United States Government Accountability Office

GAO

Report to Congressional Requesters

June 2005

NATIONAL ENERGY POLICY

Inventory of Major Federal Energy Programs and Status of Policy Recommendations

GAO-05-379

June 2005

NATIONAL ENERGY POLICY

Inventory of Major Federal Energy Programs and Status of Policy Recommendations

GAO Accountability · Integrity · Reliability

Highlights

Highlights of GAO-05-379, a report to congressional requesters

Why GAO Did This Study

The lives of most Americans are affected by energy. Increased energy demand and higher energy prices has led to concerns about dependable, affordable, and environmentally sound energy. The federal government has adopted energy policies and implemented programs over the years that have focused on the appropriate role of the federal government in energy, attempting to achieve balance between supply and conservation. The May 2001 National Energy Policy (NEP) report contained over 100 recommendations that it stated, taken together, provide a national energy plan that addresses the energy challenges facing the nation. As Congress considers existing federal energy programs and proposed energy legislation in support of the May 2001 report, GAO was asked to (1) identify major federal energy-related efforts, (2) review the status of efforts to implement the recommendations in the May 2001 NEP report, and (3) determine the extent to which resources associated with federal energy-related efforts have changed since the release of the NEP report.

What GAO Recommends

This report does not contain any recommendations. In commenting on this report, DOE stated that the NEP report and status report were not intended to provide a full accounting of federal energy-related activities. Our report does not suggest that they were so intended.

www.gao.gov/cgi-bin/getrpt?GAO-05-379.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Jim Wells at (202) 512-3841 or wellsj@gao.gov.

What GAO Found

Over 150 energy-related program activities and 11 tax preferences address eight major energy activity areas: (1) energy supply, (2) energy's impact on the environment and health, (3) low-income energy consumer assistance, (4) basic energy science research, (5) energy delivery infrastructure, (6) energy conservation, (7) energy assurance and physical security, and (8) energy market competition and education. At least 18 federal agencies, from the Department of Energy (DOE) to the Department of Health and Human Services, have energy-related activities. Based on fiscal year 2003 data (the most complete data available), the federal government provided a minimum of $9.8 billion in estimated budget authority for the energy-related programs we identified. In addition, various federal energy-related income tax preferences provided another estimated $4.4 billion in outlay equivalent value, primarily for energy supply objectives. On the revenue side, the federal government collected about $10.1 billion in fiscal year 2003 through various energy-related programs and about $34.6 billion in energy-related excise taxes. Significant collections involve royalties from the sale of oil and gas resources on federal lands, while taxes on gasoline and other fuels account for most of the excise taxes.

While DOE reports that most of the 2001 NEP report recommendations are implemented, it is difficult to independently assess the status of efforts made to implement these recommendations because of limited information and the open-ended nature of some of the recommendations themselves. For example, the NEP report recommended the development of energy educational programs, including possible legislation to create education programs funded by the energy industry. However, DOE's January 2005 status report on NEP implementation provided only an overview of federal energy education efforts and made no mention of possible legislation to create such programs. In addition, some of the recommendations are open-ended and lack a specific, measurable goal, which makes it difficult to assess progress. Without a specific, measurable goal, it can be difficult to understand how and to what extent activities are helping to fulfill a recommendation. While this report does not make recommendations, it provides observations on the lack of information on the status of the NEP recommendations, which may hinder policy makers in assessing progress and determining future energy policies.

Resources devoted to energy-related programs have grown since the release of the NEP report. For example, compared with fiscal year 2000, just prior to the 2001 NEP report, fiscal year 2003 estimated budget authority for energy-related programs grew by about 30 percent, from $7.3 billion to $9.6 billion. In addition, over the same period, estimated outlay equivalents for energy-related income tax preferences grew by over 60 percent, from $2.7 billion to $4.4 billion. Federal efforts have continued to address the eight major energy activities. Energy supply continues to be a major emphasis of the federal efforts, accounting for a majority of the growth.

Contents

Letter

Letter 1
Results in Brief 4
Over 150 Different Federal Government Program Activities Address Energy 6
It Is Difficult to Assess Progress of Federal Efforts to Implement the National Energy Policy Report Recommendations 26
Federal Resources Devoted to Energy-Related Activities Have Grown since 2000 30
Observations 33

Appendixes

Appendix I: Objectives, Scope, and Methodology 37
Appendix II: Inventory of Federal Energy Programs, by Activity, Agency, and Energy Type 43
Appendix III: Federal Electricity Support 59
PMAs and TVA Market and Deliver Power Generated at Federal Facilities 59
Rural Utilities Service Provides Federal Loans and Loan Guarantees 61
Appendix IV: NEP Recommendations, DOE Reported Status, and GAO Observations 63
Appendix V: Fiscal Years 2000 and 2003 Estimated Budget Authority for Agency Programs, by Energy Activity Area 120
Appendix VI: Comparison of Budget Requests for Fiscal Years 2000, 2003, and 2005 for Agency Programs, by Energy Activity 128
Appendix VII: Comments from the Department of Energy 133

Tables

Table 1: Federal Resources for the Eight Major Energy Activity Areas, Fiscal Year 2003 7
Table 2: Federal Resources for Energy Supply, Fiscal Year 2003 8
Table 3: Federal Resources for Energy Supply, by Major Energy Type, Fiscal Year 2003 10
Table 4: Federal Resources for Energy's Impact on the Environment and Health, by Agency, Fiscal Year 2003 12
Table 5: Energy Delivery Infrastructure, Fiscal Year 2003 Estimated Budget Authority 16

Table 6: Federal Resources for Energy Conservation, by Agency, Fiscal Year 2003 17
Table 7: Energy Assurance and Physical Security Programs, Fiscal Year 2003 Estimated Budget Authority 19
Table 8: Energy Market Competition and Education, Fiscal Year 2003 Estimated Budget Authority 20
Table 9: Federal Energy-Related Collections, Fiscal Year 2003 24
Table 10: Energy-Related Excise Tax Collections, Fiscal Year 2003 25
Table 11: Estimated Budget Authority for Energy Activity Area, Fiscal Years 2000 and 2003 31
Table 12: Energy-Related Income Tax Preferences as Reported for Fiscal Years 2000 and 2003 32
Table 13: Budget Requests, by Major Energy Activity Area, Fiscal Years 2000, 2003, and 2005 33
Table 14: Inventory of Federal Energy Programs, by Activity and Agency Program, Including Fiscal Year 2003 Estimated Budget Authority 43
Table 15: Inventory of Agencies and Programs Identified with Energy Activity, Including Fiscal Year 2003 Estimated Budget Authority 49
Table 16: Inventory of Federal Energy Supply Programs, by Major Energy Type, Including Fiscal Year 2003 Estimated Budget Authority 56
Table 17: Estimated Implicit Support to Federal Electric Power in 1998 (1999 dollars) 61
Table 18: NEP Recommendations, DOE Reported Status, and GAO Observations 64

Abbreviations

ASCR	Advanced Scientific Computing Research
BES	Basic Energy Science
BLM	Bureau of Land Management
CAFE	Corporate Average Fuel Economy
CFTC	Commodity Futures Trading Commission
CHP	combined heat and power
CSLF	Carbon Sequestration Leadership Forum
DHS	Department of Homeland Security

DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOJ	Department of Justice
DOT	Department of Transportation
EIA	Energy Information Administration
ENRD	Environment and Natural Resources Division
EPA	Environmental Protection Agency
FEMP	Federal Energy Management Program
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTC	Federal Trade Commission
FY	fiscal year
HHS	Department of Health and Human Services
IEA	International Energy Agency
IPHE	International Partnership for the Hydrogen Economy
LIHEAP	Low-Income Home Energy Assistance Program
MMS	Minerals Management Service
NEP	May 2001 National Energy Policy report
NEPDG	National Energy Policy Development Group
NHHOR	Northeast Home Heating Oil Reserve
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NRC	Nuclear Regulatory Commission
NSF	National Science Foundation
NSR	New Source Review
OAR	Office of Air and Radiation
OCS	outer continental shelf
OMB	Office of Management and Budget
OSM	Office of Surface Mining
PMA	Power Marketing Administration
R&D	research and development
RUS	Rural Utilities Service
SEC	Securities and Exchange Commission
SPR	Strategic Petroleum Reserve
TVA	Tennessee Valley Authority
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture
USTDA	U.S. Trade and Development Agency
WIP	Weatherization and Intergovernmental Program

Contents

GAO
Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, D.C. 20548

June 10, 2005

The Honorable Robert Byrd
Ranking Minority Member
Committee on Appropriations
United States Senate

The Honorable Jeff Bingaman
Ranking Minority Member
Committee on Energy and Natural Resources
United States Senate

The Honorable James Jeffords
Ranking Minority Member
Committee on Environment and Public Works
United States Senate

The daily lives of most Americans—as well as the health of our economy and our high standard of living—are directly affected by the availability of energy. Most sectors of American society, from the agricultural and industrial to the transportation and residential, rely upon a readily available supply of energy to function. According to the most recent data from the Department of Energy's (DOE) Energy Information Administration (EIA), the United States is the largest single consumer of energy, accounting for one-fourth of the world's consumption. Consumption is expected to grow here and throughout the world in the near future. Further, energy prices have risen significantly in recent years—American consumers now spend about three-quarters of a trillion dollars a year on it—and prices are not expected to drop significantly in the foreseeable future. The prospect of increased demand—and perhaps still higher prices—has led to concerns about the adequacy of our energy supply to sustain these consumption levels.

Although the federal government has adopted various energy policies and implemented related programs over the years, energy policies have frequently been the subject of heated debate. Concerns about these policies and programs have most often focused on the appropriate role of the federal government in energy matters and in how to achieve the appropriate balance between increasing supply and encouraging conservation. The May 2001 National Energy Policy (NEP) report laid out the most recent national energy policy proposal: that is, to promote dependable, affordable, and environmentally sound production and

distribution of energy for the future. The NEP report contained over 100 recommendations that it stated, taken together, provide a national energy plan that addresses the energy challenges facing the nation. As Congress considers existing federal energy programs and proposed energy legislation in support of the NEP report, you asked us for a clearer understanding of how the federal government is working to meet our nation's energy needs. Specifically, you asked us to (1) identify the federal government's major energy-related efforts, (2) review the status of efforts to implement the May 2001 NEP report recommendations, and (3) determine the extent to which resources associated with federal energy-related efforts have changed since the release of the NEP report.

To identify the federal government's major energy-related efforts, we focused our review on several key federal agencies that have the most responsibility for implementing the recommendations of the NEP report: the Departments of Energy, the Interior, Commerce, Transportation, State, and Agriculture and the Environmental Protection Agency. In addition to identifying energy-related program activities, we identified energy-related income tax preferences[1] from the lists of tax expenditures published annually by the Office of Management Budget that accompany the President's budget. We also obtained data on energy-related federal collections, including revenue from royalties, fees, and excise taxes. We collected and analyzed agency-reported program and tax policy descriptions and budget request and funding information at these key agencies and at other agencies as time allowed; we developed an inventory of the energy-related program activities we identified. Because it was often difficult to quantify the resources associated with energy-related aspects of various programs, where possible, we relied on agency estimates of budget authority[2] for fiscal year 2003—the most recent year for which data were available for most of the programs as we conducted the majority of our review during fiscal year 2004. For example, some programs received budget authority as part of a larger appropriation, and agencies had to

[1]Tax preferences are federal income tax provisions that grant preferential tax treatment to encourage certain behaviors or aid taxpayers in certain circumstances. The revenue losses resulting from these provisions—called tax expenditures—may, in effect, be viewed as spending channeled through the tax system. The Congressional Budget and Impoundment Control Act of 1974 requires that a tax expenditure list be included in the budget. The Department of the Treasury's list displays tax expenditures under the budget functional categories used to classify outlays.

[2]Budget authority is authority provided by law to enter into financial obligations that will result in immediate or future outlays involving federal government funds.

estimate the portion associated with the energy-related activity. To facilitate comparing the energy-related resources associated with outlay and tax programs, we used the Department of the Treasury's outlay equivalent[3] estimates for the income tax preferences. The aggregate value for energy-related tax preferences is useful for gauging general magnitude but does not take into account interactions between individual provisions. We were not able to review every agency within the federal government that might have energy-related activities. Principally, we did not review the Department of Defense (DOD), which is, among other things, a principal federal government energy consumer. In addition, although the federal government has a major impact on the energy industry through regulatory actions, this review did not include an inventory of federal regulatory actions that affect energy, but rather focused on federal energy-related programs and tax policies.

To review the status of federal efforts to implement the recommendations contained in the May 2001 NEP report, we reviewed publicly reported status information on the implementation of the NEP recommendations, focusing on DOE's most recent January 2005 report on the status of the 106[4] NEP recommendations. We discussed efforts to monitor and report on the status of these recommendations with DOE's Office of National Energy Policy and other federal agencies involved in energy-related efforts. We also discussed the energy-related programs with the appropriate agency personnel and, when possible, determined whether and how the programs were related to the NEP report recommendations.

To determine the extent to which resources associated with federal energy-related efforts have changed since the release of the NEP report, we compared fiscal year 2000 (shortly before the NEP report) federal programs and budget authority estimates with fiscal year 2003 programs and budget authority estimates. In addition, we compared outlay equivalent estimates for energy-related income tax preferences between fiscal years 2000 and 2003. Due to the constraints of developing an inventory of federal

[3]The "outlay equivalent" measure is the amount of budget outlays that would be required to provide taxpayers with the same after-tax income as received through the tax preference.

[4]The May 2001 NEP report provided 106 recommendations, including 3 duplicate recommendations, resulting in 103 distinct recommendations. DOE's January 2005 NEP status report also provided information on 106 recommendations. For consistency, our report provides information and analysis on the 106 recommendations as reported in DOE's January 2005 NEP status report.

energy-related efforts and associated resources within the review time frame, we did not assess the changes within the individual program activities within our inventory. We conducted our review between December 2003 and May 2005 in accordance with generally accepted government auditing standards. A detailed description of our objectives, scope, and methodology is contained in appendix I.

Results in Brief

Federal agencies oversee a myriad of energy-related programs and income tax preferences that address eight major energy activity areas: (1) energy supply, (2) energy's impact on the environment and health, (3) low-income energy consumer assistance, (4) basic energy science research, (5) energy delivery infrastructure, (6) energy conservation, (7) energy assurance and physical security, and (8) energy market competition and education. At least 18 different federal agencies, from the Department of Energy (DOE) to the Department of Health and Human Services (HHS), have energy-related program activities, with DOE accounting for more than one-half the federal government's energy-related budget authority, based on fiscal year 2003 estimates. In fiscal year 2003, the federal government provided a minimum of $9.8 billion in estimated budget authority for the over 150 energy-related program activities we identified. Energy supply programs represent about one-quarter of these federal program resources at $2.4 billion, followed by about $2.2 billion for low-income energy assistance, about $1.9 billion to address energy's impact on the environment and health, $1.2 billion for basic energy science research, about $0.9 billion for energy delivery infrastructure, about $0.8 billion for energy conservation, and about $0.2 billion each for energy assurance and security and energy market competition and education. In addition, various federal energy-related income tax preferences provided another estimated $4.4 billion in outlay equivalent value in fiscal year 2003, primarily for energy supply objectives. On the revenue side, in fiscal year 2003, the federal government collected about $10.1 billion through various energy-related programs and about $34.6 billion in energy-related excise taxes. Collections include offsetting fees that fund energy-related programs; however, significant collections are from federal oil and gas royalties, while taxes on gasoline and other fuels account for most of the excise tax revenue.

It is difficult to assess the status of efforts made to implement the NEP report recommendations because of limited information and the open-ended nature of some of the recommendations themselves. Four years after the release of the NEP report, implementation of most of its

recommendations remains a work in progress since they either address ongoing federal activities or require legislation to be enacted. While DOE's January 2005 status report provided more information on the status of recommendation implementation than has been previously reported, that information is still incomplete. For example, the 2001 NEP report recommended the development of energy educational programs, including possible legislation to create education programs funded by the energy industry. However, DOE's January 2005 status report provided only an overview of federal energy education efforts and made no mention of possible legislation to create education programs. Some of the recommendations in the 2001 NEP report are open-ended and lack specific, measurable goals, which contribute to the difficulty in assessing progress made toward implementing the recommendations. For example, a NEP report recommendation is that the President make energy security a priority of our trade and foreign policy. In reporting on the status of this recommendation, DOE states that energy security has been made a priority of our trade and foreign policy through various bilateral and multilateral activities, such as the U.S.-China Oil and Gas Industry Forum. Because this recommendation lacks a specific, measurable goal, it is difficult to understand how and to what extent the activities mentioned are helping to fulfill the recommendation. Appendix IV provides a complete list of the NEP recommendations, DOE's January 2005 reported status, and GAO observations on the reported status.

Federal resources devoted to energy-related program activities have grown since the release of the 2001 NEP report. For example, compared with fiscal year 2000, just prior to the release of the NEP report, fiscal year 2003 estimated budget authority for energy-related programs grew by about 30 percent, from $7.3 billion to $9.6 billion. In addition, over the same time period, outlay equivalent estimates for energy-related income tax preferences grew by over 60 percent, from $2.7 billion to $4.4 billion. While we did not review changes within individual programs and tax policies, federal efforts have continued to address the eight major energy activities of supply, environment and health, low-income assistance, basic science, infrastructure, conservation, assurance and security, and competition and education. Energy supply continues to be a major emphasis of the federal efforts, accounting for a majority of both total federal resources and their growth since 2000. For example, income tax preferences associated with energy supply have represented almost all of the $1.7 billion growth in income tax preferences. Within energy supply income tax preferences, growth has occurred primarily with efforts targeting fossil and renewable energy supplies. While this report does not contain recommendations, we

do note a lack of a central source of information on the progress of federal energy-related efforts that may hinder policy makers in determining the direction of future energy policy initiatives.

Over 150 Different Federal Government Program Activities Address Energy

At least 18 different federal agencies, from DOE to HHS, conduct at least 158 energy-related program activities. These programs address eight major categories of activities, ranging from energy supply to energy conservation. In fiscal year 2003, for the energy program activities we identified, the federal government provided at least $9.8 billion in estimated budget authority. In addition, 11 federal energy-related income tax preferences were estimated at $4.4 billion in outlay equivalent value for fiscal year 2003. On the revenue side, in fiscal year 2003, the federal government collected about $10.1 billion through various energy-related programs that include fees and royalties on development of federal energy resources and about $34.6 billion in excise taxes on gasoline and other fuels.

Major Energy Program Activities Fall into Eight Categories

Federal energy-related programs and income tax preferences address eight major energy activity areas: (1) energy supply, (2) energy's impact on the environment and health, (3) low-income energy consumer assistance, (4) basic energy science research, (5) energy delivery infrastructure, (6) energy conservation, (7) energy assurance and physical security, and (8) energy market competition and education. On the basis of our analysis of fiscal year 2003 estimated budget authority for energy-related programs and outlay equivalent estimates for energy-related income tax preferences, resources to address energy supply activities accounted for almost one-half of the $14.2 billion in federal energy-related resources. Table 1 provides a summary of fiscal year 2003 resources for energy-related programs we identified and income tax preferences by the eight major energy activity areas. Appendix II provides additional details on energy-related programs by major activity area, by agency, and by energy type. In addition to programs and income tax preferences, other federal policies that are not quantified also affect these major energy areas. For example, in the supply area, the federal government provides electricity support through federal utilities and loan programs. Also, regarding energy's impact on the environment and energy conservation, the federal government, as a major energy user, has energy use policies that influence both the type and amounts of energy used.

Table 1: Federal Resources for the Eight Major Energy Activity Areas, Fiscal Year 2003

Dollars in billions

Energy activity area	Agency program activities (estimated budget authority)	Income tax preferences (outlay equivalent estimates)[a]
Energy supply	$2.39	$4.18
Energy's impact on the environment and health	1.87	0.09
Low-income energy consumer assistance	2.21	None
Basic energy science research	1.17	None
Energy delivery infrastructure	0.88	None
Energy conservation	0.79	0.11
Energy assurance and physical security	0.25	None
Energy market competition and education	0.24	None
Total	**$9.80**	**$4.38**

Source: GAO analysis of agency estimates.

[a]The aggregate value for energy-related tax preferences is useful for gauging general magnitude and does not take into account interactions between individual provisions.

Energy Supply

On the basis of our analysis of fiscal year 2003 resources, energy supply programs and related income tax preferences accounted for about $6.6 billion, or almost one-half of the federal resources provided to energy-related programs. We identified 6 agencies, conducting 65 different program activities, addressing supply issues such as access for energy development on federal lands, research and development for energy sources ranging from clean coal to nuclear fusion, and nuclear energy regulation. In addition to these 6 agencies, Treasury reports on 9 different income tax preferences that address energy supply. Specifically, several provisions of the Internal Revenue Code grant favorable tax treatment to activities such as the recovery of the actual capital investment costs of discovering, purchasing, and developing energy. These income tax preferences accounted for about $4.18 billion in fiscal year 2003 outlay equivalent estimates, more than the total estimated budget authority of $2.39 billion for energy supply programs. Table 2 shows fiscal year 2003 outlay equivalent estimates for supply-related income tax preferences and fiscal year 2003 estimated budget authority for energy supply programs by

major federal agency. Appendix II provides details on energy supply programs by agency and energy type.

Table 2: Federal Resources for Energy Supply, Fiscal Year 2003

Dollars in thousands

Income tax preferences	**Outlay equivalent estimates[a]**
Alternative (nonconventional) fuel production credit (from fossil sources)	$1,720,000
Excess of percentage over cost depletion, fuels	910,000
Credit for enhanced oil recovery costs	620,000
New technology credit	380,000
Expensing of exploration and development costs, fuels	230,000
Capital gains treatment of royalties on coal	140,000
Exclusion of interest on energy facility bonds	130,000
Income tax credits for alcohol fuels	30,000
Exception from passive loss limitation for working interests in oil and gas properties	20,000
Total	**$4,180,000**
Program activities, by agency	**Estimated budget authority**
Department of Energy	$1,259,299
Department of the Interior	513,423
Nuclear Regulatory Commission	392,094
Department of Agriculture	181,313
National Science Foundation	44,237
Environmental Protection Agency	1,200
Total	**$2,391,566**

Source: GAO analysis of agency estimates.

[a]The aggregate value for energy-related tax preferences is useful for gauging general magnitude and does not take into account interactions between individual provisions.

Supply programs address four primary types of energy: fossil, renewable, nuclear, and alternative. Fossil energy supply includes coal, oil, and natural gas production and accounted for $4.7 billion of the almost $6.6 billion in fiscal year 2003 resources for energy supply programs. Fossil resources included $1.1 billion in estimated budget authority for programs such as clean coal technology research and development. Resources addressing

fossil supply also included an estimated $3.6 billion in outlay equivalent value from 6 different income tax preferences. These income tax preferences include the support of fossil fuel production from nonconventional sources such as synthetic fuels produced from coal. Renewable energy supply includes hydropower, biomass, geothermal, wind, and solar energy. Estimated budget authority for renewable programs was at $349 million in fiscal year 2003, and these programs generally address renewable energy research and development. In addition, 2 income tax preferences, a new technology credit and exclusion of interest on facility bonds, supported renewable energy at an estimated outlay equivalent of $510 million in fiscal year 2003. Nuclear energy supply-related programs, with estimated budget authority of about $507 million in fiscal year 2003, address nuclear fission and mainly consist of DOE's nuclear energy research and development programs and the Nuclear Regulatory Commission's (NRC) regulation of nuclear energy. Finally, alternative energy programs, with estimated budget authority of $439 million in fiscal year 2003, include transportation fuels other than gasoline or diesel; traditional energy sources used in untraditional ways (distributed energy);[5] and energy sources of the future, such as hydrogen and fusion. Hydrogen and fusion programs account for most of the programs under alternative energy. In addition, 1 tax preference, providing tax credits for alcohol fuels, supports alternative energy supply. Table 3 shows the fiscal year 2003 level of resources by energy supply type. Appendix II provides additional details on the types of energy supply addressed by specific agency programs.

[5]Distributed energy provides on-site power systems to customers to improve reliability, support existing utility grids, and increase efficiency.

Table 3: Federal Resources for Energy Supply, by Major Energy Type, Fiscal Year 2003

Dollars in thousands

Energy type	Agency program activities (estimated budget authority)	Income tax preferences (outlay equivalent estimates)[a]
Fossil	$1,074,021	$3,640,000
Renewable	348,962	510,000
Nuclear	506,535	0
Alternative	439,048	30,000
Total	**$2,368,566[b]**	**$4,180,000**

Source: GAO analysis of agency estimates.

[a]The aggregate value for energy-related tax preferences is useful for gauging general magnitude and does not take into account interactions between individual provisions.

[b]Total energy supply-related programs were $2,391,566 (in thousands); however, 1 program was not focused on a specific type of energy and, thus, was not included in this table—representing the difference of $23 million.

In addition to resources for programs and income tax preferences directed at the energy sector, the federal government provides other forms of support, largely to users of electricity. While this support is not captured in the programs or income tax preferences, it does provide benefits that represent implicit federal support for certain users of electricity. Specifically, there are five federal utilities, four Power Marketing Administrations (PMA) and the Tennessee Valley Authority (TVA), that provide electricity and transmission services to customers in their regions. The PMAs market power produced primarily at federal hydroelectric dams and projects that are owned and operated by either the Department of the Interior's (DOI) Bureau of Reclamation, the U.S. Army Corps of Engineers, or the International Boundary and Water Commission. TVA markets electricity produced at its own fossil, nuclear, and hydroelectric energy facilities. In addition, another federal agency, the Rural Utilities Service (RUS), provides federal loan guarantees and other services to rural utilities. The federal support provided through these agencies differs from that of the other programs and incentives described in this report because it does not provide any federal funding to electricity customers. Revenue from sales of electricity generated by federally owned facilities and from loan repayment (in the case of RUS) is intended to largely pay the costs to the federal government of providing the electricity and loans. Therefore, the programs undertaken by these agencies are intended to be revenue-neutral to the federal government. Nonetheless, the electricity support provided by these agencies constitutes a benefit to users—an implicit federal

subsidy—because the revenues collected by the agencies have generally been below what would have been collected for the same services by private entities. Appendix III provides additional details on these support programs.

Energy's Impact on the Environment and Health

We identified 29 program activities, implemented by 11 different agencies,[6] that address the impact of energy development and use on the environment and health. In fiscal year 2003, these programs represented estimated budget authority of $1.87 billion. In addition, an income tax preference for clean-fuel burning vehicles amounted to an estimated $90 million outlay equivalent in fiscal year 2003.[7] Major program focuses include nuclear waste cleanup and environmental science research. The largest portion of the funding in this energy policy area goes to DOE, which received an estimated $1.6 billion for energy-related programs in fiscal year 2003. The Environmental Protection Agency (EPA), with a primary mission of protecting the nation's environment, is also a major agency involved in addressing energy's impact on the environment and health. EPA is a major regulator of energy development and use through its implementation of environmental laws, such as the Clean Air Act. We were able to quantify an estimated $24.2 million in fiscal year 2003 that supported EPA programs addressing energy's impact on the environment. However, EPA regulatory activities affect more than the energy sector, and, because EPA does not track costs by industry sector, the agency was not able to determine with complete certainty how much of its $8 billion annual budget is energy-related. Thus, we believe the estimate for EPA programs related to energy's impact on the environment is understated. Finally, because energy development and use can have a significant impact on the environment and health,[8] other programs that primarily address other areas, such as renewable supply and energy conservation, also address the environmental

[6]Our inventory did not include the Department of Labor. Labor has several programs that relate to energy's impact on health, including the Mine Safety and Health Administration and the Occupational and Safety Health Administration oversight of the energy industry, including the electric power generation transmission and distribution industry.

[7]A tax credit of 10 percent (not to exceed $4,000) is provided for purchasers of electric vehicles. Purchasers of other clean-fuel burning vehicles and owners of clean-fuel refueling property may deduct part of their expenditures.

[8]For example, according to the Congressional Research Service, energy consumption is the dominant source of carbon dioxide emissions in this country, and a substantial source of overall greenhouse gas emissions, which contribute to global climate change. Energy-related activities are responsible for about 85 percent of the country's greenhouse gas emissions and 96 percent of its carbon dioxide emissions.

impacts of energy. However, within this inventory, those programs are accounted for under their primary area of energy supply and conservation and are not also included here. Table 4 summarizes fiscal year 2003 resources for energy's impact on the environment and health, by major agency; appendix II provides more details on the agencies' individual programs.

Table 4: Federal Resources for Energy's Impact on the Environment and Health, by Agency, Fiscal Year 2003

Dollars in thousands

Agency	Estimated budget authority
Department of Energy	$1,599,566
U.S. Agency for International Development	91,900
Nuclear Regulatory Commission	83,671
Environmental Protection Agency	24,200
Department of the Interior	19,148
Department of Agriculture	18,778
Department of Commerce	16,632
U.S. Army Corps of Engineers	9,697
Department of State	1,440
Department of Transportation	650
National Science Foundation	111
Total	**$1,865,793**
Tax preference for clean-fuel burning vehicles (outlay equivalent estimate) [a]	**$90,000**

Source: GAO analysis of agency estimates.

[a]The aggregate value for energy-related tax preferences is useful for gauging general magnitude and does not take into account interactions between individual provisions.

In addition to these programs, the federal government addresses energy's impact on the environment through policies that are difficult to quantify. For example, the federal government has set standards and offered incentives to the private sector and citizens to reduce the effects of fossil fuel use and to reduce reliance on fossil fuel for energy. These include standards for smokestack and motor vehicle emissions, home appliances, and building materials and practices. In addition, the federal government is a significant consumer of energy and, through its consumption decisions, can choose to consume energy that is less harmful to the environment. In the late 1990s, the federal government embarked on its "greening of the

government" initiative and sought to reduce reliance on the use of fuels in its buildings and vehicles that contribute the most to pollution. Executive Order 13123, Greening of the Government Through Efficient Energy Management, signed June 3, 1999, addresses greenhouse gas emissions from federal facilities and makes energy-efficiency targets more stringent. This order requires that each agency reduce its greenhouse gas emissions by 30 percent by 2010 when compared with 1990 emissions levels.

Low-income Energy Consumer Assistance

The federal government provides funding to assist low-income consumers through two block grant programs: (1) the Low-Income Home Energy Assistance Program (LIHEAP), managed by HHS, provides grants to states to fund fuel payment assistance and home energy efficiency improvements for low-income households and (2) DOE's Weatherization Assistance Program provides funds to make dwellings more fuel efficient in the long term for low-income housholds. The total estimated budget authority for these two programs in fiscal year 2003 was $2.212 billion, with the majority of the budget authority ($1.988 billion) being for LIHEAP.

LIHEAP seeks to increase the health and prosperity of communities and tribes by assisting low-income households, particularly those with the lowest income that pay a high proportion of household income for home energy, in meeting their immediate home energy needs. LIHEAP operates in the 50 states, the District of Columbia, Indian tribes or tribal organizations, and U.S. territories. LIHEAP offers three types of assistance: heating/cooling bill payment, energy crisis, and weatherization and energy-related home repairs. Each state operates its own program, which includes taking applications, establishing eligibility, and making decisions on the kinds of assistance it will offer. In fiscal year 2003, LIHEAP received $1.988 billion in budget authority. During that fiscal year, approximately 4.4 million households received heating assistance; 494,000 households received cooling aid; 1.1 million received winter/year-round crisis aid; 71,000 received summer crisis aid; and 113,000 received weatherization assistance. Households may receive more than one kind of LIHEAP assistance. Thus, even though the precise number of households assisted is not known, 4.8 million households are estimated to have received assistance in fiscal year 2003.

DOE's Weatherization Assistance Program is part of the department's Weatherization and Intergovernmental Program (WIP). The overall goal of WIP is to develop, promote, and accelerate the adoption of energy efficiency, renewable energy, and oil displacement technologies and practices by a wide range of customers—including state and local

governments, weatherization agencies, communities, companies, fleet managers, building code officials, technology developers, tribal governments, and international agencies. In fiscal year 2003, DOE received about $224 million in budget authority for the Weatherization Assistance Program to provide weatherization assistance for low-income residences. The weatherization program also provides technical assistance and formula grants to state and local weatherization agencies to help low-income residents with weatherization services. Also, the weatherization program, as part of WIP, addresses energy conservation areas as it helps to reduce demand for fuels and peak loads on constrained electricity systems and modernizes conservation technologies and practices.[9]

Basic Energy Science Research

Basic energy sciences consist of general energy-related research within DOE's Office of Science. The Office of Science's Basic Energy Science (BES) Program (fiscal year 2003 estimated budget authority of $1.0 billion) and its Advanced Scientific Computing Research (ASCR) Program (fiscal year 2003 estimated budget authority of $163 million) encompass the basic energy science research programs we identified. The BES program is a multipurpose, scientific research effort aimed at expanding the foundation for new and improved energy technologies and for understanding and mitigating the environmental impacts of energy use. BES touches virtually every aspect of energy resources—that is, production, conversion, efficiency, and waste mitigation.[10] Energy-related research includes (1) advancing hydrogen production, storage, and use and developing new concepts and (2) improving existing models for solar energy conversion and for other energy sources. BES states that it provided the basic knowledge that resulted in an array of energy-related advances, including high-energy and high-power lithium batteries, highly efficient photovoltaic solar cells, and solutions for nuclear fuel purification/reprocessing and for cleanup of radioactive waste. Also, the BES research for the Hydrogen Fuel Initiative is based on the BES workshop report entitled *Basic Research*

[9]WIP's State Energy Program Grants, along with State Energy Activities, assist states in developing emergency energy plans and in fostering clean, reliable, and diverse energy supplies. State Energy Program Grants and State Energy Activities received an additional $50 million in federal funding in fiscal year 2003.

[10]BES activities could also be included in other major activities, such as energy supply and conservation. However, a breakdown of BES activities by these various areas was not readily available; therefore, the activities were all accounted for under the basic energy sciences area.

Needs for the Hydrogen Economy. The ASCR program supports DOE's strategy to ensure the security of the nation and succeed in its science, energy, and environmental quality missions. ASCR provides the fundamental mathematical and computer science research that enables the simulation and prediction of complex physical and biological systems. Its energy-related objectives include providing the science base to enable the development of bioenergy sources and laying the groundwork for DOE's Fusion Simulation Project.

Energy Delivery Infrastructure

The primary purpose of energy delivery infrastructure programs is to facilitate the development, maintenance, and improvement of the comprehensive energy delivery system—for example, electricity transmission and distribution systems, oil refining and gas processing, and oil and gas pipelines. We identified 13 program activities at 6 federal agencies that accounted for estimated budget authority of $882 million in fiscal year 2003 that addressed energy delivery infrastructure. The largest investment of program dollars in energy infrastructure that we identified in fiscal year 2003 involved international infrastructure funded by the U.S. Agency for International Development (USAID) in its programs in Iraq and Afghanistan. The total USAID infrastructure effort amounted to about $561 million—or 64 percent of the total energy infrastructure funding—with the great majority of the effort in Iraq ($558 million).[11] Domestically, several programs involve the regulation of energy infrastructure on federal lands by DOI. In addition, Federal Energy Regulatory Commission (FERC) activities related to energy infrastructure include pipeline certification, hydropower licenses, and dam safety inspections, while the Department of Transportation (DOT) conducts regulatory work on pipeline safety. Table 5 provides a listing of infrastructure estimated budget authority for fiscal year 2003, by agency, while appendix II offers more details on specific programs.

