

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY CONSERVATION

Proposed Appropriation Language

For necessary expenses in carrying out energy conservation activities, [\$745,242,000] \$850,500,000, to remain available until expended, of which [\$25,000,000] \$2,000,000 shall be derived by transfer from unobligated balances in the Biomass Energy Development account: *Provided*, That [\$168,500,000] \$191,000,000 shall be for use in energy conservation *grant* programs [as defined in section 3008(3) of Public Law 99-509 (15 U.S.C. 4507)]: *Provided further*, That [notwithstanding section 3003(d)(2) of Public Law 99-509,] such sums shall be allocated [to the eligible programs] as follows: [\$135,000,000] \$154,000,000 for weatherization assistance grants and [\$33,500,000] \$37,000,000 for State energy [conservation] *program* grants: *Provided further*, That [notwithstanding any other provision of law, in fiscal year 2001 and thereafter sums appropriated for weatherization assistance grants shall be contingent on a cost share of 25 percent by each participating State or other qualified participant]. *the last proviso under this heading in the Department of the Interior and Related Agencies Appropriations Act, 2000, is repealed. (Department of the Interior and Related Agencies Appropriations Act, 2000, as enacted by section 1000(a)(3) of the Consolidated Appropriations Act, 2000 (P.L. 106-113).*

EXPLANATION OF CHANGE

Deletes funding amounts which had specific application to FY 2000 and includes the appropriate funding amounts for FY 2001.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY EFFICIENCY AND RENEWABLE ENERGY
ENERGY CONSERVATION

EXECUTIVE BUDGET SUMMARY

Mission

The Energy Efficiency and Renewable Energy (EERE) program of the Department of Energy develops and deploys clean energy technologies that contribute to a stronger economy, healthier environment and energy security for the nation.

EERE activities funded under the Energy Conservation Appropriation are designed to improve the nation's energy efficiency—specifically, the fuel economy of automobiles and other vehicles; the energy intensity of industries; the efficiency of buildings and appliances; and the energy management of federal facilities. In cost-shared partnerships with the nation's manufacturers, utilities, and states, EERE works to advance the development and the deployment of energy efficiency technologies for the entire nation. The efficient use of energy is a critical component of the reliable, affordable and clean energy system of the future. As such, EERE supports the Department's goal of promoting reliable, competitive, and environmentally responsible energy systems that serve the needs of the public.

Strategy

EERE strategic objectives reflect the Administration's interest in the benefits that energy research and development can deliver to all Americans. The use of advanced energy technologies reduces harmful air pollutants and greenhouse gas emissions and lowers both energy costs and dependence on fossil fuels. Moreover, energy efficiency technologies for the transportation, buildings and industrial sectors provide affordable solutions to environmental challenges. The Administration requests increases in the Department's energy efficiency activities to help the nation achieve these energy benefits in the 21st century.

Energy Resources Goals

EERE programs address the goals of the Department's Energy Resources Business Line:

- Reduce the vulnerability of the U.S. economy to disruptions in energy supplies.
- Ensure that a competitive electricity generation industry is in place that can deliver adequate and affordable supplies with reduced environmental impact

EXECUTIVE BUDGET SUMMARY (Cont'd)

- Reduce energy-related environmental impacts through more efficient energy use.
- Support U.S. energy, environmental, and economic interests in global markets.
- Carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use alternatives.

In supporting the achievement of these goals, EERE programs are responding to challenges and opportunities that have a major impact on the nation's economy and environmental quality:

National Security

The Energy Information Administration projects that by 2015, U.S. consumption of oil will increase more than 20 percent to more than 24 million barrels per day, of which 63 percent will be imported — a higher ratio than at the time of the oil shocks of the 1970s. Demand for petroleum in non-industrialized countries is projected to almost double by 2020, and Organization of Petroleum Exporting Countries (OPEC) nations are expected to supply over half of world petroleum production, as compared to 40 percent today. Given historical precedents and future oil market trends, the United States has a critical interest in diminishing the nation's reliance on foreign oil. EERE programs support development and deployment of renewable energy technologies that reduce reliance on oil as an energy source, to the benefit of national security and reduction of the U.S. trade deficit.

