply emergencies, the data are used to help determine the re-allocation of petroleum among the International Energy Agency member nations. Specific data are imports of petroleum into the United States, oil in transit, and stocks at sea.

Resulting Publications: Data not published

Form EIA-819M, Monthly Oxygenate Telephone Report

Previous Forms: EIA-819, *Monthly Oxygenate Telephone Survey*

Collection Frequency: Monthly

EIA-819M is designed to obtain information on oxygenate production, imports, and end-of-month stocks.

Resulting Publications: Data not published

Form EIA-820, Annual Refinery Report

Previous Forms: BOM-6-1334-A, *Capacity of Petroleum Refineries*; EIA-177, *Capacity of Petroleum Refineries*

Collection Frequency: Annually

Form EIA-820 is used to collect data on current and projected capacities of the facilities of all petroleum refineries and blending plants located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Current data and projections for the next year are reported for operable atmospheric crude oil distillation capacity, downstream charge capacity, and production capacity. In addition, data include current year working and shell storage capacity of crude oil and petroleum products, prior years' data for fuels consumed at the refineries for all purposes, and refinery receipts of crude oil by method of transportation. Data are used to conduct

analyses of the operation of U.S. petroleum refineries and blending plants. Respondents are operators of all operating and idle petroleum refineries (including new refineries under construction), blending plants, shutdown refineries with usable storage capacity, and refineries shut down during the previous year.

Resulting Publications:

DOE/EIA-0340, *Petroleum Supply Annual*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-821, Annual Fuel Oil and Kerosene Sales Report

Previous Forms: EIA-172, Sales Report of Fuel Oil and Kerosene

Collection Frequency: Annually

Form EIA-821 is designed to provide data on the annual sales of distillate and residual fuel oil and kerosene. The data, which are published by EIA, are used to determine current and projected fuel oil needs on national, regional, and State levels. The survey specifically covers sales of distillate and residual fuel oils and kerosene by end use and State of destination. Respondents are a scientifically selected sample of fuel oil dealers in the 50 States and the District of Columbia.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0535, *Fuel Oil and Kerosene Sales*

Form EIA-822A/D, Oxygenate Operations Identification Survey

Previous Forms: None

Collection Frequency: Nonrecurring

Form EIA-822A/D provides data on oxygenate producers, blenders, storers, and importers to determine whether such operators are eligible respondents to EIA monthly surveys: EIA-810, 811, 812 and 814.

Resulting Publications: Data not published

Form EIA-825, Petroleum Facility Operator Identification Survey

Previous Forms: EIA-747, Petroleum Facility Operator Identification Survey

Collection Frequency: Triennially

Form EIA-825 is designed to obtain information on petroleum supply facilities for use in determining if

the facilities should be included in EIA surveys EIA-810, EIA-811, EIA-812, EIA-813, EIA-816, and EIA-817. Information includes stocks, storage capacity, pipeline, tanker and barge transport operations, as well as blending, refining, and natural gas processing activities. Respondents are operators of bulk terminals, pipeline systems, tankers and barges, and petroleum or natural gas processing plants.

Resulting Publications: Data not published

Form EIA-826, Monthly Electric Utility Sales and Revenue Report with State Distributions

Previous Forms: FERC-5, Electric Utility Company Monthly Statement; FPC-5, Monthly Statement of Electric Operating Revenue and Income

Collection Frequency: Monthly

The Form EIA-826 is designed to collect data on electricity sales and associated revenue to ultimate consumers by class of service, at the State/electric utility level. Estimates of sales and average revenue per kilowatthour sold (the ratio of revenue to sales) at the national, Census division, and State level, on the basis of these reported data are published by the EIA. In addition, financial data are collected at the total company level; selected financial statistics are requested including depreciation and amortization of property, plant, and equipment; allowance for funds used during construction; net income; and gross additions to construction work in progress. These financial statistics are used by the United States Department of Commerce for compiling the Gross National Product statistics.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0226, *Electric Power Monthly*

DOE/EIA-0384, *Annual Energy Review*

Forms EIA-846A/D, Manufacturing Energy Consumption Survey

Previous Forms: EIA-846(F), Manufacturing Energy Consumption Survey (Consumption and Related); EIA-846(S), Manufacturing Energy Consumption Survey (Fuel Switching Capability)

Collection Frequency: Triennially

Forms EIA-846A through D are used to collect information on energy consumption, energy usage patterns, and fuel-switching capabilities of the manufacturing sector of the U.S. economy. The information from this survey is used to publish aggregate statistics on the consumption of energy for fuel and

nonfuel purposes, fuel-switching capabilities, and certain energy-related issues, such as energy prices, on-site electricity generation, and purchases of electricity from non-utilities. Beginning in 1991, the survey also started to collect information on end users of energy, participation in energy management programs, and penetration of new technology. Respondents are a sample of manufacturing establishments in Standard Industrial Classification categories 20 through 39.

Resulting Publications:

DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0512(88), *Manufacturing Energy Consumption Survey: Consumption of Energy, 1988*
DOE/EIA-0515(88), *Manufacturing Fuel Switching Capability, 1988*
DOE/EIA-0552(88), *Changes in Energy Intensity in the Manufacturing Sector, 1980 - 1988*
DOE/EIA-0555(92)/2, *Development of the 1991 Manufacturing Energy Consumption Survey*
DOE/EIA-0555(92)/3, *Derived Annual Estimates of Manufacturing Energy Consumption 1974-1988*

Form EIA-851, Domestic Uranium Mining Production Report

Previous Forms: None

Collection Frequency: Monthly

Form EIA-851 is designed to provide data which are needed to monitor the viability of the domestic uranium mining and milling industry pursuant to the Nuclear Regulatory Commission Authorization Act of 1983. This collection replaced production reporting to the Grand Junction Area Office in Colorado. Data collected include beginning and end-of-month inventories, production, and processing of uranium. These data are not published but are analyzed and used as input to annual reports to Congress and the President. Respondents are uranium concentrate producing firms.

Resulting Publications: Data not published

Form EIA-856, Monthly Foreign Crude Oil Acquisition Report

Previous Forms: EP-51, Monthly Foreign Crude Oil Transaction Report; ERA-51, Transfer Pricing Report
Collection Frequency: Monthly

Form EIA-856 is designed to provide data on costs of foreign crude oil acquired for importation into the United States, its territories and possessions. These data are used as follows: to calculate price indices by the Bureau of Labor Statistics; in analyses of consump-

tion, production, and prices of fuels worldwide; and in modeling and forecasting. Data collected include crude oil transactions, country crude code, crude type, gravity, data of loading/landing, port of destination, vessel, volume purchased, purchase price, other costs, landed cost, number of days credit, and name of vendor. Respondents include all firms reporting previously on Form ERA-51, Transfer Pricing Report, as of June 1982, and all other firms importing 500,000 barrels of foreign crude oil during the report month.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0380, *Petroleum Marketing Monthly*
DOE/EIA-0384, *Annual Energy Review*
DOE/EIA-0487, *Petroleum Marketing Annual*

Form EIA-857, Monthly Report of Natural Gas Purchases and Deliveries to Consumers

Previous Forms: None

Collection Frequency: Monthly

Form EIA-857 is designed to provide volume and cost or revenue data on natural gas delivered to residential, commercial, and industrial consumers. State and regional summaries of these data are published by EIA and are used by other branches of Government to make analyses and projections. Respondents are a sample of natural gas companies that deliver to consumers in the United States.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0130, *Natural Gas Monthly*
DOE/EIA-0131, *Natural Gas Annual*
DOE/EIA-0538, *Winter Fuels Report*

Form EIA-857S, Weekly Report of Natural Gas Supplies and Deliveries to Consumers (Standby Form)

Previous Forms: None

Collection Frequency: Weekly

Form EIA-857S is designed to fill gaps in the natural gas data collections where monthly data are not sufficient for responses to natural disasters, severe weather, or other catastrophic events. All companies currently responding to the EIA-857 in geographic areas affected would report. The data would permit EIA to monitor the impact of regional disruptions on a weekly basis when the EIA Administrator deter-

mines that conditions or events warrant more frequent data.

Resulting Publications: Data not published

Form EIA-858, Uranium Industry Annual Survey

Previous Forms: EIA-491A, Survey of United States Uranium Marketing Activity (January collection); EIA-491B, Survey of United States Uranium Marketing Activity (July Collection); EIA-717, Annual Uranium Exploration Survey; EIA-854, U.S. Uranium Industry Financial Survey

Collection Frequency: Annually

Form EIA-858 is a mandatory collection of exploration and development, reserves, ore and concentrate production, marketing, inventories, shipments for enrichment, requirements, and financial information compiled from companies in the uranium industry in the United States. These data are used to monitor the viability of the domestic uranium mining and milling industry pursuant to the Nuclear Regulatory Commission Authorization Act of 1983. In addition, the data are used extensively by the public and private sectors to analyze trends in the uranium industry and to assess the current status of the industry.

Resulting Publications:

DOE/EIA-0477, *Domestic Uranium Mining and Milling Industry: Viability Assessment*

DOE/EIA-0478, *Uranium Industry Annual*

Form EIA-860, Annual Electric Generator Report

Previous Forms: EIA-119A, Annual Projection of System Changes; FPC-12, Power System Statement

Collection Frequency: Annually

Form EIA-860 is used to collect data on the status of electric generating plants and associated equipment in commercial service and those scheduled to be in commercial service in the United States and Puerto Rico within 10 years of filing of the report. These data are used to maintain and update the EIA's electric power plant frame data base. Data are collected on power plant sites and the design data of electric generators. Respondents include each electric utility that operates, or plans to operate, a power plant in the United States or Puerto Rico within 10 years of the report.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0095, *Inventory of Power Plants in the United States*

DOE/EIA-0202, *Short-Term Energy Outlook*

DOE/EIA-0226, *Electric Power Monthly*

DOE/EIA-0348, *Electric Power Annual*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0455, *Electric Plant Cost and Power Production Expenses*

DOE/EIA-0437, *Financial Statistics of Selected Electric Utilities in the United States*

DOE/EIA-0383, *Annual Energy Outlook*

Form EIA-861, Annual Electric Utility Report

Previous Forms: FPC-12, Power System Statement

Collection Frequency: Annually

Form EIA-861 is a mandatory collection of data, filed annually by each electric utility in the United States, its territories, and Puerto Rico. The survey collects data on generation, wholesale purchases, and sales and revenue by class of consumer and State. These data are used to maintain and update the EIA's electric utility frame data base. This data base provides information to answer questions from the Executive Branch, Congress, other public agencies, and the general public. Respondents include each electric utility that is a corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities within the United States, its territories, or Puerto Rico for the generation, transmission, distribution, or sale of electric energy primarily for use by the public.