[11]While USAID energy funding in Afghanistan totaled an estimated $3.1 million in fiscal year 2003, the funding level increased to an estimated $84.8 million in fiscal year 2004. Also, USAID requested an estimated $317 million for fiscal year 2005 energy activities in Afghanistan. In addition, USAID energy funding in Iraq increased from an estimated $558 million in fiscal year 2003 to an estimated $1.04 billion in fiscal year 2004. A USAID official told us that USAID shares energy-related responsibilities in Iraq with DOD. In general, DOD has responsibility for the oil/gas sector, whereas DOD and USAID both have responsibilities for the electric power sector. DOD programs are not included in this inventory.

Table 5: Energy Delivery Infrastructure, Fiscal Year 2003 Estimated Budget Authority

Dollars in thousands	
Agency	**Estimated budget authority**
U.S. Agency for International Development	$561,100
Federal Energy Regulatory Commission	119,241
Department of Energy	88,384
Department of Transportation	63,261
Department of the Interior	37,400
National Science Foundation	13,030
Total	**$882,416**

Source: GAO analysis of agency estimates.

Energy Conservation

Energy conservation programs include those efforts to increase energy efficiency and reduce the amount of energy used in all sectors, such as buildings and transportation. We identified 27 program activities related to energy conservation at 5 federal agencies that accounted for about $788 million in estimated budget authority for fiscal year 2003. Energy conservation programs at DOE represent the bulk of the conservation efforts, accounting for about $657 million of the $788 million. In general, the program activities at DOE and the other major agencies, particularly EPA, DOT, and the National Science Foundation (NSF), involve research and development efforts aimed at improving energy conservation. In addition, an income tax preference provides $110 million in exclusions from income of conservation subsidies provided by public utilities.[12] Table 6 provides a listing of energy conservation resources for fiscal year 2003, by agency, while appendix II provides program details.

[12]This income tax preference allows individuals to exclude the value of a subsidy from gross income that is provided by a public utility for the purchase or installation of any conservation measures.

Table 6: Federal Resources for Energy Conservation, by Agency, Fiscal Year 2003

Dollars in thousands	
Agency	**Estimated budget authority**
Department of Energy	$656,639
Environmental Protection Agency	78,200
Department of Transportation	34,340
National Science Foundation	17,963
Department of Agriculture	793
Total	**$787,935**
Tax preference-conservation subsidies (outlay equivalent estimate)[a]	**$110,000**

Source: GAO analysis of agency estimates.

[a]The aggregate value for energy-related tax preferences is useful for gauging general magnitude and does not take into account interactions between individual provisions.

In addition to these programs, the federal government has addressed energy conservation through policies that seek to minimize the federal government's own energy use. The federal government is the largest institutional user of energy in the world and can influence the amount of energy used in the marketplace. The National Energy Conservation Policy Act, as amended, requires federal agencies to achieve reductions in energy use. The legislation also contains provisions concerning energy management requirements and incentives, life-cycle cost methods for energy management decisions, and new technology requirements. In addition, Executive Order 13123, June 3, 1999, is one of a series of executive orders over recent years directing federal agencies to demonstrate leadership in energy and environmental management, including energy efficient building design, construction and operation, and the reduction of petroleum use through improvements in fleet fuel efficiency. Chartered in 1973, the Federal Energy Management Program, administered by DOE, is charged with coordinating federal government energy management efforts. DOE's most recent *Annual Report to the Congress on Federal Government Energy Management and Conservation Programs for Fiscal Year 2002*, dated September 29, 2004, provides information on federal energy consumption and costs submitted to DOE by 29 federal agencies. Specifically, the report provides information on (1) consumption and costs of energy by fuel type for buildings, vehicles, and equipment and (2) agency appropriations for energy conservation retrofits and capital equipment. In summary, the report noted that fiscal year 2002 federal consumption costs were $9.7 billion, with 92 percent spent on two

categories—62 percent on vehicles and equipment and 30 percent on standard buildings. DOD, through such energy uses as jet fuel and diesel, was by far the largest federal energy consumer—DOD spent $7.1 billion of the $9.7 billion and accounted for 73 percent of the total federal government energy use. In addition, the report provides information on progress toward energy conservation goals. For example, Executive Order 13123 requires a 30 percent reduction by 2005 in energy consumption per square foot for buildings and a 35 percent reduction by 2010 from the base year of 1985. The report indicates that energy consumption per square foot for buildings in fiscal year 2002 was about 24 percent less than the fiscal year 1985 base year.

Energy Assurance and Physical Security

Energy assurance and physical security activities incorporate federal programs designed to respond to or prevent energy emergencies and major reliability and supply disruptions. This includes energy supply reserves, such as the Strategic Petroleum Reserve, and protection of energy production and delivery infrastructure from natural events, accidents, equipment failures, or deliberate sabotage. DOE has two programs to provide oil reserves to offset supply disruptions: the Strategic Petroleum Reserve and the Northeast Heating Oil Reserve. In addition, DOE's Energy Security and Assurance Program supports the national security of the United States by working in close collaboration with state and local governments and the private sector to protect the nation against severe energy supply disruptions. The Department of Homeland Security (DHS) is responsible for coordinating the national effort to enhance critical infrastructure protection, including energy-related infrastructure.[13] However, DOE is the sector-specific agency for the energy sector. DOE's Office of Energy Assurance is responsible for fulfilling the roles of critical infrastructure identification, prioritization, and protection for the energy sector, which includes the production, refining, and distribution of oil and gas and electric power—except for commercial nuclear power facilities. NRC has programs that address security for commercial nuclear power facilities. Table 7 lists all of the energy assurance and physical security-related programs that we identified and provides estimated program funding for fiscal year 2003.

[13]We did not include DHS in our inventory, but we did include DOE, which is the sector-specific agency for energy.

Table 7: Energy Assurance and Physical Security Programs, Fiscal Year 2003 Estimated Budget Authority

Agency/Program activity	Estimated budget authority
DOE/Strategic Petroleum Reserve	$171,732
DOE/Northeast Heating Oil Reserve	5,961
DOE/Energy Security and Assurance	25,990
NRC/Homeland Security	44,316
Total	**$247,999**

Source: GAO analysis of agency estimates.

Energy Market Competition and Education

The issue of energy market competition and education includes efforts to ensure that competitive domestic and international energy markets are functioning, as well as efforts in energy education and consumer protection and awareness. We identified 14 program activities implemented by 11 different agencies that play some role in facilitating competitive and informed energy markets. For those programs for which we could obtain estimates, these programs' estimated budget authority was at least $238 million in fiscal year 2003. Major program focuses include providing federal oversight of the domestic natural gas, petroleum, and propane markets; providing energy information and education; and facilitating secure, stable, and competitive international energy markets that support investment in developing countries. DOE's EIA represented the largest program in this area with estimated budget authority of $80 million. While most of EIA's budget goes for domestic data collection and analysis activities, these activities serve to enhance competitive domestic and, to a lesser extent, international energy markets. EIA is responsible for providing energy information that promotes sound policy making, efficient markets, and public understanding.[14] In addition, FERC, through its competitive market and market oversight programs, was the next significant program, with estimated budget authority of about $73 million. FERC has responsibility

[14]This inventory does not capture federal policy that supports industry funding of energy programs related to this issue. For example, the Propane Education and Research Act of 1996 established a "check-off" program where a portion of the wholesale cost of the product is set aside in a common fund to the benefit of producers and consumers. Funding generated can be significant. In fiscal year 2003 alone, a $38 million budget was projected to support various propane-related programs, including consumer and employee safety and training, research and development, and education about safety and other issues associated with the use of propane. In comparison, EIA's total estimated budget authority was $80 million in fiscal year 2003.

for ensuring "just and reasonable rates" for the interstate transportation of natural gas and the wholesale price of electricity sold in interstate commerce. Internationally, the U.S. Trade and Development Agency (USTDA), Commerce, State, and USAID promote economic development and/or U.S. commercial interests in the energy sector. It was difficult to quantify the funding specifically associated with energy-related aspects of various programs in this energy activity area, and some agencies were not able to provide us with funding information for their energy-related programs or activities.[15] Significant among these programs were those agencies—Commodity Futures Trading Commission (CFTC), Department of Justice (DOJ), Securities and Exchange Commission (SEC), and Federal Trade Commission (FTC)—that can play a role in market oversight, including energy markets. Table 8 provides a summary of major federal agencies that play a role in energy market competition and education and the available estimates of budget authority for fiscal year 2003. Appendix II provides additional details on individual programs.

Table 8: Energy Market Competition and Education, Fiscal Year 2003 Estimated Budget Authority

Dollars in thousands

Agency	Estimated budget authority
Department of Energy	$80,087
Federal Energy Regulatory Commission	72,759
U.S. Agency for International Development	39,300
Department of Commerce	31,202
U.S. Trade and Development Agency	14,509
Department of State	865
Department of Agriculture	140
Commodity Futures Trading Commission	Estimate not available
Department of Justice	Estimate not available
Securities and Exchange Commission	Estimate not available
Federal Trade Commission	Estimate not available
Total	**$238,862**

[15]In other cases agencies were able to provide us with overall budget information for energy activities but were not able to separate the resources associated with this issue from other energy issues addressed.

Source: GAO analysis of agency estimates.

While the federal government has a limited role in setting energy prices or dictating buyer purchasing strategies, the federal government has an interest in promoting a competitive and informed energy marketplace that protects the public from unnecessary price volatility. Recent investigations of market manipulation, by companies such as Enron, have heightened the relevancy of the federal government's role in ensuring that a lack of competition or reliable market information do not exacerbate energy prices. Tools available to federal agencies to promote a competitive energy marketplace and protect the public from price volatility include monitoring for anticompetitive behavior; taking appropriate enforcement actions when necessary; and providing decision makers with sound, up-to-date, energy marketplace information, such as short-term price movements and long-term demand and supply trends.

In addressing this area of market oversight, we attempted to quantify 4 relevant agencies' level of effort in energy-related activities—CFTC, FTC, SEC, and DOJ. However, these 4 agencies, with overall budgets of $85 million for CFTC in fiscal year 2003; $177 million for FTC; $717 million for SEC; and $22 billion for DOJ, were not able to develop reliable estimates of the amount of effort devoted to energy-related activities. CFTC officials roughly estimated that about 20 percent of CFTC's annual budget of $85 million, or $17 million, could be associated with energy-related activities. They noted that their work has increased in recent years because of concerns about energy markets, but they were not able to quantify the increase. DOJ officials told us that the majority of DOJ's energy-related work falls within their Antitrust Division and their Environment and Natural Resources Division (ENRD). The Antitrust Division was able to provide us with an estimate for energy-related work, which totaled almost $4 million in fiscal year 2003, but ENRD was not able to provide us with a similar estimate of their energy-related work.[16] Although we were not able to quantify energy-related funding for these 4 agencies, we were able to gather some basic information on major energy-related activities. For example:

- CFTC resolved its natural gas manipulation case against Enron in fiscal year 2004. CFTC also undertook a broader energy investigation that focused on energy trading firms that allegedly engaged in (1) the

[16]A DOJ ENRD official estimated that ENRD's overall annual budget was about $100 million.

reporting of false, misleading, or knowingly inaccurate market information, including price and volume information; (2) manipulation or attempted manipulation; and/or (3) "round tripping," which is a risk-free trading practice that produces "wash" results and the reporting of non-bona fide prices, in violation of the Commodity Exchange Act. As a result of its efforts in this area, as of February 1, 2005, enforcement actions commenced by the commission have resulted in civil monetary penalties totaling over $297 million, among other sanctions, imposed against approximately 27 entities and individuals.

- FTC, from 1981 to 2004, alleged that 15 proposed petroleum mergers would have resulted in significant reductions in competition and harmed consumers in one or more relevant markets. Four of the mergers were abandoned or blocked as a result of FTC or court action. In the other 11 cases, FTC required the merging companies to divest substantial assets in the markets where competitive harm was likely to occur. FTC has, since 2000, brought seven energy-related law enforcement actions to prevent consumer injury from unsubstantiated, false, or deceptive claims concerning energy or energy-related products.

- SEC officials reported that in 2003, there were 23 energy-related cases or enforcement actions brought by SEC. In addition; SEC issued about 100 orders under the Public Utility Holding Company Act in fiscal year 2003. Also, SEC's Division of Corporation Finance performed 4,088 full reviews and full financial reviews of filings from all types of companies; of these, 619 were for energy-related companies. The division also performed 190 targeted reviews related to those energy-related companies.

- DOJ's Antitrust Division has energy-related responsibilities that include promoting competition and enforcing antitrust laws in the energy industries. DOJ energy-related activities within ENRD include (1) defending EPA's more stringent clean air standards for heavy-duty trucks and diesel fuel; (2) safety standards for the Yucca Mountain nuclear waste repository in Nevada; and (3) administrative enforcement actions, such as a major clean air enforcement action against coal-fired power plants.

Federal Government Collects Revenues through Energy-Related Programs and Excise Taxes

The federal government collects about $10.1 billion a year through various energy-related programs and about $34.6 billion in energy-related excise taxes. Most of the collections are royalties, rents, and bonuses from oil and gas on federal lands or offshore areas; while taxes on gasoline and other fuels account for most of the excise tax revenue.

Energy Program Collections

A number of energy-related programs, especially those dealing with the use of federal energy resources, radioactive waste, and regulation of the energy industry, involve the collection of federal revenues that are deposited into the Treasury. In fiscal year 2003, these collections amounted to about $10.1 billion. The majority of these collections come from collections associated with the production of energy resources on federal lands and in offshore areas. DOI's Minerals Management Service (MMS) collected about $8.0 billion in royalties, rents, and bonuses in fiscal year 2003 for the development of energy resources in federal lands and offshore areas.[17] The remainders of these collections are generally fees to pay for energy-related programs. In some cases, federal agencies are authorized to use these collections to offset program costs. For example, the Office of Civilian Radioactive Waste Management in DOE collected over $1 billion from generators of nuclear waste in fiscal year 2003 to manage and dispose of high-level radioactive waste and spent nuclear fuel. FERC collected fees from the entities it regulates that funded all of the cost of its regulatory activities related to energy, while NRC collected fees from the entities it regulates, including nuclear power plants, that cover about 90 percent of its costs. Table 9 provides a breakdown of federal energy-related collections for fiscal year 2003.

[17]In addition, the MMS collects mineral leasing receipts from Indian lands that amounted to $267.1 million in fiscal year 2003. These funds are deposited in Treasury accounts controlled by the Office of the Special Trustee for American Indians and are later paid to tribal and Indian allottee accounts.

Table 9: Federal Energy-Related Collections, Fiscal Year 2003

Dollars in thousands

Agency	Program	Energy-related collections
Department of the Interior	Minerals Management Service-Mineral Leasing Receipts/Outer Continental Shelf (royalties, rents and bonuses)	$5,933,900
Department of the Interior	Minerals Management Service-Mineral Leasing Receipts/Onshore (royalties, rents and bonuses)	2,066,276
Department of the Interior	Minerals Management Service-Royalty and Offshore Minerals Management (offsetting collections)	90,000
Department of the Interior	Bureau of Land Management-Service Charges, Deposits, and Forfeitures	7,900
Department of the Interior	Minerals Management Service-Indian Trust Responsibility (offsetting collections)	7,000
Department of the Interior	Office of Surface Mining-Regulation and Technology	1,039
Department of Energy	Civilian Radioactive Waste	1,038,948
Department of Energy	Uranium Enrichment Decontamination and Decommissioning Fund	189,000
Nuclear Regulatory Commission	Nuclear Energy Related Collections estimate	473,966
Federal Energy Regulatory Commission (FERC)	FERC Competitive Markets, Energy Infrastructure, Market Oversight	192,000
Department of Transportation	Pipeline and Hazardous Materials Safety Administration-Natural Gas Pipeline Safety	57,326
Department of Commerce	National Institute of Science and Technology-Energy use and conservation programs	2,000
Total		**$10,059,355**

Source: GAO analysis and estimates based on agency data.

Excise Taxes

The Internal Revenue Code, which is administered by the Department of the Treasury, provides for federal excise taxes on energy fuels that are used in many sectors across the United States. Revenue from these energy-related taxes totaled over $34 billion in fiscal year 2003. The excise taxes, some applied at the retail and some at the manufacturers' level, were typically applied on a unit basis, typically by the gallon, and rates varied according to the content of the fuel. In general, these excise taxes fund certain trust funds. The largest of these, the excise tax on gasoline and gasohol, resulted in $24.2 billion in collections in fiscal year 2003 that support the Highway Trust Fund. The next largest revenue raiser was the excise tax on diesel fuel, which amounted to $8.6 billion in the same fiscal year. Most of the excise taxes on liquid fuels include 0.1 cent per gallon to

finance the Leaking Underground Storage Tank Trust Fund. In addition to funding various trust funds, excise taxes can be used as a tool to achieve federal energy-related objectives. For example, alcohol fuels and fuels containing a portion of alcohol are generally taxed at a lower rate. The standard rate for gasoline is 18.4 cents per gallon. However, a partial exemption of 5.4 cents per gallon from the federal excise tax is provided for ethanol that is derived from renewable sources and used as fuel. The exemption encourages the substitution of alcohol fuels produced from renewable sources for gasoline and diesel to reduce reliance on imported petroleum and to contribute to energy independence. In addition, dyed diesel fuel and kerosene meant for use in trains, school buses, and local and mass transit buses are exempt from the 24.3 cents per gallon excise tax on the normal varieties of these fuels. Another excise tax, the "gas guzzlers" levy on certain vehicles that do not meet standards for fuel economy per gallon, raised $127 million in fiscal year 2003. Table 10 provides a listing of fiscal year 2003 energy-related excise tax collections and the associated trust funds.

Table 10: Energy-Related Excise Tax Collections, Fiscal Year 2003

Dollars in thousands

Excise tax	Excise tax collections	Trust funds receiving amounts equivalent to excise tax collected
Alcohol fuels[a]	$(9,986)[b]	Highway Trust Fund[c]
Aviation fuel (except gasoline)	739,920	Airport and Airways Trust Fund and the Leaking Underground Storage Tank Trust Fund
Aviation gasoline	57,953	Airport and Airways Trust Fund and the Leaking Underground Storage Tank Trust Fund
Coal	517,531	Black Lung Disability Trust Fund
Compressed natural gas	1,735	Highway Trust Fund
Diesel fuel, except for trains and intracity buses	8,581,467	Highway Trust Fund and the Leaking Underground Storage Tank Trust Fund
Dyed diesel fuel used in trains and regularly scheduled buses	163,920	Highway Trust Fund and the Leaking Underground Storage Tank Trust Fund
Fuels used commercially on inland waterways	111,058	Inland Waterways Trust Fund and the Leaking Underground Storage Tank Trust Fund
Gas guzzlers	126,685	Not applicable
Gasoline and gasohol	24,232,426	Highway Trust Fund and the Leaking Underground Storage Tank Trust Fund
Kerosene	72,128	Highway Trust Fund and the Leaking Underground Storage Tank Trust Fund

(Continued From Previous Page)

Dollars in thousands

Excise tax	Excise tax collections	Trust funds receiving amounts equivalent to excise tax collected
Special motor fuels	14,226	Highway Trust Fund and the Leaking Underground Storage Tank Trust Fund
Total	**$34,609,063**	

Source: GAO analysis of Treasury estimates.

[a]This entry is for a retail sales excise tax on diesel fuel, special motor fuel, or nongasoline aviation fuel containing at least 10 percent alcohol. The American Jobs Creation Act of 2004 (Pub. L. No. 108-357) has restructured the excise tax provisions for these fuels.

[b]According to the Office of Tax Analysis, Department of the Treasury, the number for alcohol fuels collections in fiscal year 2003 is reported as negative because adjustments are being made for earlier amounts allocated to the account incorrectly.

[c]The Highway Trust Fund includes a separate Mass Transit Account for certain funds appropriated to the fund.

It Is Difficult to Assess Progress of Federal Efforts to Implement the National Energy Policy Report Recommendations

It is difficult to fully assess the status of progress made in implementation of the NEP recommendations because the information DOE has reported has been limited. Moreover, some of the recommendations are open-ended and lack measurable goals, which contribute to the difficulty in assessing implementation progress. Finally, because the NEP recommendations do not reflect all federal energy-related efforts, understanding the overall status of federal efforts to address energy issues is challenging.

Since the May 2001 NEP report, publicly reported information on the status of the recommendations has been limited. For example, on the first anniversary of the NEP report, in May 2002, DOE issued a press release highlighting progress made in implementing the NEP recommendations. According to DOE, at that time all but 1 of the 22 recommendations, that it reported required legislative action, had either been enacted into law or were contained in House or Senate energy bills.[18] However, DOE provided no detail on what the 22 recommendations that required legislation were or what the status was of the other 84 recommendations. On the second anniversary of the NEP report, in May 2003, DOE again issued a press

[18]We have identified 26, not 22, recommendations that have a legislative component—although 2 were duplicates. In addition, we could not identify any recommendations that had been implemented by enacted legislation at the time of the May 2002 press release. As of March 2005, only 5 of the 26 recommendations needing legislation had been addressed by enacted legislation, according to DOE's January 2005 status report—1 in December 2002 and 4 in October 2004.

release that described progress in implementing the NEP recommendations. This document provided the first status information on each of the 106 recommendations in the form of an NEP scorecard that characterized each recommendation as either under way or complete. The scorecard reported that 96 of the 106 recommendations were complete, although it noted that 16 of the "complete" recommendations involved legislation that was then being considered by Congress. However, DOE did not provide information on the progress cited specifically related to the 96 recommendations the scorecard reported as complete or on what actions were planned or then under way to complete the remaining 10 recommendations. DOE's next report on the NEP recommendations was its January 2005 report. In contrast to the May 2003 scorecard that characterized most of the recommendations as complete (but had provided no specific information pertinent to each), DOE's January 2005 report (1) characterized most recommendations as implemented but involving ongoing activities or requiring legislation[19] and (2) provided the first information on specific actions taken to implement each recommendation.

Although DOE's January 2005 report represents an improvement in the level of information DOE has provided on the status of NEP recommendation implementation, the information is still incomplete. For example, the NEP report recommended the development of energy educational programs, including possible legislation to create education programs funded by the energy industry. However, the January 2005 status report provided only an overview of federal energy education efforts, and it made no mention of creating education programs through legislation. Similarly, the 2001 NEP report made a recommendation to the Secretary of Transportation to work with Congress to enact legislation to implement congestion mitigation strategies. However, while the reported status outlined various DOT congestion mitigation efforts, it did not address the legislative aspect of the recommendation nor did it reflect DOT efforts to propose legislation to address this recommendation. In addition, another recommendation was made to DOE and DOI to promote new oil and gas well technology, but the status report addressed only DOE's efforts to implement the recommendation. Appendix IV provides a complete list of the 106 NEP recommendations, DOE's reported status of the recommendations, and our observations.

[19]In contrast, both before and after the January 2005 report, the Administration's Web site stated that approximately 75 percent of the NEP recommendations were administrative in nature, and that a majority of them had been completed.

DOE's ability to provide consistent and complete information on the status of NEP implementation may have been limited by a lack of sustained, centralized efforts to monitor and report on the ongoing implementation of the NEP recommendations. For example, one of the first recommendations in the NEP report was that the National Energy Policy Development Group (NEPDG) continue to work and meet on the implementation of the NEP. However, the NEPDG was terminated on September 30, 2001, and did not meet or work on the implementation of the NEP recommendations after that time. Nevertheless, according to DOE, individual agencies have continued to coordinate implementation efforts and to measure and track implementation progress. Also, according to DOE, an interagency working group led by DOE was established to coordinate agencies' implementation of the NEP recommendations. According to DOE officials, the agency's Office of National Energy Policy is responsible for coordinating, and providing strategic direction for, the implementation of the NEP report recommendations. However, additional information we obtained in our review raises questions about the extent to which centralized monitoring of recommendation implementation has been sustained. For example, according to DOE, its NEP Office did not assume leadership of the interagency working group until the fall of 2003. Also, DOE officials told us in November 2003 that the NEP Office had not been fully staffed because of budget constraints. Finally, at that time, DOE officials also told us that implementing the NEP recommendations was the responsibility of individual federal agencies, and that there was no centralized, formal system to monitor implementation and report on the status of the NEP recommendations.

The nature of some of the NEP recommendations also makes it difficult to assess the progress made in implementing them. Specifically, some of the recommendations are open-ended and lack measurable goals. For example, a NEP report recommendation is that the President make energy security a priority of our trade and foreign policy. In reporting on the status of this recommendation, DOE states that the recommendation has been implemented, with activities ongoing, because energy security has been made a priority of our trade and foreign policy through various bilateral and multilateral activities, such as the U.S.-China Oil and Gas Industry Forum and the International Partnership for the Hydrogen Economy. However, this recommendation is open-ended and does not contain a specific, measurable goal, thereby making it difficult to understand how or to what extent the activities described have helped to implement the recommendation. In contrast, another NEP report recommendation directs the Secretary of Energy to authorize the Western Area Power

Administration to explore relieving an electricity transmission bottleneck in the western United States. The DOE status report noted that a new transmission line to relieve this bottleneck was completed on December 14, 2004. This recommendation sets a measurable infrastructure-related goal, and the status report demonstrated progress toward that goal. (See app. IV.)

Finally, some federal energy-related programs that address the same issues as some of the NEP recommendations are not mentioned in either the NEP recommendations or the status report, making it difficult to assess the overall status of federal efforts to address energy issues. For example, one NEP recommendation calls for the Secretary of Energy to conduct a review of current funding and historic performance of energy-efficiency research and development programs. In response, the status report noted that DOE completed a detailed review of its programs. However, at least one other federal agency, NSF, funds energy-efficiency research and development activities as part of its overall science program. These activities were not specified in the recommendation or recognized in the status report. Other federal energy efforts that relate to some of the same issues that the NEP recommendations addressed, but were not specifically addressed in the recommendations or the status report, include some NRC programs and most USTDA and USAID programs. (See app. IV.) These agencies are not represented on DOE's NEP interagency task force. When we spoke with representatives from these agencies, they said that even though their programs address some of the same issues as the NEP recommendations, they were not involved in the development of the NEP, nor were they charged with implementation of the recommendations. Additionally, we found that the NEP report recommendations omit discussion of some federal energy-related efforts and the issues they address. Such omissions preclude a full accounting of the results of federal energy efforts in any NEP status report. For example, the NEP report recommendations do not address all energy-related excise taxes and energy-related income tax preferences.[20] Regarding programs, our review of the NEP report did not find that it addressed basic energy science research; DOE nondefense

[20]The NEP report did address extension of the ethanol excise tax exemption and extension of the tax credit for electricity produced using wind and biomass. It also addressed the creation of new tax credits for combined heat and power projects, hybrid and fuel cell vehicles, new landfill methane projects, and residential solar energy property. Finally, the NEP report addresses the permanent extension of the general research and development tax credit in support of clean coal technology. However, because this tax credit is not specifically energy-related, it was not included in our inventory of income tax preferences.

nuclear waste cleanup; federal electricity support; FERC energy market oversight; and the overall market oversight roles of agencies such as CFTC, FTC, DOJ, and SEC.

Federal Resources Devoted to Energy-Related Activities Have Grown since 2000

Federal energy-related program resources have grown since the release of the NEP report as programs continue to address the major energy activity areas. For example, compared with fiscal year 2000 estimated budget authority, fiscal year 2003 estimated budget authority funding grew by about 30 percent, from $7.3 billion to $9.6 billion for those programs where we could identify estimated budget authority for both years. In addition, over the same time period, outlay equivalent estimates for energy-related income tax preferences grew by over 60 percent, from $2.7 billion to about $4.4 billion. While we did not review changes within individual programs and tax policies, federal efforts have continued to address the eight major energy activities of supply, environment and health, low-income assistance, basic science, infrastructure, conservation, assurance and security, and competition and education. Energy supply continues to be a major emphasis of the federal efforts, accounting for a majority of the growth. For example, income tax preferences associated with energy supply have represented almost all of the $1.7 billion growth in income tax preferences. Within energy supply income tax preferences, growth has occurred primarily with efforts targeting fossil and renewable energy supplies. Table 11 shows changes in program estimated budget authority, by major energy issue, in fiscal years 2000 and 2003. Appendix V provides a breakdown of the change in estimated budget authority for each program addressing the major energy issues.

Table 11: Estimated Budget Authority for Energy Activity Area, Fiscal Years 2000 and 2003

Dollars in thousands

	Estimated budget authority	
Energy activity area	**Fiscal year 2000**	**Fiscal year 2003**
Energy supply	$1,591,377	$2,391,566
Energy's impact on the environment and health	1,658,668	1,865,793
Low-income energy consumer assistance	1,979,350	2,211,837
Basic energy science research	874,369	1,165,126
Energy delivery infrastructure	136,835	763,175
Energy conservation	724,087	787,935
Energy assurance and physical security	160,500	247,999
Energy market competition and education	219,101	166,103
Total[a]	**$7,344,287**	**$9,599,533**

Source: GAO analysis of agency estimates.

Note: This table does not include a comparison of estimated budget authority for the three programs under FERC, totaling $192 million in fiscal year 2003 estimated budget authority, because FERC did not allocate its $175 million in fiscal year 2000 estimated budget authority among the same three programs of Energy Infrastructure, Market Oversight and Investigations, and Competitive Markets.

[a]Numbers may not add due to rounding.

Income tax preferences do not compete in the budget process and do not have to seek budget authority—they are already "fully funded" as long as they remain in effect. However, as has been demonstrated, they can represent significant resources. Current fiscal year 2005 projected estimates indicate energy-related income tax preferences have continued to grow—to $5.15 billion in outlay equivalent estimates. Table 12 provides a profile of changes in energy-related income tax preferences in outlay equivalent estimates between fiscal years 2000 and 2003.

Table 12: Energy-Related Income Tax Preferences as Reported for Fiscal Years 2000 and 2003

Dollars in thousands

			Income tax preferences (outlay equivalent estimates)[a]	
Tax preference	**Activity area**	**Supply type**	**Fiscal year 2000**	**Fiscal year 2003**
Alternative (nonconventional) fuel production credit	Energy supply	Fossil	$1,310,000	$1,720,000
Capital gains treatment of royalties on coal	Energy supply	Fossil	90,000	140,000
Credit for enhanced oil recovery costs	Energy supply	Fossil	410,000	620,000
Exception from passive loss limitation for working interests in oil and gas properties	Energy supply	Fossil	20,000	20,000
Excess of percentage over cost depletion, fuels	Energy supply	Fossil	450,000	910,000
Exclusion of interest on energy facility bonds	Energy supply	Renewable	130,000	130,000
Expensing of exploration and development costs, fuels	Energy supply	Fossil	30,000	230,000
Income tax credits for alcohol fuels	Energy supply	Alternatives	20,000	30,000
New technology credit	Energy supply	Renewable	50,000	380,000
Exclusion from income of conservation subsidies provided by public utilities	Energy conservation	Not applicable	110,000	110,000
Tax credit and deduction for clean-fuel burning vehicles	Energy's impact on the environment and health	Not applicable	80,000	90,000
Total			**$2,700,000**	**$4,380,000**

Source: GAO analysis of Treasury estimates published in the *Analytical Perspectives Budget of the United States Government*, for selected years.

[a]The aggregate value for energy-related tax preferences is useful for gauging general magnitude and does not take into account interactions between individual provisions.

Along with the growth in energy-related federal resources, budget requests for federal energy-related programs have also grown since 2000. However, budget request information is not available for all of the programs identified in our inventory for which we have obtained estimates because many energy-related programs are part of larger programs and separate, distinct budget requests are not made for them. For those programs that had specific, energy-related budget requests, budget requests grew between fiscal years 2000 and 2003 by about 27 percent—from $5.9 billion

to $7.5 billion. This growth continued into fiscal year 2005, when requests reached $8.4 billion. Table 13 shows budget requests in fiscal years 2000, 2003, and 2005 by major energy activity area. Appendix VI provides a breakdown of requests for each program that has a budget request under the major energy areas.

Table 13: Budget Requests, by Major Energy Activity Area, Fiscal Years 2000, 2003, and 2005

Dollars in thousands

	Budget request		
Energy activity area	**Fiscal year 2000**	**Fiscal year 2003**	**Fiscal year 2005**
Energy supply	$1,027,280	$1,818,261	$1,754,579
Energy's impact on the environment and health	1,398,931	1,781,433	2,400,712
Low-income energy consumer assistance	1,400,000	1,700,000	2,001,000
Basic energy science	1,086,959	1,189,225	1,267,870
Energy delivery infrastructure	106,401	169,252	203,353
Energy conservation	579,668	534,248	514,764
Energy assurance and physical security	164,000	201,029	187,700
Energy market competition and education	100,444	110,211	89,700
Total	**$5,863,683**	**$7,503,659**	**$8,419,678**

Source: GAO analysis of budget request information.

Observations

The nation's energy problems are not new. In the 1970s, we issued a series of reports to Congress on the need for both a focal point for dealing with energy problems and a coherent set of energy policies that would stand the tests of the future. While the United States does have, and has had, a series of energy-related programs and tax policies, calls for a "national energy policy" persist. Currently, hundreds of energy-related programs funded by the federal government, energy-related income tax preferences, and federal regulatory requirements that impact energy encompass the federal government's role in energy policy. At the federal level, development and implementation of our national energy policy is a shared responsibility of the executive and legislative branches of government. Any progress toward understanding the role that the federal government plays in energy policy and improving upon it must start with a comprehensive inventory of these

federal energy-related programs, tax policies, and regulatory activity. The NEP report, as other national energy policies have in the past, offers such a start toward the development of this inventory. Furthermore, although we are not making recommendations in this report, we have noted a lack of information on the results of federal energy-related efforts. DOE's Office of National Energy Policy has an opportunity to serve as a key focal point in improving upon the measurement of results made in federal energy-related efforts. Establishing clear and measurable goals and having the ability to track, measure, and transparently report on results achieved toward those goals will give policy makers the information they need to provide continually improving direction to the federal government's energy-related efforts.