Electricity Restructuring

The United States consumes more than \$200 billion worth of electricity each year (more electricity than Western Europe and Japan combined). Electricity generation accounts for 38 percent of annual U.S. primary energy consumption and a similar share of U.S. greenhouse gas emissions, and in some areas adversely impacts local and regional air quality.

The electric power industry is in the midst of restructuring to increase competition and consumer choice. However, a new competitive electric marketplace will require the Nation's utility infrastructure to operate in ways for which it was not originally designed, and may not include sufficient incentives for developing and deploying more advanced technology. New technologies will be required to ensure that adequate, reliable, reasonably-priced, and environmentally sensitive electricity supplies are available during and after the restructuring process.

EERE is working with utilities, industry, states, and consumers to ensure that electricity restructuring results in a competitive and effective electric power industry. Power market restructuring presents an opportunity to reduce energy costs, advance the use of energy efficient technologies, and provide affordable and reliable services with reduced environmental impacts.

EXECUTIVE BUDGET SUMMARY (Cont'd)

Environmental Quality

Air pollution, particularly in urban centers, ranks high among the nation's most pressing environmental concerns. In advancing a smart energy policy, EERE programs work to mitigate and minimize the environmental costs associated with energy use. By developing technologies that improve energy efficiency in industry and buildings, EERE's programs are concurrently identifying ways to reduce energy-related air pollutants. EERE's work on vehicle technologies will lead to greater fuel-efficiency as well as use of alternative fuels — both offering impressive reductions in emissions.

The FY 2001 budget request for EERE programs is a major element of the President's Climate Change Technology Initiative, a multi-billion dollar investment over five years to reduce greenhouse gas emissions. In 1997, a major study conducted by five national laboratories documented the critical role that development and deployment of renewable energy technologies can play in reducing greenhouse gases. Given the cost savings associated with these technologies, the study noted that aggressive investment in energy R&D and deployment could lead to significant emissions reductions without raising the nation's energy bill. The President's budget request for EERE programs also includes activities to enable the private sector to achieve emissions reductions overseas — at potentially the lowest cost — and respond to direction to encourage meaningful participation by developing countries in a global effort to address this issue.

Economic Competitiveness

In addition to reducing the nation's vulnerability to disruptions in energy supplies, EERE's research and development efforts advance U.S. economic interests. Carried out in partnership with industry, national laboratories, and universities, EERE's research and development programs are designed to maintain America's technological expertise and competitive advantage in the global market. EERE's investments not only lay the foundation for a more sustainable energy future but also open markets for U.S. manufacturers of advanced energy efficiency technologies.

EERE's work with the nation's most energy-intensive and polluting industries results in productivity enhancements and savings in energy and environmental compliance costs. Energy is typically one of the most expensive elements of manufactured products. By cultivating clean and energy efficient industries, EERE is helping to assure the long-term competitiveness of U.S. industry.

EERE also sponsors international programs to promote U.S. energy efficiency technologies and services in international markets, to help ensure that U.S. companies are competitive in the large and growing global marketplace for energy efficiency and clean energy technologies. International markets represent a multi-billion dollar opportunity for U.S. clean energy technology providers. The strategic focus of EERE international activities is to address emerging global environmental issues, to promote trade and market development, and to ensure energy and environmental security. The June 1999 report issued by the President's Council of Advisors for Science and Technology (PCAST), *Powerful*

EXECUTIVE BUDGET SUMMARY (Cont'd)

Partnerships: The Federal Role in International Cooperation on Energy Innovation, stresses the need for greater federal coordination and funding of international activities to promote greater use of renewable and efficient U.S. energy technologies in global markets. The report found that international cooperation on energy innovation lowers the cost and increases the pace of U.S. energy innovation, and that government support for such cooperation is warranted by economic, environmental and security impacts of how energy challenges are addressed abroad. PCAST has recommended to the President that existing Federal activities in support of international cooperation on energy innovation be increased.