Resulting Publications:

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0226, *Electric Power Monthly*

DOE/EIA-0348, *Electric Power Annual*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0437/1, *Financial Statistics of Selected Investor-Owned Electric Utilities in the United States*

DOE/EIA-0437/2, *Financial Statistics of Selected Publicly Owned Electric Utilities in the United States*

DOE/EIA-0531, *Electric Trade in the United States*

DOE/EIA-0540, *Electric Sales and Revenue*

Form EIA-863, Petroleum Product Sales Identification Survey

Previous Forms: EIA-764A, Petroleum Product Sales Identification Survey; EIA-764B, Petroleum Product Sales Identification Survey (EIA-172 Respondents)

Collection Frequency: Triennially

Form EIA-863 is designed to provide a comprehensive frame file of No. 2 distillate and residual fuel oil dealers and motor gasoline resellers. Information is col-

lected on size, type, and geographic location of these firms. The 21,000 firms surveyed, with their associated volumetric data and tracking information, serve as the sampling frame for Forms EIA-821 (Annual Fuel Oil and Kerosene Sales Report), EIA-782 (Monthly Petroleum Products Sales Report), EIA-877 (Winter Heating Fuels Telephone Survey), EIA-878, (Daily Motor Gasoline Price Survey), and other ad hoc surveys, such as the National Petroleum Council surveys.

Resulting Publications: Data not published

Form EIA-867, Annual Nonutility Power Producer Report

Previous Forms: None

Collection Frequency: Annually

EIA-867 collects data annually from nonutility power producers who own or plan on installing electric generation equipment with a total capacity of one megawatt or more at an existing or proposed site. Electricity generation, installed capacity, and energy consumption data are collected. These data will be used to augment existing electric utility data and for electric power forecasts and analyses.

Resulting Publications:

DOE/EIA-0348, *Electric Power Annual*

DOE/EIA-0384, *Annual Energy Review*

Form EIA-868, Quarterly Coal Imports by Electric Utilities into the United States

Previous Forms: None

Collection Frequency: Quarterly

Form EIA-868 collects quantity, quality, and cost (transportation, mine price, delivered price) of coal imported by electric utility plants. This information is used to prepare quarterly and annual summaries on coal imports, including data and analysis on prices, sources of exports, transportation methods and costs, and displacement of U.S. coal by imports.

Resulting Publications:

DOE/EIA-0121, *Quarterly Coal Report*

DOE/EIA-0191, *Cost and Quality of Fuels for Electric Utility Plants*

Forms EIA-871A/G, Commercial Buildings Energy Consumption Survey

Previous Forms: EIA-788A, Nonresidential Buildings Energy Consumption Survey-Original Building; Form EIA-788B, Nonresidential Buildings Energy Con-

sumption Survey-Update Building; Form EIA-788C, Nonresidential Buildings Energy Consumption Survey-Energy Supplier Form

Collection Frequency: Triennially

Forms EIA-871A through G are used to collect information for the Commercial Buildings Energy Consumption Survey (CBECS). The survey provides comprehensive national and regional information on the consumption of, and expenditures for, energy in the commercial sector of the economy. Data are used in EIA models and are published in statistical and analytical reports. Physical characteristics information for commercial buildings is collected by personal interviews with building owners and managers by using Form EIA-871A. Billing and consumption data for the buildings are collected by mail from individual energy suppliers by using Forms EIA-871C through F (depending on energy source). Supplemental information on construction improvements, maintenance, and repairs is collected for the Bureau of the Census by using Form EIA-871G. This survey was renamed the CBECS in 1989. Previously it was conducted under the name of Nonresidential Buildings Energy Consumption Survey.

Resulting Publications:

DOE/EIA-0318(89), *Commercial Buildings Energy Consumption and Expenditures, 1989*

DOE/EIA-0246(89), *Commercial Buildings Characteristics, 1989*

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0555(92)/1, *Lighting in Commercial Buildings*

DOE/EIA-0555(92)/4, *User Needs Study for the 1992 Commercial Buildings Energy Consumption Survey*

Forms EIA-876A/E, Residential Transportation Energy Consumption Survey

Previous Forms: EIA-141, National Survey of Fuel Purchases for Vehicles-Purchase Log; Odometer Reading Cards, and Supplementary Questionnaire; EIA-429, National Survey of Fuel Purchases for Vehicles-Background Questionnaire

Collection Frequency: Triennially

Forms EIA-876A through E are designed to collect information on the number and types of vehicles per household and for each vehicle: annual mileage; Vehicle Identification Number (VIN); vehicle characteristics, such as size of engine, transmission type, and fuel type used (including alternative fuels). Fuel consumption, expenditures, and fuel efficiency are estimated by using Environmental Protection Agency, Bureau of Labor Statistics, and Lundberg Survey Inc.

data. Data are collected in a telephone survey and are used in EIA publications. Note: Residential Transportation Energy Consumption Survey was dropped from the publication title for the 1988 survey.

Resulting Publications:

DOE/EIA-0384, *Annual Energy Review*

DOE/EIA-0464(85), *Residential Transportation Energy Consumption Survey: Consumption Patterns of Household Vehicles 1985*

DOE/EIA-0464(88), *Household Vehicles Energy Consumption 1988*

Form EIA-877, Winter Heating Fuels Telephone Survey

Previous Forms: None

Collection Frequency: Other

Form EIA-877 is used to collect data on residential prices of No. 2 heating oil and propane. These data are used to monitor No. 2 heating oil and propane during the heating season (Oct 1 - March 31) and to report to the Congress and others. Respondents are selected retailers of heating oil and propane in PAD Districts I and II.

Resulting Publications:

DOE/EIA-0538, *Winter Fuels Report*

Form EIA-878, Motor Gasoline Price Survey

Previous Forms: None

Collection Frequency: Other

The EIA-878 is used to collect information on the retail price of unleaded regular motor gasoline. Data were used by the EIA to monitor prices during the Middle East crisis. Respondents were companies that owned retail motor gasoline stations. (OMB approval has been extended for use on a standby basis.)

Resulting Publications: Data not published

Form EIA-881(P), Farm Energy Consumption Survey Pretest

Previous Forms: None

Collection Frequency: Nonrecurring

EIA-881(P) was a pretest of a data collection effort to measure the purchases and expenditures by energy source, and end use by energy source for the agriculture sector of the U.S. economy. Data will be used to determine whether respondents are able to understand the questionnaire and instructions, if the infor-

mation requested is available, and the amount of burden being imposed upon the respondent. Respondents were a sample of farmers in SIC 01 and 02.

Resulting Publications: Data not published

Form FERC-1, Annual Report of Major Electric Utilities, Licensees and Others

Previous Forms: FPC-1, Annual Report for Electric Utilities, Licensees, and Others (Class A and Class B)

Collection Frequency: Annually

The Federal Energy Regulatory Commission (FERC) Form 1 is designed to gather financial data used for formal investigation of electric rates, rate levels, and financial audits. Specific data are collected on corporate information, balance sheet; income statement; retained earnings; taxes; depreciation, amortization, and depletion; electric operating revenues; electric maintenance expenses; and generating plant statistics. Survey respondents are electric utilities and licensees that had sales or transmission services that in each of the last three consecutive years exceeded any one or more of the following: (1) 1 million megawatt-hours of total annual sales; (2) 100 megawatt-hours of annual sales for resale; (3) 500 megawatt-hours of annual gross interchange out; or (4) 500 megawatt-hours of wheeling for others (deliveries plus losses).

Resulting Publications:

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0348, *Electric Power Annual*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0437/1, *Financial Statistics of Selected Investor-Owned Electric Utilities in the United States*

DOE/EIA-0455, *Electric Plant Cost and Power Production Expenses*

DOE/EIA-0531, *Electric Trade in the United States*

Form FERC-2, Annual Report of Major Natural Gas Companies

Previous Forms: FPC-2, Annual Report of Natural Gas Companies (Class A and Class B)

Collection Frequency: Annually

Form FERC-2 data are used by the Federal Energy Regulatory Commission for gas pipeline review and rate-setting; by the EIA for statistical purposes and publications; by State regulatory commissions for reporting requirements; and by the Economic Regulatory Administration in programs related to the Natural Gas Act. Specific data collected include depreciation, amortization and depletion; income state-

ments and retained earnings; materials and supplies; salary and wage distribution; construction work in progress; operating revenues; and operation and maintenance expenses. Respondents are major natural gas companies, as defined in the Natural Gas Act, whose combined gas sold for resale and gas transported or stored for a fee exceeds 50 mcf (thousand cubic feet at 14.73 pounds per square inch absolute at 60 degrees Fahrenheit) in each of the three previous calendar years.