Agency Comments and Our Evaluation

We provided DOE with a draft of this report for review and comment and asked DOE to coordinate any formal written comments from the other federal agencies included in this report. In addition, we provided a draft of this report to the other federal agencies in order to obtain comments on specific information about particular agencies' energy-related activities. In summary, DOE responded in its written comments that it did not believe our report accurately reflected the goals or intent of the NEP, its implementation, or the Administration's ongoing energy security efforts. Overall, we believe DOE's comments reflect a basic misunderstanding about the report's objectives and the approaches we used to address these objectives. Specifically, with respect to our first objective (an inventory of major federal energy programs and their cost) DOE commented that our presentation of estimated budget authority for programs and outlay equivalent estimates for tax preferences represented a quantitative approach to evaluating the NEP report that is not consistent with its purpose. However, our first objective and the resulting inventory of major federal energy programs laid out in our report does not in any way reflect an evaluation of the NEP report. We prepared this inventory independent of the NEP report and did not intend to suggest that the NEP report was intended to reflect an inventory and accounting of resources comparable to the one we prepared.

Our second and third objectives--dealing with the results of NEP report recommendation implementation and changes in resources since the NEP report's issuance—do have obvious connections to the NEP report. Here too, however, we believe DOE's comments confuse the issue by suggesting that our report is somehow an evaluation of the NEP report rather than simply a presentation of observations on actions taken and reported results

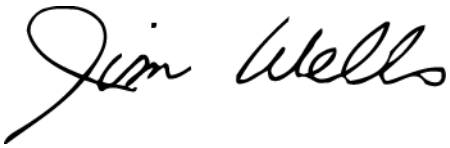
achieved since the report's issuance. In this connection, DOE defends the NEP report "as an overall blueprint" and that it "is not sufficient to look at the President's energy policies through specific NEP recommendations alone." We agree and note that our report suggests nothing to the contrary. However, our report does focus on the reported results achieved in implementing these important NEP recommendations that, as the NEP report states, "taken together, offer the thorough and responsible energy plan our nation has long needed." Moreover, DOE implies that when we point out that many of the NEP recommendations are open-ended in nature, we were being critical of the recommendations. This is not our intent. We were simply stating as a matter of fact that the open-ended, nonspecific nature of many of the NEP recommendations complicated our reporting on recommendation implementation status. With respect to NEP report recommendation implementation, DOE further commented that DOE's own NEP status report was not intended to be comprehensive and that supplementary material could be found in unidentified "budget documents and other means." We recognize that status information may be available from a variety of sources, and we explored those sources in performing our analysis. However, in reviewing the status of efforts to implement the recommendations, we believe it was appropriate to focus on DOE's most recent report on the status of these recommendations. In our view, it does not seem unreasonable to expect that Congress and the American people could find relatively complete information on NEP implementation status in a direct format through one centralized source, especially if that source is entitled NEP Status Report.

DOE and other federal agencies provided numerous technical clarifications, observations, and editorial comments, and we have made changes to this report as appropriate. DOE's written comments are reproduced in appendix VII.

As agreed with your offices, unless you publicly announce the contents of this report, we plan no further distribution of it until 30 days from the date of this letter. At that time, we will send copies to the Secretary of Energy and other interested parties. We will make copies available to others upon request. In addition, the report will be available at no charge at GAO's Web site at http:www.gao.gov.

Questions about this report should be directed to me at (202) 512-3841. Key contributors to this report are James Cooksey, Nancy Crothers, Doreen Feldman, Mark Gaffigan, Michael Gilbert, Erica Haley, Elisabeth Helmer,

Chir Huang, Arthur James, Alan Kasdan, Frank Rusco, John Scott, Karla Springer, Anne Stevens, Jena Whitley, and Monica Wolford.



Jim Wells
Director, Natural Resources
and Environment

Objectives, Scope, and Methodology

We were asked to (1) identify the federal government's major energy-related efforts, (2) review the status of efforts to implement the May 2001 National Energy Policy (NEP) report recommendations, and (3) determine the extent to which resources associated with federal energy-related efforts has changed since the release of the NEP report.

To identify the federal government's major energy-related efforts, we reviewed the federal agencies that have the most responsibility for implementing the recommendations of the NEP report—the Departments of Energy (DOE), the Interior (DOI), Commerce, Transportation (DOT), State, and Agriculture (USDA) and the Environmental Protection Agency (EPA). We asked these key agencies, and other agencies as time allowed, to identify their energy-related work, and we developed an inventory of the energy-related programs that we identified. Other agencies we included were the Commodity Futures Trading Commission, Department of Justice (DOJ), Federal Energy Regulatory Commission, Federal Trade Commission, Department of Health and Human Services, Nuclear Regulatory Commission, National Science Foundation (NSF), Securities and Exchange Commission, U.S. Army Corps of Engineers, U.S. Trade and Development Agency (USTDA), and U.S. Agency for International Development (USAID). In addition to identifying energy-related programs, we relied on the list of energy-related tax expenditures published in the President's annual budget that provided income tax preferences.[1] We also obtained data on energy-related federal collections, including revenue from royalties and user fees from the agencies. In addition, we also attempted to identify collections from energy-related excise taxes. Although the Department of the Treasury does not provide a specific listing of energy-related excise taxes, we used information on the collection of excise taxes that was published by Treasury's Internal Revenue Service to identify these taxes. While this information is updated quarterly, the last full fiscal year available is 2003. We collected and analyzed agency-reported program and tax preference descriptions and budget request and funding information at these key agencies. Based on our review of the NEP report and the program and tax preference descriptions and our discussions with

[1]Tax preferences are federal income tax provisions that grant preferential tax treatment to encourage certain behaviors or aid taxpayers in certain circumstances. The revenue losses resulting from these provisions—called tax expenditures—may, in effect, be viewed as spending channeled through the tax system. The Congressional Budget and Impoundment Control Act of 1974 requires that a tax expenditure list be included in the budget. The Department of the Treasury's list displays tax expenditures under the budget functional categories used to classify outlays.

applicable program officials, we identified eight categories of energy-related activities and grouped the programs and tax preferences by these eight areas: (1) energy supply, (2) energy's impact on the environment and health, (3) low-income energy consumer assistance, (4) basic energy science research, (5) energy delivery infrastructure, (6) energy conservation, (7) energy assurance and physical security, and (8) energy market competition and education. Because it was often difficult to quantify the resources associated with energy-related aspects of various programs, where possible, we relied on agency estimates of budget authority[2] for fiscal year 2003—the most recent year for which data were readily available for most of the programs during our review. Since we began our review in late 2003, fiscal year 2003 was the most complete year for which data were readily available.

It was often difficult to quantify the resources associated with energy-related aspects of various programs because agencies could not provide specific estimates. We used the following method to arrive at an estimate of the magnitude of federal energy resources for fiscal year 2003—the most recently completed fiscal year readily available—and for fiscal year 2000.[3] For many programs, we obtained budget request, budget authority, outlay, and obligation information for programs from agency officials and documents to the extent that these numbers were available. To ensure the accuracy of the financial information provided by the agencies, we attempted to obtain documentation and agency verification, but we could not independently verify the estimates for energy-related programs or activities. In obtaining information on resources associated with most programs, we were able to obtain actual budget authority or estimated budget authority from agency officials. However, some programs do not have readily available estimates of budget authority available for their energy-related activities because they are part of a larger appropriation that addresses both energy-related and nonenergy-related activities. For such programs, agencies had to estimate the portion of budget authority associated with the energy-related program activity. In these cases, we asked knowledgeable agency officials to estimate the amount of resources dedicated to the energy-related activities. In some cases, agencies provided estimates of energy-related outlays or obligations. For the following

[2]Budget authority is authority provided by law to enter into financial obligations that will result in immediate or future outlays involving federal government funds.

[3]Resource information provided throughout this report was not adjusted for inflation.

agencies, in consultation with agency officials, we used these agency outlay or obligation estimates as estimates for budget authority: State, U.S. Army Corps of Engineers, NSF, USAID, USTDA, and some USDA, DOT, and EPA programs. On the basis of our examination of the supporting information, we believe that the estimates of budget authority for federal energy-related programs gathered are sufficiently reliable for the purposes of this report, which is to provide the best available estimate of federal resources for energy-related programs.

In addition to obtaining budget authority estimates for energy-related programs, we also obtained outlay equivalent estimates for energy-related income tax preferences—federal income tax provisions that provide preferential tax treatment related to energy supply and use. Revenue losses resulting from these tax preferences—also called tax expenditures—may, in effect, be viewed as spending channeled through the tax system. The Congressional Budget and Impoundment Act of 1974 requires that the budget include a list of tax expenditures.[4] Each year, revenue loss estimates for tax expenditures are prepared by Treasury and the Joint Committee on Taxation. Treasury also produces outlay equivalent estimates—the amount of budget outlays that would be required to provide the taxpayer with the same after-tax income as would be received through the tax expenditure. We used the outlay equivalent measure in quantifying the energy-related tax preferences because it allows the tax preference programs to be compared with federal outlay programs on a more even footing. While the aggregate value for energy-related tax preferences is useful for gauging their general magnitude, summing does not take into account interactions between individual provisions. In addition, tax preferences below $5 million annually are not reported on Treasury's list and, therefore, are not included in this report.

We focused on federal resources associated with key federal agencies that have direct responsibility for issues addressed in and for implementing the recommendations of the NEP report. We attempted to address other agencies as time allowed, but the inventory did not evaluate the efforts of every federal agency. Principally, in this review, we did not attempt to inventory DOD spending and activities.[5] However, DOD is a large user of

[4]Tax expenditures are reductions in tax liability that result from preferential provisions in the Internal Revenue Code, such as exemptions and exclusions from taxation, deductions, credits, deferrals, and preferential tax rates.

[5]We did review civilian programs within the U.S. Army Corps of Engineers.

energy and engages in a wide range of activities that may impact the energy sector. For example, DOD installations have about 2,600 electric, water, wastewater, and natural gas utility systems valued at about $50 billion. These systems include the equipment, fixtures, and structures used in the distribution of electric power and natural gas; the treatment and distribution of water; and the collection and treatment of wastewater. Because we did not evaluate DOD spending, or every federal agency that may have energy-related activities, this report reflects a significant, but minimum amount of resources associated with federal programs that may play a role in energy.

In addition, although the federal government has a major impact on the energy industry through regulatory actions, this review did not attempt to inventory the federal regulatory actions that affect energy, but rather focused on federal energy-related programs and tax policies. Federal regulatory actions that impact energy have a cost to the industry but are offset by benefits accruing to the population at large or targeted groups. For example, in its report entitled *Progress in Regulatory Reform: 2004 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities 2004*, the Office of Management and Budget (OMB) estimated the annual costs of all major federal rules implemented between fiscal years 1994 and 2003 at about $35 billion to $40 billion and annual benefits of these rules at between $63 billion to $169 billion. A large fraction of these costs and benefits may be related to energy in that (1) they have come about as the result of regulations to reduce public exposure to fine particulate matter, such as some emissions from burning fuels, or (2) they pertain to regulations promulgated by DOE, in part to address energy efficiency and renewable energy. In this report, we have primarily focused on direct federal programs and tax policies, rather than trying to assess the total economic impact of the federal government on the energy sector. However, the magnitude of the OMB estimates of the costs and benefits of regulation indicates that the federal impact on energy issues may be greater than the sum of resources associated with direct programs and tax preferences.

To review the status of federal efforts to implement the recommendations contained in the May 2001 NEP report, we reviewed publicly reported status information on the implementation of the NEP recommendations, focusing on DOE's most recent January 2005 report on the status of the

106[6] NEP recommendations. We discussed efforts to monitor and report on the status of these recommendations with DOE's Office of National Energy Policy and other federal agencies involved in energy-related efforts. We also discussed the energy-related programs with the appropriate agency personnel and, when possible, determined whether and how the programs were related to the NEP report recommendations.

To determine the extent to which resources associated with federal energy-related efforts have changed since the release of the NEP report, we compared fiscal year 2000 (shortly before the NEP report) federal programs and budget authority estimates with fiscal year 2003 programs and budget authority estimates. However, we were not able to identify estimates of budget authority for every program for both fiscal years 2000 and 2003. Thus, we compared only those programs for which we could identify an estimate for both years. As a result, three FERC programs that were included in the inventory of fiscal year 2003 programs and resources were not included in the fiscal years 2000 to 2003 comparison. In addition, we compared outlay equivalents for energy-related tax preferences between fiscal years 2000 and 2003. We were able to obtain outlay equivalent estimates for all 11 energy-related tax preferences for both years as well as projections for fiscal year 2005. Finally, we compared fiscal years 2000, 2003, and 2005 Presidential budget requests for those major energy-related programs that have specific budget requests. However, many of the smaller programs we identified in our inventory do not have specific budget requests. Thus, those programs are not included in the comparison of energy-related budget requests and cannot be compared with the estimates of budget authority provided for all energy-related programs we identified in our inventory.

Finally, due to the constraints of developing an inventory of federal energy-related efforts and associated resources within the review time frame, we did not assess the changes within the objectives of the individual program activities within our inventory. Instead, we compared the resources and budget requests associated with federal energy-related efforts in the eight major activity areas. We conducted our review between December 2003

[6]The May 2001 NEP report provided 106 recommendations, including 3 duplicate recommendations, resulting in 103 distinct recommendations. DOE's January 2005 NEP status report also provided information on 106 recommendations. For consistency, this report provides information and analysis on the 106 recommendations as reported in DOE's NEP status report.

and May 2005 in accordance with generally accepted government auditing standards.

Inventory of Federal Energy Programs, by Activity, Agency, and Energy Type

Table 14: Inventory of Federal Energy Programs, by Activity and Agency Program, Including Fiscal Year 2003 Estimated Budget Authority

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
Energy supply		
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs I	$0
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs II	1,656,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs III	1,373,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs IV	884,000
Department of Agriculture	Farm Service Agency: Commodity Credit Corporation's Bioenergy Program	150,000,000
Department of Agriculture	Forest Service Research and Development: Bioenergy, Energy Efficiency, and Conservation Research	2,400,000
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses: 3	1,000,000
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses: 2	1,000,000
Department of Agriculture	Rural Development Business Programs: Renewable Energy and Energy Efficiency	23,000,000
Department of Energy	Clean Coal Technology	(47,000,000)
Department of Energy	Energy Supply: Biomass and biorefinery systems research and development (R&D)	84,898,000
Department of Energy	Energy Supply: Departmental energy management program	1,445,000
Department of Energy	Energy Supply: Facilities and Infrastructure	5,297,000
Department of Energy	Energy Supply: Geothermal technology	28,390,000
Department of Energy	Energy Supply: Hydrogen technology	38,113,000
Department of Energy	Energy Supply: Hydropower	5,016,000
Department of Energy	Energy Supply: Intergovernmental activities	14,449,000
Department of Energy	Energy Supply: Program direction	12,615,000
Department of Energy	Energy Supply: Renewable Program Support	0
Department of Energy	Energy Supply: Solar energy	82,330,000
Department of Energy	Energy Supply: Wind energy	41,640,000
Department of Energy	Energy Supply: Zero energy buildings	7,572,000
Department of Energy	Fossil Energy R&D: National Academy of Sciences Program Review	497,000
Department of Energy	Fossil Energy R&D: Plant and Capital Projects	6,954,000
Department of Energy	Fossil Energy R&D: Advanced metallurgical research	5,961,000
Department of Energy	Fossil Energy R&D: Black Liquor	0
Department of Energy	Fossil Energy R&D: Coal and other power systems	410,340,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
Department of Energy	Fossil Energy R&D: Cooperative research and development	8,186,000
Department of Energy	Fossil Energy R&D: Energy efficiency science initiative	497,000
Department of Energy	Fossil Energy R&D: Import/export authorization	2,981,000
Department of Energy	Fossil Energy R&D: Natural gas technologies	47,013,000
Department of Energy	Fossil Energy R&D: Petroleum Oil technology	42,025,000
Department of Energy	Fossil Energy R&D: Program direction and management support	87,229,000
Department of Energy	Naval Petroleum and Oil Shale Reserves	17,715,000
Department of Energy	Nuclear Energy R&D	114,441,000
Department of Energy	Science: Fusion energy sciences program	240,695,000
Department of the Interior	Bureau of Indian Affairs: Operation of Indian Programs	3,300,000
Department of the Interior	Bureau of Land Management (BLM): Coal Management	9,526,000
Department of the Interior	BLM: Oil and Gas Management	86,100,000
Department of the Interior	BLM: Workforce/Organizational Support	23,000,000
Department of the Interior	Minerals Management Service (MMS): Indian Trust Responsibility	22,000,000
Department of the Interior	MMS: Royalty and Offshore Minerals Management	239,430,000
Department of the Interior	Office of Surface Mining (OSM): Abandoned Mine Reclamation Fund	2,153,000
Department of the Interior	OSM: Regulation and Technology	104,209,000
Department of the Interior	U.S. Geological Survey: Energy Resource Program	23,705,000
Environmental Protection Agency	Office of Air and Radiation (OAR): New Source Review	1,200,000
National Science Foundation	Biological Sciences: Hydrogen and Fusion: Basic Research	920,000
National Science Foundation	Biological Sciences: Renewable Energy: Basic Research	87,000
National Science Foundation	Education and Human Resources: Hydrogen and Fusion/Basic Research	0
National Science Foundation	Engineering Directorate: Hydrogen and Fusion/Basic Research	200,000
National Science Foundation	Engineering Directorate: Hydrogen and Fusion/Applied Research	790,000
National Science Foundation	Engineering Directorate: Other Energy/Basic Research	930,000
National Science Foundation	Engineering Directorate: Renewable Energy/Applied Research	1,310,000
National Science Foundation	Mathematical and Physical Sciences: Renewable Energy/Basic Research	30,540,000
National Science Foundation	Mathematical and Physical Sciences: Hydrogen and Fusion/Basic Research	7,330,000
National Science Foundation	Office of International Science and Engineering: Hydrogen and Fusion/Basic Research	70,000
National Science Foundation	Office of International Science and Engineering: Renewable Energy/Basic Research	2,000,000
National Science Foundation	Social, Behavioral, Economic Sciences: Renewable Energy/Basic Research	60,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
Nuclear Regulatory Commission	International Nuclear Safety Support	8,026,645
Nuclear Regulatory Commission	Nuclear Materials Safety: Fuel Facilities Licensing and Inspection	21,420,704
Nuclear Regulatory Commission	Nuclear Reactor Safety: New Reactor Licensing	26,464,865
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor Inspection and Performance Assessment	147,123,812
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor License Renewal	22,870,187
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor Licensing	95,316,734
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor Safety Research	70,870,929
Subtotal		**$2,391,565,876**
Energy's impact on the environment and health		
U.S. Agency for International Development	Energy Programs, Agency-wide	$91,900,000
Department of Agriculture	Forest Service R&D: Global Change Research/Climate Change Science Program/Climate Change Technology Program	18,778,000
Department of Commerce	National Oceanic and Atmospheric Administration (NOAA): National Marine Fisheries Habitat	103,000
Department of Commerce	NOAA: National Marine Fisheries Service Consultations	2,539,000
Department of Commerce	NOAA: National Weather Service	5,962,000
Department of Commerce	NOAA: Ocean and Coastal Resource Management	341,000
Department of Commerce	NOAA: Office of Oceanic and Atmospheric Research	1,987,000
Department of Commerce	NOAA: Office of Response and Restoration	5,700,000
Department of Energy	Civilian Radioactive Waste	457,010,000
Department of Energy	Fossil Energy R&D: Environmental restoration	9,652,000
Department of Energy	Non-Defense Environmental Services	161,852,000
Department of Energy	Non-Defense Site Acceleration Completion	156,129,000
Department of Energy	Science: Biological and environmental research	494,360,000
Department of Energy	Uranium Enrichment Decontamination and Decommissioning Fund	320,563,000
Department of the Interior	Fish and Wildlife Service: Resource Management	13,148,000
Department of the Interior	MMS: Oil Spill Research	6,000,000
Department of State	State: Climate Change and Sustainable Development	1,440,000
Department of Transportation	Office of the Secretary of Transportation: National Climate Change Technology	650,000
Environmental Protection Agency	OAR: Boutique Fuels	400,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
Environmental Protection Agency	OAR: Climate Change Programs/Technological Advances (Clean Car Program)	21,700,000
Environmental Protection Agency	OAR: Multi-pollutant Legislation, Clear Skies Legislation	2,100,000
National Science Foundation	Office of International Science and Engineering: Energy Efficiency/Basic Research	41,000
National Science Foundation	Social, Behavioral, Economic Sciences: Energy Efficiency/Basic Research	60,000
National Science Foundation	Social, Behavioral, Economic Sciences: Other Energy/Basic Research	10,000
Nuclear Regulatory Commission	Nuclear Waste Safety: Environmental Protection and Low Level Waste Management	4,563,957
Nuclear Regulatory Commission	Nuclear Waste Safety: High Level Waste Regulation	30,457,514
Nuclear Regulatory Commission	Nuclear Waste Safety: Regulation of Decommissioning	21,628,121
Nuclear Regulatory Commission	Nuclear Waste Safety: Spent Fuel Storage and Transportation Licensing and Inspection	27,021,284
U.S. Army Corps of Engineers	Regulatory Program	9,696,726
Subtotal		**$1,865,792,602**
Low-income energy consumer assistance		
Department of Energy	Energy Conservation: Weatherization	$223,537,000
Department of Health and Human Services	Low-Income Home Energy Assistance Program	1,988,300,000
Subtotal		**$2,211,837,000**
Basic energy science research		
Department of Energy	Science: Advanced scientific computing research	$163,185,000
Department of Energy	Science: Basic energy sciences	1,001,941,000
Subtotal		**$1,165,126,000**
Energy delivery infrastructure		
U.S. Agency for International Development	Energy Activities in Afghanistan	$3,100,000
U.S. Agency for International Development	Energy Activities in Iraq	558,000,000
Department of Energy	Electric Transmission and Distribution	88,384,000
Department of the Interior	BLM: Lands and Realty Management	27,200,000
Department of the Interior	BLM: Oregon and California Grant Lands	2,300,000
Department of the Interior	BLM: Service Charges, Deposits, and Forfeitures	7,900,000
Department of Transportation	Pipeline and Hazardous Materials Safety Administration: Natural Gas Pipeline Safety	63,261,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
Federal Energy Regulatory Commission (FERC)	FERC: Energy Infrastructure	119,241,000
National Science Foundation	Education and Human Resources: Superconductivity/Basic Research	0
National Science Foundation	Engineering Directorate: Superconductivity/Applied Research	110,000
National Science Foundation	Engineering Directorate: Superconductivity/Basic Research	340,000
National Science Foundation	Mathematical and Physical Sciences: Superconductivity/Basic Research	12,130,000
National Science Foundation	Office of International Science and Engineering: Superconductivity/Basic Research	450,000
Subtotal		**$882,416,000**
Energy conservation		
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses: 1	$793,000
Department of Energy	Energy Conservation: Biomass and biorefinery systems R&D	24,050,000
Department of Energy	Energy Conservation: Building technologies	58,327,000
Department of Energy	Energy Conservation: Distributed energy resources	60,054,000
Department of Energy	Energy Conservation: Energy efficiency science initiative	2,440,000
Department of Energy	Energy Conservation: Federal energy management program	19,299,000
Department of Energy	Energy Conservation: Fuel cell technologies	53,906,000
Department of Energy	Energy Conservation: Industrial technologies	96,824,000
Department of Energy	Energy Conservation: Intergovernmental Activities	90,618,000
Department of Energy	Energy Conservation: Program management	76,950,000
Department of Energy	Energy Conservation: Vehicle technologies	174,171,000
Department of Transportation	Federal Highway Administration (FHWA): Intelligent Traffic Systems	7,541,000
Department of Transportation	FHWA: Office of Operations Energy Related Obligations	4,903,000
Department of Transportation	Federal Transit Administration: Fuel Cell-Powered Transit Buses	20,896,397
Department of Transportation	National Highway Traffic Safety Administration: Corporate Average Fuel Economy	1,000,000
Environmental Protection Agency	OAR: Clean School Bus	5,000,000
Environmental Protection Agency	OAR: Climate Change Programs/Industry	26,800,000
Environmental Protection Agency	OAR: Climate Change Programs/Smart Way Transport Partnership Initiative	4,400,000
Environmental Protection Agency	OAR: Climate Change/Buildings	41,600,000
Environmental Protection Agency	OAR: Locomotive Idling	200,000
Environmental Protection Agency	OAR: Truck Idling	200,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
National Science Foundation	Computer and Information Science and Engineering: Energy Efficiency/Basic Research	9,560,000
National Science Foundation	Education and Human Resources: Renewable Energy/Basic Research	33,000
National Science Foundation	Education and Human Resources: Energy Efficiency/Basic Research	400,000
National Science Foundation	Engineering Directorate: Energy Efficiency/Applied Research	830,000
National Science Foundation	Engineering Directorate: Energy Efficiency/Basic Research	6,970,000
National Science Foundation	Mathematical and Physical Sciences: Energy Efficiency/Basic Research	170,000
Subtotal		**$787,935,397**
Energy assurance and physical security		
Department of Energy	Energy Security and Assurance Program	$25,990,000
Department of Energy	Northeast Home Heating Oil Reserve	5,961,000
Department of Energy	Strategic Petroleum Reserve	171,732,000
Nuclear Regulatory Commission	Nuclear Materials Safety: Homeland Security	10,388,139
Nuclear Regulatory Commission	Nuclear Reactor Safety: Homeland Security	28,884,439
Nuclear Regulatory Commission	Nuclear Waste Safety: Homeland Security	5,043,223
Subtotal		**$247,998,801**
Energy market competition and education		
Commodity Futures Trading Commission	Energy Related Activities	Estimate not available
Department of Agriculture	Agricultural Marketing Service: Federal- State Marketing Improvement Programs	$0
Department of Agriculture	National Agricultural Statistics Service: Price Paid by Farmers/Fuel	140,000
Department of Commerce	International Trade Administration: Trade Development/Office of Energy	1,101,713
Department of Commerce	National Institute of Standards and Technology: Energy use and conservation programs	30,100,000
Department of Energy	Energy Information Administration	80,087,000
Department of Justice	Energy Related Activities	Estimate not available
Department of State	State: Economic and Business Affairs: Energy	865,181
Federal Energy Regulatory Commission	FERC: Competitive Markets	36,824,000
Federal Energy Regulatory Commission	FERC: Market Oversight	35,935,000
Federal Trade Commission	Energy Related Activities	Estimate not available
Securities and Exchange Commission	Energy Related Activities	Estimate not available

(Continued From Previous Page)

Dollars in actual amounts

Energy activity/Agency	Program	Estimated budget authority
U.S. Trade and Development Agency	Energy Related Activities	14,508,784
U.S. Agency for International Development	Energy Programs: Agency-wide	39,300,000
Subtotal		**$238,861,678**
Total		**$9,791,533,354**

Source: GAO analysis of agency estimates.

Table 15: Inventory of Agencies and Programs Identified with Energy Activity, Including Fiscal Year 2003 Estimated Budget Authority

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
U.S Agency for International Development		
Energy Activities in Afghanistan	Energy delivery infrastructure	$3,100,000
Energy Activities in Iraq	Energy delivery infrastructure	558,000,000
Energy Programs, Agency-wide	Energy's impact on the environment and health	91,900,000
Energy Programs, Agency-wide	Energy market competition and education	39,300,000
Subtotal		**$692,300,000**
Commodity Futures Trading Commission		
Energy Related Activities	Energy market competition and education	Estimate not available
Subtotal		**Estimate not available**
Department of Agriculture		
Agricultural Marketing Service: Federal-State Marketing Improvement Programs	Energy market competition and education	$0
Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs I	Energy supply	0
Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs II	Energy supply	1,656,000
Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs III	Energy supply	1,373,000
Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs IV	Energy supply	884,000
Farm Service Agency: Commodity Credit Corporation's Bioenergy Program	Energy supply	150,000,000

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
Forest Service Research and Development (R&D): Global Change Research/Climate Change Science Program/Climate Change Technology Program	Energy's impact on the environment and health	18,778,000
Forest Service R&D: Bioenergy, Energy Efficiency, and Conservation Research	Energy supply	2,400,000
National Agricultural Statistics Service: Price Paid by Farmers/Fuel	Energy market competition and education	140,000
Office of Chief Economist, Office of Energy Policy and New Uses: 1	Energy conservation	793,000
Office of Chief Economist, Office of Energy Policy and New Uses: 3	Energy supply	1,000,000
Office of Chief Economist, Office of Energy Policy and New Uses: 2	Energy supply	1,000,000
Rural Development Business Programs: Renewable Energy and Energy Efficiency	Energy supply	23,000,000
Subtotal		**$201,024,000**
Department of Commerce		
International Trade Administration: Trade Development/Office of Energy	Energy market competition and education	$1,101,713
National Institute of Standards and Technology: Energy use and conservation programs	Energy market competition and education	30,100,000
National Oceanic and Atmospheric Administration (NOAA): National Marine Fisheries Habitat	Energy's impact on the environment and health	103,000
NOAA: National Marine Fisheries Service Consultations	Energy's impact on the environment and health	2,539,000
NOAA: National Weather Service	Energy's impact on the environment and health	5,962,000
NOAA: Ocean and Coastal Resource Management	Energy's impact on the environment and health	341,000
NOAA: Office of Oceanic and Atmospheric Research	Energy's impact on the environment and health	1,987,000
NOAA: Office of Response and Restoration	Energy's impact on the environment and health	5,700,000
Subtotal		**$47,833,713**
Department of Energy		
Civilian Radioactive Waste	Energy's impact on the environment and health	$457,010,000
Clean Coal Technology	Energy supply	(47,000,000)
Electric Transmission and Distribution	Energy delivery infrastructure	88,384,000
Energy Conservation: Biomass and biorefinery systems R&D	Energy conservation	24,050,000
Energy Conservation: Building technologies	Energy conservation	58,327,000
Energy Conservation: Distributed energy resources	Energy conservation	60,054,000
Energy Conservation: Energy efficiency science initiative	Energy conservation	2,440,000

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
Energy Conservation: Federal energy management program	Energy conservation	19,299,000
Energy Conservation: Fuel cell technologies	Energy conservation	53,906,000
Energy Conservation: Industrial technologies	Energy conservation	96,824,000
Energy Conservation: Intergovernmental Activities	Energy conservation	90,618,000
Energy Conservation: Program management	Energy conservation	76,950,000
Energy Conservation: Vehicle technologies	Energy conservation	174,171,000
Energy Conservation: Weatherization	Low-income energy consumer assistance	223,537,000
Energy Information Administration	Energy market competition and education	80,087,000
Energy Security and Assurance Program	Energy assurance and physical security	25,990,000
Energy Supply: Biomass and biorefinery systems R&D	Energy supply	84,898,000
Energy Supply: Departmental energy management program	Energy supply	1,445,000
Energy Supply: Facilities and Infrastructure	Energy supply	5,297,000
Energy Supply: Geothermal technology	Energy supply	28,390,000
Energy Supply: Hydrogen technology	Energy supply	38,113,000
Energy Supply: Hydropower	Energy supply	5,016,000
Energy Supply: Intergovernmental activities	Energy supply	14,449,000
Energy Supply: Program direction	Energy supply	12,615,000
Energy Supply: Renewable Program Support	Energy supply	0
Energy Supply: Solar energy	Energy supply	82,330,000
Energy Supply: Wind energy	Energy supply	41,640,000
Energy Supply: Zero energy buildings	Energy supply	7,572,000
Fossil Energy R&D: National Academy of Sciences Program Review	Energy supply	497,000
Fossil Energy R&D: Plant and Capital Projects	Energy supply	6,954,000
Fossil Energy R&D: Advanced metallurgical research	Energy supply	5,961,000
Fossil Energy R&D: Black Liquor	Energy supply	0
Fossil Energy R&D: Coal and other power systems	Energy supply	410,340,000
Fossil Energy R&D: Cooperative research and development	Energy supply	8,186,000
Fossil Energy R&D: Energy efficiency science initiative	Energy supply	497,000
Fossil Energy R&D: Environmental restoration	Energy's impact on the environment and health	9,652,000
Fossil Energy R&D: Import/export authorization	Energy supply	2,981,000
Fossil Energy R&D: Natural gas technologies	Energy supply	47,013,000
Fossil Energy R&D: Petroleum Oil technology	Energy supply	42,025,000

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
Fossil Energy R&D: Program direction and management support	Energy supply	87,229,000
Naval Petroleum and Oil Shale Reserves	Energy supply	17,715,000
Non-Defense Environmental Services	Energy's impact on the environment and health	161,852,000
Non-Defense Site Acceleration Completion	Energy's impact on the environment and health	156,129,000
Northeast Home Heating Oil Reserve	Energy assurance and physical security	5,961,000
Nuclear Energy Research and Development	Energy supply	$114,441,000
Science: Advanced scientific computing research	Basic energy science research	163,185,000
Science: Basic energy sciences	Basic energy science research	1,001,941,000
Science: Biological and environmental research	Energy's impact on the environment and health	494,360,000
Science: Fusion energy sciences program	Energy supply	240,695,000
Strategic Petroleum Reserve	Energy assurance and physical security	171,732,000
Uranium Enrichment Decontamination and Decommissioning Fund	Energy's impact on the environment and health	320,563,000
Subtotal		**$5,276,321,000**
Department of Health and Human Services		
Low-Income Home Energy Assistance Program	Low-income energy consumer assistance	$1,988,300,000
Subtotal		**$1,988,300,000**
Department of the Interior		
Bureau of Indian Affairs: Operation of Indian Programs	Energy supply	$3,300,000
Bureau of Land Management (BLM): Coal Management	Energy supply	9,526,000
BLM: Lands and Realty Management	Energy delivery infrastructure	27,200,000
BLM: Oil and Gas Management	Energy supply	86,100,000
BLM: Oregon and California Grant Lands	Energy delivery infrastructure	2,300,000
BLM: Service Charges, Deposits, and Forfeitures	Energy delivery infrastructure	7,900,000
BLM: Workforce/Organizational Support	Energy supply	23,000,000
Fish and Wildlife Service: Resource Management	Energy's impact on the environment and health	13,148,000
Minerals Management Service (MMS): Indian Trust Responsibility	Energy supply	22,000,000
MMS: Oil Spill Research	Energy's impact on the environment and health	6,000,000
MMS: Royalty and Offshore Minerals Management	Energy supply	239,430,000
Office of Surface Mining (OSM): Abandoned Mine Reclamation Fund	Energy supply	2,153,000
OSM: Regulation and Technology	Energy supply	104,209,000
U.S. Geological Survey: Energy Resource Program	Energy supply	23,705,000
Subtotal		**$569,971,000**

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
Department of Justice		
Energy-Related Activities	Energy market competition and education	Estimate not available
Subtotal		**Estimate not available**
Department of State		
State: Climate Change and Sustainable Development	Energy's impact on the environment and health	$1,440,000
State: Economic and Business Affairs: Energy	Energy market competition and education	865,181
Subtotal		**$2,305,181**
Department of Transportation		
Federal Highway Administration (FHWA): Intelligent Traffic Systems	Energy conservation	$7,541,000
FHWA: Office of Operations Energy Related Obligations	Energy conservation	4,903,000
Federal Transit Administration: Fuel Cell-Powered Transit Buses	Energy conservation	20,896,397
National Highway Traffic Safety Administration: Corporate Average Fuel Economy	Energy conservation	1,000,000
Office of the Secretary of Transportation: National Climate Change Technology	Energy's impact on the environment and health	650,000
Pipeline and Hazardous Materials Safety Administration: Natural Gas Pipeline Safety	Energy delivery infrastructure	63,261,000
Subtotal		**$98,251,397**
Environmental Protection Agency		
Office of Air and Radiation (OAR): Boutique Fuels	Energy's impact on the environment and health	$400,000
OAR: Clean School Bus	Energy conservation	5,000,000
OAR: Climate Change Programs/Industry	Energy conservation	26,800,000
OAR: Climate Change Programs/Smart Way Transport Partnership Initiative	Energy conservation	4,400,000
OAR: Climate Change Programs/Technological Advances (Clean Car Program)	Energy's impact on the environment and health	21,700,000
OAR: Climate Change/Buildings	Energy conservation	41,600,000
OAR: Locomotive Idling	Energy conservation	200,000
OAR: Multi-pollutant Legislation/Clear Skies Legislation	Energy's impact on the environment and health	2,100,000
OAR: New Source Review	Energy supply	1,200,000
OAR: Truck Idling	Energy conservation	200,000
Subtotal		**$103,600,000**
Federal Energy Regulatory Commission (FERC)		
FERC: Competitive Markets	Energy market competition and education	$36,824,000

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
FERC: Energy Infrastructure	Energy delivery infrastructure	119,241,000
FERC: Market Oversight	Energy market competition and education	35,935,000
Subtotal		**$192,000,000**
Federal Trade Commission		
Energy Related Activities	Energy market competition and education	Estimate not available
Subtotal		**Estimate not available**
National Science Foundation		
Biological Sciences: Hydrogen and Fusion: Basic Research	Energy supply	$920,000
Biological Sciences: Renewable Energy: Basic Research	Energy supply	87,000
Computer and Information Science and Engineering: Energy Efficiency/Basic Research	Energy conservation	9,560,000
Education and Human Resources: Hydrogen and Fusion/Basic Research	Energy supply	0
Education and Human Resources: Renewable Energy/Basic Research	Energy conservation	33,000
Education and Human Resources: Energy Efficiency/Basic Research	Energy conservation	400,000
Education and Human Resources: Superconductivity/Basic Research	Energy delivery infrastructure	0
Engineering Directorate: Energy Efficiency/Applied Research	Energy conservation	830,000
Engineering Directorate: Energy Efficiency/Basic Research	Energy conservation	6,970,000
Engineering Directorate: Hydrogen and Fusion/Basic Research	Energy supply	200,000
Engineering Directorate: Hydrogen and Fusion/Applied Research	Energy supply	790,000
Engineering Directorate: Other Energy/Basic Research	Energy supply	930,000
Engineering Directorate: Renewable Energy/Applied Research	Energy supply	1,310,000
Engineering Directorate: Superconductivity/Applied Research	Energy delivery infrastructure	110,000
Engineering Directorate: Superconductivity/Basic Research	Energy delivery infrastructure	340,000
Mathematical and Physical Sciences: Energy Efficiency/Basic Research	Energy conservation	170,000
Mathematical and Physical Sciences: Renewable Energy/Basic Research	Energy supply	30,540,000

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
Mathematical and Physical Sciences: Hydrogen and Fusion/Basic Research	Energy supply	7,330,000
Mathematical and Physical Sciences: Superconductivity/Basic Research	Energy delivery infrastructure	12,130,000
Office of International Science and Engineering: Hydrogen and Fusion/Basic Research	Energy supply	70,000
Office of International Science and Engineering: Renewable Energy/Basic Research	Energy supply	2,000,000
Office of International Science and Engineering: Superconductivity/Basic Research	Energy delivery infrastructure	450,000
Office of International Science and Engineering: Energy Efficiency/Basic Research	Energy's impact on the environment and health	41,000
Social, Behavioral, Economic Sciences: Renewable Energy/Basic Research	Energy supply	60,000
Social, Behavioral, Economic Sciences: Energy Efficiency/Basic Research	Energy's impact on the environment and health	60,000
Social, Behavioral, Economic Sciences: Other Energy/Basic Research	Energy's impact on the environment and health	10,000
Subtotal		**$75,341,000**
Nuclear Regulatory Commission		
International Nuclear Safety Support	Energy supply	$8,026,645
Nuclear Materials Safety: Fuel Facilities Licensing and Inspection	Energy supply	21,420,704
Nuclear Materials Safety: Homeland Security	Energy assurance and physical security	10,388,139
Nuclear Reactor Safety: Homeland Security	Energy assurance and physical security	28,884,439
Nuclear Reactor Safety: New Reactor Licensing	Energy supply	26,464,865
Nuclear Reactor Safety: Reactor Inspection and Performance Assessment	Energy supply	147,123,812
Nuclear Reactor Safety: Reactor License Renewal	Energy supply	22,870,187
Nuclear Reactor Safety: Reactor Licensing	Energy supply	95,316,734
Nuclear Reactor Safety: Reactor Safety Research	Energy supply	70,870,929
Nuclear Waste Safety: Environmental Protection and Low Level Waste Management	Energy's impact on the environment and health	4,563,957
Nuclear Waste Safety: High Level Waste Regulation	Energy's impact on the environment and health	30,457,514
Nuclear Waste Safety: Homeland Security	Energy assurance and physical security	5,043,223
Nuclear Waste Safety: Regulation of Decommissioning	Energy's impact on the environment and health	21,628,121
Nuclear Waste Safety: Spent Fuel Storage and Transportation Licensing and Inspection	Energy's impact on the environment and health	27,021,284
Subtotal		**$520,080,553**

(Continued From Previous Page)

Dollars in actual amounts

Agency/Program	Energy activity	Estimated budget authority
Securities and Exchange Commission		
Energy Related Activities	Energy market competition and education	Estimate not available
Subtotal		**Estimate not available**
U.S. Trade and Development Agency		
Energy Related Activities	Energy market competition and education	$14,508,784
Subtotal		**$14,508,784**
U.S. Army Corps of Engineers		
Regulatory Program	Energy's impact on the environment and health	$9,696,726
Subtotal		**$9,696,726**
Total		**$9,791,533,354**

Source: GAO analysis of agency estimates.

Table 16: Inventory of Federal Energy Supply Programs, by Major Energy Type, Including Fiscal Year 2003 Estimated Budget Authority

Dollars in actual amounts

Energy type/Agency	Program	Estimated budget authority
Fossil		
Department of Energy	Clean Coal Technology	$(47,000,000)
Department of Energy	Fossil Energy Research and Development (R&D): National Academy of Sciences Program Review	497,000
Department of Energy	Fossil Energy R&D: Plant and Capital Projects	6,954,000
Department of Energy	Fossil Energy R&D: Advanced metallurgical research	5,961,000
Department of Energy	Fossil Energy R&D: Black Liquor	0
Department of Energy	Fossil Energy R&D: Coal and other power systems	410,340,000
Department of Energy	Fossil Energy R&D: Cooperative research and development	8,186,000
Department of Energy	Fossil Energy R&D: Energy efficiency science initiative	497,000
Department of Energy	Fossil Energy R&D: Import/export authorization	2,981,000
Department of Energy	Fossil Energy R&D: Natural gas technologies	47,013,000
Department of Energy	Fossil Energy R&D: Petroleum Oil technology	42,025,000
Department of Energy	Fossil Energy R&D: Program direction and management support	87,229,000
Department of Energy	Naval Petroleum and Oil Shale Reserves	17,715,000
Department of the Interior	Bureau of Indian Affairs: Operation of Indian Programs	3,300,000
Department of the Interior	Bureau of Land Management (BLM): Coal Management	9,526,000
Department of the Interior	BLM: Oil and Gas Management	86,100,000

(Continued From Previous Page)

Energy type/Agency	Program	Estimated budget authority
Department of the Interior	Minerals Management Service (MMS): Indian Trust Responsibility	22,000,000
Department of the Interior	MMS: Royalty and Offshore Minerals Management	239,430,000
Department of the Interior	Office of Surface Mining (OSM): Abandoned Mine Reclamation Fund	2,153,000
Department of the Interior	OSM: Regulation and Technology	104,209,000
Department of the Interior	U.S. Geological Survey: Energy Resource Program	23,705,000
Environmental Protection Agency	Office of Air and Radiation: New Source Review	1,200,000
Subtotal		**$1,074,021,000**
Renewable		
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs I	$0
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs II	1,656,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs III	1,373,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs IV	884,000
Department of Agriculture	Forest Service Research and Development: Bioenergy, Energy Efficiency, and Conservation Research	2,400,000
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses: 3	1,000,000
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses: 2	1,000,000
Department of Agriculture	Rural Development Business Programs: Renewable Energy and Energy Efficiency	23,000,000
Department of Energy	Energy Supply: Biomass and biorefinery systems R&D	84,898,000
Department of Energy	Energy Supply: Departmental energy management program	1,445,000
Department of Energy	Energy Supply: Facilities and Infrastructure	5,297,000
Department of Energy	Energy Supply: Geothermal technology	28,390,000
Department of Energy	Energy Supply: Hydropower	5,016,000
Department of Energy	Energy Supply: Intergovernmental activities	14,449,000
Department of Energy	Energy Supply: Program direction	12,615,000
Department of Energy	Energy Supply: Renewable Program Support	0
Department of Energy	Energy Supply: Solar energy	82,330,000
Department of Energy	Energy Supply: Wind energy	41,640,000
Department of Energy	Energy Supply: Zero energy buildings	7,572,000
National Science Foundation	Biological Sciences: Renewable Energy: Basic Research	87,000
National Science Foundation	Engineering Directorate: Renewable Energy/Applied Research	1,310,000
National Science Foundation	Mathematical and Physical Sciences: Renewable Energy/Basic Research	30,540,000
National Science Foundation	Office of International Science and Engineering: Renewable Energy/Basic Research	2,000,000

(Continued From Previous Page)

Energy type/Agency	Program	Estimated budget authority
National Science Foundation	Social, Behavioral, Economic Sciences: Renewable Energy/Basic Research	60,000
Subtotal		**$348,962,000**
Nuclear		
Department of Energy	Nuclear Energy R&D	$114,441,000
Nuclear Regulatory Commission	International Nuclear Safety Support	8,026,645
Nuclear Regulatory Commission	Nuclear Materials Safety: Fuel Facilities Licensing and Inspection	21,420,704
Nuclear Regulatory Commission	Nuclear Reactor Safety: New Reactor Licensing	26,464,865
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor Inspection and Performance Assessment	147,123,812
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor License Renewal	22,870,187
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor Licensing	95,316,734
Nuclear Regulatory Commission	Nuclear Reactor Safety: Reactor Safety Research	70,870,929
Subtotal		**$506,534,876**
Alternative		
Department of Agriculture	Farm Service Agency: Commodity Credit Corporation's Bioenergy Program	$150,000,000
Department of Energy	Energy Supply: Hydrogen technology	38,113,000
Department of Energy	Science: Fusion energy sciences program	240,695,000
National Science Foundation	Biological Sciences: Hydrogen and Fusion: Basic Research	920,000
National Science Foundation	Education and Human Resources: Hydrogen and Fusion/Basic Research	0
National Science Foundation	Engineering Directorate: Hydrogen and Fusion: Basic Research	200,000
National Science Foundation	Engineering Directorate: Hydrogen and Fusion/Applied Research	790,000
National Science Foundation	Engineering Directorate: Other Energy: Basic Research	930,000
National Science Foundation	Mathematical and Physical Sciences: Hydrogen and Fusion/Basic Research	7,330,000
National Science Foundation	Office of International Science and Engineering: Hydrogen and Fusion/Basic Research	70,000
Subtotal		**$439,048,000**
Total		**$2,368,565,876**

Source: GAO analysis of agency estimates.

Federal Electricity Support

PMAs and TVA Market and Deliver Power Generated at Federal Facilities

The four federal Power Marketing Administrations (PMAs)—Bonneville Power Administration, Southeast Power Administration, Southwest Power Administration, and Western Power Administration—market power produced primarily at federal hydroelectric dams and projects. These facilities are owned and operated by either DOI's Bureau of Reclamation, the U.S. Army Corps of Engineers, or the International Boundary and Water Commission. In contrast, the Tennessee Valley Authority (TVA) markets electricity produced at its own fossil, nuclear, and hydroelectric energy facilities. Most electricity marketed by the PMAs is generated from facilities built with federal funding through appropriations or Treasury financing. Sales of this electricity are intended to pay back these appropriated funds or financing as well as offset any ongoing expenses associated with operating or upgrading the facilities, including the construction, operation, and maintenance of hydroelectric facilities by the Bureau of Reclamation, the Corps, or the International Boundary and Water Commission.

The Corps has developed hydroelectric power as part of many of its multipurpose water resources projects. The Corps reports that it has an $18 billion investment in hydropower facilities, which include 75 plants and 350 generating units. Hydropower represents 13 percent of the electrical power generated in the United States, and the Corps reports that its facilities generate 24 percent of it. The Corps is the largest owner/operator of hydroelectric power plants in the United States. The Corps reports that its objective is to keep the plants operating at peak efficiency and reliability by replacing aging turbines, generators, and control systems with state-of-the-art equipment. In fiscal year 2003, the Corps received budget authority of $414 million to fund a portion of these activities. The revenues from the power collected were either deposited in the Treasury by the PMAs or, as in the case of the Bonneville Power Administration, used directly to fund the Corps activities. In fiscal year 2003, Bonneville provided $336 million directly for the Corps' hydroelectric power program in Bonneville's region. The Bureau of Reclamation's central mission is to manage water resources for multiple benefits, including the generation of electricity, at its multipurpose water projects in the western United States. Electricity produced at Reclamation facilities either is used internally at projects or sold as surplus power. Surplus power marketed by the PMAs produces revenues used to repay project costs. In fiscal year 2003, Reclamation received $58.6 million in budget authority for operations of hydroelectric facilities in three of its five regions. In the other two regions, PMAs directly fund the hydroelectric facilities. Finally, the International Boundary and

Water Commission operates the Falcon-Amistad Project. The project consists of two dams on the Rio Grande River between Texas and Mexico, which share and operate separate power plants on each side of the river.

By law, the federal utilities are nonprofit and provide selected classes of customers with preference in purchasing their power. These "preference customers" include municipal utilities; cooperatives; state utilities; irrigation districts; and, in some instances, state governments and federal agencies. According to the Energy Information Administration (EIA), in 2003, federal utilities sold about 300 million megawatt-hours of wholesale and retail electricity, a volume equivalent to about 8 percent of total U.S. electricity consumption. In 2000, EIA published a report on federal financial interventions and subsidies in energy markets that included an assessment of subsidies to PMA and TVA customers.[1] In its 2000 report, EIA presented three different methodologies for estimating the value of the implicit support to these customers measured by the extent to which (1) electric power was sold by federal utilities at below-market prices, (2) federal utilities paid below-market rates on debt they had incurred, or (3) federal utilities' rates of return were below those of their private utility counterparts. The estimated value of the implicit support varied significantly, depending on which methodology was used. Further, EIA's report noted that there are potential problems with each of the methodologies that EIA discussed that make it impossible to choose the best methodology or to conclude that any one of the three methodologies is likely to give a "most accurate" estimate of the actual value.[2] In table 17, we present EIA's measures of implicit support for 1998 for the PMAs and TVA.

[1]Energy Information Administration, *Federal Financial Interventions and Subsidies in Energy Markets 1999: Energy Transformation and End Use* (Washington, D.C.: May 2000).

[2]For example, EIA noted that with regard to comparing federal utility prices with market prices, it requires the assumption that fully competitive electricity prices exist, and this is not demonstrably the case because there are really two markets for electricity—competitive and rate regulated markets. With regard to the comparison of interest rates between federal and nonfederal utilities, substantial differences in borrowing practices exist between federal and nonfederal utilities that make a simple comparison of borrowing costs potentially misleading. Finally, with regard to measuring different rates of return for federal and nonfederal utilities, the federal utilities have generally not acquired their assets under competitive conditions, and therefore, would generally not be expected to have the same rate of return as private counterparts who invested differently.

Table 17: Estimated Implicit Support to Federal Electric Power in 1998 (1999 dollars)

Dollars in millions

Agency	Support under the market price methodology	Support under the below-market interest rate methodology	Support under the rate of return methodology
Bonneville Power Administration	$732	$24-$116	$190-$466
Southeastern Power Administration	152		
Southwestern Power Administration	106	80-224[a]	237-530[a]
Western Power Administration	407		
Tennessee Valley Authority	0[b]	77-248	228-557

Source: Energy Information Administration, *Federal Financial Interventions and Subsidies in Energy Markets 1999: Energy Transformation and End Use* (Washington, D.C.: May 2000).

[a]Figures presented are total for the Southeastern Power Administration, Southwestern Power Administration, and Western Power Administration.

[b]Tennessee Valley Authority power prices were higher than the adjacent regions' prices, so there was no implicit subsidy using the price comparison methodology.

Rural Utilities Service Provides Federal Loans and Loan Guarantees

The Rural Utilities Service (RUS) is an agency of USDA that provides support to rural communities, including loans and loan guarantees for the development and improvement of electricity services. Under the authority of the Rural Electrification Act of 1936 and amendments,[3] RUS loans and loan guarantees are (1) to finance the construction of electric transmission and generation facilities, as well as electric system improvements and replacements in rural areas, and (2) to be used for energy conservation programs and renewable energy systems.

As of September 30, 2003, RUS had approximately $28 billion in outstanding loans and about $520 million in outstanding loan guarantees. Some RUS loans and loan guarantees provide access to financing at below-market rates, which amounts to a subsidy for some rural users of electricity. The size of this subsidy depends on the interest rates at which RUS loans are made as well as the prevailing market interest rates;

[3]7 U.S.C. 901-950bb.

therefore, the amount of support varies from year to year and according to which measure of market interest is used.

In its May 2000 report on federal financial interventions in energy markets, EIA estimated that the value of the subsidy provided by RUS loans and loan guarantees was between $144 million and $1.557 billion in 1998. We asked RUS to estimate the value of the subsidy associated with these loans and loan guarantees for fiscal year 2003, but RUS does not estimate such values. However, RUS did provide us with a figure derived by OMB of about $5 million that reflects the net cost to the government of the program, which is the amount of direct appropriations to the program that is not recaptured by loan repayments. This figure does not reflect the implied interest rate support as measured by the EIA report.

NEP Recommendations, DOE Reported Status, and GAO Observations

This appendix provides a complete list of the 106 recommendations contained in the May 2001 National Energy Policy report, DOE's January 2005 reported status of these recommendations, and our observations on the reported status. For each of the 106 NEP recommendations, table 18 contains the following information:

- The first column contains the number and text of the NEP recommendation as printed in the May 2001 NEP report. This number is used to track the recommendations and refers to the chapter and the order within which the recommendations appear in the NEP. Thus, "4-3" refers to the fourth chapter of the NEP and the third recommendation within that chapter.

- The second column contains DOE's overall assessment of the recommendation, such as "Implemented, Activities Ongoing, or Legislation Proposed," and DOE's description of the actions taken to implement the recommendation. This status information was reported by DOE in its January 2005 *National Energy Policy Status Report on Implementation of NEP Recommendations*.

- The third column contains our observations on the status of the recommendation provided by DOE as reported in the second column. Our observations may discuss reported status of the recommendations and observations about it, such as the lack of specific goals and measures that make it difficult to assess the progress of federal energy-related efforts to implement the recommendations. In some cases, we include additional information in this column from (1) DOE's responses to questions we raised about its status report or (2) agency comments on a draft of this report. Our observations on the status report should not be viewed as either an endorsement or a critique of the NEP recommendations.

Table 18: NEP Recommendations, DOE Reported Status, and GAO Observations

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
1-1: The NEPD Group recommends that the President issue an executive order to direct all federal agencies to include in any regulatory action that could significantly and adversely affect energy supplies, distribution, or use, a detailed statement on (1) the energy impact of the proposed action, (2) any adverse energy effects that cannot be avoided should the proposal be implemented, and (3) alternatives to the proposed action. The agencies would be directed to include this statement in all submissions to the Office of Management and Budget (OMB) of proposed regulations covered by Executive Order 12866, as well as in all notices of proposed regulations published in the *Federal Register*.	**Implemented:** In May 2001, President Bush issued Executive Order 13211 requiring federal agencies to include in any regulatory action that could significantly and adversely affect energy supplies, distribution, or use, a detailed "Statement of Energy Effects" in submissions to OMB.	Executive Order 13211 remains in effect and is being implemented. However, the status report does not provide information about the regulatory actions for which such statements of energy effect have been prepared or what impact, if any, these statements have had on regulatory actions. According to DOE, most regulatory actions do not have impacts sufficient to warrant a Statement of Energy Effects because the order sets forth a $100 million level of economic effect for a statement to be necessary.
1-2: The NEPD Group recommends that the President direct the executive agencies to work closely with Congress to implement the legislative components of a national energy policy.	**Implemented; activities ongoing:** President Bush and his Administration have consistently urged Congress to enact comprehensive energy legislation as recommended by the NEP. Many of the NEP legislative recommendations were reflected in the comprehensive energy bill, H.R. 6, which was adopted by both the House and Senate in 2003. The House approved the H.R. 6 conference report in November 2003, but it was still pending in the Senate when Congress adjourned. Several energy tax provisions were contained in H.R. 4520, signed into law by the President on October 22, 2004. The President will continue to work with Congress on comprehensive energy legislation that will ensure safe, affordable, and reliable energy supplies for the growing U.S. economy.	Of the 106 recommendations, 26 have a legislative element. However, according to DOE, 5 of these recommendations have been addressed by enacted legislation, 18 have been the subject of proposed legislation, and 3 have not been addressed by proposed legislation. (Two of the 26 recommendations that have a legislative element are duplicates.)