Resulting Publications:

DOE/EIA-0145, *Statistics of Interstate Natural Gas Pipeline Companies*

DOE/EIA-0449, *A Study of Contracts Between Interstate Pipelines and Their Customers*

Form FERC-11, Natural Gas Pipeline Company Monthly Statement

Previous Forms: FPC-11, Natural Gas Pipeline Company Monthly Statement

Collection Frequency: Monthly

Form FERC-11 is designed to collect data on revenues, expenses, and gas volume of jurisdictional respondents for regulatory purposes. Specific data include end-of-month sales of natural gas to customers, income, operation and maintenance expenses, rates, and gas supplies and production. Respondents are companies whose combined gas sales for resale and whose gas transported or stored for a fee are in excess of 50 million Mcf (thousand cubic feet). The data provide an indication of the current status of pipeline activities and are used to measure the financial status of the regulated pipelines as a group.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0130, *Natural Gas Monthly*

DOE/EIA-0440, *Recent Market Activities of Major Interstate Pipeline Companies*

DOE/EIA-0448, *Drilling and Production Under Title 1 of the NGPA*

Form FERC-15, Interstate Pipeline's Annual Report of Gas Supply

Previous Forms: FPC-15, Annual Report of Gas Supply for Certain Natural Gas Pipeline Companies

Collection Frequency: Annually

Form FERC-15 is used by the Federal Energy Regulatory Commission (FERC) to monitor gas pipeline rates, supplies and certificates and for matters of policy. It is used by EIA in publications and analyses.

Form data consist of reporting year production, purchases, remaining reserves owned or under contract, and projected deliveries. Each supply source is uniquely identified. Imported natural gas and liquefied natural gas, as well as domestic supplies of coal gas, liquefied natural gas, and synthetic natural gas, are included. Respondents are interstate natural gas pipelines.

Resulting Publications:

DOE/EIA-0167, *Gas Supplies of Interstate Natural Gas Pipeline Companies*

DOE/EIA-0440, *Recent Market Activities of Major Interstate Pipeline Companies*

Form FERC-16, Report of Gas Supply and Requirements

Previous Forms: FPC-16, Report of Gas Supply, Requirements and Curtailments

Collection Frequency: Semiannually

Form FERC-16 is used by FERC to evaluate gas supply problems, to anticipate the location and extent of gas supply deficiencies, and for gas curtailment and allocation proceedings. Data include system-wide summary information concerning pipeline company supply, requirements, and surplus or deficiency, by month. Energy measurements are reported in million cubic feet at the pressure base of 14.73 psia at 60 degrees Fahrenheit. Respondents are companies selling natural gas interstate for resale.

Resulting Publications:

DOE/EIA-0449, *A Study of Contracts Between Interstate Pipelines and Their Customers*

Form FERC-80, Licensed Hydropower Development Recreation Report

Previous Forms: FPC-80, Licensed Projects Recreation Report

Collection Frequency: On Occasion

Form FERC-80 collects information for filing complete reports from licensed hydropower project developments in recreation facilities for the last full calendar year. The collected information includes data of hydroelectric projects under minor and major license. Data are used for negotiation of voluntary license conditions needed for improvements at FERC licensed projects. Part 10a of the Federal Power Act requires that a licensee submit to the Federal Energy Regulatory Commission for approval any plans, maps, and specifications which will present a comprehensive

plan for improving and developing a waterway for beneficial uses, including recreation.

Resulting Publications: Data not published.

Form FERC-121, Application for Determination of the Maximum Lawful Price Under the Natural Gas Policy Act of 1978

Previous Forms: None

Collection Frequency: On occasion

The information provided on FERC-121 is used by FERC to determine if a gas well qualifies for a particular price category under Sections 102, 103, 107, and 108 of the Natural Gas Policy Act of 1978. Data are also used by EIA in publications and analyses. Data include identification of wells, location of wells (onshore and outer continental shelf), names and code numbers of purchasers, estimated annual production from wells, and contract price information. Respondents are all natural gas producers who have drilled a new well since February 19, 1977, or who operated a qualifying stripper well on that date and who want a new rate determination.

Resulting Publications:

DOE/EIA-0130, *Natural Gas Monthly*

Form FERC-423, Monthly Report of Cost and Quality of Fuels for Electric Plants

Previous Forms: FPC-423, Monthly Report of Cost and Quality of Fuels for Electric Plants

Collection Frequency: Monthly

FERC-423 is designed to provide data for the Department of Energy, Federal Energy Regulatory Commission; the Environmental Protection Agency; the General Accounting Office; the Department of Commerce; the Federal Reserve Board; the Council of Economic Advisors; the Department of Labor; and Congress. These data are used in economic studies to determine the justification for increasing electric rates, environmental studies, fuel emergencies, and policy decisions. Specific data include respondent identification, type of purchase (contract, spot, firm, interruptible), expiration date of contract, fuel type, coal origin data, including type of mine, Bureau of Mine (BOM) district, and State and county of origin. Supplier (mine, broker, refinery, pipeline) data include quantity of fuel received, quality of fuel (as received, including Btu, sulfur, and ash content), and delivered cost of fuel. Respondents are electric generating plants with a steam-electric and combined cycle nameplate capacity of 50 megawatts or more.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*

DOE/EIA-0130, *Natural Gas Monthly*

DOE/EIA-0131, *Natural Gas Annual*

DOE/EIA-0191, *Cost and Quality of Fuels for Electric Utility Plants*

DOE/EIA-0214, *State Energy Data Report*

DOE/EIA-0226, *Electric Power Monthly*

DOE/EIA-0121, *Quarterly Coal Report*

DOE/EIA-0348, *Electric Power Annual*

DOE/EIA-0376, *State Energy Price and Expenditure Report*

DOE/EIA-0384, *Annual Energy Review*

Form FERC-542-PGA, Purchased Gas Adjustment (PGA) Filings

Previous Forms: None

Collection Frequency: Semiannually, Other

FERC-542-PGA is filed with FERC to support the purchased gas adjustment as the primary source of specific data on natural gas purchases by the Natural Gas Policy Act (NGPA) category. In addition, information is provided regarding the company's projected purchases, volumes, sources of supply, and the effective rate and costs of this gas during a forthcoming effective period.

Resulting Publications:

DOE/EIA-0130, *Natural Gas Monthly*

DOE/EIA-0404, *Producer Revenues, Prices, and Concentration in the Natural Gas Market*

DOE/EIA-0440, *Recent Market Activities of Major Interstate Pipeline Companies*

DOE/EIA-0448, *Drilling and Production Under Title 1 of the NGPA*

DOE/EIA-0449, *A Study of Contracts Between Interstate Pipelines and Their Customers*

Form FPC-14, Annual Report for Importers and Exporters of Natural Gas

Previous Forms: None

Collection Frequency: Annually

Form FPC-14 is designed to provide data used to help monitor and regulate natural gas imports into, and exports from, the United States and for inclusion in EIA publications. Specific monthly data collected annually include transporter, U.S. point of entry, foreign buyer or seller, docket number, and volume and dollar amount of natural gas exports and imports. Respondents are natural gas companies importing or exporting natural gas under Section 3 of the Natural Gas Act.

Resulting Publications:

DOE/EIA-0035, *Monthly Energy Review*
DOE/EIA-0130, *Natural Gas Monthly*
DOE/EIA-0202, *Short-Term Energy Outlook*
DOE/EIA-0383, *Annual Energy Outlook*
DOE/EIA-0384, *Annual Energy Review*

Form NWPA-830R-G, Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste-Quarterly Report-Standard Remittance Advice-Annex A

Previous Forms: None

Collection Frequency: Quarterly

Form NWPA-830R-G is a standard Remittance Advice (RA) for payment of fees to the Department of Energy (DOE) by electric utilities which own nuclear power reactors and other owners of spent nuclear fuel or high level radioactive waste. Data include identification, gross and net electricity generation, total energy adjustment factor calculation for nuclear electricity generated and sold, and fee calculation for electricity generated and sold.

Resulting Publications: Data not published

Form RW-859, Nuclear Fuel Data

Previous Forms: None

Collection Frequency: Annually, on occasion

Form RW-859 is used by DOE to collect nuclear fuel data on every fuel assembly irradiated in commercial nuclear reactors operating in the United States, as well as current spent nuclear fuel inventories, discharges, and storage capacities of those reactors. These data are considered in the design and operation of the equipment facilities that will be used by DOE for the future acceptance, transportation, and disposal of all spent fuel. Respondents are commercial utilities that operate nuclear power plants and from all other owners of commercial spent nuclear fuel.

Resulting Publications:

SR/CNEAF/92-01, *Spent Nuclear Fuel Discharges from U.S. Reactors*

DOE/EIA-0436, *World Nuclear Capacity and Fuel Cycle Requirements, 1993*

Appendix B

Analytic Models of the Energy Information Administration

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Analytic Models of the Energy Information Administration

This appendix contains abstracts for 34 computer models operated by the Energy Information Administration (EIA) in 1992. Also included are the Demand Evaluation Modeling System Integrating Module (DEMS), two subsystems for the Short-Term Integrated Forecasting System (STIFS) model, and a summary of the Annual Energy Outlook Forecasting System. Models under development are not included in this Appendix.

The abstracts are arranged in alphabetical order and each listing contains the model's title, acronym, and brief description of the model's uses and the types of information it produces. Additional information about EIA's models is available in the *Directory of Energy Information Administration Model Abstracts* (DOE/EIA-0293).

Annual Energy Outlook, 1992 Forecasting System

Abstract: A modeling system, referred to as IFPS/GAMS/DEMS, was used to produce AEO 92 projections. The system is a collection of models that are used to forecast U.S. energy production, supply, distribution, and consumption. The system uses a combination of models residing on a mainframe computer and on a personal computer (PC), which are linked via a network. The system requires an assumption of the world crude oil price and a baseline macroeconomic forecast. Projections are generated through the year 2010.

Building Energy End-Use Model (BEEM)

Abstract: BEEM is designed to forecast energy consumption in commercial buildings in the United States on an annual basis through the year 2010. The level of detail in BEEM includes three major fuels (electricity, natural gas, and distillate fuel oil) and five minor fuels (residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene). These fuels are modeled at the four Census region levels.