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
1-3: The NEPD Group recommends to the President that the NEPD Group continue to work and meet on the implementation of the NEP and explore other ways to advance dependable, affordable, and environmentally responsible production and distribution of energy.	**Implemented in modified form:** Although the NEPD Group terminated on September 30, 2001, by the terms of the memorandum that established the group, an interagency working group led by DOE was established to coordinate agency implementation of the NEP. This interagency group meets on a regular basis.	DOE's Office of National Energy Policy is responsible for coordinating and providing strategic direction for the implementation of the NEP report recommendations. However, although the NEPD Group was terminated on September 30, 2001, DOE's NEP Office did not assume leadership of the interagency working group until the Fall of 2003.
2-1: The NEPD Group recommends that the President direct the Secretary of Energy to explore potential opportunities to develop educational programs related to energy development and use. This should include possible legislation to create public education awareness programs about energy. Such programs should be long term in nature, should be funded and managed by the respective energy industries, and should include information on energy's compatibility with a clean environment.	**Implemented; activities ongoing:** Through DOE and other agencies, the Bush Administration has supported extensive energy education programs at all levels, in all regions, and in all sectors. Activities include development of instructional materials, Web sites, field trips, and career education materials. DOE, directly and through the national labs, sponsors higher education, extension programs, and research programs for residential, commercial, agricultural, and industrial energy users. EPA, USDA, and DOI sponsor programs on resource conservation and protection. Federal agencies also work with the energy industry and trade associations to support educational programs on energy efficiency, new technologies, consumer safety, and environmental protection.	The status report does not include information on whether possible legislation was considered as outlined in this recommendation. In addition, while the status report mentions federal agencies working with industry, the funding of these programs by energy industries was not addressed. There is a precedent for industry funding of education programs. For example, the Propane Education and Research Act of 1996 established a "check-off" program where a portion of the wholesale cost of the product is set aside in a common fund for the benefit of producers and consumers. The funding generated can be significant—in FY 2003 alone, a $38 million budget was projected to support various propane-related programs, including education. Recommendations 4-15 and 6-6 also address federal education programs.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
2-2: The NEPD Group recommends that the President take steps to mitigate impacts of high energy costs on low-income consumers. These steps would include: (1) Strengthening the Low Income Home Energy Assistance Program by making $1.7 billion available annually. This is an increase of $300 million over the regular FY 2001 appropriation; (2) Directing the Secretaries of Interior and Health and Human Services to propose legislation to bolster LIHEAP funding by using a portion of oil and gas royalty payments; (3) Redirecting royalties above a set trigger price to LIHEAP, whenever crude oil and natural gas prices exceed that trigger price, as determined by the responsible agencies.	**Implemented in part; activities ongoing:** The President's FY 2005 budget provided $2 billion in total funding for the LIHEAP program, including a $100 million increase in contingency funds, which allows the Administration to respond to both winter and summer emergencies. This represents a $600 million increase over the $1.4 billion requested for LIHEAP in the FY 2001 budget request.	The FY 2005 budget request was $2.001 billion for LIHEAP. Although the budget request increased by $600 million, the increase in actual funding varied. FY 2001 funding was $1.856 billion, while a recent estimate of FY 2005 funding is $2.182 billion, which is an increase of $326 million in actual funding. Regarding legislation, the status report does not address the second and third parts of this recommendation related to legislation. No legislation has been proposed by DOI/Department of Health and Human Services (HHS) to bolster LIHEAP funding by using a portion of oil and gas royalty payments, or to redirect royalties above a set trigger price to LIHEAP. According to an HHS official, there were meetings with a group from DOE and DOI regarding this aspect of the recommendation, but action was postponed. According to DOE, in June 2001, the President transmitted to Congress the legislative recommendations contained in the NEP, and Congress chose not to pursue this particular recommendation.
2-3: The NEPD Group recommends that the President increase funding for the Weatherization Assistance Program by $1.2 billion over 10 years. This will roughly double the spending during that period on weatherization. Consistent with that commitment, the FY 2002 budget includes a $120 million increase over 2001. DOE will have the option of using a portion of those funds to test improved implementation approaches for the weatherization program.	**Implemented; activities ongoing:** The President's budget has consistently sought increased funding for low-income weatherization, from a baseline of $153 million in FY 2001 to $291 million in the FY 2005 budget. As a result, about 275,000 low-income homes have been weatherized in the last 4 FYs.	Actual funding was $153 million in FY 2001, $230 million in FY 2002, $224 million in FY 2003, $227 million in FY 2004, and $228 million in FY 2005. The FY 2006 budget request is $230 million. Compared with the FY 2001 baseline, a funding level of about $230 million per year represents an increase of about $80 million per year, or $800 million over 10 years.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
2-4: The NEPD Group recommends that the President support legislation to allow funds dedicated for the Weatherization and State Energy Programs to be transferred to LIHEAP if DOE deems it appropriate.	**Implemented:** Congress has not considered legislation to allow transfer between the Weatherization and State Energy Programs and LIHEAP. Both programs serve important functions to reduce overall energy costs to low-income families.	It is not clear why the status report notes that this recommendation is implemented when no legislation has been considered. According to an internal draft document on NEP status from May 2003, an internal determination was made that it was not appropriate to support transfer of Weatherization and State Energy funds to LIHEAP at that time. According to DOE, in June 2001, the President transmitted to Congress the legislative recommendations contained in the NEP, and Congress chose not to pursue this particular recommendation. However, the 2001 transmittal to Congress did not include a legislative recommendation to allow funds to be transferred.
2-5: The NEPD Group recommends that the President recognize unique regional energy concerns by working with the National Governors Association and regional governor associations to determine how to better serve the needs of diverse areas of the country.	**Implemented; activities ongoing:** In August 2001, DOE, DOI, USDA, EPA, and CEQ signed a Memorandum of Understanding (MOU) with the Western Governors' Association (WGA) regarding energy development and conservation activities in the Western United States. The group subsequently developed a "Transmission Siting and Permitting Protocol" in June 2002 that established a systematic, coordinated review process for the siting and permitting of electric power transmission in the west. Other agency programs include cooperative efforts with the WGA to address wind energy resource development on the public lands administered by DOI.	This recommendation is much broader than transmission siting, but it is unclear from the status report what other ongoing activities have taken place subsequent to the June 2002 protocol. In response to questions about other activities, DOE noted that the described activities are illustrative, not exhaustive, and that most NEP agencies have worked to implement this recommendation. Also, from the status report, it appears that the Federal Energy Regulatory Commission (FERC), which plays a major role in transmission management, was not a party to the MOU and did not play a role in the development of the subsequent protocol. In addition, the related role of the energy project streamlining task force established under recommendation 3-3 is not clear.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
2-6: The NEPD Group recommends that the President direct FEMA to prepare for potential energy emergencies. • FEMA should work with states' Offices of Emergency Management as they expand existing emergency operations plans to identify potential problems and address consequences of the power shortages. FEMA should use its current Regional Incident Reporting System to identify any situations that might demand immediate attention. • Using the structure of the already existing Federal Response Plan, FEMA should conduct Regional Interagency Steering Committee (RISC) meetings for states affected by the energy shortfalls. The RISC is a FEMA-led interagency committee comprised of agencies and departments that support the Federal Response Plan. Either an upcoming, scheduled RISC meeting or a special-focus RISC meeting can be held to identify the short-term energy outlook, as well as any expected consequences, in each of the states during the peak summer season.	**Implemented; activities ongoing:** FEMA is working with states to prepare for natural disasters and the consequences of power system failures using communications tools, including the Regional Incident Reporting System. DOE has been working with the electric power industry, states, FERC, and the Canadian government to implement recommendations from the report on the August 2003 blackout and is establishing an energy assurance approach for dealing with energy emergencies.	FEMA is now under the Department of Homeland Security (DHS). DOE has an Energy Assurance and Security Program that is responsible for fulfilling the roles of critical infrastructure identification, prioritization, and protection for the energy sector, which include the production, refining, and distribution of oil and gas, and electric power—except for commercial nuclear power facilities. The Nuclear Regulatory Commission (NRC) also has programs that address homeland security for commercial nuclear power facilities.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
3-1: The NEPD Group recommends that the President direct the EPA Administrator to propose multipollutant legislation. The NEPD Group recommends that the President direct the EPA Administrator to work with Congress to propose legislation that would establish a flexible, market-based program to significantly reduce and cap emissions of sulfur dioxide, nitrogen oxides, and mercury from electric power generators. Such a program (with appropriate measures to address local concerns) would provide significant public health benefits even as we increase electricity supplies: (1) establish mandatory reduction targets for emissions of three main pollutants: sulfur dioxide, nitrogen oxides, and mercury; (2) phase in reductions over a reasonable period of time, similar to the successful acid rain reduction program established by the 1990 amendments to the Clean Air Act; (3) provide regulatory certainty to allow utilities to make modifications to their plants without fear of new litigation; (4) provide market-based incentives, such as emissions trading credits, to help achieve the required reductions.	**Implemented; legislation proposed:** In February 2002, President Bush proposed Clear Skies legislation to reduce emissions of sulfur dioxide, nitrogen oxides, and mercury from electricity generators and improve air quality throughout the country. Using a proven, market-based approach that can save American consumers millions of dollars in compliance costs, Clear Skies will cut air pollution emissions from electric power plants by approximately 70 percent over 15 years. This historic proposal will bring cleaner air to Americans faster, more reliably, and more cost-effectively than under current law, and it would also, for the first time, reduce emissions of mercury from electric power plants. This legislation was not enacted in the 108th Congress, but the Administration will continue to work with Congress to achieve passage as early as possible in the 109th Congress.	Clear Skies legislation was reintroduced earlier this year as S. 131. However, in the absence of the legislation, EPA has issued two rules with similar goals as Clear Skies. In March 2005, EPA issued the Clean Air Interstate Rule, which addresses sulfur dioxide and nitrogen oxides. The reduction goals for this rule are similar to those under Clear Skies, but it only affects facilities in 28 eastern states and the District of Columbia, while Clear Skies would have been a national program. The second is the Clean Air Mercury Rule, which EPA issued later in March 2005. This rule limits mercury emissions to similar levels as the Clear Skies legislation. However, it is possible that implementation of the mercury rule may be delayed by litigation. See related recommendations 5-12 and 5-13.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
3-2: The NEPD Group recommends that the President direct the Secretary of the Interior to work with Congress to create the "Royalties Conservation Fund." This fund will earmark potentially billions of dollars in royalties from new oil and gas production in the Arctic National Wildlife Refuge (ANWR) to fund land conservation efforts. This fund will also be used to eliminate the maintenance and improvements backlog on federal lands.	**Implemented; legislation proposed:** As in past years, in his 2005 Budget, President Bush proposed to create the Royalty Conservation Fund that would use royalties from new oil and gas exploration in ANWR to fund land conservation efforts and address the backlog in maintenance and improvement projects on federal lands, including national parks. The House of Representatives has twice approved legislation that would have authorized environmentally sensitive oil and gas exploration in ANWR and created the Royalty Conservation Fund, consistent with the President's request. However, the Senate failed to act on similar legislation.	The potentially billions of dollars available (according to the recommendation) for the federal fund would be affected by the portion of the royalties Alaska would receive. In 1999, DOI's Minerals Management Service (MMS) reported that Alaska receives about 90 percent of all royalties, rents, and bonuses for mineral production on public domain leases in Alaska.
3-3: The NEPD Group recommends that the President issue an executive order to rationalize permitting for energy production in an environmentally sound manner by directing federal agencies to expedite permits and other federal actions necessary for energy-related project approvals on a national basis. This order would establish an interagency task force chaired by the Council on Environmental Quality to ensure that federal agencies responsible for permitting energy-related facilities are coordinating their efforts. The task force will ensure that federal agencies set up appropriate mechanisms to coordinate federal, state, tribal, and local permitting activity in particular regions where increased activity is expected.	**Implemented; activities ongoing:** President Bush issued Executive Order 13212 on May 18, 2001, directing federal agencies to take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy. The executive order established an interagency task force to "work with and monitor Federal Agencies' efforts to expedite their review of permits or take other actions as necessary to accelerate the completion of energy-related permits, while maintaining safety, public health, and environmental protections." By acting to foster interagency cooperation, the task force has helped accelerate completion of permitting on specific energy projects, acted to streamline redundant processes, and increased opportunities for environmental stewardship and energy production at the same time. In April 2004, the President signed Executive Order 13337, which updates the Secretary of State's authority to issue presidential permits for cross-border petroleum or natural gas pipelines after consultation with DOE, EPA, DHS, and other agencies.	The reported status does not provide reference to any comprehensive analysis of what the task force has accomplished. For example, information on the activities of the task force can be found at www.etf.energy.gov. In addition, the task force charter ended in January 2005, and the reported status does not make it clear whether the work of the task force will continue. In response to our questions, DOE notes that the task force will continue to meet as a senior-level interagency group. Finally, many NEP recommendations relate to the issue of providing regulatory certainty and expediting approval of energy projects. However, it is not clear what role the task force has played or will play in addressing these recommendations.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-1: The NEPD Group recommends that the President direct the Office of Science and Technology Policy and the President's Council of Advisors on Science and Technology (PCAST) to review and make recommendations on using the nation's energy resources more efficiently.	**Implemented:** In February 2003, PCAST issued a report: *Improving Efficiency in the Nation's Electrical System*. The report focused on the nation's electricity generation, transmission and distribution, and management systems and makes recommendations to improve the efficiency of each piece of the system. PCAST identified four areas where technological progress could have a potentially significant impact, including (1) efficiency of coal-fired generation plants, (2) efficiency of electricity transmission systems, (3) distributed energy technologies, and (4) demand-side management.	This recommendation refers to the broader issue of reviewing and making recommendations on using energy resources more efficiently, but DOE's status report refers to a specific PCAST report on *Improving Efficiency in the Nation's Electrical System*. The reported status does not indicate whether any further study of the use of energy resources beyond electrical system efficiency is ongoing or planned. In response to our questions, DOE stated that the PCAST report completely satisfies this recommendation. Also, the reported status does not indicate what the results of the February 2003 study have been. For example, the study makes six specific recommendations to address the four areas where technological progress could have a potentially significant impact.
4-2: The NEPD Group recommends that the President direct the Secretary of Energy to conduct a review of current funding and historic performance of energy efficiency research and development programs in light of the recommendations of this report. Based on this review, the Secretary of Energy is then directed to propose appropriate funding of those research and development programs that are performance-based and modeled as public-private partnerships.	**Implemented:** In 2002, DOE completed a full review of all energy efficiency research and development programs. After a series of public meetings and receipt of other public comments, a report addressing the strengths and weaknesses of these programs was released. The findings focused management on the need for reorganization. Research that was performed in multiple areas was consolidated into one office. This led, for example, to the establishment of the Hydrogen, Fuel Cells and Infrastructure Technologies program and the transfer of the Zero-Energy Buildings design activity from the Solar program to the Buildings Technologies program. Moreover, layers of management were reduced so that all programs would have a more direct link to senior management and individual program managers would have greater accountability.	DOE reports it completed a review with findings that focused management on the need for reorganization. However, the reported status does not indicate how this review addressed the recommendation to "review current funding and historic performance of energy efficiency research and development programs in light of the recommendations of the report." For example, outside of the reorganization, it is not clear how research efforts have changed and what developments have been made. In addition, DOE completed a detailed report on DOE programs. However, there are other energy-efficiency research and development activities, funded by the federal government through agencies such as the National Science Foundation, that were not addressed by the review. See related recommendation 6-3 on renewable energy funding.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-3: The NEPD Group recommends that the President direct the Secretary of Energy to promote greater energy efficiency: (1) expand the Energy Star Program beyond office buildings to include schools, retail buildings, health care facilities, and homes; (2) extend the Energy Star labeling program to additional products; appliances, and services; (3) strengthen DOE public education programs relating to energy efficiency.	**Implemented; activities ongoing:** Under the Bush Administration, the DOE/EPA Energy Star program has been expanded to include home ventilation fans, small commercial HVAC units, ceiling fans, reach-in commercial refrigerators, portable telephones, home insulation and air leak sealing, commercial cooking equipment, and vending machines. Energy Star specifications have been upgraded for residential windows, compact fluorescent bulbs, residential light fixtures, central air conditioners, televisions, and VCRs. The Energy Star program has also been extended to new categories of commercial buildings, including hospitals, supermarkets, hotels, financial centers, bank branches, courthouses, warehouses, and residence halls. DOE has launched several public awareness campaigns to help consumers and businesses save energy, including the DOE Energy Savers campaign to educate consumers and businesses on smart energy use. In May 2004, DOE and the Alliance to Save Energy initiated a “Powerful Savings” campaign to provide consumers with the information to make smart energy choices. In December 2004, DOE launched a new Web site, www.EnergySavingTips.gov, as a consumer-friendly portal to detail energy-saving information from various federal agencies.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-4: The NEPD Group recommends that the President direct the Secretary of Energy to improve the energy efficiency of appliances: • Support the appliance standards program for covered products, setting higher standards where technologically feasible and economically justified. • Expand the scope of the appliance standards program, setting standards for additional appliances where technologically feasible and economically justified.	**Implemented; activities ongoing:** In April 2001, DOE approved energy efficiency standards for clothes washers and water heaters and in 2004 DOE finalized new Seasonal Energy Efficiency Ratio standards for central air conditioners and heat pumps. Further, DOE has issued advanced notices of proposed rulemaking for new energy efficiency standards covering (1) residential furnaces and boilers, (2) certain classes of commercial central air conditioners, and (3) electric distribution transformers. Public meetings have been held, and DOE is assessing comments from those meetings. DOE has received public comments and is working on its next steps in the standard-setting process.	The energy efficiency standards for clothes washers and water heaters was completed in April 2001, before the NEP was released in May 2001. Since the NEP's release, new standards for residential central air conditioners were finalized with an effective date of 2006. These standards have been in process since at least FY 2000. During FY 2006, DOE will focus on developing Notices of Proposed Rulemaking for energy efficiency standards for three priority products: (1) residential furnaces and boilers, (2) certain classes of commercial air conditioners, and (3) electric distribution transformers. DOE has requested $8.3 million in FY 2006 to develop standards. This is a 19 percent decrease from FY 2005 funding of $10.1 million (FY 2004 funding was about $10.3 million; FY 2000 funding was about $10.5 million). National appliance standards have been statutorily mandated by a series of laws dating back to enactment of the National Appliance Energy Conservation Act of 1987. DOE provided a schedule of the rulemaking status for updates to the appliance standards in its FY 2006 budget request for Interior and Related Agencies (pp. 430-431). According to DOE, the schedule is incomplete, but it lists the majority of the schedule.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-5: The NEPD Group recommends that the President direct heads of executive departments and agencies to take appropriate actions to conserve energy use at their facilities to the maximum extent consistent with the effective discharge of public responsibilities. Agencies located in regions where electricity shortages are possible should conserve, especially during periods of peak demand. Agencies should report to the President, through the Secretary of Energy, within 30 days on the conservation actions taken.	**Implemented; activities ongoing:** In 2001, President Bush directed executive branch departments and agencies to use energy more efficiently. A report, *Energy Conservation Actions Taken at Federal Government Facilities*, was subsequently sent to the President outlining actions taken by federal agencies to reduce energy consumption, including updating and implementing agency Energy Management Plans, implementing immediate measures to reduce peak load, and participating in the May 2001 Load Reduction Test conducted by California. DOE's Federal Energy Management Program (FEMP) provides technical and financial energy assistance to government agencies. FEMP has a formal contact list to access all Federal Building Managers. With this list and an inventory of potential back-up supply and demand-side options, federal agencies can be requested to adjust consumption in areas of energy shortages. Each year, the White House has honored energy management teams from federal agencies, including the Department of Defense, HHS, and the U.S. Postal Service, for their dedication and leadership in conserving energy.	The reported status does not provide information on federal conservation goals, agency-reported actions or progress made toward those goals, or the costs and benefits of achieving those goals. For example, one federal government goal is to reduce energy use in buildings by 35 percent in 2010 from a baseline year of 1985. According to DOE, the most recent report on federal programs is a September 2004 report entitled *Federal Government Energy Management and Conservation Programs for Fiscal Year 2002*. This report indicated that energy consumption for buildings in FY 2002 was about 24 percent less than the FY 1985 base year.
4-6: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress to encourage increased energy efficiency through combined heat and power (CHP) projects by shortening the depreciation life for CHP projects or providing investment tax credits.	**Implemented; legislation proposed:** The President's FY 2003 budget and subsequent budget requests have each proposed an investment tax credit for qualified CHP projects. Congress considered, but did not enact, legislation that would have provided such a tax credit.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-7: The NEPD Group recommends that the President direct the EPA Administrator to work with local and state governments to promote the use of well-designed CHP and other clean power generation at brownfields sites, consistent with the local communities' interests. EPA will also work to clarify liability issues if they are raised at a particular site.	**Implemented; activities ongoing:** EPA has established a Combined Heat and Power partnership that now works with more than 100 organizations to promote CHP projects across the country. Through EPA's CHP/Brownfields Initiative, two brownfields communities have been selected to receive CHP/clean energy technical assistance, and EPA has established a Web site that includes a CHP/clean energy screening tool for brownfields stakeholders. In addition, in 2002, DOE provided assistance to Iowa to co-fund feasibility studies and engineering work to accelerate installation of CHP facilities at brownfields sites.	None.
4-8: The NEPD Group recommends that the President direct the EPA Administrator to promote CHP through flexibility in environmental permitting.	**Implemented; activities ongoing:** DOE and EPA have worked together to organize regional CHP Initiatives that foster the use of CHP, develop tools and services to support the development of new projects, and address permitting and other barriers within their regions. Several states have issued permitting rules or are drafting permitting rules that address CHP. EPA has developed a handbook, *Output-based Regulations: A Handbook for Regulators*, to assist air regulators in developing regulations that recognize the pollution prevention benefits of efficient energy generation, like CHP, and renewable energy technologies. EPA continues to work with key states to investigate output-based approaches, providing technical support.	See related recommendation 6-13.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-9: The NEPD Group recommends that the President direct the Secretary of Transportation to: • Review and provide recommendations on establishing Corporate Average Fuel Economy (CAFE) standards with due consideration of the National Academy of Sciences (NAS) study to be released in July 2001. Responsibly crafted CAFE standards should increase efficiency without negatively impacting the U.S. automotive industry. The determination of future fuel economy standards must therefore be addressed analytically and based on sound science. • Consider passenger safety, economic concerns, and disparate impact on the U.S. versus foreign fleet of automobiles. • Look at other market-based approaches to increasing the national average fuel economy of new motor vehicles.	**Implemented; activities ongoing:** Following extensive review of the NAS fuel economy report, Transportation Secretary Norman Mineta sent a letter to Congress in 2001 asking Congress to remove restrictions on implementing new CAFE standards, and calling on Congress to allow reform of the CAFE system consistent with the NAS recommendations. In 2003, the National Highway Traffic Safety Administration (NHTSA) finalized regulations increasing CAFE standards for light trucks, from the current level of 20.7 mpg to 21.0 mpg for model year 2005, 21.6 mpg for 2006, and 22.2 mpg for 2007. The new standards are expected to save approximately 3.6 billion gallons of gasoline over the lifetime of these vehicles. In addition, on December 29, 2003, NHTSA issued an advanced notice of proposed rulemaking to consider revisions to the CAFE program within the scope of current legislation to address some key issues identified by the NAS.	The status report does not provide information on what has happened since December 29, 2003, when NHSTA issued an advanced notice of proposed rulemaking to consider revisions to the CAFE program within the scope of current legislation to address some key issues identified by the NAS. The Department of Transportation (DOT) commented on a draft of this report that NHTSA is currently preparing a further light truck rulemaking, covering the years 2008 and beyond, and a Notice of Proposed Rulemaking to appear in the near future.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-10: The new NEPD Group recommends that the President direct the Secretary of Transportation to review and promote congestion mitigation technologies and strategies and work with Congress on legislation to implement these strategies.	**Implemented; activities ongoing:** The Department of Transportation, through the Federal Highway Administration (FHWA), has offered public and private owners of highways a number of tools to reduce growing highway congestion. The most important of these is a 15-state pilot program (which the Administration has proposed to expand to all states) that permits the imposition of variable pricing on all federal-aid highways, including the interstate system. By giving drivers a choice to pay more for premium "high-speed" service, this pilot has received widespread public acceptance and has significantly reduced congestion on the roads incorporated into the program. FHWA is also engaged in significant other congestion relief activities, including guidance and training products on reducing delays caused by traffic incidents and in work zones; implementing and sustaining congestion partnerships in metropolitan areas; implementing traveler information services such as 511 telephone numbers; anticipating and mitigating the transportation impacts of adverse weather; reducing delays at traffic signals; and developing and using congestion performance measures.	The recommendation calls for legislation to implement these strategies, but the status report does not address whether any related legislation has been proposed or enacted. DOE, in response to our questions about related legislation, noted that the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 proposed an array of congestion relief measures.
4-11: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress on legislation to increase energy efficiency with a tax credit for fuel-efficient vehicles. The NEPD Group recommends that a temporary, efficiency-based income tax credit be available for purchase of new hybrid fuel cell vehicles between 2002 and 2007.	**Implemented; legislation proposed:** The President's FY 2003 budget, and every subsequent budget request, proposed a tax credit for hybrid and fuel cell vehicles. Congress considered, but did not enact, legislation that would have provided such a tax credit.	See duplicate recommendation 6-12.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-12: The NEPD Group recommends that the President direct all agencies to use technological advances to better protect our environment. (1) The Administration remains committed to investing in Intelligent Transportation Systems (ITS) and encourages the private sector to invest in ITS applications. This DOT program funds the development of improved transportation infrastructure that will reduce congestion, such as traveler information/navigation systems, freeway management, and electronic toll collection. ITS applications reduce fuel associated with travel. (2) The Administration remains committed to the DOT's fuel-cell-powered transit bus program, authored by the Transportation Equity Act for the 21st Century (TEA-21). This program demonstrates the viability of fuel-cell power plants for transit bus applications. (3) The Administration remains committed to the Clean Buses Program. TEA-21 establishes a new clean fuel formula grant program, which provides an opportunity to accelerate the introduction of advanced bus propulsion technologies into the mainstream of the nation's transit fleet.	**Implemented; activities ongoing**: (1) DOT continues to lead in deploying integrated ITS infrastructure in metropolitan areas, with 62 metropolitan areas now at a medium to high level of deployment. Recently, nine major initiatives that comprise the centerpiece of the ITS program were announced. (2) DOT's Hydrogen and Fuel Cell Bus Initiative focuses on improving the energy efficiency, emissions, performance, and cost-effectiveness of 40-foot, heavy-duty transit buses. The Federal Transit Administration (FTA) has collaborated with DOE and the National Renewable Energy Laboratory (NREL) on the development of a data collection and evaluation plan for the fuel cell bus demonstration efforts. (3) The DOT Clean Buses Program works to accelerate introduction of advanced bus propulsion technologies into the mainstream of the nation's transit fleet.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-13: The NEPD Group recommends that the President direct EPA and DOT to develop ways to reduce demand for petroleum transportation fuels by working with the trucking industry to establish a program to reduce emissions and fuel consumption from long-haul trucks at truck stops by implementing alternatives to idling, such as electrification and auxiliary power units at truck stops along interstate highways. EPA and DOT will develop partnership agreements with trucking fleets, truck stops, and manufacturers of idle-reducing technologies (e.g., portable auxiliary packs, electrification) to install and use low emission-idling technologies.	**Implemented; activities ongoing:** EPA, DOT, and DOE are working together on "truck stop electrification," a program that will permit idling trucks to shut down their engines and run lights, heating, and air conditioning from on-site electricity. This program promises reductions in truck fuel consumption and emissions. Through a series of workshops and conferences aimed at anti-idling and truck stop electrification (TSE), DOT, EPA, and DOE are developing TSE codes and standards that will pave the way for new technologies to reduce truck idling. EPA has created the National Idle-Free Corridors Program designed to create TSE at truck stops and travel centers along major interstate highways. EPA has awarded over $1 million in grants for the installation of TSE technology at nine truck stops around the United States. There are currently over 40 idling-control projects around the country.	The reported status does not indicate whether there are any measures of reductions in truck fuel consumption and emissions yet. It is not clear whether a baseline measure and goals have been established.
4-14: The NEPD Group recommends that the President direct the Secretary of Energy to establish a national priority for improving energy efficiency. The priority would be to improve the energy intensity of the U.S. economy as measured by the amount of energy required for each dollar of economic productivity. This increased efficiency should be pursued through the combined efforts of industry; consumers; and federal, state, and local governments.	**Implemented:** DOE has developed a Web-based energy intensity indicator that can be used to track the energy intensity of the United States, measured by the amount of energy required for each dollar of economic productivity. DOE's Energy Information Administration (EIA) Web site has a public energy efficiency page, which shows energy intensity in various sectors of the economy. Further, DOE continues to pursue a portfolio of efforts to improve energy efficiency in all sectors of the economy, ranging from research and development activities, such as the FreedomCAR Program and the Hydrogen Fuel Initiative, to the low-income Weatherization program and deployment programs such as Energy Star.	The status report does not indicate the actual results found when using the indicator on trends in the amount of energy required for each dollar of economic productivity. In responding to our questions about the indicator results, DOE stated that the indicator suggests that while Gross Domestic Product has increased more than six-fold over the last 50 years, total energy consumption has increased only three-fold.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
4-15: The NEPD Group recommends that the President direct the EPA Administrator to develop and implement a strategy to increase public awareness of the sizable savings that energy efficiency offers to homeowners across the country. Typical homeowners can save about 30 percent (about $400) a year on their home energy bill by using Energy Star-labeled products.	**Implemented; activities ongoing:** EPA has launched several public awareness campaigns to help consumers and businesses save energy. EPA's 2003 "Change a Light, Change the World" campaign challenges Americans to switch to lighting products that save energy. For 2004, EPA started the "Cool Change Campaign" to encourage homeowners to learn how to increase their comfort at home during the summer months and save energy.	The reported status does not provide any information on homeowners' savings achieved through this program. See related energy education recommendations 2-1 and 6-6.
5-1: The NEPD Group recommends that the President direct the Secretaries of Energy and the Interior to promote enhanced oil and gas recovery from existing wells through new technology.	**Implemented; activities ongoing:** New drill-pipe system technology, developed with DOE's support, will allow operators to produce oil and gas more efficiently by being able to steer the drill bit more precisely toward oil- and gas-bearing sweet spots and away from less productive areas. DOE's programs have also helped develop new technology to map flow of groundwater, find previously overlooked oil deposits, reduce the cost of high angle wells, provide a high-speed data link for better real time drilling decisions, improve high temperature electronic components for use in deep gas drilling, improve measurement-while-drilling tools to improve drilling decisions, improve sealing of drill pipe annuli at high temperatures and pressures, minimize the impact of the conventional drilling process on the reservoir rock, and improve fundamental understanding of physical mechanisms during drilling of deeper hard-rock.	The reported status does not address DOI programs. For example, DOI's MMS Technology Assessment and Research Program is participating in several projects aimed at improving oil and gas recovery.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-2: The NEPD Group recommends that the President direct the Secretary of Energy to improve oil and gas exploration technology through continued partnership with public and private entities.	**Implemented; activities ongoing:** To gain access to the estimated 125 trillion cubic feet of domestic natural gas in formations deeper than 15,000 feet below the surface, DOE has sponsored “Deep Trek” drilling technology programs with the goal of developing a "smart" drilling system tough enough to withstand the extreme temperatures, pressures, and corrosive conditions of deep reservoirs, yet economical enough to make the gas affordable to produce. In 2003, DOE announced the successful deployment of the environmentally sensitive prototype “Arctic Platform,” a lightweight, 100-by-100-foot aluminum drilling platform elevated 12 feet above the frozen tundra on specially designed steel legs. This compact and modular concept could one day eliminate the need for gravel pads and the temporary ice roads and ice pads that oil companies now must use on the North Slope. It could also be used in the lower 48 states in ecologically fragile areas, such as wetlands. DOE’s Ocean Drilling Program recovered almost 2 miles of methane hydrate core off the coast of Oregon, including significant amounts of gas hydrates in sediments collected in DOE-developed pressurized containers.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-3: The NEPD Group recommends that the President direct the Secretary of the Interior to examine land status and lease stipulation impediments to federal oil and gas leasing, and review and modify those where opportunities exist (consistent with the law, good environmental practice, and balanced use of other resources): • Expedite the ongoing Energy Policy and Conservation Act study of impediments to federal oil and gas exploration and development. • Review public lands withdrawals and lease stipulations, with full public consultation, especially with the people in the region, to consider modifications where appropriate.	**Implemented; activities ongoing:** The Secretary of the Interior reported on land status and lease stipulation impediments to federal oil and gas leasing for five initial oil and gas basins in a study completed in January 2003. The "EPCA inventory" grouped approximately 1,000 different lease stipulations used by federal land management agencies into three broad levels of constraint: lands where leasing is permitted under standard stipulations; lands where leasing is permitted with increasing limitations on access, principally seasonal occupancy restrictions; and lands where oil and gas leasing is prohibited. The analysis also included consideration of exceptions to stipulations granted after a review of on-the-ground conditions and the use of modern technologies such as directional drilling. The inventory results are being integrated into the land use planning and use authorization programs. Also completed was the Powder River Basin Study on coal bed methane development and the economics of produced water management. Bureau of Land Management (BLM) field managers have been directed to look beyond the boundaries of their units to ensure that the restrictions they impose are reasonable in light of the study and practices at nearby comparable units.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-4: The NEPD Group recommends that the President direct the Secretary of the Interior to consider economic incentives for environmentally sound offshore oil and gas development where warranted by specific circumstances: explore opportunities for royalty reductions, consistent with ensuring a fair return to the public where warranted for enhanced oil and gas recovery; for reduction of risk associated with production in frontier areas or deep gas formations; and for development of small fields that would otherwise be uneconomic.	**Implemented; activities ongoing:** Gulf of Mexico lease sales offer automatic royalty relief for development in deepwater. Similar royalty relief incentives for the Beaufort Sea and Cook Inlet (Alaska Outer Continental Shelf (OCS)) were offered for the 2003 and 2004 lease sales. Final rules have been published for supplemental royalty relief for deepwater leases and for lease term extensions for subsalt exploration. In addition, a final rule was published in January 2004 that would extend royalty relief to natural gas from deep formations in shallow waters of the Gulf of Mexico for existing OCS leases issued before 2001.	The reported status does not provide information on the amount of royalty relief that has been provided or how that has changed over time. For example, about 90 percent of the active leases in the Gulf of Mexico as of December 2004 have royalty relief. Gulf of Mexico leases could earn royalty relief valued between $1 and $2 billion annually through 2013. Also, it is not clear if any measures of how royalty relief encourages enhanced oil and gas recovery have been developed. In commenting on a draft of this report, MMS stated that the reference to the $1 to $2 billion value of royalty incentives should be qualified because of the effects of price threshold restrictions on whether production on qualified leases will realize the incentive. They noted that due to current high prices, the value of annual royalty relief is likely to be considerably less. MMS estimated that less than one-sixth of total oil and gas production will be royalty free because prices exceed the thresholds and are expected to exceed thesholds for the forseeable future.
5-5: The NEPD Group recommends that the President direct the Secretaries of Commerce and the Interior to reexamine the current federal legal and policy regime (statutes, regulations, and executive orders) to determine if changes are needed regarding energy-related activities and the siting of energy facilities in the coastal zone and on the OCS.	**Implemented; activities ongoing:** The Departments of Commerce and the Interior issued in December 2000 a final published rule for revision of Coastal Zone Management Act (CZMA) federal consistency regulations, and are reviewing CZMA regulations to determine if further changes are needed to provide greater clarity and predictability. In addition, DOI and DOC are working as equal partners on the Marine Protected Areas executive order. NOAA and DOI have joined in the cataloging of Marine Managed Areas (MMA) and establishment of the Marine Protected Areas Federal Advisory Committee.	The status report does not provide information on the status of the review of CZMA regulations to determine if further changes are needed to provide greater clarity and predictability. Also, it is not clear when the review started or if there is an end date for the review.
5-6: The NEPD Group recommends that the President direct the Secretary of the Interior to continue OCS oil and gas leasing and approval of exploration and development plans on predictable schedules.	**Implemented; activities ongoing:** DOI completed the 5-Year OCS Oil and Gas Leasing Program for 2002-07 in July 2002. The program proposed up to 20 lease sales in the Gulf of Mexico and offshore Alaska. DOI's MMS continues to process exploration and development plans in a timely manner. The Northstar Unit produced the first federal oil from the Alaska OCS. Several exploration plans in the Eastern Gulf of Mexico have been approved and implemented, leading to four new discoveries in the deepwater Eastern Gulf.	The status report does not indicate what the criteria or goals are for processing exploration and development plans in a timely manner. In commenting on a draft of this report, MMS reported that it has criteria and goals for processing exploration and development plans. The performance measures published in the bureau operational plan are to process 100 percent of exploration plans in less than 30 days; and to process 100 percent of development plans in less than 120 days.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-7: The NEPD Group recommends that the President direct the Secretary of the Interior to consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve-Alaska (NPR-A). Such consideration should include areas not currently leased within the northeast corner of the reserve.	**Implemented; activities ongoing:** Further lease sales in the NPR-A are ahead of schedule. BLM held a lease sale in June 2002 for the Northeast Sector of NPR-A. Winning bids totaled $64 million on 579,000 acres. DOI also published a final rule for lease utilization, allowing operators to utilize leases to provide for efficient and environmentally sound resource recovery. BLM also finalized an EIS for the Northwest Sector of NPR-A in 2004.	None.
5-8: The NEPD Group recommends that the President direct the Secretary of the Interior to work with Congress to authorize exploration and, if resources are discovered, development of the 1002 Area of ANWR. Congress should require the use of the best available technology and should require that activities will result in no significant adverse impact to the surrounding environment.	**Implemented; legislation proposed:** The President's FY 2003 budget and subsequent budget requests have proposed to authorize environmentally sensitive exploration and, if resources are discovered, development of the 1002 Area of ANWR. Congress considered, but did not enact legislation that would have provided authorization for development of the 1002 Area of ANWR.	None.
5-9: The NEPD Group recommends that the President direct the Secretary of the Interior to work with Congress and the State of Alaska to put in place the most expeditious process for renewal of the Trans-Alaska Pipeline System rights-of-way to ensure that Alaskan oil continues to flow uninterrupted to the west coast of the United States.	**Implemented:** Interior Secretary Gale Norton approved a 30-year renewal of the federal right-of-way lease for the Trans-Alaska oil pipeline, effective January 23, 2004.	See duplicate recommendation 7-5.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-10: The NEPD Group recommends that the President direct the Secretary of Energy to propose comprehensive electricity legislation that promotes competition, protects consumers, enhances reliability, promotes renewable energy, improves efficiency, repeals the Public Utility Holding Company Act, and reforms the Public Utility Regulatory Policies Act.	**Implemented in modified form; legislation supported:** In both the 107th and 108th Congresses, the Administration supported comprehensive electricity reform legislation that promotes competition, protects consumers, enhances reliability, promotes renewable energy, improves energy efficiency, enhances the transmission and distribution infrastructure, repeals the Public Utility Holding Company Act of 1935, and reforms the Public Utility Regulatory Policies Act of 1978. Congress considered, but did not enact, legislation to address these important needs.	None.
5-11: The NEPD Group recommends that the President encourage FERC to use its existing statutory authority to promote competition and encourage investment in transmission facilities.	**Implemented; activities ongoing:** FERC promotes competition and encourages investment through the use of effective market rules administered by independent grid and market managers. FERC's April 2003 White Paper on the wholesale market emphasized the need for independent transmission system and market operations, while underscoring an increasingly flexible approach to regional needs. The White Paper also highlighted other key principles to increase the benefits of wholesale electric competition for end-use customers. FERC encourages the continued development of Regional Transmission Organizations and Independent System Operators with sound market rules that reduce the costs of "seams" and inconsistent practices between regions, eliminate discriminatory or preferential practices, monitor and address the exercise of market power, and encourage new investment in the grid.	The status report does not provide information on the extent to which FERC's efforts have resulted in investment in transmission facilities. FERC has a goal to foster nationwide competitive energy markets as a substitute for traditional regulation.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-12: The NEPD Group recognizes the importance of looking to technology to help us meet the goals of increasing electricity generation while protecting our environment. To that end, the NEPD Group recommends that the President direct DOE to continue to develop advanced clean coal technology by (1) investing $2 billion over 10 years to fund research in clean coal technologies, (2) supporting a permanent extension of the existing research and development tax credit, (3) directing federal agencies to explore regulatory approaches that will encourage advancements in environmental technology.	**Implemented; activities ongoing:** Including the funds proposed for clean coal technology programs contained in the President's FY 2005 budget request, the Administration is on track to exceed the President's commitment to clean coal funding. This includes the FutureGen project, a $1 billion cost-shared project with the private sector to build and operate the world's first coal-fired power and hydrogen producing plant with near-zero emissions. The President's FY 2005 budget also recommended permanent extension of the research and development investment tax credit. Finally, the President's Clear Skies legislation largely eliminates the need for traditional new source review for power plants, an impediment to environmental technology investments.	Permanent extension of the research and development investment tax credit has been proposed, but not enacted. Clear Skies legislation has been proposed, but not enacted. EPA is pursuing related rulemaking. See related recommendations 3-1 and 5-13.
5-13: The NEPD Group recommends that the President direct federal agencies to provide greater regulatory certainty relating to coal electricity generation through clear policies that are easily applied to business decisions.	**Implemented; activities ongoing:** Using a proven, market-based approach that can save American consumers millions of dollars in compliance costs, the Bush Administrations' Clear Skies proposal will cut air pollution emissions from electric power plants by approximately 70 percent over 15 years. This historic proposal will bring cleaner air to Americans faster, more reliably, and more cost-effectively than under current law, and it would also, for the first time, reduce emissions of mercury from electric power plants. This legislation, if enacted into law, could provide a more certain regulatory environment and encourage new investments by assuring a future for coal electricity generation in our Nation's energy mix.	The reported status does not indicate what activities are ongoing at federal agencies to provide greater regulatory certainty as mentioned in the recommendation. Clear Skies legislation was reintroduced earlier this year as S. 131. However, in the absence of the legislation, EPA is implementing two rules with similar goals as Clear Skies. In March 2005, EPA issued the Clean Air Interstate Rule, which addresses sulfur dioxide and nitrogen oxides. The reduction goals for this rule are similar to those under Clear Skies, but it only affects facilities in 28 eastern states and the District of Columbia, while Clear Skies would have been a national program. The second is the Clean Air Mercury Rule, which EPA issued later in March 2005. This rule would limit mercury emissions to similar levels as the Clear Skies legislation. However, it is possible that implementation of a mercury rule may be delayed by litigation. See related recommendations 3-1 and 5-12.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-14: The NEPD Group recommends that the President support the expansion of nuclear energy in the United States as a major component of our national energy policy. Following are specific components of the recommendation: (1) Encourage the Nuclear Regulatory Commission to ensure that safety and environmental protection are high priorities as they prepare to evaluate and expedite applications for licensing new advanced-technology nuclear reactors. (2) Encourage NRC to facilitate efforts by utilities to expand nuclear energy generation in the United States by uprating existing nuclear plants safely. (3) Encourage NRC to relicense existing nuclear plants that meet or exceed safety standards. (4) Direct the Secretary of Energy and the EPA Administrator to assess the potential of nuclear energy to improve air quality. (5) Increase resources as necessary for nuclear safety enforcement in light of the potential increase in generation. (6) Use the best science to provide a deep geologic repository for nuclear waste. (7) Support legislation clarifying that qualified funds set aside by plant owners for eventual decommissioning will not be taxed as part of the transaction. (8) Support legislation to extend the Price–Anderson Act.	**Implemented; legislation proposed:** NRC continues to review current regulatory requirements and procedures that will be applicable to new plant licensing to ensure that they are safe, environmentally protective, streamlined, and consistent with more recent operating history. Through DOE's Nuclear Power 2010 Program, the Administration is funding demonstrations using the new NRC expedited licensing process for new nuclear plants. In the last 15 years, NRC has approved almost 90 power uprates, which represent an additional 3,700 megawatts electric (MWe) on the electrical grid or an equivalent of almost four "additional" nuclear power plants. Applications for future uprates totaling just over 1,000 MWe are pending before NRC. NRC has issued renewed licenses for 30 units at 14 sites and has license renewal applications under review for another 16 units at 8 sites. Following congressional approval of the Yucca Mountain repository, DOE has advanced the process of designing, licensing, and developing the site. NRC is undertaking an independent site review, and DOE plans to file a license application with NRC in 2005. The President's FY 2003 budget and subsequent budget requests have proposed to clarify the tax-free status of funds that are set aside for eventual decommissioning of nuclear plants. Congress has considered, but has not yet enacted, legislation that would have included this clarification or provided a long-term extension of the Price-Anderson Act.	The status report does not address the part of the recommendation that directs the Secretary of Energy and the EPA Administrator to assess the potential of nuclear energy to improve air quality. We found that EPA planned to complete the initial draft of the Nuclear Energy and Air Quality report, including EPA and DOE management review, by the spring of 2004. By the summer of 2004, EPA planned to release the final study conclusions. Regarding NRC, the commission did not participate in the development of this recommendation nor is NRC tasked with implementation of this recommendation. The NRC programs cited in the status report represent some of the NRC programs associated with nuclear energy. Other associated programs include nuclear materials safety, reactor safety research, and other nuclear waste safety. Regarding Yucca Mountain, DOE missed a January 31, 1998, contractual deadline to begin accepting nuclear waste from utilities. About 60 lawsuits are pending in the U.S. Court of Federal Claims for damages for failure of the government to meet that obligation. The federal government faces a potential liability estimated by industry to be as high as $50 billion. DOE believes that the government's potential liability is more likely in the range of $2 to $3 billion, if the facility were to open in 2010. The government's plan to dispose of nuclear waste at Yucca Mountain has been the subject of extensive litigation and debate over many years. In July 2004, a federal appeals court rejected the radiation protection standard established by EPA for the site. Most recently, after the status report was issued, on March 16, 2005, the Secretary of Energy announced that government employees (U.S. Geological Survey) may have falsified documents related to computer modeling for water infiltration and climate at the site. The Secretary stated that DOE has initiated a scientific investigation of these data and documentation that was part of this modeling activity. He further stated that in addition, he referred the matter to DOE's Office of Inspector General for a full investigation.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-15: The NEPD Group recommends that, in the context of developing advanced nuclear fuel cycles and next generation technologies for nuclear energy, the United States should reexamine its policies to allow for research, development, and deployment of fuel conditioning methods (such as pyroprocessing) that reduce waste streams and enhance proliferation resistance. In doing so, the United States will continue to discourage the accumulation of separated plutonium, worldwide.	**Implemented; activities ongoing:** DOE's Advanced Fuel Cycle Initiative (AFCI) Program develops advanced fuel cycle technologies, which include spent fuel treatment, advanced fuels, and transmutation technologies, for application to current operating commercial reactors, advanced light water reactors, and Generation IV nuclear energy systems.	The status report does not provide information on whether the United States has reexamined its policies to allow for research, development, and deployment of fuel conditioning methods (such as pyroprocessing) that reduce waste streams and enhance proliferation resistance. It is not clear how the programs listed in the status report address this recommendation. Also, no program goals or results are discussed. In response to our question about the status of this recommendation, DOE stated that prior to the NEP report in May 2001, U.S. research and development of fuel conditioning methods was limited by the requirements to not encourage the civil use of plutonium and to not engage in plutonium reprocessing for either nuclear power or nuclear explosive purposes. Following publication of the NEP report, United States policy on research and development of fuel conditioning technologies was changed to permit research in the context of developing advanced, proliferation resistant nuclear fuel cycle, and nuclear reactor technologies.
5-16: The United States should also consider technologies (in collaboration with international partners with highly developed fuel cycles and a record of close cooperation) to develop reprocessing and fuel treatment technologies that are cleaner, more efficient, less waste intensive, and more proliferation-resistant.	**Implemented; activities ongoing:** Considerable expertise in nuclear fuel-cycle technologies has been developed internationally, and the potential for significant cooperation and collaboration is very high. DOE is currently collaborating with France, Switzerland, the European Commission, and the Republic of Korea in separations, fuels, transmutation, and test facilities. Other potential international partners include Japan, South Africa, Canada, and Brazil.	It is not clear from the status report what DOE programs are involved and what results have been achieved. In response to our question about the status of this recommendation, DOE stated that technologies for reprocessing and fuel treatment technologies that are cleaner, more efficient, less waste intensive, and more proliferation-resistant have not been developed and research is continuing.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
5-17: The NEPD Group recognizes there is a need to reduce the time and cost of the hydropower licensing process. The NEPD Group recommends that the President encourage FERC and direct federal resource agencies to make the licensing process more clear and efficient, while preserving environmental goals. In addition, the NEPD Group recognizes the importance of optimizing the efficiency and reliability of existing hydropower facilities and will encourage the Administration to adopt efforts toward that end. • Support administrative and legislative reform of the hydropower licensing process. • Direct federal resource agencies to reach interagency agreement on conflicting mandatory license conditions before they submit their conditions to FERC for inclusion in a license. • Encourage FERC to adopt appropriate deadlines for its own actions during the licensing process.	**Implemented; activities ongoing; legislation supported:** In 2002, following consultation with stakeholders and other federal agencies, FERC developed a new, more efficient, Integrated Licensing Process (ILP) for the licensing of hydropower dams. To date, seven projects have elected to use the ILP process. Through these individual cases, the commission has identified ways of further reducing the redundancies related to commission and state environmental reviews. In addition, in September 2004, Commerce and DOI proposed to codify their existing mandatory condition review process consistent with FERC's ILP, and DOI also proposed an administrative appeals process. The Administration has generally supported legislative initiatives to carry out this NEP recommendation.	The reported status does not make it clear if legislation has been proposed or what legislation has been supported to carry out this recommendation. In a previous report, we recommended that FERC inform Congress of the extent that time and cost data limitations restrict its ability to reach informed decisions on whether further administrative reforms or legislative changes are needed to shorten the hydropower licensing process or make it less costly. We also recommended that the commission work with other federal and state agencies and licensees to (1) collect complete and accurate data on process-related time and costs by participant, project, and process step and (2) link time and costs to projects displaying similar characteristics in order to identify those project, process, and outcome characteristics that can increase the time and costs to obtain a license. In addition, we recommended that the commission (1) establish a schedule and firm deadlines for implementing the necessary enhancements to its management information systems that are required to track and analyze process-related time and costs and (2) share these data with other parties involved or interested in the process.[a] FERC generally agreed with our characterization of the licensing process and the primary issues that affect time and costs. It also agreed that it does not systematically collect complete and accurate data on process-related time and costs by participant, project, and process step. However, FERC believes that these data are not needed to reach informed decisions on the effectiveness of recent reforms to the licensing process as well as the need for further reforms to the process. Rather, it thinks that it can address the salient issues by developing "targeted analyses" to determine major factors affecting licensing time and costs based, in part, on its "years of experience" with the licensing process. However, we continue to believe that good time and cost data are needed to reach good decisions. Without such data, it will not be possible for the commission to determine how much either can be reduced. Moreover, without these data and the ability to link time and costs to projects, processes, and outcomes, FERC increases the risk that any reforms that it recommends may not only not reduce process-related time and costs but also may result in unintended consequences to the outcomes of the process. FERC did not implement our recommendations.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
6-1: The NEPD Group recommends that the President direct the Secretaries of the Interior and Energy to reevaluate access limitations to federal lands in order to increase renewable energy production, such as biomass, wind, geothermal, and solar.	**Implemented; activities ongoing:** DOI and DOE hosted two renewable energy conferences to provide a public forum to share ideas on increasing renewable energy development on federal lands. Information garnered at these conferences was published in August 2002 in an interagency report entitled *White House Report in Response to the National Energy Policy Recommendations to Increase Renewable Energy Production on Federal Lands*. In October 2002, BLM issued its Wind Policy to expedite the development of wind resources on public lands. In February 2003, BLM and NREL issued a joint report, *Assessing the Potential for Renewable Energy on Public Lands*, that will help federal land managers make decisions on prioritizing land-use activities that will increase development of renewable energy resources on BLM, tribal, and Forest Service lands in the West (except Alaska). NREL also is preparing an assessment of wind and solar energy potential on National Forest Service lands that should be ready later this year.	It is not clear what has changed because of these reports. For example, has renewable energy production increased on federal lands and have any baseline measures been established and comparison made? Also, it is not clear what access limitations have been reevaluated.
6-2: The NEPD Group supports the increase of $39.2 million in the FY 2002 budget amendment for DOE's Energy Supply account that would provide increased support for research and development of renewable energy resources.	**Implemented:** For FY 2002, the total budget request for DOE's Energy Supply account, including renewable energy and related technologies, was $276.6 million. This figure included the original budget request of $237.5 million and the supplemental request of $39.2 million recommended in the NEP. Comparable figures for FYs 2003 and 2004 were $408 million and $444 million, respectively.	Additional information is available on funding for renewable energy under DOE's Energy Supply account. This account included funding for other activities outside of renewable programs, namely the electric energy systems program that strives to enhance electricity delivery. In fact about one-half ($17.8 million) of the $39.2 million supplemental request was for the electric energy systems program. Compared with the total budget request of $276.6 million in FY 2002, actual funding for this account was $373.2 million in FY 2001 and $385.6 million in FY 2002.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
6-3: The NEPD Group recommends that the President direct the Secretary of Energy to conduct a review of current funding and historic performance of renewable energy and alternative energy research and development programs in light of the recommendations of this report. Based on this review, the Secretary of Energy is then directed to propose appropriate funding of those research and development programs that are performance-based and are modeled as public-private partnerships.	**Implemented:** Program activities within DOE's Office of Energy Efficiency and Renewable Energy (EERE) are conducted in partnership with the private sector, state and local government, DOE national laboratories, and universities. In July 2002, after a review of past funding and performance, EERE was reorganized to strengthen its focus on programs and these public-private partnerships. This reorganization, "Focused on Results: Streamlining and Integrating Program and Business Management for Better Performance," is designed to create a more responsive performance-based research and development effort. The results of this reorganization have been reflected in recent budget submissions.	DOE reports it completed a review with findings that focused management on the need for reorganization. However, it is not clear how this review addressed the recommendation to conduct a review of renewable energy and alternative energy research and development programs in light of the recommendations of the NEP report. For example, outside of the reorganization, how have research efforts changed and what developments have been made? Also, DOE's review focused on DOE programs, but there are other renewable energy and alternative energy research and development programs funded by the federal government through agencies, such as the National Science Foundation (NSF) and USDA, that were not addressed by the review. See related recommendation 4-2 on energy efficiency.
6-4: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress on legislation to expand the section 29 tax credit to make it available for new landfill methane projects. The credit could be tiered, depending on whether a landfill is already required by federal law to collect and flare its methane emissions due to local air pollution concerns.	**Implemented; legislation proposed:** The President's FY 2003 budget and subsequent budget requests have each proposed a tax credit for new landfill methane projects. Congress considered, but did not enact, legislation that would have provided such a tax credit. However, landfill methane projects were included in the extension of the tax credit for renewable electricity contained in the corporate tax bill (Pub. L. No. 108-357) signed into law by the President in October 2004.	The status report does not make it clear why the status is characterized as "legislation proposed" when legislation has been enacted (Pub. L. No. 108-357). Also, DOE does not indicate how long the extension is for the tax credit for renewable energy. In response to our inquiry, DOE noted that Pub. L. No. 108-357 does expand the credit to landfill gas for power generation, but not for other applications that would be covered by legislation called for by this recommendation. However, it is still not clear what those other applications would be.
6-5: The NEPD Group recommends that the President direct the Secretary of the Interior to determine ways to reduce the delays in geothermal lease processing as part of the permitting review process.	**Implemented:** Since 2001, BLM has issued more than 200 new geothermal leases, a 1,000 percent increase over the previous 4 years. In 2001, BLM-Nevada issued an action plan for expediting the processing of geothermal leases. To help identify new candidate sites for geothermal development, BLM and DOE completed a collaborative resource assessment and prepared a report, *Opportunities for Near-Term Geothermal Development on Public Lands in the Western United States*, issued in April 2003. The report identifies 35 top-pick BLM sites in 18 planning units in 6 states as having high potential for near-term geothermal development.	The status report does not indicate how delays have been reduced or what actions BLM took to increase leases by 1,000 percent. Also, it is not clear whether baselines and performance measures for reducing delays have been established.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
6-6: The NEPD Group recommends that the President direct the EPA Administrator to develop a new renewable energy partnership program to help companies more easily buy renewable energy, as well as receive recognition for the environmental benefits of their purchase, and help consumers by promoting consumer choice programs that increase their knowledge about the environmental benefits of purchasing renewable energy.	**Implemented:** In 2001, EPA launched the Green Power Marketing Program with 21 charter members. The Green Power Partnership encourages organizations to use renewable energy as a part of best-practice environmental management. The program now boasts 600 partners—including Fortune 500 companies, federal agencies, state and local governments, nongovernmental organizations, and universities—committed to purchase some 2 billion kwh of electricity from "Green Power" sources. EPA also has developed a Green Power Web site, a comprehensive procurement guide and an online Green Power Locator to help consumers find Green Power suppliers.	The status report does not indicate whether a baseline and goal for increasing purchases of renewable energy has been established. No information is provided on how much of the 2 billion kwh has been purchased and whether this an annual goal or a longer term goal. Also, regarding efforts to increase their knowledge about the benefits of renewable energy, it is not clear how these efforts are related to other education programs outlined under recommendations 2-1 and 4-15.
6-7: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress on legislation to extend and expand tax credits for electricity produced using wind and biomass. The President's budget request extends the present 1.7 cents per kilowatt hour tax credit for electricity produced from wind and biomass; expands eligible biomass sources to include forest-related sources, agricultural sources, and certain urban sources; and allows a credit for electricity produced from biomass co-fired with coal.	**Implemented; legislation enacted:** The President's FY 2003 budget and subsequent budget requests have each proposed extending and expanding the current Section 45 tax credit for electricity produced from certain renewable sources, such as wind, solar, and biomass. Congress considered, but did not enact, legislation that would have provided such a tax credit. A 1-year extension of the tax credit for renewable electricity was contained in the corporate tax bill (Pub. L. No. 108-357) signed into law by the President in October 2004.	The status report notes that tax credits are reported to be extended 1 year, but it is not clear from the status report whether any expansion of tax credits was enacted as called for in this recommendation. DOE considers this recommendation implemented by legislation enacted because it was extended 1 year. In providing techincal comments on a draft of this report, the Department of the Treasury noted that the American Jobs Creation Act of 2004 (Pub. L. No. 108-357) expanded the wind and biomass credit (code section 45) to include electricity produced from open-loop biomass and several other energy sources.
6-8: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress on legislation to provide a new 15 percent tax credit for residential solar energy property, up to a maximum credit of $2,000.	**Implemented; legislation proposed:** The President's FY 2003 budget and subsequent budget requests have each proposed a tax credit for residential solar energy investments. Congress considered, but did not enact, legislation that would have provided such a tax credit.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
6-9: The NEPD Group recommends that the President direct the Secretaries of the Interior and Energy to work with Congress on legislation to use an estimated $1.2 billion of bid bonuses from the environmentally responsible leasing of ANWR for funding research into alternative and renewable energy resources, including wind, solar, geothermal, and biomass.	**Implemented; legislation proposed:** The President's FYs 2003-05 budgets have each proposed using ANWR bid bonuses to fund renewable energy research and development activities. Congress considered, but did not enact, legislation that would have opened ANWR to environmentally responsible development.	See related recommendation 3-2 on the use of ANWR royalties.
6-10: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress to continue the ethanol excise tax exemption.	**Implemented; legislation enacted:** The President's FY 2003 budget and subsequent budget requests have each proposed to continue the ethanol excise tax exemption. Extension of this tax exemption was contained in the corporate tax bill (Pub. L. No. 108-357) signed into law by the President in October 2004.	Our review of the provisions of The American Jobs Creation Act of 2004 (Pub. L. No. 108-357) found that the excise tax exemption was not continued as DOE reported, but rather was repealed and replaced by a new ethanol tax exemption that has an economically equivalent effect on ethanol producers (but increases revenues dedicated to the Highway Trust Fund). Thus DOE considered the recommendation to be implemented.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
6-11: The NEPD Group recommends that the President direct the Secretary of Energy to develop next-generation technology—including hydrogen and fusion. (1) Develop an education campaign that communicates the benefits of alternative forms of energy, including hydrogen and fusion. (2) Focus research and development efforts on integrating current programs regarding hydrogen, fuel cells, and distributed energy. (3) Support legislation reauthorizing the Hydrogen Energy Act.	**Implemented; activities ongoing:** In his January 2003 State of the Union address, President Bush announced a $1.2 billion Hydrogen Fuel Initiative to develop the technologies and infrastructure to produce, store, and distribute hydrogen for use in fuel cell vehicles and distributed electricity generation. Combined with the FreedomCAR Partnership, President Bush is proposing a total of $1.7 billion over 5 years to develop hydrogen-powered fuel cells, hydrogen infrastructure, and advanced automotive technologies. To implement internationally the goals of President Bush's FreedomCAR and Hydrogen Fuel Initiatives, the United States hosted the first Ministerial meeting of the International Partnership for the Hydrogen Economy (IPHE) in November 2003. The IPHE's 15 nations and the EU are working to advance research, development, and deployment of hydrogen and fuel cell technologies, and to develop common codes and standards for hydrogen use. DOE has developed extensive Web-based material to educate the public on alternative forms of energy, including hydrogen and fusion. In addition, in October 2003, DOE launched an effort to introduce science students across the country to the promise of hydrogen and fuel cell technology. Through the program, students of all ages will be introduced to the basic concepts and principles of hydrogen-based energy in fun and creative ways to interest them in the vision of a hydrogen economy. DOE prepared extensive testimony and documentation in support of proposed legislation to reauthorize the Hydrogen Future Act as a part of any comprehensive national energy legislation. Also, in 2003, President Bush announced that the United States was rejoining negotiations on the International Thermonuclear Experimental Reactor, a research project to develop nuclear fusion's potential as a future energy source.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
6-12: The NEPD Group recommends that the President direct the Secretary of the Treasury to work with Congress to develop legislation to provide for a temporary income tax credit available for the purchase of new hybrid or fuel-cell vehicles between 2002 and 2007.	**Implemented; legislation proposed:** The President's FY 2003 budget and subsequent budget requests have each proposed a tax credit for hybrid and fuel cell vehicles. Congress considered, but did not enact, legislation that would have established this tax credit.	See duplicate recommendation 4-11.
6-13: The NEPD Group recommends that the President direct the EPA Administrator to issue guidance to encourage the development of well-designed CHP units that are both highly efficient and have low emissions. The goal of this guidance would be to shorten the time needed to obtain each permit; provide certainty to industry by ensuring consistent implementation across the country; and encourage the use of these cleaner, more efficient technologies.	**Implemented:** In 2001, DOE and EPA issued a stakeholder roadmap for CHP and established the Distributed Generation Emissions Collaborative, composed of DOE, EPA, states, and industry, to address state emission requirements for CHP facilities. DOE and EPA have worked together to organize regional CHP initiatives for most regions of the country to foster the use of CHP, develop tools and services to support the development of new projects, and address permitting and other barriers within their regions. Several states have issued permitting rules or are drafting permitting rules that address CHP. EPA has developed a handbook, *Output-based Regulations: A Handbook for Regulators*, to assist air regulators in developing emissions regulations that recognize the pollution prevention benefits of efficient energy generation, like CHP, and renewable energy technologies.	See related recommendation 4-8. The reported status for recommendation 4-8 lists activities ongoing, while the reported status for this recommendation does not. DOE confirmed that both recommendations have activities ongoing.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-1: The NEPD Group recommends that the President direct the Secretary of Energy to work with FERC to improve the reliability of the interstate transmission system and to develop legislation providing for enforcement by a self-regulatory organization subject to FERC oversight.	**Implemented; activities ongoing, legislation supported:** The President has repeatedly called on Congress to develop legislation that would improve the reliability of the interstate electric transmission system by providing for enforcement by a self-regulatory organization subject to FERC oversight. FERC and DOE worked together on the U.S. Canada Power System Outage Task Force, which investigated the August 2003 blackout and recommended that Congress make reliability standards mandatory and enforceable, with penalties for noncompliance. DOE's newly created Office of Electric Transmission and Distribution is working with reliability experts from the power industry, state governments, and their Canadian counterparts to improve grid reliability and increase investment in our electric infrastructure. For example, following the August 2003 blackout, DOE's Transmission Reliability Program accelerated efforts to install real-time grid early-warning equipment and software in the Eastern United States.	The reported status does not indicate whether any legislation has been developed. In response to our question about legislation, DOE stated that Title XII of last year's energy bill conference report included a provision for enforcement by a self-regulatory organization subject to FERC oversight. In addition, the status report does not note that FERC acted on the recommendations of the Task Force with a Policy Statement (Docket No. PL04-5) identifying specific initiatives the commission should undertake to promote reliable transmission service. Also, the commission formed a new reliability division to specifically address the reliability of the transmission system.
7-2: The NEPD Group recommends that the President direct the Secretary of Energy to expand the department's research and development on transmission reliability and superconductivity.	**Implemented; activities ongoing:** Through its electricity transmission and distribution research and development activities, DOE supports superconductivity and breakthrough grid reliability technologies. The President's FY 2005 budget sought $45 million for these programs, up from a FY 2003 request of $32.3 million. With DOE funding support, two American firms, American Superconductor Corp. and IGC Superpower, announced in March 2004 world-record performance in its second generation high temperature superconductor (HTS) wire. The companies reported that the electrical current carrying capacity of its new wire is now twice that of the best industrial HTS wires anywhere in the world, and 50 percent higher than previous results.	The status report does not provide information on what actual funding for these programs has been. In addition, other federal programs conduct superconductivity research that may be related to this recommendation. For example, the National Science Foundation funds superconductivity research.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-3: The NEPD Group recommends that the President direct the Secretary of Energy to authorize the Western Area Power Administration to explore relieving the "Path 15" bottleneck through transmission expansion financed by nonfederal contributions.	**Implemented:** A transmission line to relieve the California "Path 15" bottleneck was energized on December 14, 2004, following considerable facilitation from DOE and FERC, which approved an incentive rate agreement among users providing for the recovery of the upgrade costs borne by the private sector.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-4: The NEPD Group recommends that the President direct the appropriate federal agencies to take actions to remove constraints on the interstate transmission grid and allow our nation's electricity supply to meet the growing needs of our economy. (1) Direct the Secretary of Energy, by December 31, 2001, to examine the benefits of establishing a national grid, identify transmission bottlenecks, and identify measures to remove transmission bottlenecks. (2) Direct the Secretary of Energy to work with FERC to relieve transmission constraints by encouraging the use of incentive rate-making proposals. (3) Direct the federal utilities to determine whether transmission expansions are necessary to remove constraints. The Administration should review the Bonneville Power Administration's (BPA) capital and financing requirements in the context of its membership in a regional transmission organization, and, if additional Treasury financing appears warranted or necessary in the future, the Administration should seek an increase in BPA's borrowing authority at that time. (4) Direct the Secretary of Energy, in consultation with appropriate federal agencies and state and local government officials, to develop legislation to grant authority to obtain rights-of-way for electricity transmission lines, with the goal of creating a reliable national transmission grid. Similar authority already exists for natural gas pipelines in recognition of their role in interstate commerce.	**Implemented; activities ongoing:** In May 2002, DOE provided the President with the National Transmission Grid Study, which made 51 recommendations to facilitate investment in the Nation's transmission infrastructure to improve reliability and reduce electricity costs to consumers. Following completion of the study, DOE and FERC worked to develop incentive rate proposals, including higher rates of return for new grid investments, for investments in new technologies and sophisticated grid operating practices, and for grid owners who join a regional transmission organization and let that organization operate the grid. FERC has since issued a Proposed Pricing Policy for public comment. DOE also started a process to identify and make known "National Interest Transmission Bottlenecks" that need to be addressed. In July 2003, FERC approved standardized procedures and agreements for the interconnection of electricity generators (larger than 20 megawatts) to the interstate transmission grid. In November 2003, FERC issued market behavior rules to help prevent market abuse, provide a more stable marketplace, and create an environment that will attract investment capital in the electricity and natural gas sectors, and, in April 2004, FERC adopted new methods to assess "market power" in the electric sector and clarified its standards of conduct that govern the relationship between transmission providers and their energy affiliates. In both the 107th and 108th Congresses, the Administration supported comprehensive electricity reform legislation that would have established last-resort federal siting authority for high-priority transmission lines. Congress considered, but did not enact, legislation to address this important need.	The DOE status report does not address whether the administration reviewed the BPA's capital and financing requirements in the context of its membership in a regional transmission organization as called for in this recommendation. Thus, it is not known if additional Treasury financing appears warranted or necessary in the future, or whether the Administration sought an increase in BPA's borrowing authority. According to DOE, the Administration did review BPA's financing requirements, and, for the FY 2003 budget, requested an additional $700 million in BPA borrowing authority.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-5: The NEPD Group recommends that the President direct the Secretary of the Interior to work with Congress and the State of Alaska to put in place the most expeditious process for renewal of the Trans-Alaskan Pipeline System lease to ensure that Alaskan oil continues to flow uninterrupted to the west coast of the United States.	**Implemented:** Interior Secretary Gale Norton approved a 30-year renewal of the federal right-of-way lease for the Trans-Alaska oil pipeline bringing that oil to Port Valdez, effective January 23, 2004.	See duplicate recommendation 5-9.
7-6: The NEPD Group recommends that the President direct the Secretaries of Energy and State, coordinating with the Secretary of the Interior and FERC, to work closely with Canada, the State of Alaska, and all other interested parties to expedite the construction of a pipeline to deliver natural gas to the lower 48 states. This should include proposing to Congress any changes or waivers of law pursuant to the Alaska Natural Gas Transportation Act of 1976 that may be required.	**Implemented; activities ongoing; legislation enacted:** An interagency working group, including FERC, DOE, EPA, and DHS, was convened in July 2001 and continues to meet regularly to facilitate interagency coordination. In April 2004, the President signed Executive Order 13337, which updated the Secretary of State's authority to issue Presidential Permits for cross-border petroleum or natural gas pipelines after consultation with DOE, EPA, DHS, and other agencies. In October 2004, Congress enacted and the President approved the Alaska Natural Gas Pipeline Act (Pub. L. No. 108-324) to expedite and streamline federal permitting for an Alaska natural gas pipeline and authorize $18 billion in federal loan guarantees for the project.	While the status information reports that Congress enacted Pub. L. No. 108-324, it does not state what changes this law made to the Alaska Natural Gas Transportation Act of 1976. The status report also does not set out the Secretary of Energy's role under Pub. L. No. 108-324 in issuing loan guarantees. In response to our questions, DOE noted that the 2004 Act included minor modifications to the 1976 Act and that DOE is the lead agency concerning loan guarantees. DOE also told us that FERC is prepared to work with project proponents as soon as an application is filed, possibly as early as November 2005. We observed that Executive Order 13337 does not address cross-border gas pipelines. Specifically, the executive order states that "except for facilities covered by Executive Order 10485" the Secretary of State is designated to receive applications for cross-border permits. Executive Order 10485, as amended, empowers the Secretary of Energy to issue permits for the importation or exportation of natural gas to or from a foreign country. Accordingly, it is not clear how Executive Order 13337, which by its terms excludes cross-border natural gas pipelines, is relevant to this recommendation. See duplicate recommendation 8-9.
7-7: The NEPD Group recommends that the President support legislation to improve the safety of natural gas pipelines, protect the environment, strengthen emergency preparedness and inspections, and bolster enforcement.	**Implemented; legislation enacted:** In December 2002, the President signed into law the Pipeline Safety Improvement Act of 2002 (Pub. L. No. 107-355), which will improve the safety of natural gas pipelines, protect the environment, strengthen emergency preparedness and inspections, and bolster enforcement.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-8: The NEPD Group recommends that the President direct agencies to continue their interagency efforts to improve pipeline safety and expedite pipeline permitting in an environmentally sound manner and encourage FERC to consider improvements in the regulatory process governing approval of interstate natural gas pipeline projects.	**Implemented; activities ongoing:** DOT has led cooperative action to implement provisions of the Pipeline Safety Improvement Act of 2002, finalizing gas integrity management regulations, developing standards to evaluate operator qualification, reviewing gas integrity management plans, and inspecting operator qualification plans. DOT and other agencies are cooperating to implement the legislation through the development of an interagency Memorandum of Understanding (MOU) that provides for expedited permit reviews for repair instances where best management practices are applied. Through use of the NEPA pre-filing process, FERC has reduced the time for permitting a major pipeline from 16 months or longer to as few as 9 months.	The status report does not provide information on the status of the development of the interagency MOU that provides for expedited permit reviews. According to DOE, the MOU was signed in the summer of 2004, and the agencies are still developing implementation protocols.
7-9: The NEPD Group recommends that the President direct the EPA Administrator to study opportunities to maintain or improve the environmental benefits of state and local "boutique" clean fuel programs, while exploring ways to increase the flexibility of the fuels distribution infrastructure, improve fungibility, and provide added gasoline market liquidity. In concluding this study, the administrator shall consult with DOE, USDA, and other agencies as needed.	**Implemented:** Following extensive interagency consultation, EPA completed a series of analyses of "boutique fuel" issues in October 2001, resulting in a report to the President. The report identified several regulatory changes that can be made in the near term that could help to moderate gasoline price spikes during future transition periods when fuel producers switch from winter to summer grade cleaner-burning gasoline. The report also sought public comment on longer term changes to EPA's fuels programs. These changes may require amendments to the Clean Air Act or wide-scale changes to current fuel regulations. Congress considered, but did not enact, legislation that would have addressed this issue.	The status report does not indicate what the status is of the regulatory changes that can be made in the near term. Also, it is not clear what specific legislation was proposed to address longer term changes or whether activities are ongoing to address these changes. In response to our questions, DOE stated that a number of short-term provisions were finalized, but that longer term actions still require enacted legislation.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-10: The NEPD Group recommends that the President direct the EPA Administrator and the Secretary of Energy to take steps to ensure America has adequate refining capacity to meet the needs of consumers. (1) Provide more regulatory certainty to refinery owners and streamline the permitting process where possible to ensure that regulatory overlap is limited. (2) Adopt comprehensive regulations (covering more than one pollutant and requirement) and consider the rules' cumulative impacts and benefits.	**Implemented; activities ongoing:** In 2002, EPA released a background paper on impacts of the New Source Review (NSR) Program on power plants, refineries, and energy efficiency; held four public "hearings"; toured communities near refineries in Lake Charles, Louisiana, and Houston. EPA finalized rules to implement several improvements to the NSR Program, including "Plant Applicability Limits," that will make it easier for refineries to upgrade or expand their facilities while maintaining stringent environmental standards. The Executive Order 13212 Task Force is currently reviewing opportunities to simplify and expedite the refinery permitting process by working collaboratively with federal agencies, states, and local communities to eliminate regulatory delay or overlap.	The status report does not provide information on the status of the task force review of opportunities to simplify the refinery permitting process. (See related recommendation 3-3 on the work of the task force.) Further information is available on EPA's rules. In June 2001, EPA issued a NSR background paper as a partial response to recommendation 7-11 that sought a report on NSR within 90 days. EPA's June 2002 final report found that NSR had not affected investments in new power plants and refineries but had discouraged some energy-efficiency projects at existing facilities, including some that would have reduced air emissions. However, EPA noted that the report's conclusions about the effect of NSR on energy-efficiency projects are based on anecdotal information from industry because the agency lacked comprehensive data on the number of projects that did not go forward as a result of NSR. Because of a lack of data and uncertainties about NSR's impact, we recommended that EPA determine what data are available, identify additional data needs, and use the monitoring results to determine whether NSR has created adverse effects that EPA needs to address. While EPA generally agreed with these recommendations, EPA is still collecting data on the rules' effects. EPA's modifications to the NSR Program are contained in rules issued in December 2002 and October 2003. However, lawsuits challenging the legality of these two rules were filed in court. The 2002 rule, which is intended to provide incentives for facilities to reduce emissions, removes barriers to energy-efficiency and pollution control projects and offers greater regulatory flexibility. It is currently being implemented in 10 states while other rules are awaiting EPA approval. The 2002 rule included plant applicability limits. However, the 2003 rule, which is intended to allow companies to modernize facility operations in ways that will maintain and improve safety, reliability, and efficiency, has been prevented from going into effect by legal challenges. On December 24, 2003, the U.S. Court of Appeals for the District of Columbia Circuit stayed this equipment replacement rule pending further review of the legal challenges brought by a coalition of primarily mid-Atlantic and northeastern states and environmental and public health groups. See related recommendation 7-11.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-11: The NEPD Group recommends that the President direct the EPA Administrator, in consultation with the Secretary of Energy and other relevant agencies, to review NSR regulations, including administrative interpretation and implementation, and report to the President within 90 days on the impact of the regulations on investment in new utility and refinery generation capacity, energy efficiency, and environmental protection.	**Implemented:** Following several public outreach meetings, EPA sent to the President in June 2002 a final report on its review of the NSR Program. EPA has since issued modifications to the NSR Program to facilitate power plant and refinery maintenance, enabling safety and efficiency improvements to move forward without penalizing industry and the consumers who need affordable electric power and refined fuels, while also preserving air quality.	Further information is available on the status of this recommendation. For example, in June 2001, EPA issued a NSR background paper as a partial response to the recommendation that sought a report within 90 days. EPA's June 2002 final report found that NSR had not affected investments in new power plants and refineries but had discouraged some energy-efficiency projects at existing facilities, including some that would have reduced air emissions. However, EPA notes that the report's conclusions about the effect of NSR on energy-efficiency projects are based on anecdotal information from industry because the agency lacked comprehensive data on the number of projects that did not go forward as a result of NSR. Because of a lack of data and uncertainties about NSR's impact, we recommended that EPA determine what data are available, identify additional data needs, and use the monitoring results to determine whether NSR has created adverse effects that EPA needs to address. While EPA generally agreed with these recommendations, EPA is still collecting data on the rules' effects. EPA's modifications to the NSR Program are contained in rules issued in December 2002 and October 2003. However, lawsuits challenging the legality of these two rules were filed in court. The December 2002 rule, which is intended to provide incentives for facilities to reduce emissions, removes barriers to energy-efficiency and pollution control projects and offers greater regulatory flexibility, is currently being implemented in 10 states, while other rules are awaiting EPA approval. State and local agencies that operate under delegation agreements were required to implement this rule by March 2003 or return responsibility for implementing the rule to EPA. Those agencies operating under state implementation plans have until January 2006 to revise their regulations accordingly. However, the October 2003 rule, which is intended to allow companies to modernize facility operations in ways that will maintain and improve safety, reliability, and efficiency, has been prevented from going into effect by legal challenges. On December 24, 2003, the U.S. Court of Appeals for the District of Columbia Circuit stayed this equipment replacement rule pending further review of the legal challenges brought by a coalition of primarily mid-Atlantic and northeastern states and environmental and public health groups. See related recommendation 7-10.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
7-12: The NEPD Group recommends that the President direct the Attorney General to review existing enforcement actions regarding NSR to ensure that the enforcement actions are consistent with the Clean Air Act and its regulations.	**Implemented:** In January 2002, the Department of Justice (DOJ) reviewed the applicable law, agency actions, and representative pleadings and concluded that the EPA's NSR enforcement actions were consistent with the Clean Air Act and its regulations. DOJ concluded that EPA's civil actions to enforce the NSR provisions of the Clean Air Act were supported by a reasonable basis in law and fact.	Further information is available on the status of enforcement actions. The January 2002 DOJ report focused principally on enforcement actions against coal-fired power plants because defendants in other industries, such as petroleum refining, generally had not alleged that EPA's actions were inconsistent with the Clean Air Act. However, NSR modifications made in December 2002 and October 2003 rules could affect current enforcement cases. According to DOJ, as of March 2005, there were eight pending cases brought against coal-fired power plants. Settlements have been reached in three of those cases, but the settlements are awaiting public comment and court approval. In addition, two cases are pending that involve petroleum refineries.
7-13: The NEPD Group supports the President's budget proposal to provide $8 million to maintain the 2-million-barrel Northeast Heating Oil Reserve. Operated by the private sector, the reserve helps ensure adequate supplies of heating oil in the event that colder-than-normal winters occur in the northeast United States.	**Implemented; activities ongoing:** During its first 2 years, the Bush Administration requested and received $8 million annually for maintenance of the Northeast Home Heating Oil Reserve (NHHOR). Since then, DOE has cut costs and only requires funding around $5 million per year to maintain the NHHOR. Leases have been signed to ensure continued storage of 2 million barrels in New Haven, Connecticut; Woodbridge, New Jersey; and Providence, Rhode Island, with options to extend for up to 4 additional years.	None.
8-1: The NEPD Group recommends that the President make energy security a priority of our trade and foreign policy.	**Implemented; activities ongoing:** The President has made energy security a priority of our trade and foreign policy through various bilateral and multilateral dialogues, initiatives, and activities. Examples of these activities include the U.S.-China Oil and Gas Industry Forum, the International Partnership for the Hydrogen Economy, the Carbon Sequestration Leadership Forum, the U.S.-Russia Commercial Energy Dialogue, the U.S.-Russia Energy Working Group, and the U.S.-African Energy Ministerial process.	It is not clear what the overall energy security goal is or how the initiatives outlined in the reported status have enhanced energy security.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-2: The NEPD Group recommends that the President support initiatives by Saudi Arabia, Kuwait, Algeria, Qatar, the UAE, and other suppliers to open up areas of their energy sectors to foreign investment.	**Implemented; activities ongoing:** Senior officials from the Departments of State, Energy, and Commerce have been engaged to support initiatives by Saudi Arabia (Gas Initiative), Kuwait (Northern Oilfields), Qatar (LNG), and Algeria (LNG). The United States is active in the International Energy Forum (IEF) and uses these and other fora to consult with energy ministers on trade and investment and to advocate energy sector liberalization. Specifically, DOE has reestablished U.S.-Saudi bilateral consultations and assisted Algeria in the creation of New Energy Algeria, a renewable energy venture intended to attract U.S. and other foreign investment and technology with up to 70 percent foreign ownership.	The reported status does not indicate what areas of these energy sectors have been opened as a result of these intiatives.
8-3: The NEPD Group recommends that the President direct the Secretaries of State, Energy, and Commerce to work to improve dialogue among energy producing and consuming nations.	**Implemented; activities ongoing:** Multilaterally, the United States actively participates in ministerial-level meetings of the IEF to exchange views on key energy issues. Other important dialogues initiated by President Bush are the U.S.-U.K. Energy Dialogue, U.S.-Russia Energy Working Group, and the North American Energy Working Group. The United States continues to support the Joint Oil Data Initiative (JODI), a joint activity launched by the Asia Pacific Energy Research Center, the statistics office of the European Union, International Energy Agency (IEA), the Latin-American Energy Organization, the Organization of the Petroleum Exporting Countries, and the United Nations Statistical Division as an effort to improve the quality and transparency of international oil statistics.	The reported status does not indicate what the results of these dialogues have been. For example, how has the quality and transparency of international oil statistics been improved?