Coal Supply and Transportation Model (CSTM)

Abstract: CSTM is a freight network equilibrium model adapted to forecast U.S. coal supply and distribution patterns at a moderately disaggregated level of detail. The problem solved by the CSTM is meeting a set of fixed demands for different coal types in different economic sectors and regions by producing from

supplies of different coal types in different supply regions and by shipping these supplies across a transportation network.

Demand Evaluation Modeling System Integrating Module (DEMS)

Abstract: DEMS represents U.S. energy consumption by consumption sector and includes a macroeconomic projection of economic growth. A baseline forecast of the world crude oil prices drives four price-sensitive models for consumption of fuels by end-use sector. The model solves for the market equilibrium for each fuel by balancing supply and demand to produce an energy balance in each forecast year, currently through 2010.

Drilling Cost Estimates Model (DCEM)

Abstract: DCEM estimates current instantaneous domestic well drilling costs by area, well depth, and well type (oil, gas, dry, and composite). The model uses Joint Association Survey (JAS) data on drilling costs and other variables which represent actual components of drilling costs (or surrogates) to estimate costs for 2 years following the published JAS costs.

Electricity Market Model (EMM)

Abstract: EMM is used by EIA as an analytical system for projecting the future state of the electricity market. This model is a major component of the Intermediate Future Forecasting System (IFFS). This representation of the electricity market accounts for the economic factors of supply and demand, the economic competition of fuels, and Government policies and regulations that deviate from purely economic behavior.

Gas Analysis Modeling System (GAMS)

Abstract: GAMS covers all aspects of the natural gas market, from producers through pipeline companies and distributors to the consumer. GAMS encompasses the production of natural gas, imports of gas, natural gas contract pricing and take-or-pay provisions for production purchases; pricing by pipeline companies and distributors; projected demand for each sector; and transmission and distribution of natural gas. Forecasts are generated through the year 2010. The model is used to forecast a supply and demand balance of gas markets and to analyze the natural gas industry.

Industrial Model (IM)

Abstract: IM is used to forecast annual industrial sector energy consumption through the year 2000. Most of the equations are econometrically based and are logically organized into sectors consisting of manufacturing heat and power, nonmanufacturing heat and power, and feedstocks (raw materials), and other fuels.

Intermediate Future Forecasting System (IFFS)

Abstract: IFFS represents U.S. energy supply, distribution, and consumption by fuel supply and consumption sector, given an assumption of the world crude oil price and a macroeconomic projection of economic growth. A detailed representation of utility and non-utility electricity generation and capacity expansion provides the demand for oil, coal, natural gas, renewable and nuclear generation, and the prices of electricity. An econometric representation of refinery pricing provides oil product prices. A coal supply and transportation model provides the delivered price of coal. IFFS is linked to the Gas Analysis Modeling System/Production of Onshore Lower 48 Oil and Gas Model (GAMS/PROLOG) to compute the production of domestic oil and gas and the wellhead and end-use prices of natural gas. IFFS solves for the market equilibrium for each fuel by balancing supply and demand to produce an energy balance in each forecast year. The model currently forecasts to the year 2010.

International Coal Trade Model (ICTM)

Abstract: ICTM projects coal trade flows from 20 coal-exporting regions of the world to 9 demand regions for 3 types of coal: metallurgical, low-sulfur steam, and high-sulfur steam. The model consists of supply, demand, trade and transportation constraint components, the latter representing alternate routes of passage (Panama Canal, Suez Canal, direct ocean-going) and ship size (30,000 to 250,000 deadweight tons). The major coal producing countries (United States, Australia, South Africa, Canada, and Poland) are represented, as well as countries that could become major coal exporters (Colombia, Venezuela, and China).

International Nuclear Model (INM)

Abstract: INM simulates the commercial nuclear power industry, with emphasis on the nuclear fuel cycle. The model projects nuclear fuel cycle requirements (including uranium and enrichment services, as well as spent fuel discharges) and electricity generation associated with a specific nuclear reactor deployment schedule.

Levelized Nuclear Fuel Cycle Cost Model (LNFCC-PC)

Abstract: LNFCC-PC computes an electric utility's levelized nuclear fuel cost (mills per kilowatthour). The code computes quantities of fuel cycle services and levelized direct costs, which include the carrying charges accounting for the time value of money. All fuel-cycle services from natural uranium purchased through waste disposal are covered.

Low Income Housing Assistance Program State Residential Energy (LIHEAP) Price Projection Model

Abstract: LIHEAP is a set of State-level regression equations used to project State residential energy prices for the current year and one future year on the basis of national-level residential price projections produced for the Energy Information Administration's (EIA) *Short-Term Energy Outlook*. LIHEAP produces 51 separate sets of projections of residential prices (50 for each State and 1 for the District of Columbia), including prices for electricity, natural gas, heating oil, liquefied petroleum gas (LPG-propane), kerosene, and coal. Less than 51 projections are available where historical information for a State is nonexistent or unavailable. The State price projections from LIHEAP are published annually in the EIA Service Report *State Energy Price Projections for the Residential Sector*.

Market Penetration Model for Active and Passive Solar Technologies (MPSOLAR-PC)

Abstract: MPSOLAR-PC for active and passive solar technologies was developed to project the potential of these systems to displace primary energy from the present up to the year 2030. The model provides projections in 5-year increments for nine solar technologies: Residential and Commercial Active Solar Water Heating; Residential and Commercial Active Solar Combined Space and Water Heating Systems; Residential and Commercial Passive Solar Space Heating; Residential and Commercial Active Solar Space Cooling Systems; and Commercial Daylighting.

Market Penetration Model for Ground Water Heat Pump Systems (MPGWHP-PC)

Abstract: MPGWHP-PC for ground water heat pump systems was developed to project the potential of these systems to displace primary energy from the present up to the year 2030. The model provides projections in 5-year increments for four aggregated groups of the 10 DOE regions.

Market Penetration Model for Residential Rooftop Photovoltaic Systems (MPRESPV-PC)

Abstract: MPRESPV-PC for residential rooftop photovoltaic systems was developed to project the potential of these systems to displace primary energy from the present up to the year 2030. The model provides projections in 5-year increments for four aggregated groups of the 10 DOE regions.

Mini-Macroeconomic Personal Computer Model (PC-MAC)

Abstract: PC-MAC forecasts 37 macroeconomic variables and 11 industrial outputs. Variables include, among others, real GNP, the GNP deflator, real disposable income, the unemployment rate, housing starts, industrial output (at an 11-sector disaggregation), the interest rate on corporate bonds, and the mortgage rate. The PC-MAC name was retained although the model has been moved to EIA mainframe.

National Coal Model (NCM)

Abstract: NCM projects coal production by State; coal transportation flows; and fuel consumption by electric utilities, based on specified levels of electricity consumption, existing and planned generating capacity, the economics of electricity generation, and nonutility demand for coal. The NCM is a highly disaggregated coal supply and utility model. Coal demands in each of 44 regions are met via a transportation network from existing and new mines in 31 supply regions. Flue gas desulfurization technology is internally represented and both sulfur dioxide and other emissions are reported.

National Utility Financial Statement Model (NUFS)

Abstract: NUFS is a regulatory accounting model that projects electricity prices. The model first solves for revenue requirements by building up a rate base, calculating a return on the rate base, and adding the allowed expenses. Next, electric revenues (prices) are calculated on the basis of assumptions regarding regulatory lag. With revenues determined, the model solves for internal cash flow and analyzes the need for external financing to meet necessary capital expenditures. Given these results, the model finally builds up the financial statements and calculates financial ratios. NUFS is normally used in conjunction with the National Coal Model or the Intermediate Future Forecasting System. Inputs to NUFS include forecast capacity expansion plans, operating costs, regulatory environment, and financial data. The outputs include forecasts of income statements, balance sheets, sources and uses of funds, revenue requirements, average electricity prices, and other financial ratios.

Nonutility Generation Supply Model (NUGS)

Abstract: The NUGS model is an analytic construct that provides a forecast of nonutility electricity supply, including power supplied from cogeneration, independent power production and small power production. The forecast is based on supply potential input and a simulation of a PURPA bidding system to allow selection of projects. The NUGS is designed to allow an assessment of potential nonutility electric supply to the power grid at a number of levels.

Oil Market Model (OMM)

Abstract: OMM is a component of the Intermediate Future Forecasting System (IFFS), which represents the domestic refining and pricing of petroleum products. The OMM uses econometric and accounting methods to model domestic crude oil refining and petroleum product distribution. In addition to projecting product prices, the model assures a material balance for domestic petroleum and provides estimates for the quantities of net product imports and crude inputs to U.S. refineries.

Oil Market Simulation Model (OMS-PC)

Abstract: OMS-PC projects future world oil prices and world oil supplies and demands by region (the United States, Canada, Japan, and OECD-Europe, OPEC, developing countries, and net from current and former Centrally Planned Economies' trade on an annual basis through the year 2010. The OMS-PC model is used as an adjunct to the World Energy Projection System (WEPS-PC).

Petroleum Financial Analysis System (PETFAS-PC)

Abstract: PETFAS-PC is designed to utilize *Annual Energy Outlook (AEO)* model results for oil and gas prices, domestic drilling levels, and drilling cost relationships. It also uses information from the AEO on oil and gas reserves and production to provide forecasts of investment and profits for the U.S. oil and gas production industry. Detailed income statement, capital account, balance sheet, and tax information is provided for two main industry categories—major energy companies' domestic oil and gas segments and domestic independent producers.

Production of Onshore Lower 48 Oil and Gas Model (PROLOG)

Abstract: PROLOG forecasts oil and natural gas production activities for six onshore regions of the Lower 48 States on an annual basis. The primary activities are exploratory and developmental drilling. Forecast values include the reserve additions from exploratory drilling, as well as production from all flowing wells. The PROLOG model employs econometric equations to determine exploratory drilling levels and a linear

programming framework to determine the optimal developmental drilling levels that maximize the present value of profits stemming from the drilling projects.