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-4: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to continue supporting American energy firms competing in markets abroad and use our membership in multilateral organizations—such as the Asia-Pacific Economic Cooperation (APEC) forum, the Organization for Economic Cooperation and Development (OECD), the World Trade Organization (WTO) Energy Services Negotiations, the Free Trade Area of the Americas (FTAA)—and our bilateral relationships to implement a system of clear, open, and transparent rules and procedures governing foreign investment; to level the playing field for U.S. companies overseas; and to reduce barriers to trade and investment.	**Implemented; activities ongoing:** Through bilateral commercial policy fora (U.S.-China Oil and Gas Industry Forum, U.S.-Russia Commercial Energy Summits, North American Energy Working Group, etc.) and through leadership and participation in multilateral organizations (APEC, WTO, etc.), the federal agencies are working to create a level and transparent playing field for U.S. companies (e.g., promoting best practices for LNG trade and financing of cleaner and more efficient energy among APEC members).	The reported status does not identify barriers to trade and investment that have been reduced. Also, other federal agencies may play a role in addressing this recommendation. For example, the U.S. Trade and Development Agency (USTDA) funds various forms of technical assistance, feasibility studies, training, orientation visits, and business workshops (in energy and other sectors) in developing and middle-income countries to support the development of a modern infrastructure and a fair and open trading environment. USTDA provides grants directly to overseas project sponsors who, in turn, select U.S. companies to perform USTDA-funded activities. In addition, the U.S. Agency for International Development (USAID) works to support the reform of energy sectors in the countries where it works, improve the functioning of markets, increase private sector participation, expand access to energy services, and support regional energy trade and integration.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-5: The NEPD Group recommends that the President direct the Secretaries of Commerce and Energy, and the U.S. Trade Representative, to support a sectoral trade initiative to expand investment and trade in energy-related goods and services that will enhance exploration, production, and refining, as well as the development of new technologies.	**Implemented; activities ongoing:** Commerce's Office of Energy has led missions to support expanded investment and trade in energy-related goods and services that enhance exploration, production, and refining, as well as the commercialization of new energy technologies. The Industry Trade Advisory Committee on Energy and Energy Services (ITAC 6), a federal advisory group composed of U.S. private sector energy industry representatives and overseen by Commerce and the Office of the U.S. Trade Representative (USTR), bolsters Commerce and USTR's work in these areas by providing ongoing advice on global energy trade, investment, and market access policy matters. DOE efforts have focused on regional (e.g., Sixth Western Hemisphere Energy Ministers Meeting) and energy sector-specific activities (e.g., Oil and Gas Services and Equipment Trade Mission to Sakhalin Island, Russia), such as investment and trade in energy-related goods and services enhancing exploration, production, refining, and new technologies with China, Russia, UK, Angola, Kazakhstan, and other key energy markets. DOE and State participated in a meeting of the U.S.-UK Energy Dialogue in February 2004. The Dialogue's Commercial Working Group, led by Commerce, sponsored a Clean Coal Technology Reverse Trade Mission in June 2003. Commerce, State, and DOE also regularly participate in Free Trade Agreement negotiations (e.g., Australia and Morocco).	The reported status does not indicate how expanded investment and trade in energy-related goods and services that enhances exploration, production, and refining, as well as the development of new technologies, is being measured. For example, DOE reports that Commerce tracks expanded investment and trade in energy-related goods and services through its commercial service performance measures database.
8-6: The NEPD Group recommends that the President direct the Secretaries of State, Treasury, and Commerce to initiate a comprehensive review of sanctions. Energy security should be one of the factors considered in such a review.	**Implemented; activities ongoing:** The United States has liberalized trade and investment sanctions with respect to Libya and Iraq, and other sanctions are under continuous review. Energy security is generally one of the factors considered in such a review. While the actions related to Iraq and Libya offer the potential to improve energy security, these steps were not taken on the basis of energy security considerations.	The reported status does not indicate whether there has been a comprehensive review of sanctions, in particular those that impact energy security as called for in the recommendation. Also, it is not clear what the universe of sanctions is that can impact energy security.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-7: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to engage in a dialogue through the North American Energy Working Group (NAEWG) to develop closer energy integration among Canada, Mexico, and the United States and identify areas of cooperation, fully consistent with the countries' respective sovereignties.	**Implemented; activities ongoing:** The NAEWG was created to increase U.S., Canadian, and Mexican energy cooperation and enhance the energy and economic security of North America. The group has worked together to further integrate and strengthen North American energy markets by overcoming policy and technical obstacles to increased energy production and delivery. NAEWG technical discussions have occurred in working groups covering energy markets, electricity, energy efficiency, science and technology, and infrastructure security.	The reported status does not indicate what roles Commerce, State, and DOE play in implementing this recommendation. In commenting on a draft of this report, State reported that it participates at each principals' meeting of the NAEWG and works with DOE and Commerce to make certain that the expert groups' goals are consistent with the foreign policy goals of the Administration.
8-8: The NEPD Group recommends that the President direct the Secretaries of Energy and State, in consultation with FERC, to review their respective oil, natural gas, and electricity cross-boundary "Presidential Permitting" authorities and to propose reforms as necessary in order to make their own regulatory regimes more compatible for cross-border trade.	**Implemented:** In April 2004, the President signed Executive Order 13337, which updated the Secretary of State's authority to issue Presidential Permits for cross-border petroleum pipelines in consultation with DOE, EPA, DHS, and other appropriate agencies.	It is not clear from the reported status whether a complete review of oil, natural gas, and electricity cross-boundary "Presidential Permitting" authorities was conducted. For example, Executive Order 13337 updated the Secretary of State's authority to issue Presidential Permits for cross-border petroleum pipelines, but it is not clear if electricity authorities were reviewed or how FERC was consulted. See related recommendations 7-6 and 8-9.
8-9: The NEPD Group recommends that the President direct the Secretaries of Energy and State, coordinating with the Secretary of the Interior and FERC, to work closely with Canada, the State of Alaska, and all other interested parties to expedite the construction of a pipeline to deliver natural gas to the lower 48 states. This should include proposing to Congress any changes or waivers of law pursuant to the Alaska Natural Gas Transportation Act of 1976 that may be required.	**Implemented; activities ongoing; legislation enacted:** An interagency working group, including FERC, DOE, EPA, and DHS, was convened in July 2001 and continues to meet regularly to facilitate interagency coordination. In April 2004, the President signed Executive Order 13337, which updated the Secretary of State's authority to issue Presidential Permits for cross-border petroleum or natural gas pipelines after consultation with DOE, EPA, DHS, and other federal agencies. In October 2004, Congress enacted and the President approved the Alaska Natural Gas Pipeline Act (Pub. L. No. 108-324) to expedite and streamline federal permitting for an Alaska natural gas pipeline and authorize $18 billion in federal loan guarantees for the project.	While the status information reports that Congress enacted Pub. L. No. 108-324, it does not state what changes this law made to the Alaska Natural Gas Transportation Act of 1976. The status report also does not set out the Secretary of Energy's role under Pub. L. No. 108-324 in issuing loan guarantees. In response to our questions, DOE noted that the 2004 Act included minor modifications to the 1976 Act, and that DOE is the lead agency concerning loan guarantees. DOE also told us that FERC is prepared to work with project proponents as soon as an application is filed, possibly as early as November 2005. We observe that Executive Order 13337 does not address cross-border gas pipelines. Specifically, the executive order states that "except for facilities covered by Executive Order 10485" the Secretary of State is designated to receive applications for cross-border permits. Executive Order 10485, as amended, empowers the Secretary of Energy to issue permits for the importation or exportation of natural gas to or from a foreign country. Accordingly, it is not clear how Executive Order 13337, which by its terms excludes cross-border natural gas pipelines, is relevant to this recommendation. See duplicate recommendation 7-6.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-10: The NEPD Group recommends that the President direct the Secretaries of State and Commerce to conclude negotiations with Venezuela on a Bilateral Investment Treaty (BIT), and propose formal energy consultations with Brazil, to improve the energy investment climate for the growing level of energy investment flows between the United States and each of these countries.	**Implemented; activities ongoing:** In 2001, an interagency group from the United States met with their Venezuelan counterparts and discussed terms for the possible reinitiation of BIT negotiations. The interagency group also met with private sector and Venezuelan government representatives on the Venezuela hydrocarbons law and held bilateral energy consultations with Venezuelan officials in Caracas in 2001, and in Washington in 2001 and 2003. There have been no further official contacts with Venezuela on these issues since 2003 because of concerns over the political and investment climate in Venezuela. In December 2003, a DOE team visited Brazil to identify areas of cooperation in the permitting of oil and gas exploration and production activities. DOE Secretary Abraham and Brazilian Energy Minister Rousseff signed an MOU on June 20, 2003, to establish a mechanism for consultations on energy cooperation. In addition to continuing collaboration in energy science and technology, the MOU established a mechanism for consultations on issues of mutual interest, such as energy planning, analysis, trade, and investment. DOE and FERC teams visited Brazil and held discussions on energy planning, information collection, and regulatory experiences and practices. DOE and the Brazilian Ministry of Mines and Energy cohosted an Energy Investment Symposium on November 21, 2003, in Washington for U.S. companies investing in Brazil.	From the reported status, it is not clear what Commerce and State programs are involved in implementing this recommendation. DOE appears to have taken the lead role since information is provided on its program efforts. In commenting on a draft of this report, State reported that the interagency group that met with Venezuelan counterparts in 2001 included staff of the U.S. Trade Representative, DOE, and State.
8-11: The NEPD Group recommends that the President direct the Secretaries of Energy, Commerce, and State to work through the Summit of the Americas Hemispheric Energy Initiative to develop effective and stable regulatory frameworks and foster reliable supply sources of all fuels within the region.	**Implemented; activities ongoing:** The sixth Western Hemisphere Energy Ministers Meeting was held in Trinidad on April 19-21, 2004. The theme was enhancing hemispheric energy security and cooperation through agreement on actions to increase oil and gas development and trade, including the development of stable markets.	This recommendation is to foster reliable supply sources of all fuels within the region, yet the theme on the reported actions taken to implement this recommendation was to increase oil and gas development and trade. It is not clear if other reliable sources of fuel were addressed. Also, it is not clear what other meetings or work through the Summit of the Americas Hemispheric Energy Initiative have occurred and what the respective programmatic roles of State, Commerce, and DOE have been. In commenting on a draft of this report, State reported that the Western Hemisphere Energy Ministers' Meeting included discussions of alternate energy sources, including wind and nuclear.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-12: The NEPD Group recommends that the President direct the Secretaries of State, Energy, and Commerce to reinvigorate the U.S.-Africa Trade and Economic Cooperation Forum and the U.S.-African Energy Ministerial process; deepen bilateral and multilateral engagement to promote a more receptive environment for U.S. oil and gas trade, investment, and operations; and promote geographic diversification of energy supplies, addressing such issues as transparency, sanctity of contracts, and security.	**Implemented; activities ongoing:** Senior Administration officials met with African government officials twice in 2003 to reinvigorate the U.S.-Africa Trade and Economic Cooperation Forum. A similar meeting was held for the U.S.-African Energy Ministerial process in Casablanca in June 2002, and another meeting will be held in Senegal in 2005. Participating officials include those from Angola, Cameroon, Democratic Republic of Congo, Equatorial Guinea, Morocco, Algeria, South Africa, and Republic of Congo-Brazzaville. Ongoing programs include cooperation with the following: Nigeria on privatization reforms, transparency, increased access to energy, and regional integration; Angola and Equatorial Guinea on policy reforms and oil and gas development; South Africa on renewable energy, nuclear energy, and electricity and natural gas regulatory training; Botswana on clean coal technology; Ghana on energy policy; Kenya on geothermal; and Uganda on commercialization of solar ovens.	The reported status does not indicate what roles Commerce, State, and DOE play in implementing this recommendation. Also, it is not clear how the various intiatives reported resulted in increases in diverse energy supplies. Furthermore, other federal programs may play a role in addressing this recommendation. For example, according to USTDA, it has supported activities advancing a regional integration approach to economic partnership in Africa, with the aim of facilitating development and enhancing trade capacity. For example, in FY 2003 USTDA supported a small oil refinery project in Nigeria and a Forest Oil offshore gas project in South Africa. Also, USAID has supported relevant efforts in Africa, such as the construction of the West Africa Gas Pipeline.
8-13: The NEPD Group recommends that the President direct the Secretaries of State, Energy, and Commerce to recast the Joint Economic Partnership Committee with Nigeria to improve the climate for U.S. oil and gas trade, investment, and operations and to advance our shared energy interests.	**Implemented; activities ongoing:** DOE has established a comprehensive energy reform and technical assistance program with Nigeria, which included assignment of a senior energy advisor in Abuja, implementation of price liberalization, and development of a draft natural gas strategy in 2002. Other activities have included advocacy support on sanctity of contracts and investment issues, assistance for advanced power sector reform and natural gas policy development, and ongoing programs on privatization reforms, increased access to energy, and regional integration.	It is not clear what Commerce and State programs are involved in implementing this recommendation. DOE appears to have taken the lead role as information is provided on its program efforts. In commenting on a draft of this report, State reported that, with interagency assistance, it has organized formal bilateral meetings with Nigeria, and agencies maintain an active dialogue with Nigeria on issues that affect investment by U.S. energy producers.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-14: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to support more transparent, accountable, and responsible use of oil resources in African producer countries to enhance the stability and security of trade and investment environments.	**Implemented; activities ongoing:** The Administration has pursued stronger bilateral ties, geographic diversification of energy sources, growing oil and gas trade with the United States, good governance, free markets, rule of law, and stable regulatory structures in African producing countries. For example, Nigeria, Africa's largest energy producer, has publicly committed to the G-8 Transparency and Anticorruption Compact in 2004, and to the Extractive Industries Transparency Initiative, which aims for effective and transparent use of oil revenues to fund development.	The reported status does not indicate what roles Commerce, State, and DOE play in implementing this recommendation. See related recommendations 8-23 and 8-36 on transparency.
8-15: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to support the BTC oil pipeline as it demonstrates its commercial viability.	**Implemented:** Construction on the $3.2 billion BTC pipeline began in April 2003 and should be completed on schedule in 2005. OPIC has approved up to $125 million in political risk insurance for the project, and the Export-Import Bank approved financing for up to $160 million.	The reported status does not indicate what roles State, Commerce, or DOE have played in construction of the BTC pipeline or what role they will play to support it as it demonstrates commercial viability. In addition, USAID and USTDA programs and activities appear to support this recommendation. For example, USAID provided technical assistance and training for the establishment of the Georgia International Oil Company (GIOC), which was involved in the process for establishment of the BTC pipeline, and USTDA has also provided support for the BTC pipeline.
8-16: The NEPD Group recommends that the President direct the Secretaries of Commerce, State, and Energy to continue working with relevant companies and countries to establish the commercial conditions that will allow oil companies operating in Kazakhstan the option of exporting their oil via the BTC pipeline.	**Implemented; activities ongoing:** The United States has signed an Energy Partnership Declaration with Kazakhstan that will help develop a stable and transparent legal and regulatory climate for the development of the energy sector. The Administration has promoted a market environment that will allow Kazakh oil companies the option of exporting their oil via the BTC pipeline, facilitating discussions between Azerbaijan and Kazakhstan to move Kazakh oil through the BTC system.	The reported status does not indicate what roles Commerce, State, and DOE play in implementing this recommendation. In addition, other federal programs may play a role in addressing this recommendation. For example, USAID's energy activities in Kazakhstan focus on improving transparency and public participation in the management of energy resources. According to USAID, the work helps reinforce the agency's overall goals for enhancing resource management by providing the foundations for public disclosure of key sector data and transparency operations within the industry, all of which are required for Kazakhstan to become recognized as a key supplier to the east-west corridor pipelines.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-17: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to support the efforts of private investors and regional governments to develop the Shah Deniz gas pipeline as a way to help Turkey and Georgia diversify their natural gas supplies and help Azerbaijan export its gas via a pipeline that will continue diversification of secure energy supply routes.	**Implemented; activities ongoing:** The Bush Administration has promoted the Shah Deniz gas pipeline (now known as the "South Caucasus" gas pipeline) that will run along the BTC route. The $1 billion Shah Deniz project and the BTC project will provide alternate energy supply routes to market for Caspian energy resources, providing regional stability and much-needed transit revenues for the participating countries. With U.S. encouragement, Georgia, Azerbaijan, and Turkey have ratified an agreement to construct the pipeline. Construction has started and completion is expected at the end of 2006.	The reported status does not indicate what roles Commerce, State, and DOE play in implementing this recommendation. In addition, other federal programs may play a role in addressing this recommendation. For example, USTDA has provided support for the Shah-Deniz gas pipeline.
8-18: The NEPD Group recommends that the President direct appropriate federal agencies to complete the current cycle of oil spill response readiness workshops and to consider further appropriate steps to ensure the implementation of the workshops' recommendations.	**Implemented; activities ongoing:** The Administration cosponsored an April 2002 oil spill response workshop in Kazakhstan, cosponsored in June 2001 the newly launched Black and Caspian Sea Environmental Information Web site, and cohosted a meeting of marine scientists from the five Caspian nations in August 2001. In 2003, Secretary Abraham signed a Statement of Intent to cooperate with Russia on oil spill response, with a first workshop held in Moscow in December 2003. Under the U.S.-Russia Energy Working Group, the United States signed a Protocol on Oil Spill Response cooperation with Russia. DOE and the Navy will hold a desktop exercise to test the regional oil spill response plan developed by the Black Sea states upon availability of funds.	The reported status does not mention other federal programs that may play a role in oil spill response. For example, MMS, NOAA, and USTDA have oil spill response efforts. MMS reports that it is the principal U.S. agency funding oil spill response research and has been actively involved in international oil spill conferences and workshops for more than 20 years. MMS helps organize the Biennial International Oil Spill Conference. In addition, NOAA's Office of Response and Restoration is responsible for preventing, planning for, and responding to oil spills in coastal environments and restoring affected resources. Also, in May 2005, USTDA planned to sponsor an orientation visit to familiarize a delegation of Pakistani officials with U.S. policy and practices in oil spill response and recovery. The delegation will also attend the 2005 International Oil Spill Conference in Miami, Florida.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-19: The NEPD Group recommends that the President direct the Secretary of State to encourage Greece and Turkey to link their gas pipeline systems to allow European consumers to diversify their gas supplies by purchasing Caspian gas.	**Implemented:** With U.S. encouragement, Greece and Turkey signed an agreement in December 2003 to build a natural gas pipeline connecting the two countries. By 2006, the Greek-Turkish interconnector should deliver 500 million cubic meters of natural gas from Azerbaijan to Greece via Turkey.	The reported status does not indicate what role State played in implementing this recommendation. In addition, other federal programs may play a role in addressing this recommendation. For example, USAID reported that its Europe and Eurasia Bureau programs provide technical assistance to the Energy Community in Southeast Europe to create electricity and gas markets. According to USAID, the expansion of natural gas markets in Southeast Europe from Caspian gas resources destined to the rest of Europe strengthens the commercial viability of the Greek-Turkish gas interconnector and of the proposed pipelines that will transport this gas from Greece to Europe through the countries of Southeast Europe. In FY 2005, USAID is providing analysis related to expansion of gas distribution networks in Southeast Europe and the Southeast Europe Regulators Working Group on the Gas Sector.
8-20: The NEPD Group recommends that the President direct the Secretaries of Commerce, Energy, and State to deepen their commercial dialogue with Kazakhstan, Azerbaijan, and other Caspian states to provide a strong, transparent, and stable business climate for energy and related infrastructure projects.	**Implemented; activities ongoing:** The third annual U.S. Kazakhstan Energy Partnership meeting will have working groups on Oil and Gas, Electric Power, Environmental Protection and Alternative Energy Technologies, Facilities Security, and Commercial Nuclear Technologies. The Energy Partnership's declaration advocates support for market-based development of the energy sector on the basis of a stable and transparent legal and regulatory climate and honoring sanctity of existing contracts. Other initiatives include working on the formation of an Investors Council and an Energy Partnership in Azerbaijan, and a dialogue with Georgia on development of a long-term "National Energy Strategy" and possible utilization of distributed energy technologies.	The reported status does not indicate what roles Commerce, State, and DOE play in implementing this recommendation. In addition, other federal programs may play a role in addressing this recommendation. For example, USTDA supported technical assistance in the restructuring of SOCAR (State Oil Company of the Azerbaijan Republic), Azerbaijan's state-owned oil company. Also, relevant USAID programs include efforts in Kazakhstan that focus on improving transparency and public participation in the management of energy resources. According to USAID, the work helps reinforce the agency's overall goals for enhancing resource management by providing the foundations for public disclosure of key sector data and transparency operations within the industry, all of which are required for Kazakhstan to become recognized as a key supplier to the east-west corridor pipelines.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-21: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to deepen the focus of the discussions with Russia on energy and the investment climate.	**Implemented; activities ongoing:** The Bush Administration has devoted much effort to strengthening our energy relationship with Russia, which is now competing with Saudi Arabia to be the world's largest crude oil producer and is a major exporter. In 2002, the Administration initiated a cooperative effort to help improve commercial cooperation and the regulatory and investment conditions required to increase energy and infrastructure development in Russia. Private sector participants at two U.S.-Russia Commercial Energy Summits presented recommendations on increased energy cooperation to both governments in September 2003. Additionally, a U.S.-Russia Energy Working Group has been formed and has hosted workshops on energy efficiency, LNG, oil spill response, oil markets, investment, and taxation. However, advancement of this relationship has been hampered by recent actions that have raised concerns with the investment climate in Russia.	The reported status does not indicate what roles Commerce, State, and DOE programs play in implementing this recommendation. In commenting on a draft of this report, State reported that it helped develop positions for and participated in both Commercial Energy Summits, meetings of the U.S.-Russia Energy Dialogue, and Energy Working Groups.
8-22: The NEPD Group recommends that the President direct the Secretaries of Commerce, State, and Energy to assist U.S. companies in their dialogue on the investment and trade climate with Russian officials, to encourage reform of the PSA law and other regulations and related tax provisions, as well as general improvements in the overall investment climate. This will help expand private investment opportunities in Russia and will increase the international role of Russian firms.	**Implemented; activities ongoing:** Since the summer of 2001, there have been several ministerial-level meetings with the Russian Ministers of Energy and Economic Development and Trade, where U.S. officials have stressed the importance of the PSA framework as well as the importance of a fair and transparent legal regime in encouraging investment in the energy sector. In 2001, the United States agreed to the establishment of a bilateral business dialogue. Supporting the business dialogue was a key component of Secretary Evans' trip to Russia in October 2001. The U.S.-Russia Energy Working Group between DOE and the Ministry of Energy had its first meeting in April 2002, agreeing on a program of continued cooperation and information sharing. Real progress in reform and investment has been limited for many reasons, including concerns with the investment climate in Russia following recent activity; however, follow-up activities will continue in the context of the G-8 Energy Ministers' Meeting and the Bush-Putin Summits in February and May 2005.	The reported status does not indicate what role State programs played in implementing this recommendation. In commenting on a draft of this report, State reported that its officials helped develop implementing tactics for this recommendation and frequently raised investment climate issues with its Russian counterparts and the legislature.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-23: The NEPD Group recommends that the President direct the Secretaries of State, Commerce, and Energy to continue to work in the APEC forum Energy Working Group to examine oil market data transparency issues and the variety of ways petroleum stocks can be used as an option to address oil market disruptions.	**Implemented; activities ongoing:** Significant activities over the past year have improved the timeliness and coverage of data collection among APEC members. An Action Plan to enhance energy security endorsed by APEC leaders in 2003 includes a mandate to identify best practice principles for strategic oil stocks. Other actions include efforts on building petroleum stocks: China, Thailand, and the Philippines have announced stockholding plans. IEA has improved participation in the Joint Oil Data Initiative by nonmembers and has improved data quality through consultation with participants.	The reported status does not indicate what roles Commerce, State, and DOE programs play in implementing this recommendation. Also, the reported status is not specific about how data transparency has been improved. Also see related recommendations 8-31 and 8-32 on oil stocks and recommendations 8-14 and 8-36 on transparency.
8-24: The NEPD Group recommends that the President direct the Secretaries of State and Energy to work with India's Ministry of Petroleum and Natural Gas to help India maximize its domestic oil and gas production.	**Implemented; activities ongoing:** DOE organized a 1-week Coal Bed Methane Mission in January 2003 for senior Indian officials that included the Secretary of Petroleum, the Secretary of Coal, and the Secretary of Labor. In June 2003, senior DOE officials joined Indian Oil Minister Naih in meeting with U.S. oil companies to encourage them to invest in India's oil and gas sector. This was followed by a visit to the Strategic Petroleum Reserve (SPR) by the Minister and a SPR visit by an Indian technical team in September 2003. India passed legislation in December 2003 authorizing the establishment of the first part of an Indian SPR. Throughout this period, negotiations have continued on a draft MOU with DOE's EIA on energy data exchange, which among other things, could facilitate greater investment in India's oil and gas sector.	The reported status does not indicate what role State played in implementing this recommendation. Also, it is not clear what the status is of the draft MOU with DOE's EIA on energy data exchange, which among other things, could facilitate greater investment in India's oil and gas sector. Further, other federal programs may play a role in addressing this recommendation. For example, in September 2004, USTDA awarded a $690,000 grant to GAIL (India) Ltd. (Erstwhile Gas Authority of India Ltd.) to partially fund a feasibility study for the National Gas Grid project in India. GAIL (India) Ltd. is a public sector enterprise under India's Ministry of Petroleum and Natural Gas.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-25: The NEPD Group recommends that the President direct the Secretaries of Commerce, State, and Energy to promote market-based solutions to environmental concerns; support exports of U.S. clean energy technologies and encourage their overseas development; engage bilaterally and multilaterally to promote best practices; explore collaborative international basic research and development in energy alternatives and energy-efficient technologies; and explore innovative programs to support the global adoption of these technologies.	**Implemented; activities ongoing:** Several significant initiatives have been undertaken to support exports of U.S. clean energy technologies and encourage their overseas development both bilaterally and multilaterally. The multilateral Carbon Sequestration Leadership Forum (CSLF), launched in June 2003, sets a framework for international cooperation on sequestration technologies. The forum's 17 partners also are eligible to participate in FutureGen, the joint DOE/private sector near-zero emission power and hydrogen producing plant. The Administration led the 2003 formation of the International Partnership for the Hydrogen Economy (IPHE) to coordinate and leverage multinational hydrogen research programs. IPHE will address the technological, financial, and institutional barriers to the hydrogen economy and develop internationally recognized technology standards to speed market penetration of new technologies. The Administration also launched the new international "Methane to Markets Partnership" in a ministerial conference in Washington, D.C., in November 2004. This is an innovative partnership of developed and developing countries working together to help promote energy security, improve environmental quality, and reduce greenhouse gas emissions by capturing methane that is currently wasted from leaky oil and gas systems, from underground coal mines, and from landfills and using it as a clean energy source. The Administration's Clean Energy Technology Exports (CETE) initiative is designed to promote the global adoption of these and other energy-efficient technologies and create international energy markets for trade and investment. The United States has also supported locally based market solutions to address energy and environmental concerns in developing and transitional economies. In 2002 at the World Summit on Sustainable Development in South Africa, the United States announced the Clean Energy Initiative to reduce poverty and promote economic growth by creating access to clean efficient energy services.	It is not clear from the reported status what role State and Commerce played in implementing this recommendation. In contrast, information is provided on specific DOE program efforts. In addition, it is not clear if any goals and measures of success in the use of clean energy technologies have been established. For example, is there a measure to compare current use of clean energy technologies against future use as a progress measurement tool? In response to our question, DOE stated that no uniform measure of success is in place under CETE, but efforts are being designed to promote best practices with measures of success being a component. Finally, other federal programs may be related to implementation of this recommendation. For example, USAID is a cochair (with DOE and Commerce) of the interagency Clean Energy Technology Export Working Group. Also, USTDA supports activities related to clean energy technology exports as described in DOE's April 2001 *Status Report to Congress on Current and Proposed Activities under the Clean Energy Technology Exports (CETE) Initiative*. In commenting on a draft of this report, State reported that it was integrally involved in the establishment of these initiatives and continues to be involved in maintaining them.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-26: The NEPD Group recommends that the President direct federal agencies to support continued research into global climate change; continue efforts to identify environmentally and cost-effective ways to use market mechanisms and incentives; continue development of new technologies; and cooperate with allies, including through international processes, to develop technologies, market-based incentives, and other innovative approaches to address the issue of global climate change.	**Implemented; activities ongoing:** President Bush is committed to addressing the long-term challenge of global climate change while ensuring continued economic growth and prosperity for America. Domestically, the President has committed America to reducing the greenhouse gas intensity of the U.S. economy by 18 percent by 2012, preventing the emission of more than 500 million tons of carbon over this period. To address this issue, the Bush Administration is carrying out a comprehensive, innovative program of domestic and international initiatives to (1) improve our understanding of the science of climate change; (2) encourage near-term voluntary and cost-effective emissions reductions; (3) develop transformational energy technologies, such as hydrogen-powered vehicles, safer and more proliferation-resistant nuclear power plants, and zero-emission coal power plants, to substantially reduce greenhouse gas emissions in the longer term; and (4) build international partnerships (such as the Earth Observations initiative, the IPHE, the CSLF, and the Methane to Markets partnership) with developed and developing nations alike in a global, long-term effort to mitigate and adapt to climate change.	The reported status sets an overall goal, but it is not clear what the baseline measure is against which the goal of an 18 percent reduction by 2012 is to be compared. DOE explained that EIA, taking into account current and anticipated factors in energy markets, projects a greenhouse gas emissions intensity improvement of about 14 percent from a 2002 baseline to 2012. The President's goal is to increase that improvement to 18 percent.
8-27: The NEPD Group recommends that the President seek to increase international cooperation on finding alternatives to oil, especially for the transportation sector.	**Implemented; activities ongoing:** DOE and USAID have provided grants for Clean Cities Coalitions and training programs in New Delhi, India; Dhaka, Bangladesh; cities in the Philippines; Mexico City, Mexico; and Lima, Peru, to assist with the conversion of vehicles to cleaner fuels. The Administration led the 2003 formation of the IPHE to coordinate and leverage multinational hydrogen research programs. The IPHE will address the technological, financial, and institutional barriers to the hydrogen economy and develop internationally recognized technology standards to speed market penetration of new technologies.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-28: The NEPD Group recommends that the President direct the Secretary of State to reinvigorate its dialogue with the European Union on energy issues, and resume the consultative process this year in Washington.	**Implemented; activities ongoing:** In November 2001, DOE and State hosted a bilateral consultation on energy issues with the EU, which was followed by an expert discussion on electricity and gas in May 2002. The EU has also joined several multilateral international energy initiatives launched by the United States, including the IPHE and the CSLF. The United States and the EU also are partners in a climate change bilateral agreement that has a strong focus on energy technologies.	It is not clear what activities have continued after the May 2002 example provided in the status report. In commenting on a draft of this report, State reported that the international partnerships, CSLF and IPHE, were both launched in 2003 and are chartered to continue indefinitely, providing an ongoing energy dialogue.
8-29: The NEPD Group recommends that the President promote a coordinated approach to energy security by calling for an annual meeting of G-8 Energy Ministers or their equivalents.	**Implemented; activities ongoing:** Secretary Abraham co-chaired with Canada a meeting of G-8 Energy Ministers in May 2002, resulting in the issuance of a Joint Statement committing to cooperation in energy security; emergency responses; energy dialogue among producers and consumers; research, development, and deployment; and fostering open markets and a favorable/stable investment climate. An informal meeting of G-8 Energy Ministers, hosted by France in April 2003, continued the dialogue on oil markets, producer/consumer relations, Iraqi production, and market transparency. At the G-8 Summit in Evian, France, in 2003, a science and technology action plan was endorsed which included cooperation in the CSLF and the IPHE. Many individual G-8 countries and the EU are participating in these initiatives. The G-8 Summit in June 2004 called for continued G-8 action to implement the Evian Action Plan and achieve concrete results.	None.
8-30: The NEPD Group recommends that the President reaffirm that the SPR is designed for addressing an imminent or actual disruption in oil supplies, and not for managing prices.	**Implemented:** The Administration has continually resisted calls to use the SPR for manipulating prices. The United States will use the SPR only during a severe supply disruption, if necessary to protect American consumers and our economy. The SPR is vital to our national security and filling it to capacity is necessary to maximize protection for American consumers and our economy against severe oil supply disruptions, which could result from a variety of events, including natural disasters, industrial accidents, and terrorist attacks.	None.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-31: The NEPD Group recommends that the President direct the Secretary of Energy to work within the International Energy Agency (IEA) to ensure that member states fulfill their stockholding.	**Implemented; activities ongoing:** The United States has worked with the IEA to ensure that member states fulfill their stockholding requirements. Currently, IEA members collectively hold 116 days' worth of imports in oil stocks. The United States supported new, tougher measures to address certain members' failure to maintain emergency reserves equal to 90 days' worth of national oil imports. IEA held an energy emergency response exercise to evaluate readiness for an international emergency.	The reported status does not indicate what the stockholding requirements are and whether those requirements are met by the 116 days' worth of imports. Also, it is not clear who is party to this agreement, what members are failing to meet requirements, and the status of U.S. stockholding requirements.
8-32: The NEPD Group recommends that the President direct the Secretary of Energy to encourage major oil-consuming countries that are not IEA members to consider strategic stocks as an option for addressing potential supply disruptions. In this regard, we should work closely with Asian economies, especially through APEC.	**Implemented; activities ongoing:** The United States has worked with Asian countries through APEC to encourage the build-up of oil stocks by non-IEA members as a cushion against market disruptions and to address oil market transparency. China, India, Thailand, and the Philippines have announced stockholding plans. The IEA has held workshops for China, India, and Association of Southeast Asian Nations countries, all of which have indicated a desire to hold strategic stocks. China has plans to begin construction of an SPR, and India recently passed legislation in December 2003 authorizing establishment of the first part of an Indian SPR. DOE has hosted Chinese and Indian delegations to study the SPR. State and DOE have used APEC as another forum in which to urge non-IEA members to hold strategic stocks, and stockholding is now part of the APEC Energy Security Initiative, endorsed by APEC Leaders in Bangkok in November 2003.	The reported status does not indicate what the status is on the strategic stocks for non-IEA members. See related recommendation 8-23.
8-33: The NEPD Group recommends that the President direct the Secretary of Energy offer to lease excess SPR storage facilities to countries (both IEA and non-IEA members) that might not otherwise build storage facilities or hold sufficient strategic stocks, consistent with statutory authorities.	**Not implemented:** In November 2001, the President directed the Secretary of Energy to fill the SPR to its 700 million barrel capacity in a cost-effective manner using principally royalty oil from federal offshore leases; the SPR is expected to reach its capacity during FY 2005. The United States and the IEA continue to promote and support workshops and other actions to encourage holding of strategic oil stocks in both IEA and non-IEA member countries.	The SPR leases facilities that are not required for standby operational readiness and have no adverse impact on the SPR mission. All of the leases specify that DOE can take control of the facilities if needed for an oil sale from the SPR.