Refinery Evaluation Modeling System (REMS)

Abstract: REMS consists of two models. The regional Refinery Yield Model (RYM) produces a detailed representation of refinery processes and product production. The Oil Refining and Distribution Model (ORAD) simulates the industry's interregional producing, refining, and distribution network throughout the United States. RYM can run over 130 different foreign and domestic crude types, which are represented as linear combinations of 37 principal crudes, as defined by their assays. RYM refineries produce over 35 petroleum products using 21 detailed refinery process units. ORAD represents an aggregated bundle of domestic and foreign crudes available from the RYM, an aggregated bundle of petroleum products, and transportation modes and links for crude oil and petroleum products among regions.

Refinery Yield Model Spreadsheet System (RYMSS-PC)

Abstract: RYMSS-PC simulates the operations of a refinery or group of refineries within the United States, including the processing of crude oils and other raw materials, as well as the processing of these raw materials into finished petroleum products. Refinery product yields and net margins are generated which can be used in comparative and sensitivity analyses by using RYMSS-PC.

Residential Energy End-Use Demand Model (REEM)

Abstract: REEM forecasts energy use by type of fuel annually through the year 2010. It is an end-use structural model, with emphasis placed on fuel-using technologies and efficiencies. The model forecasts fuel use by type and vintage of house, by service demand, and on a regional basis for four Census regions. It is sensitive to the major demographic and economic determinants of residential sector energy use.

Resource Allocation and Mine Costing Model (RAMC)

Abstract: RAMC produces the quantity-price relationships in coal supply for 30 coal types (further distinguished between surface and deep mines) and 32 producing regions on the basis of the 1991 EIA Demonstrated Reserve Base, engineering estimates of mining costs for various surface and underground mines, and region-specific and coal-type-specific cost elements. This model serves as a major component of the Intermediate Future Forecasting System, the National

Coal Model, the International Coal Trade Model, and the Coal Supply and Transportation Model.

Revenue Requirements Modeling System (RRMS)

Abstract: RRMS is designed to estimate the impacts of various regulatory and economic policy variables on the revenue requirements of individual electric utilities. The model assesses the impact of changes in construction work in progress (CWIP), in rate base policies, capital structures, costs of capital, and demand on total estimated revenue requirements.

Short-Term Coal Analysis System (SCOAL)

Abstract: SCOAL projects domestic coal production, imports, and exports six to eight quarters into the future on the basis of assumed trajectories of coal prices relative to prices of other fuels and industry activity. All markets are defined at the national level.

Short-Term Integrated Forecasting System (STIFS)

Abstract: STIFS (complete system) is the system used for producing the forecasts in the *Short-Term Energy Outlook*. It consists of the Unified Price and Demand Analysis System (UDAPAS) and the Short-Term Integrating Model (STIM). The forecasts of energy product consumption provided by UDAPAS, together with data and forecasts from other sources, are integrated by STIM into balances for major petroleum products, total petroleum, natural gas, coal, electricity, and total energy.

Short-Term Integrating Model (Subsystem of STIFS) (STIM)

Abstract: STIM, a subsystem of the Short-Term Integrated Forecasting System (STIFS), provides a National monthly data base and accounting framework for energy supply, demand, stocks, and conversion processes (refineries and electric utilities). This model balances historical data and forecasts for the entire energy network for up to 2 years in the future.

Short-Term Nuclear Annual Power Production Simulation (SNAPPS)

Abstract: SNAPPS forecasts the short-term monthly and annual electric power generation by U.S. commercial nuclear power plants. SNAPPS is a relatively simple, straightforward accounting model programmed in FORTRAN. The model consists of codes that provide accounting for each nuclear reactor's generation for the projection period.

Transportation Energy Demand Model (TED)

Abstract: TED is designed to project transportation energy demand at the national and Census region level, by fuel and by year to 2010. TED provides the transportation demand forecasts used in the AEO

modeling system. The model consists of four distinct segments: personal highway travel, freight travel, aviation travel, and other transportation. These segments consist of data estimates and assumptions necessary to execute various specific forecasting equations of the model.

Unified Demand and Price Analysis Subsystem (Subsystem of STIFS) (UDAPAS)

Abstract: UDAPAS forecasts monthly consumption and prices for major petroleum products, nonutility petroleum consumption, total electricity generation, and nonutility natural gas and coal demand, at the national level, on the basis of prices, income, and weather. This model reflects the effects on prices likely to result from inventories, world oil prices, and inflation rates.

Uranium Market Model (UMM-PC)

Abstract: UMM-PC projects prices, production, imports, inventory, capital expenditures, and employment in the uranium mining and milling industry. The model considers every major production center and utility on a worldwide basis (with centrally planned economies considered in a limited way).

World Energy Projection System (WEPS-PC)

Abstract: WEPS-PC is an integrated set of microcomputer-based spreadsheets containing data compilations, assumption specifications, descriptive analysis procedures, and projection models. WEPS-PC provides projections of total world primary energy consumption disaggregated by 10 individual countries and 10 country groupings; projections of energy consumption by primary energy type and by economic sector for selected countries; projections of natural gas production; and projections concerning world oil supplies for use in the Oil Market Simulation Model (OMS) model. For both historical series and projection series, WEPS-PC provides analytical computations of percentages of energy consumption attributable to each primary energy source, total energy consumption per dollar of gross domestic product (GDP), and an energy/GDP index. WEPS-PC projections and

analyses are published annually in the "International Energy Outlook" (IEO) and are used in various internal EIA studies.

World Integrated Nuclear Evaluation System (WINES-PC)

Abstract: WINES-PC is an aggregate demand-based partial equilibrium model used by the Energy Information Administration (EIA) to project long-term domestic and international nuclear energy requirements. WINES-PC follows a top-down approach in which economic growth rates, delivered energy demand growth rates, and electricity demand are projected successively to ultimately forecast total nuclear generation and nuclear demand capacity. WINES-PC could potentially be used to produce forecasts for any country or region in the world. Presently, WINES-PC is being used to generate long-term forecasts for the United States and all countries with free market economies and commercial nuclear programs. Projections for the United States are developed for the period from 2010 through 2030 and for other countries during the period starting in 2000 or 2005 (depending on the country) through 2010. WINES-PC serves as a flexible tool with which to assist the U.S. Department of Energy (DOE) program offices and other Government agencies in their analyses of long-term nuclear energy demand and supply and to support cooperative efforts between the United States and the Nuclear Energy Agency of the Organization for Economic Cooperation and Development, the International Energy Agency, and the International Atomic Energy Agency. WINES-PC is used to develop long-term projections of nuclear capacity and generation which are provided to the Office of Civilian Radioactive Waste Management of DOE for use in estimating nuclear waste fund revenues and to aid in planning the disposal of nuclear waste. In addition, the projections support other reports published annually by EIA, such as "Domestic Uranium Mining and Milling Industry: Viability Assessment," and "World Nuclear Capacity and Fuel Cycle Requirements."

Appendix C

EIA Publications; EIA Products Available on Diskette

Appendix C

EIA Publications; EIA Products Available on Diskette

Each year the Energy Information Administration publishes nearly 300 issues of over 70 titles, from weekly, monthly, and annual periodicals to one-time reports, including statistical and data reports, directories, and studies containing data analyses and projections. Statistical and data reports provide historical information on production, consumption, prices, and resource availability of conventional and alternate energy sources; directories serve as guides to finding energy information or to making subject-specialist contacts; analyses look indepth at specific economic and technical energy subjects or make projections of future energy demand and supply.

This appendix contains charts of active EIA periodicals and 1992 one-time reports, organized by energy source family. It also provides an annotated listing of these publications, arranged alphabetically by title. (Some publications contained in the annotated list may not be found on the chart because they have been discontinued.) Service Reports and reprints of feature articles (listed in the appendix) are available upon request from the National Energy Information Center. Publication entry includes: the full title, report number, reference date for annual and one-time reports released in 1992, and information on availability and ordering. Also included is an alphabetical listing of 1992 EIA products available on diskette, along with a brief synopsis and price of each. Synopses of all publications are available in the *EIA Publications Directory*.

Generally, single complimentary copies of EIA publications are available to staff members of Federal, public, and academic libraries; EIA survey respondents; Congress or Congressional committees; press; State or local governments; Department of Energy (DOE) employees or DOE contractors; and the Executive Branch. Selected publications are available to the general public free of charge, such as all Service Reports, the *Annual Report to Congress*, *EIA Publications Directory*, *EIA New Releases*, *Directory of Energy Data Collection Forms*, *Energy Information Directory*, and "Information Sheets," as well as feature articles extracted from various periodicals.

If Government Printing Office (GPO) ordering information is listed, you may order the item from GPO. Prices of EIA publications and diskettes sold by the GPO are subject to change without notice.

The National Technical Information Service (NTIS) also sells EIA publications in hard copy and microfiche form, and models and data bases on diskette and magnetic tape. Call the National Technical Information Service for an order number and price.

Following are the addresses and telephone numbers of the organizations from which EIA publications and diskettes are available.