(Continued From Previous Page)

NEP recommendation, May 2001	DOE reported status, January 2005	GAO observations
8-34: The NEPD Group recommends that the President, at such time that exchanged SPR barrels are returned to the SPR, should determine whether offshore Gulf of Mexico royalty oil deposits to the SPR should be resumed, thereby increasing the size of our reserve.	**Implemented; activities ongoing:** In November 2001, the President directed the Secretary of Energy to fill the SPR to its 700 million barrel capacity in a cost-effective manner using principally royalty oil from federal offshore leases. In August 2004, DOE awarded three new contracts to deliver crude oil to the Strategic Petroleum Reserve under the Royalty-In-Kind (RIK) exchange program. The RIK program is managed by the Department of the Interior Minerals Management Service and represents a practical means of filling the reserve in keeping with the President's objective to do so in a deliberate and cost-effective manner.	The status report does not provide information on the current status of the SPR. According to DOE, the SPR inventory stands at 681 million barrels of oil as of February 2005. The SPR is expected to reach 700 million barrels in August 2005.
8-35: The NEPD Group recommends that the President direct the Secretary of Energy to work closely with Congress to ensure that our SPR protection is maintained.	**Implemented; activities ongoing:** The SPR is now at its highest level and continues to grow as additional crude oil is received. In 2001, the SPR contained enough oil to cover the loss of U.S. imports for 54 days. When the SPR reaches 700 million barrels in mid-2005, as directed by the President, the SPR will provide nearly 60 days of import protection. The Administration recommended to Congress in 2003 that the optimal size of the SPR be analyzed before determining whether further expansion of the SPR is warranted.	The reported status does not indicate the status of plans to analyze the optimal size of the SPR to ensure that protection is maintained. According to DOE, the SPR has a capacity of 727 million barrels, the SPR is authorized to have a capacity of 1 billion barrels, and the Administration is continually looking at the optimal size of the SPR.
8-36: The NEPD Group recommends that the President direct the Secretary of Energy to work with producer and consumer country allies and the IEA to craft a more comprehensive and timely world oil data reporting system.	**Implemented; activities ongoing:** DOE continues participation in the Joint Oil Data Initiative (JODI) to improve international oil market transparency. Over the past year, the timeliness and coverage of APEC member data collection has significantly improved. DOE is supporting the International Energy Forum Secretariat and the African Energy Information System data reporting initiatives. The United States has also highlighted the "oil data" issue as a key objective of the producer-consumer dialogue.	See related recommendations 8-14 and 8-23 on oil market transparency.