GPO
U.S. Government Printing Office
P.O. Box 371954
Pittsburgh, PA 15250-7954

or call

GPO
(202) 653-2050 (Publications)
(202) 512-1530 (Diskettes)

NTIS
Document Sales
5285 Port Royal Road
Springfield, Virginia 22161
(703) 487-4650

NEIC
Free publications and complimentary issues of sale publications for EIA survey respondents, media, Federal, State, and local government, and public and academic libraries may be obtained from:

National Energy Information Center
Forrestal Building, Room 1F-048
Washington, DC 20585
(202) 586-8800

Periodical Reports of the Energy Information Administration

Active as of December 31, 1992

	Petroleum	Petroleum and Natural Gas	Natural Gas	Electricity	Coal	Nuclear Energy	Solar and Renewable Energy	Multisource Energy	Energy Consumption	Metadata
Weekly/ Biweekly	Weekly Petroleum Status Report	Winter Fuels Report (seasonal weekly)			Weekly Coal Production					
Monthly/ Bimonthly	International Petroleum Statistics Report Petroleum Marketing Monthly Petroleum Supply Monthly		Natural Gas Monthly	Electric Power Monthly				Monthly Energy Review		EIA New Releases (Bimonthly)
Quarterly					Quarterly Coal Report			Short-Term Energy Outlook: Quarterly Projections		U.S. Energy Industry Financial Developments
Annual/Other	Fuel Oil and Kerosene Sales Petroleum: An Energy Profile (Triennial) Petroleum Marketing Annual Petroleum Supply Annual	Oil and Gas Field Code Master List U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves Annual Report	Gas Supplies of Interstate Natural Gas Pipeline Companies Natural Gas Annual	Cost and Quality of Fuels for Electric Utility Plants	Coal Data-A Reference (Biennial) Coal Production U.S. Coal Reserves: An Update by Heat and Sulfur Content	Domestic Uranium Mining and Milling Industry: Viability Assessment Uranium Industry Annual	Estimates of U.S. Biofuels Consumption (Biennial) Solar Collector Manufacturing Activity	Annual Energy Outlook Assumptions for the Annual Energy Outlook Supplement to the Annual Energy Outlook Annual Energy Review	Commercial Buildings Characteristics (Triennial) Commercial Buildings Energy Consumption and Expenditures (Triennial)	An Assessment of the Quality of Selected EIA Data Series Annual Report to Congress Directory of Energy Data Collection Forms Directory of Energy Information Administration Models

Periodical Reports of the Energy Information Administration

Active as of December 31, 1982

	Petroleum	Petroleum and Natural Gas	Natural Gas	Electricity	Coal	Nuclear Energy	Solar and Renewable Energy	Multisource Energy	Energy Consumption	Metadata
Annual/Other			Statistics of Interstate Natural Gas Pipeline Companies	Electric Plant Cost and Power Production Expenses Electric Power Annual Electric Sales and Revenue Electric Trade in the United States Financial Statistics of Selected Investor-Owned Electric Utilities Financial Statistics of Selected Publicly-Owned Electric Utilities Inventory of Power Plants in the United States		World Nuclear Capacity and Fuel Cycle Requirements		International Energy Annual International Energy Outlook Performance Profiles of Major Energy Producers Profiles of Foreign Direct Investment in U.S. Energy Short-Term Energy Outlook Annual Supplement State Energy Data Report, Consumption Estimates State Energy Price and Expenditure Report	Household Energy Con- sumption and Expenditures (Triennial) Household Vehicles Energy Consumption (Triennial) Housing Characteristics (Triennial) Manufacturing Energy Con- sumption Survey(MECS): Changes in Energy Intensity in the Manufacturing Sector (Triennial) Manufacturing Energy Consumption Survey (MECS): Consumption of Energy (Triennial) Manufacturing Fuel-Switching Capability (Triennial)	EIA Publications Directory Energy Education Resources: Kindergarten through 12th Grade Energy Facts Energy Information Directory Energy Information Sheets

One-Time Reports of the Energy Information Administration

Released for printing January 1 through December 31, 1992

	Petroleum	Natural Gas	Electricity	Coal	Nuclear and Alternate Fuel	Energy Markets and End Use
Data Reports + Analysis Reports + Documentation Reports + Technical Reports	Geologic Distribution of U.S. Oil and Gas Oil Market Simulation Model User's Guide Pedro Users Guide Resources Information Gathering System (RIGS)	Capacity and Service on the Interstate Natural Gas Pipeline System 1990 Regional Profiles and Analyses	U.S. Electricity Trade with Canada and Mexico	Documentation of the Resource Allocation and Mine Costing (RAMC) Model Trends in Contract Coal Transportation The U.S. Coal Industry, 1970-1990: Two Decades of Change	International Nuclear Model Personal Computer (PCINM)	Derived Annual Estimates of Energy: Manufacturing Energy Consumption, 1974-1988 Development of the 1991 Manufacturing Energy Consumption Survey Lighting in Commercial Buildings User-Needs for the 1992 Commercial Buildings Energy Consumption Survey World Energy Projection System Model Documentation World Integrated Evaluation System Model Documentation
Service Reports	Water Treatment Technology Costs Associated with Offshore Oil and Gas Production				Spent Nuclear Fuel Discharges from U.S. Reactors 1990	Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets State Energy Price Projections for the Residential Sector, 1992-1993

EIA Publications Released for Printing January 1 through December 31, 1992

Daily/Weekly

Weekly Coal Production

DOE/EIA-0218

GPO Subscription: 761-014-00000-5

Domestic: \$95.00 Foreign: \$118.75

Single Issues:

Domestic: \$2.00 Foreign: \$2.50

Weekly Petroleum Status Report

DOE/EIA-0208

GPO Subscription: 761-015-00000-1

Domestic: \$51.00 Foreign: \$63.75

Single Issue:

Domestic: \$2.75 Foreign: \$3.44

Winter Fuels Report (Seasonal)

DOE/EIA-0538

Free from NEIC

Monthly

Electric Power Monthly

DOE/EIA-0226

GPO Subscription: 761-002-00000-7

Domestic: \$87.00 Foreign: \$108.75

Single Issue:

Domestic: \$13.00 Foreign: \$16.25

International Petroleum Statistics Report

DOE/EIA-0520

GPO Subscription: 761-018-00000-1

Domestic: \$47.00 Foreign: \$58.75

Single Issue:

Domestic: \$4.25 Foreign: \$5.31

Monthly Energy Review

DOE/EIA-0035

GPO Subscription: 761-007-00000-9

Domestic: \$71.00 Foreign: \$88.75

Single Issue:

Domestic: \$8.50 Foreign: \$10.63

Natural Gas Monthly

DOE/EIA-0130

GPO Subscription: 761-008-00000-5

Domestic: \$73.00 Foreign: \$91.25

Single Issue:

Domestic: \$9.00 Foreign: \$11.25

Petroleum Marketing Monthly

DOE/EIA-0380

GPO Subscription: 761-010-00000-0

Domestic: \$87.00 Foreign: \$108.75

Single Issue:

Domestic: \$12.00 Foreign: \$15.00

Petroleum Supply Monthly

DOE/EIA-0109

GPO Subscription: 761-001-00000-6

Domestic: \$78.00 Foreign: \$97.50

Single Issue:

Domestic: \$11.00 Foreign: \$13.75

Bimonthly

EIA New Releases

DOE/EIA-0204

Free from NEIC

Quarterly

Coal Distribution

DOE/EIA-0125

Discontinued with 4th quarter 1991 issue

Quarterly Coal Report

DOE/EIA-0121

GPO Subscription: 761-012-00000-2

Domestic: \$24.00 Foreign: \$30.00

Single Issue:

Domestic: \$9.00 Foreign: \$11.25

Short-Term Energy Outlook: Quarterly Projections

DOE/EIA-0202

GPO Subscription: 761-013-00000-9

Domestic: \$16.00 Foreign: \$20.00

Single Issue:

Domestic: \$4.50 Foreign: \$5.63

U.S. Energy Industry Financial Developments

DOE/EIA-0543

GPO Subscription: 761-022-00000-3

Domestic: \$8.00 Foreign: \$10.00

Single Issue:

Domestic: \$2.25 Foreign: \$2.81

Annual

Annual Energy Outlook 1992

DOE/EIA-0383(92)

January 1992

GPO Stock No. 061-003-00740-6

Domestic: \$14.00 Foreign: \$17.50

Annual Energy Outlook 1993

DOE/EIA-0383(93)

December 1992

GPO Stock No. 061-003-00784-8

Domestic: \$9.00 Foreign: \$11.25

Annual Energy Review 1991

DOE/EIA-0384(91)

June 1992

GPO Stock No. 061-003-00760-1

Domestic: \$21.00 Foreign: \$26.25

Annual Report to Congress 1991

DOE/EIA-0173(91)

April 1992

Free from NEIC

Assumptions for the Annual Energy Outlook 1992

DOE/EIA-0527(92)

February 1992

GPO Stock No. 061-003-00744-9

Domestic: \$6.50 Foreign: \$8.13

Coal Production 1991

DOE/EIA-0118(91)

November 1992

GPO Stock No. 061-003-00775-9

Domestic: \$7.50 Foreign: \$9.38

Cost and Quality of Fuels for Electric Utility Plants 1991

DOE/EIA-0191(91)

August 1992

GPO Stock No. 061-003-00767-8

Domestic: \$14.00 Foreign: \$17.50

Directory of Energy Data Collection Forms

DOE/EIA-0249(91)

February 1992

Free from NEIC

Directory of Energy Information Administration Models 1992

DOE/EIA-0293(92)

June 1992

Free from NEIC

Domestic Uranium Mining and Milling Industry: 1991 Viability Assessment

DOE/EIA-0477(91)

December 1992

GPO Stock No. 061-003-00779-1

Domestic: \$6.50 Foreign: \$8.13

EIA Publications Directory 1991

DOE/EIA-0149(91)

June 1992

Free from NEIC

Electric Plant Cost and Power Production Expenses 1990

DOE/EIA-0455(90)

June 1992

GPO Stock No. 061-003-00761-9

Domestic: \$9.50 Foreign: \$11.88

Electric Power Annual 1990

DOE/EIA-0348(90)

February 1992

GPO Stock No. 061-003-00743-1

Domestic: \$9.50 Foreign: \$11.88

Electric Sales and Revenue 1990

DOE/EIA-0540 (90)

March 1992

GPO Stock No. 061-003-00741-4

Domestic: \$12.00 Foreign: \$15.00

Energy Facts 1990

DOE/EIA-0469(90)

December 1991

GPO Stock No. 061-003-00678-7

Domestic: \$2.50 Foreign: \$3.13

Energy Facts 1991

DOE/EIA-0469(91)

December 1992

GPO Stock No. 061-003-00778-3

Domestic: \$2.00 Foreign: \$2.50

Energy Information Directory

DOE/EIA-0205(91)