Sources: The May 2001 National Energy Policy report, the January 2005 *National Energy Policy Status Report on Implementation of NEP Recommendations*, and GAO's observations on the reported status, along with DOE's responses to GAO's questions or agency comments on a draft of this report.

[a]See GAO, *Licensing Hydropower Projects: Better Time and Cost Data Needed to Reach Informed Decisions About Process Reforms*. GAO-01-499 (Washington, D.C.: May 2, 2001).

Fiscal Years 2000 and 2003 Estimated Budget Authority for Agency Programs, by Energy Activity Area

Dollars in actual amounts

Energy activity area/Agency	Program	Estimated budget authority	
		Fiscal year 2000	Fiscal year 2003
Energy supply			
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs I	$0	$0
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs II	1,378,000	1,656,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs III	735,000	1,373,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service: Bioenergy and Energy Related Programs IV	1,993,000	884,000
Department of Agriculture	Farm Service Agency-Commodity Credit Corporation's Bioenergy Program	0	150,000,000
Department of Agriculture	Forest Service Research and Development: Bioenergy, Energy Efficiency, and Conservation Research	1,590,000	2,400,000
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses-3	0	1,000,000
Department of Agriculture	Office of Chief Economist, Office of Energy Policy and New Uses-2	0	1,000,000
Department of Agriculture	Rural Development Business Programs: Renewable Energy and Energy Efficiency	0	23,000,000
Department of Energy	Clean Coal Technology	(146,000,000)	(47,000,000)
Department of Energy	Energy Supply-Biomass And Biorefinery Systems Research and Development (R&D)	69,868,000	84,898,000
Department of Energy	Energy Supply-Departmental Energy Management Program	0	1,445,000
Department of Energy	Energy Supply-Facilities and Infrastructure	1,100,000	5,297,000
Department of Energy	Energy Supply-Geothermal Technology	23,333,000	28,390,000
Department of Energy	Energy Supply-Hydrogen Technology	24,287,000	38,113,000
Department of Energy	Energy Supply-Hydropower	4,861,000	5,016,000
Department of Energy	Energy Supply-Intergovernmental Activities	10,033,000	14,449,000
Department of Energy	Energy Supply-Program Direction	17,720,000	12,615,000
Department of Energy	Energy Supply-Renewable Program Support	0	0
Department of Energy	Energy Supply-Solar energy	82,034,000	82,330,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Estimated budget authority	
		Fiscal year 2000	Fiscal year 2003
Department of Energy	Energy Supply-Wind energy	32,085,000	41,640,000
Department of Energy	Energy Supply-Zero energy buildings	0	7,572,000
Department of Energy	Fossil Energy R&D-National Academy of Sciences Program Review	0	497,000
Department of Energy	Fossil Energy R&D-Plant and Capital Projects	2,590,000	6,954,000
Department of Energy	Fossil Energy R&D-Advanced Metallurgical Research	4,980,000	5,961,000
Department of Energy	Fossil Energy R&D-Black Liquor	13,939,000	0
Department of Energy	Fossil Energy R&D-Coal and Other Power Systems	111,881,000	410,340,000
Department of Energy	Fossil Energy R&D-Cooperative Research And Development	7,408,000	8,186,000
Department of Energy	Fossil Energy R&D-Energy Efficiency Science Initiative	0	497,000
Department of Energy	Fossil Energy R&D-Import/Export Authorization	2,173,000	2,981,000
Department of Energy	Fossil Energy R&D-Natural Gas Technologies	120,279,000	47,013,000
Department of Energy	Fossil Energy R&D-Petroleum Oil Technology	57,324,000	42,025,000
Department of Energy	Fossil Energy R&D-Program Direction and Management Support	75,192,000	87,229,000
Department of Energy	Naval Petroleum and Oil Shale Reserves	0	17,715,000
Department of Energy	Nuclear Energy Research and Development	34,864,000	114,441,000
Department of Energy	Science-Fusion Energy Sciences Program	238,260,000	240,695,000
Department of the Interior	Bureau of Indian Affairs-Operation of Indian Programs	2,200,000	3,300,000
Department of the Interior	Bureau of Land Management (BLM)-Coal Management	7,285,000	9,526,000
Department of the Interior	BLM-Oil and Gas Management	57,793,000	86,100,000
Department of the Interior	BLM-Workforce/Organizational Support	20,960,000	23,000,000
Department of the Interior	Minerals Management Service (MMS)-Indian Trust Responsibility	19,000,000	22,000,000
Department of the Interior	MMS-Royalty and Offshore Minerals Management	213,000,000	239,430,000
Department of the Interior	Office of Surface Mining (OSM)-Abandoned Mine Reclamation Fund	2,111,000	2,153,000
Department of the Interior	OSM-Regulation and Technology	95,401,000	104,209,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Estimated budget authority	
		Fiscal year 2000	Fiscal year 2003
Department of the Interior	U.S. Geological Survey-Energy Resource Program	22,783,000	23,705,000
Environmental Protection Agency	Office of Air and Radiation (OAR)-New Source Review	0	1,200,000
National Science Foundation	Biological Sciences-Hydrogen and Fusion, Basic Research	2,910,000	920,000
National Science Foundation	Biological Sciences-Renewable Energy, Basic Research	20,000	87,000
National Science Foundation	Education and Human Resources-Hydrogen and Fusion, Basic Research	0	0
National Science Foundation	Engineering Directorate-Hydrogen and Fusion, Basic Research	490,000	200,000
National Science Foundation	Engineering Directorate-Hydrogen and Fusion, Applied Research	490,000	790,000
National Science Foundation	Engineering Directorate-Other Energy, Basic Research	1,880,000	930,000
National Science Foundation	Engineering Directorate-Renewable Energy, Applied Research	900,000	1,310,000
National Science Foundation	Mathematical and Physical Sciences-Renewable Energy, Basic Research	4,540,000	30,540,000
National Science Foundation	Mathematical and Physical Sciences: Hydrogen and Fusion, Basic Research	6,010,000	7,330,000
National Science Foundation	Office of International Science and Engineering-Hydrogen and Fusion, Basic Research	10,000	70,000
National Science Foundation	Office of International Science and Engineering-Renewable Energy, Basic Research	20,000	2,000,000
National Science Foundation	Social, Behavioral, Economic Sciences-Renewable Energy, Basic Research	0	60,000
Nuclear Regulatory Commission	International Nuclear Safety Support	7,117,465	8,026,645
Nuclear Regulatory Commission	Nuclear Materials Safety-Fuel Facilities Licensing and Inspection	22,057,943	21,420,704
Nuclear Regulatory Commission	Nuclear Reactor Safety-New Reactor Licensing	0	26,464,865
Nuclear Regulatory Commission	Nuclear Reactor Safety-Reactor Inspection and Performance Assessment	132,942,192	147,123,812
Nuclear Regulatory Commission	Nuclear Reactor Safety-Reactor License Renewal	15,786,830	22,870,187
Nuclear Regulatory Commission	Nuclear Reactor Safety-Reactor Licensing	80,098,135	95,316,734

(Continued From Previous Page)

Dollars in actual amounts

		Estimated budget authority	
Nuclear Regulatory Commission	Nuclear Reactor Safety-Reactor Safety Research	81,664,869	70,870,929
Subtotal		**$1,591,377,434**	**$2,391,565,876**
Energy's impact on the environment and health			
U.S. Agency for International Development	Energy Programs, Agency-wide	$92,400,000	$91,900,000
Department of Agriculture	Forest Service Research and Development-Global Change Research, Climate Change Science Program and Climate Change Technology Program	16,900,000	18,778,000
Department of Commerce	National Oceanic and Atmospheric Administration (NOAA)-National Marine Fisheries Habitat	8,000	103,000
Department of Commerce	NOAA-National Marine Fisheries Service Consultations	1,415,000	2,539,000
Department of Commerce	NOAA-National Weather Service	0	5,962,000
Department of Commerce	NOAA-Ocean and Coastal Resource Management	206,000	341,000
Department of Commerce	NOAA-Office of Oceanic and Atmospheric Research	0	1,987,000
Department of Commerce	NOAA-Office of Response and Restoration	5,100,000	5,700,000
Department of Energy	Civilian Radioactive Waste	351,175,000	457,010,000
Department of Energy	Fossil Energy R&D-Environmental Restoration	9,963,000	9,652,000
Department of Energy	Non-Defense Environmental Services	301,600,000	161,852,000
Department of Energy	Non-Defense Site Acceleration Completion	0	156,129,000
Department of Energy	Science-Biological and Environmental Research	416,037,000	494,360,000
Department of Energy	Uranium Enrichment Decontamination and Decomissioning Fund	336,100,000	320,563,000
Department of the Interior	Fish and Wildlife Service-Resource Management	9,646,000	13,148,000
Department of the Interior	MMS-Oil Spill Research	6,000,000	6,000,000
Department of State	State-Climate Change and Sustainable Development	1,135,000	1,440,000
Department of Transportation	Office of the Secretary of Transportation-National Climate Change Technology	0	650,000
Environmental Protection Agency	OAR-Boutique Fuels	0	400,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Estimated budget authority	
		Fiscal year 2000	Fiscal year 2003
Environmental Protection Agency	OAR-Climate Change Programs-Technological Advances, Clean Car Program	27,200,000	21,700,000
Environmental Protection Agency	OAR-Multi-pollutant Legislation, Clear Skies Legislation	7,000,000	2,100,000
National Science Foundation	Office of International Science and Engineering: Energy Efficiency, Basic Research	0	41,000
National Science Foundation	Social, Behavioral, Economic Sciences-Energy Efficiency, Basic Research	220,000	60,000
National Science Foundation	Social, Behavioral, Economic Sciences-Other Energy, Basic Research	60,000	10,000
Nuclear Regulatory Commission	Nuclear Waste Safety-Environmental Protection and Low Level Waste Management	1,129,469	4,563,957
Nuclear Regulatory Commission	Nuclear Waste Safety-High Level Waste Regulation	24,804,276	30,457,514
Nuclear Regulatory Commission	Nuclear Waste Safety-Regulation of Decommissioning	23,483,756	21,628,121
Nuclear Regulatory Commission	Nuclear Waste Safety-Spent Fuel Storage and Transportation Licensing and Inspection	20,373,831	27,021,284
U.S. Army Corps of Engineers	Regulatory Program	6,711,537	9,696,726
Subtotal		**$1,658,667,869**	**$1,865,792,602**
Low-income energy consumer assistance			
Department of Energy	Energy Conservation-Weatherization	$135,000,000	$223,537,000
Department of Health and Human Services	Low-Income Home Energy Assistance Program	1,844,350,000	1,988,300,000
Subtotal		**$1,979,350,000**	**$2,211,837,000**
Basic energy science research			
Department of Energy	Science-Advanced Scientific Computing Research	$122,338,000	$163,185,000
Department of Energy	Science-Basic Energy Sciences	752,031,000	1,001,941,000
Subtotal		**$874,369,000**	**$1,165,126,000**
Energy delivery infrastructure			
U.S. Agency for International Development	Energy Activities in Afghanistan	$0	$3,100,000
U.S. Agency for International Development	Energy Activities in Iraq	0	558,000,000
Department of Energy	Electric Transmission and Distribution	37,336,000	88,384,000

(Continued From Previous Page)

Dollars in actual amounts

		Estimated budget authority	
Energy activity area/Agency	**Program**	**Fiscal year 2000**	**Fiscal year 2003**
Department of the Interior	BLM-Lands and Realty Management	23,101,000	27,200,000
Department of the Interior	BLM-Oregon and California Grant Lands	1,975,500	2,300,000
Department of the Interior	BLM-Service Charges, Deposits, and Forfeitures	6,671,000	7,900,000
Department of Transportation	Pipeline and Hazardous Materials Safety Administration-Natural Gas Pipeline Safety	37,331,000	63,261,000
National Science Foundation	Education and Human Resources-Superconductivity, Basic Research	1,000,000	0
National Science Foundation	Engineering Directorate-Superconductivity, Applied Research	780,000	110,000
National Science Foundation	Engineering Directorate- Superconductivity, Basic Research	400,000	340,000
National Science Foundation	Mathematical and Physical Sciences-Superconductivity, Basic Research	28,170,000	12,130,000
National Science Foundation	Office of International Science and Engineering-Superconductivity, Basic Research	70,000	450,000
Subtotal		**$136,834,500**	**$763,175,000**
Energy conservation			
Department of Agriculture	Office of Chief Economist-Office of Energy Policy and New Uses-1	$793,000	$793,000
Department of Energy	Energy Conservation-Biomass and Biorefinery Systems R&D	3,700,000	24,050,000
Department of Energy	Energy Conservation-Building Technologies	58,877,000	58,327,000
Department of Energy	Energy Conservation-Distributed Energy Resources	44,450,000	60,054,000
Department of Energy	Energy Conservation-Energy Efficiency Science Initiative	11,490,000	2,440,000
Department of Energy	Energy Conservation-Federal Energy Management Program	20,731,000	19,299,000
Department of Energy	Energy Conservation-Fuel Cell Technologies	3,550,000	53,906,000
Department of Energy	Energy Conservation-Industrial Technologies	109,243,000	96,824,000
Department of Energy	Energy Conservation-Intergovernmental Activities	80,589,000	90,618,000
Department of Energy	Energy Conservation-Program Management	76,300,000	76,950,000
Department of Energy	Energy Conservation-Vehicle Technologies	206,271,000	174,171,000
Department of Transportation	Federal Highway Administration (FHWA)-Intelligent Traffic Systems	11,175,000	7,541,000

(Continued From Previous Page)

Dollars in actual amounts

		Estimated budget authority	
Energy activity area/Agency	**Program**	**Fiscal year 2000**	**Fiscal year 2003**
Department of Transportation	FHWA-Office of Operations Energy Related Obligations	5,008,000	4,903,000
Department of Transportation	Federal Transit Administration-Fuel-Cell-Powered Transit Buses	5,469,596	20,896,397
Department of Transportation	National Highway Traffic Safety Administration-Corporate Average Fuel Economy	60,000	1,000,000
Environmental Protection Agency	OAR-Clean School Bus	0	5,000,000
Environmental Protection Agency	OAR-Climate Change Programs, Industry	22,000,000	26,800,000
Environmental Protection Agency	OAR-Climate Change Programs, Smart Way Transport Partnership Initiative	2,600,000	4,400,000
Environmental Protection Agency	OAR-Climate Change, Buildings	42,600,000	41,600,000
Environmental Protection Agency	OAR-Locomotive Idling	0	200,000
Environmental Protection Agency	OAR-Truck Idling	0	200,000
National Science Foundation	Computer and Information Science and Engineering-Energy Efficiency, Basic Research	7,070,000	9,560,000
National Science Foundation	Education and Human Resources-Renewable Energy, Basic Research	1,000,000	33,000
National Science Foundation	Education and Human Resources- Energy Efficiency, Basic Research	100,000	400,000
National Science Foundation	Engineering Directorate-Energy Efficiency, Applied Research	1,790,000	830,000
National Science Foundation	Engineering Directorate-Energy Efficiency, Basic Research	4,500,000	6,970,000
National Science Foundation	Mathematical and Physical Sciences-Energy Efficiency, Basic Research	4,720,000	170,000
Subtotal		**$724,086,596**	**$787,935,397**
Energy assurance and physical security			
Department of Energy	Energy Security and Assurance Program	$2,100,000	$25,990,000
Department of Energy	Northeast Home Heating Oil Reserve	0	5,961,000
Department of Energy	Strategic Petroleum Reserve	158,400,000	171,732,000
Nuclear Regulatory Commission	Nuclear Materials Safety-Homeland Security	0	10,388,139
Nuclear Regulatory Commission	Nuclear Reactor Safety-Homeland Security	0	28,884,439

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Estimated budget authority	
		Fiscal year 2000	Fiscal year 2003
Nuclear Regulatory Commission	Nuclear Waste Safety-Homeland Security	0	5,043,223
Subtotal		**$160,500,000**	**$247,998,801**
Energy market competition and education			
Department of Agriculture	Agricultural Marketing Service-Federal-State Marketing Improvement Programs	$0	$0
Department of Agriculture	National Agricultural Statistics Service-Price Paid by Farmers, Fuel	129,000	140,000
Department of Commerce	International Trade Administration-Trade Development, Office of Energy	628,385	1,101,713
Department of Commerce	National Institute of Standards and Technology-Energy Use And Conservation Programs	27,800,000	30,100,000
Department of Energy	Energy Information Administration	72,400,000	80,087,000
Department of State	State-Economic and Business Affairs, Energy	779,045	865,181
U.S. Trade and Development Agency	Energy Related Activities	17,764,831	14,508,784
U.S. Agency for International Development	Energy Programs-Nationwide	99,600,000	39,300,000
Subtotal		**$219,101,261**	**$166,102,678**
Total		**$7,344,286,660**	**$9,599,533,354**

Source: GAO analysis of agency estimates.

Comparison of Budget Requests for Fiscal Years 2000, 2003, and 2005 for Agency Programs, by Energy Activity

Dollars in actual amounts

Energy activity area/Agency	Program	Budget request		
		Fiscal year 2000	Fiscal year 2003	Fiscal year 2005
Energy supply				
Department of Agriculture	Cooperative State Research, Education, and Extension Service-Bioenergy and Energy Related Programs I	$0	$0	$0
Department of Agriculture	Cooperative State Research, Education, and Extension Service-Bioenergy and Energy Related Programs II	1,580,000	3,500,000	4,097,000
Department of Agriculture	Cooperative State Research, Education, and Extension Service-Bioenergy and Energy Related Programs III	0	0	0
Department of Agriculture	Cooperative State Research, Education, and Extension Service-Bioenergy and Energy Related Programs IV	1,747,000	2,005,000	1,097,000
Department of Agriculture	Farm Service Agency-Commodity Credit Corporation's Bioenergy Program	0	150,000,000	100,000,000
Department of Agriculture	Forest Service Research and Development-Bioenergy, Energy Efficiency, and Conservation Research	1,590,000	7,400,000	2,400,000
Department of Agriculture	Office of Chief Economist-Office of Energy Policy and New Uses-3	0	1,000,000	1,000,000
Department of Agriculture	Office of Chief Economist-Office of Energy Policy and New Uses-2	0	1,000,000	2,500,000
Department of Agriculture	Rural Development Business Programs-Renewable Energy and Energy Efficiency	0	22,800,000	10,700,000
Department of Energy	Clean Coal Technology	(246,000,000)	40,000,000	(140,000,000)
Department of Energy	Energy Supply-Biomass and Biorefinery Systems Research and Development (R&D)	92,391,000	86,005,000	72,596,000
Department of Energy	Energy Supply-Departmental Energy Management Program	0	3,000,000	1,967,000
Department of Energy	Energy Supply-Facilities and Infrastructure	1,100,000	5,000,000	11,480,000
Department of Energy	Energy Supply-Geothermal Technology	29,500,000	26,500,000	25,800,000
Department of Energy	Energy Supply-Hydrogen Technology	28,000,000	39,881,000	95,325,000
Department of Energy	Energy Supply-Hydropower	7,000,000	7,489,000	6,000,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Budget request		
		Fiscal year 2000	Fiscal year 2003	Fiscal year 2005
Department of Energy	Energy Supply-Intergovernmental Activities	7,500,000	18,807,000	16,000,000
Department of Energy	Energy Supply-Program Direction	19,171,000	16,907,000	20,711,000
Department of Energy	Energy Supply-Renewable Program Support	0	0	0
Department of Energy	Energy Supply-Solar Energy	117,659,000	79,625,000	80,333,000
Department of Energy	Energy Supply-Wind Eenergy	45,600,000	44,000,000	41,600,000
Department of Energy	Energy Supply-Zero Energy Buildings	0	8,000,000	0
Department of Energy	Fossil Energy R&D-National Academy of Sciences Program Review	0	0	0
Department of Energy	Fossil Energy R&D-Plant and Capital Projects	2,000,000	2,000,000	0
Department of Energy	Fossil Energy R&D-Advanced metallurgical research	5,000,000	5,300,000	8,000,000
Department of Energy	Fossil Energy R&D-Black Liquor	0	0	0
Department of Energy	Fossil Energy R&D-Coal and Other Power systems	110,682,000	365,100,000	470,000,000
Department of Energy	Fossil Energy R&D-Cooperative Research and Development	5,836,000	6,000,000	3,000,000
Department of Energy	Fossil Energy R&D-Energy Efficiency Science Initiative	0	0	0
Department of Energy	Fossil Energy R&D-Import/Export Authorization	0	2,500,000	1,799,000
Department of Energy	Fossil Energy R&D-Natural Gas Technologies	105,314,000	22,590,000	26,000,000
Department of Energy	Fossil Energy R&D-Petroleum Oil Technology	50,166,000	35,400,000	15,000,000
Department of Energy	Fossil Energy R&D-Program Direction and Management Support	72,079,000	84,700,000	106,000,000
Department of Energy	Naval Petroleum and Oil Shale Reserves	0	21,069,000	20,000,000
Department of Energy	Nuclear Energy Research and Development	30,000,000	71,500,000	96,046,000
Department of Energy	Science-Fusion Energy Sciences Program	222,614,000	257,310,000	264,110,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Budget request		
		Fiscal year 2000	Fiscal year 2003	Fiscal year 2005
Department of the Interior	Bureau of Land Management (BLM)-Coal Management	7,527,000	9,588,000	8,944,000
Department of the Interior	BLM-Oil and Gas Management	55,326,000	84,936,000	85,600,000
Department of the Interior	Minerals Management Service (MMS)-Indian Trust Responsibility	19,000,000	22,000,000	22,000,000
Department of the Interior	MMS-Royalty and Offshore Minerals Management	213,000,000	240,000,000	250,000,000
Department of the Interior	U.S. Geological Survey-Energy Resource Program	21,898,000	25,349,000	24,474,000
Subtotal		**$1,027,280,000**	**$1,818,261,000**	**$1,754,579,000**
Energy's impact on the environment and health				
Department of Agriculture	Forest Service Research and Development-Global Change Research,Climate Change Science Program, Climate Change Technology Program	$16,900,000	$18,778,000	$19,396,000
Department of Commerce	National Oceanic and Atmospheric Administration (NOAA)-National Marine Fisheries Habitat	8,000	103,000	585,000
Department of Commerce	NOAA-National Marine Fisheries Service Consultations	1,415,000	2,539,000	3,923,000
Department of Commerce	NOAA-National Weather Service	0	0	6,900,000
Department of Commerce	NOAA-Ocean and Coastal Resource Management	206,000	341,000	216,000
Department of Commerce	NOAA-Office of Oceanic and Atmospheric Research	0	2,000,000	17,556,000
Department of Commerce	NOAA-Office of Response and Restoration	5,100,000	5,700,000	5,700,000
Department of Energy	Civilian Radioactive Waste	370,000,000	590,802,000	880,000,000
Department of Energy	Fossil Energy R&D-Environmental Restoration	10,000,000	9,715,000	6,000,000
Department of Energy	Non-Defense Environmental Services	330,934,000	172,970,000	291,296,000
Department of Energy	Non-Defense Site Acceleration Completion	0	167,581,000	151,850,000
Department of Energy	Science-Biological and Environmental Research	411,170,000	504,215,000	501,590,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Budget request		
		Fiscal year 2000	Fiscal year 2003	Fiscal year 2005
Department of Energy	Uranium Enrichment Decontamination and Decommissioning Fund	240,198,000	298,489,000	500,200,000
Department of the Interior	MMS-Oil Spill Research	6,000,000	6,000,000	7,000,000
Environmental Protection Agency	Office of Air and Radiation (OAR)-Multi-pollutant Legislation,Clear Skies Legislation	7,000,000	2,200,000	8,500,000
Subtotal		**$1,398,931,000**	**$1,781,433,000**	**$2,400,712,000**
Low-income energy consumer assistance				
Department of Health and Human Services	Low-Income Home Energy Assistance Program	$1,400,000,000	$1,700,000,000	$2,001,000,000
Subtotal		**$1,400,000,000**	**$1,700,000,000**	**$2,001,000,000**
Basic energy science research				
Department of Energy	Science-Advanced Scientific Computing Research	$198,875,000	$169,625,000	$204,340,000
Department of Energy	Science-Basic Energy Sciences	888,084,000	1,019,600,000	1,063,530,000
Subtotal		**$1,086,959,000**	**$1,189,225,000**	**$1,267,870,000**
Energy delivery infrastructure				
Department of Energy	Electric Transmission and Distribution	$41,000,000	$76,506,000	$90,880,000
Department of the Interior	BLM-Lands and Realty Management	23,214,000	27,121,000	27,900,000
Department of the Interior	BLM-Service Charges, Deposits, and Forfeitures	4,000,000	1,115,000	14,500,000
Department of Transportation	Pipeline and Hazardous Materials Safety Administration-Natural Gas Pipeline Safety	38,187,000	64,510,000	70,073,000
Subtotal		**$106,401,000**	**$169,252,000**	**$203,353,000**
Energy conservation				
Department of Agriculture	Office of Chief Economist-Office of Energy Policy and New Uses-1	$793,000	$793,000	$793,000
Department of Energy	Energy Conservation-Biomass and Biorefinery Systems R&D	4,000,000	23,939,000	8,420,000
Department of Energy	Energy Conservation-Building Technologies	88,163,000	52,563,000	56,586,000
Department of Energy	Energy Conservation-Distributed Energy Resources	31,300,000	54,784,000	52,867,000

(Continued From Previous Page)

Dollars in actual amounts

Energy activity area/Agency	Program	Budget request		
		Fiscal year 2000	Fiscal year 2003	Fiscal year 2005
Department of Energy	Energy Conservation-Energy Efficiency Science Initiative	0	0	0
Department of Energy	Energy Conservation-Federal Energy Management Program	28,968,000	23,425,000	17,683,000
Department of Energy	Energy Conservation-Fuel Cell Technologies	41,380,000	57,500,000	77,500,000
Department of Energy	Energy Conservation-Industrial Technologies	114,300,000	91,477,000	57,762,000
Department of Energy	Energy Conservation-Program Management	80,504,000	74,954,000	86,731,000
Department of Energy	Energy Conservation-Vehicle Technologies	190,200,000	153,563,000	155,139,000
Department of Transportation	National Highway Traffic Safety Administration-Corporate Average Fuel Economy	60,000	1,250,000	1,283,000
Subtotal		**$579,668,000**	**$534,248,000**	**$514,764,000**
Energy assurance and physical security				
Department of Energy	Energy Security and Assurance Program	$0	$4,275,000	$10,600,000
Department of Energy	Northeast Home Heating Oil Reserve	0	8,000,000	5,000,000
Department of Energy	Strategic Petroleum Reserve	164,000,000	188,754,000	172,100,000
Subtotal		**$164,000,000**	**$201,029,000**	**$187,700,000**
Energy market competition and education				
Department of Agriculture	Agricultural Marketing Service-Federal-State Marketing Improvement Programs	$0	$0	$0
Department of Agriculture	National Agricultural Statistics Service-Price Paid by Farmers, Fuel	0	0	0
Department of Commerce	National Institute of Standards and Technology-Energy Use and Conservation Programs	27,800,000	30,100,000	4,700,000
Department of Energy	Energy Information Administration	72,644,000	80,111,000	85,000,000
Subtotal		**$100,444,000**	**$110,211,000**	**$89,700,000**
Total		**$5,863,683,000**	**$7,503,659,000**	**$8,419,678,000**

Source: GAO analysis of agency estimates.

Comments from the Department of Energy

Department of Energy
Washington, DC 20585

May 12, 2005

2005 MAY 13 PM 1:53

Mr. Jim Wells
Director
Natural Resources and Environment
Government Accountability Office
Washington, D. C. 20548

Dear Mr. Wells:

The Department of Energy appreciates the opportunity to review and comment on the Government Accountability Office's (GAO) report entitled, "National Energy Policy: Inventory of Federal Energy Programs and Status of Policy Recommendations" (GAO-05-379).

Early in 2001, President Bush laid out a comprehensive plan to address many of the significant energy challenges we face today. This framework, or National Energy Policy (NEP), is a balanced approach that seeks to promote dependable, affordable, environmentally sound energy for the future.

Since that time, our Administration has aggressively worked to improve America's energy independence and security, capitalizing on our technology investments and implementing many of the NEP recommendations through executive action. While we have made significant progress, there is still an acute need for Congress to approve a comprehensive energy bill containing several items of critical importance. We remain optimistic that this important legislation will be sent to the President this year.

You indicated that your study sought to: (1) identify the federal government's current energy-related efforts; (2) review the status of efforts to implement the May 2001 National Energy Policy ("NEP") report recommendations; and (3) determine the extent to which resources associated with federal energy-related efforts have changed since the release of the NEP report. In this regard, you have employed a quantitative methodology in setting forth your information. For example, you have presented estimated budget authority for programs in eight major energy activity areas and outlay equivalent estimates for energy-related income tax preferences.

Printed with soy ink on recycled paper

The quantitative approach you have taken in evaluating the NEP report and the Status Report is not consistent with the purpose and nature of these documents. The NEP report and the recent Status Report were never intended by the Administration to provide a "full accounting" of all federal energy-related programs and all energy-related excise taxes and income tax preferences that is the focus of your study. Moreover, we believe other sources of publicly available information exist that provide the quantitative information more appropriate to your objectives and methodology.

The National Energy Policy should, however, be recognized as an overall blueprint which, in addition to laying out specific policy objectives, seeks to fundamentally reconfigure the way government agencies address our energy needs. The broad policy objectives contained in the NEP provide the basis for subsequent Administration actions, accomplishments and initiatives, whether specifically related to an NEP recommendation or not. It is not sufficient to look at the President's energy policies through the specific NEP recommendations alone.

We have additional concerns regarding specific aspects of your study:

Your observation that the NEP report and the Status Report is the start of work on an inventory is similarly misplaced. The Administration has been tracking implementation of all NEP recommendations and related actions on a continuous basis, and status updates have been provided periodically to the Congress via budget documents and other means.

As to your concern that many of the policy recommendations are open-ended in nature and do not include measurable targets, agencies have developed strategic goals and performance measures under the "Government Performance and Results Act" (GPRA), the vehicle through which measurable goals and performance is reported. These performance measures have been included in every budget submission to Congress, along with an evaluation of results against previous performance measures as dictated by GPRA.

Moreover, we take exception to your observation that public information about NEP implementation is limited to the NEP Status Report and press releases at the time of the NEP anniversary date. These documents were designed to provide the public a general overview of progress being made. As stated above, volumes of information related to energy policy implementation are generated during each annual budget and appropriations cycle. During these annual processes, agency programs and activities have been the subject of considerable Congressional oversight.

In short, we believe that your analysis of the NEP and Status Report does not accurately reflect the goals or intent of the National Energy Policy, its implementation or the Administration's ongoing efforts to provide greater energy security for the American people.

Comments on technical and resource issues, editorial remarks, and corrections are being forwarded to your office directly by the GAO liaison offices at DOE and other interested agencies.

If you have additional questions, please call me at 202-586-8660.

Sincerely,

Karen A. Harbert
Assistant Secretary
Office of Policy and International Affairs

3

GAO's Mission

The Government Accountability Office, the audit, evaluation and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site (www.gao.gov). Each weekday, GAO posts newly released reports, testimony, and correspondence on its Web site. To have GAO e-mail you a list of newly posted products every afternoon, go to www.gao.gov and select "Subscribe to Updates."

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. Government Accountability Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone: Voice: (202) 512-6000
TDD: (202) 512-2537
Fax: (202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Gloria Jarmon, Managing Director, JarmonG@gao.gov (202) 512-4400
U.S. Government Accountability Office, 441 G Street NW, Room 7125
Washington, D.C. 20548

Public Affairs

Paul Anderson, Managing Director, AndersonP1@gao.gov (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, D.C. 20548