March 1992

Free from NEIC

Energy Information Sheets

DOE/EIA-0558(91)

August 1992

Free from NEIC

Financial Statistics of Selected Investor-Owned Electric Utilities 1990

DOE/EIA-0437(90)/1

January 1992

GPO Stock No. 061-003-00739-2

Domestic: \$32.00 Foreign: \$40.00

Financial Statistics of Selected Publicly-Owned Electric Utilities 1990

DOE/EIA-0437(90)/2

February 1992

GPO Stock No. 061-003-00745-7

Domestic: \$19.00 Foreign: \$23.75

Fuel Oil and Kerosene Sales 1991

DOE/EIA-0535(91)

November 1992

GPO Stock No. 061-003-00776-7

Domestic: \$3.75 Foreign: \$4.69

Gas Supplies of Interstate Natural Gas Pipeline Companies 1990

DOE/EIA-0167(90)

February 1992

GPO Stock No. 061-003-00746-5

Domestic: \$6.00 Foreign: \$7.50

Gas Supplies of Interstate Natural Gas Pipeline Companies 1991

DOE/EIA-0167(91)

December 1992

GPO Stock No. 061-003-00780-5

Domestic: \$7.00 Foreign: \$8.75

International Energy Annual 1990

DOE/EIA-0219(90)

February 1992

GPO Stock No. 061-003-00742-2

Domestic: \$11.00 Foreign: \$13.75

International Energy Annual 1991

DOE/EIA-0219(91)

December 1992

GPO Stock No. 061-003-00785-6

Domestic: \$12.00 Foreign: \$15.00

International Energy Outlook 1992

DOE/EIA-0484(92)

May 1992

GPO Stock No. 061-003-00750-3

Domestic: \$3.75 Foreign: \$4.69

Inventory of Power Plants in the United States 1991

DOE/EIA-0095(91)

November 1992

GPO Stock No. 061-003-00774-0

Domestic: \$23.00 Foreign: \$28.75

Natural Gas Annual 1991

DOE/EIA-0131(91)

December 1992

GPO Stock No. 061-003-00773-2

Domestic: \$15.00 Foreign: \$18.75

Natural Gas Annual 1990 Supplement: Company Profiles

DOE/EIA-0131(90)

June 1992

GPO Stock No. 061-003-00755-4

Domestic: \$9.00 Foreign: \$11.25

Performance Profiles of Major Energy Producers 1991

DOE/EIA-0206(91)

December 1992

GPO Stock No. 061-003-00788-1

Domestic: \$8.50 Foreign: \$10.63

Petroleum Marketing Annual 1991

DOE/EIA-0487(91)

September 1992

GPO Stock No. 061-003-00768-6

Domestic: \$24.00 Foreign: \$30.00

Petroleum Supply Annual 1991, Volume 1

DOE/EIA-0340(91)/1

June 1992

GPO Stock No. 061-003-00758-9

Domestic: \$11.00 Foreign: \$13.75

Petroleum Supply Annual 1991, Volume 2

DOE/EIA-0340(91)/2

June 1992

GPO Stock No. 061-003-00759-7

Domestic: \$31.00 Foreign: \$38.75

Profiles of Foreign Direct Investment in U.S. Energy 1990

DOE/EIA-0466(90)

April 1992

GPO Stock No. 061-003-00751-1

Domestic: \$3.25 Foreign: \$4.06

Short-Term Energy Outlook Annual Supplement 1992

DOE/EIA-0202(92)

June 1992

GPO Stock No. 061-003-00764-3

Domestic: \$2.75 Foreign: \$3.44

Solar Collector Manufacturing Activities 1990

DOE/EIA-0174(90)

March 1992

GPO Stock No. 061-003-00747-3
Domestic: \$4.00 Foreign: \$5.00

Solar Collector Manufacturing Activities 1991
DOE/EIA-0174(91)
December 1992

GPO Stock No. 061-003-00782-1
Domestic: \$4.75 Foreign: \$5.94

State Energy Data Report, Consumption Estimates 1960-1990
DOE/EIA-0214(90)
June 1992

GPO Stock No. 061-003-00756-2
Domestic: \$26.00 Foreign: \$32.50

State Energy Price and Expenditure Report 1990
DOE/EIA-0376(90)
September 1992

GPO Stock No. 061-003-00769-4
Domestic: \$16.00 Foreign: \$20.00

Statistics of Interstate Natural Gas Pipeline Companies 1990
DOE/EIA-0145(90)
April 1992

GPO Stock No. 061-003-00752-0
Domestic: \$12.00 Foreign: \$15.00

Supplement to the Annual Energy Outlook 1992
DOE/EIA-0554(92)
March 1992

GPO Stock No. 061-003-00748-1
Domestic: \$11.00 Foreign: \$13.75

U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 1991 Annual Report
DOE/EIA-0216(91)
December 1992

GPO Stock No. 061-003-00777-5
Domestic: \$9.50 Foreign: \$11.88

Uranium Industry Annual 1991
DOE/EIA-0478(91)
October 1992
GPO Stock No. 061-003-00771-6
Domestic: \$8.50 Foreign: \$10.63

World Nuclear Capacity and Fuel Cycle Requirements 1992
DOE/EIA-0436(92)
December 1992
GPO Stock No. 061-003-00181-3
Domestic: \$8.50 Foreign: \$10.63

Biennial, Triennial, and Other

Commercial Buildings Energy Consumption and Expenditure 1989 (Triennial)
DOE/EIA-0318(89)
May 1992

GPO Stock No. 061-003-00753-8
Domestic: \$25.00 Foreign: \$31.25

EIA Publications Style Manual (Irregular)
DOE/EIA-0415(92)
December 1992
Free from NEIC

Electric Trade in the United States 1990 (Biennial)
DOE/EIA-0531(90)
December 1992

GPO Stock No. 061-003-00783-0
Domestic: \$20.00 Foreign: \$25.00

Residential Energy Consumption Survey: Housing Characteristics 1990 (Triennial)
DOE/EIA-0314(90)
May 1992

GPO Stock No. 061-003-00754-6
Domestic: \$23.00 Foreign: \$28.75

Documentation

Documentation of the Resource Allocation and Mine Costing (RAMC) Model
DOE/EIA-M021(92)
February 1992
Free from NEIC

International Nuclear Model Personal Computer (PCINM)
DOE/EIA-M051(92)
August 1992
Free from NEIC

Oil Market Simulation Model User's Guide
DOE/EIA-M028(92)
August 1992
Free from NEIC

Reserves Information Gathering System (RIGS) User's Guide
DOE/EIA-M042(91)
January 1992
Free from NEIC

World Energy Projection System Model Documentation
DOE/EIA-M050(92)

June 1992

Free from NEIC

World Integrated Evaluation System Model Documentation

DOE/EIA-M049

March 1992

Free from NEIC

One-Time Publications

Capacity and Service on the Interstate Natural Gas Pipeline System 1990 Regional Profiles and Analyses

DOE/EIA-0556

July 1992

GPO Stock No. 061-003-00762-7

Domestic: \$9.50 Foreign: \$11.88

Derived Annual Estimates of Energy: Manufacturing Energy Consumption, 1974-1988

DOE/EIA-0555(92)/3

August 1992

GPO Stock No. 061-003-00766-0

Domestic: \$7.00 Foreign: \$8.75

Development of the 1991 Manufacturing Energy Consumption Survey

DOE/EIA-0555(92)/2

June 1992

GPO Stock No. 061-003-00757-1

Domestic: \$5.50 Foreign: \$6.88

Geologic Distribution of U.S. Oil and Gas

DOE/EIA-0557

August 1992

GPO Stock No. 061-003-00765-1

Domestic: \$9.50 Foreign: \$11.88

Lighting in Commercial Buildings

DOE/EIA-0555(92)/1

March 1992

GPO Stock No. 061-003-00749-0

Domestic: \$6.50 Foreign: \$8.13

Pedro User Guide

DOE/EIA-0528(91)

December 1992

Free from NEIC

The U.S. Coal Industry, 1970-1990: Two Decades of Change

DOE/EIA-0559

November 1992

GPO Stock No. 061-003-00772-4

Domestic: \$7.00 Foreign: \$8.75

U.S. Electricity Trade with Canada and Mexico

DOE/EIA-0553

January 1992

GPO Stock No. 061-003-00738-4

Domestic: \$5.00 Foreign: \$6.25

User-Needs for the 1992 Commercial Buildings Energy Consumption Survey

DOE/EIA-0555(92)/4

September 1992

GPO Stock No. 061-003-00770-8

Domestic: \$8.50 Foreign: \$10.63

Service Reports

Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets

DOE/EIA-SR/EMEU/92-02

November 1992

Free from NEIC

Spent Nuclear Fuel Discharges from U.S. Reactors 1990

DOE/EIA-SR/CNEAF/92-01

March 1992

Free from NEIC

State Energy Price Projections for the Residential Sector, 1992-1993

DOE/EIA-SR/EMEU/92-01

September 1992

Free from NEIC

Water Treatment Technology Costs Associated with Off-shore Oil and Gas Production

DOE/EIA-SR/RNGD/92-01

July 1992

Free from NEIC

Special Features

There are four categories of special feature articles published by EIA. "Feature Articles," which cover a wide range of energy-related subjects in depth; "Highlights," which summarize the most important information presented in the subject EIA report; "Energy Previews," which provide brief overviews of EIA preliminary energy data on a given topic; and "EIA Data News" items, which present information on recent changes in the scope, design, methodology, and findings of EIA's energy surveys and data bases. Listed below are the 27 special features published in 1992.

"Summary of EIA Oxygenates Operations Identification Survey"

(*Weekly Petroleum Status Report*, February 1992)

"U.S. Petroleum Developments: 1991"

(*Petroleum Supply Monthly*, February 1992)

"Comparisons of Independent Statistics on Petroleum Supply"

(*Petroleum Supply Monthly*, March 1992)

"Revisions to Monthly Natural Gas Data"

(*Natural Gas Monthly*, March 1992)

"Nonutility Power Producers"

(*Electric Power Monthly*, April 1992)

"Electric Utility Demand-Side Management"

(*Electric Power Monthly*, April 1992)

"U.S. Petroleum Trade, 1991"

(*Petroleum Supply Monthly*, April 1992)

"Energy Preview: Residential Energy Consumption and Expenditures, Preliminary Estimates, 1990"

(*Monthly Energy Review*, April 1992)

"EIA Data News: Oxygenate Data Collection Begins"

(*Monthly Energy Review*, May 1992)

"U.S. Petroleum Supply"

(*Petroleum Supply Annual* 1991, Vol. 1, June 1992)

"U.S. Refining Industry Highlights 1991"

(*Petroleum Supply Annual* 1991, Vol. 1, June 1992)

"Highlights: Lighting in Commercial Buildings"

(*Monthly Energy Review*, June 1992)

"Demand, Supply, and Price Outlook for Oxygenated Gasoline, Winter 1992-1993"

(*Monthly Energy Review*, August 1992)

"Performance Optimization and Repowering of Generating Units"

(*Electric Power Monthly*, August 1992)

"U.S. Natural Gas Imports and Exports -- 1991"

(*Natural Gas Monthly*, August 1992)

"EIA Data News: EIA Statistics on Electric Utility Demand-Side Management"

(*Monthly Energy Review*, September 1992)

"Timeliness and Accuracy of Petroleum Supply Data"

(*Petroleum Supply Monthly*, September 1992)

"Distillate Fuel Oil Outlook for the 1992-1993 Winter Heating Season"

(*Winter Fuels Report*, DOE/EIA-0538(92/93-1) and (92/93-2), October 1992)

"Propane Outlook: Winter 1992-1993"

(*Winter Fuels Report*, DOE/EIA-0538(92/93-1) and (92/93-2), October 1992)

"The Uranium Industry of the Commonwealth of Independent States"

(*Uranium Industry Annual* 1991, October 1992)

"EIA Data News: EIA Statistics on Nonutility Power Producers"

(*Monthly Energy Review*, October 1992)

"Wyoming Coal. An Overview"

(*Coal Production* 1991, October 1992)

"Natural Gas Futures Contract Market - The First 2 Years"

(*Natural Gas Monthly*, November 1992)

"Highlights: Derived Annual Estimates of Manufacturing Energy Consumption, 1974-1988"

(*Monthly Energy Review*, November 1992)

"Energy Efficiency in the Manufacturing Sector"

(*Monthly Energy Review*, December 1992)

"Imports of Canadian Gas Under Long-Term Contracts"

(*Natural Gas Monthly*, December 1992)

"Three-Dimensional Seismology: A New Perspective" (*Petroleum Supply Monthly*, December 1992, and *Natural Gas Monthly*, December 1992).

Energy Information Administration Products Available on Diskette

Annual Energy Review 1991. A comprehensive annual summary of U.S. energy statistics. 1991 production, consumption, import, export, stock, and price data are shown for the primary energy sources: coal, electricity, natural gas, nuclear and petroleum. Data are also presented by energy source for the principle consuming sectors. Values are shown for most data series from 1949 forward.

Available from GPO for \$30 and NTIS for \$90

Commercial Buildings Energy Consumption and Expenditures, 1989. Provides basic statistical information on the consumption of, and expenditures for, energy in commercial buildings and their energy-related characteristics. Covers the physical and operating characteristics that affect energy use for the U.S. commercial building stock in 1989. These data are from the Commercial Buildings Energy Consumption Survey, formerly called the Nonresidential Buildings Energy Consumption Survey.

Available from GPO for \$45.00 and NTIS for \$140

Market Penetration Model 1992. Used to project the potential of ground water heat pump systems, active and passive solar technologies, and residential rooftop photovoltaic systems to displace primary energy from the present up to the year 2030.

Available from GPO for \$30 and NTIS for \$90

Monthly Energy Review Data Base. Provides automated access to the most recent comprehensive monthly summary of U.S. energy statistics.

Available from GPO for \$15 and NTIS for \$55

Natural Gas Annual 1990. Offers data on natural gas supply, disposition, and prices. Much of the data are historical, monthly, back to 1967.

Available from GPO for \$15 and NTIS for \$90

Oak Ridge Uranium Market Model 1991, 1992. Projects prices, production, imports, inventory, capital expenditures, and employment in the uranium mining and milling industry. The model considers every major production center and utility on a worldwide basis (with centrally planned economies considered in a general way).

Available from GPO for \$15 and NTIS for \$90

Oil Market Simulation Model 1992. Project future world oil prices and world crude oil supplies and demands

by region on an annual basis through the year 2010.
Available from GPO for \$30 and NTIS for \$55

State Energy Data System (1960-1990). Estimates the consumption of specific sources of energy by end-use sectors (residential, commercial, industrial, and transportation) and electric utilities annually by State.

U.S. and Census Region 1 available from GPO for \$15

U.S. and Census Region 2 available from GPO for \$15

U.S. and Census Region 3 (2 diskettes) available from GPO for \$30

U.S. and Census Region 4 available from GPO for \$15

Complete set of five diskettes available from GPO for \$75

State Energy Price and Expenditure Data System. Presents energy price and expenditure estimates by energy source and economic sector from 1970 through 1990. The State data are grouped with one Census Region per diskette. In addition to the States in the Region, each diskette contains data for the United States.

U.S. and Region 1 available from GPO for \$15 and NTIS for \$50

U.S. and Region 2 available from GPO for \$15 and NTIS for \$50

U.S. and Region 3 available from GPO for \$15 and NTIS for \$50

U.S. and Region 4 available from GPO for \$15 and NTIS for \$50

Complete set of four diskettes available from GPO for \$75 and NTIS for \$140

World Energy Projection System 1992. Provides projections of world consumption of total primary energy: oil, natural gas, coal, nuclear power, and "other" energy; growth rates of gross domestic product; and oil production capacity.

Available from GPO for \$60 and NTIS for \$195

World Integrated Nuclear Evaluation System (WINES91). Projects the domestic and international nuclear energy requirements into the long-term (through 2030). An aggregate demand-based partial equilibrium model which generates nuclear energy requirements in a broad context of national economic activity, labor force population and productivity, energy demand measured at end uses, price and income effects, and electricity production.

Available from GPO for \$15 and NTIS for \$55.

Appendix D

**Major Laws Affecting EIA,
1974-1992**

Year	Law	Impact on EIA
1974	Federal Energy Administration (FEA) Act P.L. 93-275, 15 USC 761	Created the FEA and mandated it to "collect, assemble, evaluate, and analyze energy information;" provide energy information and projections to the Federal Government, State Governments, and the public; and provide Congress with an annual report summarizing these activities. It also provided FEA with data collection enforcement authority for data gathered from energy producing and consuming firms.
1974	Energy Supply and Environmental Coordination Act P.L. 93-319, 15 USC 796	Provided additional authority for collecting energy information. The definition that was given "energy information" has been included in all subsequent energy information legislation.
1975	Energy Policy and Conservation Act P.L. 94-163, 42 USC 6274	Provided for exchange of information for the international energy program.
1976	Energy Conservation and Production Act P.L. 94-385, 15 USC 790	Established within the FEA the Office of Energy Information and Analysis (which later became the Energy Information Administration (EIA)). This office was to (1) operate a National Energy Information System, (2) possess expertise in energy analysis and forecasting, (3) be subject to performance audits by a Professional Audit Review Team, (4) coordinate energy information activities with other Federal agencies, (5) "promptly provide upon request any energy information... to any duly established committee of Congress," and (6) produce an annual report to Congress.
1977	Department of Energy (DOE) Organization Act P.L. 95-91, 42 USC 7135	Established EIA as the single Government authority for energy information. Gave EIA independence from the rest of the DOE with respect to data collection, and from the whole of Government with respect to the content of EIA reports. Incorporated all the mandates of the Office of Energy Information and Analysis. Established the Financial Reporting System, an annual survey that gathers and reports detailed energy industry financial data.
1978	Powerplant and Industrial Fuel Use Act P.L. 95-620, 42 USC 8301	Required a comprehensive annual summary on coal reserves.
1982	Energy Emergency Preparedness Act P.L. 97-229, 42 USC 6245	Required EIA to maintain State-level petroleum marketing data similar to those published in September 1981.
1983	Nuclear Regulatory Commission Authorization Act P.L. 97-415, 42 USC 2210	Required a one-time review by the President on the status of the domestic uranium mining and milling industry. Required an annual DOE report on the viability of this industry, using criteria for assessment given in this act. EIA gathers information for this report.
1985	Energy Policy and Conservation Act Amendments of 1985 P.L. 99-58, 42 USC 6201	Required EIA to conduct a comprehensive analysis of the U.S. coal import market and to issue quarterly reports on the status of coal imports.
1986	Omnibus Budget Reconciliation Act P.L. 99-509, 42 USC 7135	Required EIA to conduct a survey of energy consumption in the of 1986 manufacturing industries in the United States on a triennial basis and EIA's participation in a one-time DOE study of domestic crude oil production and petroleum refining capacity and the effects of imports thereon.
1987	Powerplant and Industrial Fuel Use Act of 1978 Amendment, P.L. 100-42, 42 USC 8312	Repealed section of Powerplant and Industrial Fuel Act, P.L. 95-620, which required an annual summary on coal reserves.
1992	Energy Policy Act of 1992	Required EIA to expand energy consumption surveys; collect data and perform analyses of alternative fuels and alternatively-fueled vehicles; compile an inventory of greenhouse gas emissions; establish data base and prepare study on transportation rates and distribution patterns of coal, oil, and natural gas; collect data on renewable energy sources in electricity production; compile data on foreign purchases and imports of uranium; and support the DOE in the study of industrial energy use targets.

* U.S. G.P.O.: 1993-343-169:80115

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