Energy prices, particularly for oil, are now relatively low (in real terms), and electric utility restructuring is expected to support this general trend by subjecting the pricing of electricity to the discipline of market forces. If energy prices remain low for the near future as many project, private sector investments in energy R&D could be reduced and introduction of new, commercial-scale technologies into the market delayed or deferred. But R&D and adoption of new technologies is a long-term process. The size and complexity of the U.S. energy systems, and the large capital requirement of many energy investments are such that the transition to new energy sources and fuels has historically taken several decades, as did the development of our current power sources. A substantial period of R&D, in some cases decades, may be needed to ensure that robust energy technology options are available when the need arrives.

Crosscutting Initiatives

EERE strongly supports Department of Energy initiatives that address new opportunities in bioenergy, international energy markets, electricity market restructuring, electricity grid reliability, and energy savings in schools. Many of these efforts extend across organizational boundaries and require extensive cooperation among EERE sectors offices, Departmental elements and other Federal agencies. EERE-supported advances in biomass and agricultural processes, fuel cells, combined heat and power, advanced materials, distributed power, cofiring, and other areas of crosscutting research now allow EERE programs to collaborate on accelerating the development of energy technologies that apply to all sectors of the economy. To meet the objectives of the Department's crosscutting initiatives, EERE integrates the efforts of its five program offices, which have developed and deployed technologies for the transportation, industrial, buildings, power and Federal sectors during the past two decades.

Bioenergy/Bioproducts

In August 1999, the Administration issued the Executive Order on Bioenergy and Bioproducts, launching a national Bioenergy/Bioproducts Initiative designed to speed the development of biomass as an environmentally friendly, renewable energy source. The Bioenergy Initiative is a national partnership to develop an integrated industry that produces power, fuels and chemicals from crops, trees, and agricultural wastes—the nation's abundant biomass resources. Building on existing efforts, the Bioenergy/Bioproducts Initiative will create new and economically viable options for farmers, foresters, fuels producers, chemical manufacturers, wood products companies, electricity producers and consumers to use

EXECUTIVE BUDGET SUMMARY (Cont'd)

and profit from biomass commodities, products, and services. By making biomass a resource that competes with oil in the marketplace, the Bioenergy/Bioproducts Initiative will help grow the U.S. economy, strengthen energy security, protect the environment, reduce greenhouse gas emissions, and revitalize rural America.

International Energy Efficiency

Contributing to international efforts, EERE facilitates deployment of energy efficiency technologies in developing countries and other nations in support of U.S. national interests and policies. The strategic focus of the EERE international activities is to address emerging global environmental issues, to promote trade and market development, and to ensure energy and environmental security. Facilitating international technology cooperation advances U.S. interests in bilateral and multilateral discussions, agreements, and treaty negotiations.

Partnership for a New Generation of Vehicles (PNGV)

Most Federal research and development for the Partnership for a New Generation of Vehicles is supported by the EERE Office of Transportation Technologies, working with automobile manufacturers and their suppliers to develop an 80-mpg family sedan by 2004 at a cost, performance, safety and comfort level similar to today's models.

Industries of the Future

The Industries of the Future program, implemented by the EERE Office of Industrial Technologies, allows the nation's most energy-intensive industries to share in the planning, research, and development of industrial technologies that reduce energy costs, resource waste, and the burdens of pollution, for a more productive and environmentally sound manufacturing base.

Building America

The EERE Office of Buildings Technology, State and Community Program's Building America program supports the energy goals of the Partnership for Advancing Technology in Housing (PATH), a Presidential initiative that brings Federal agencies and industry together to accelerate the creation and widespread use of advanced technologies to radically improve the quality, affordability, disaster resistance, and environmental and energy efficiency of the nation's housing.

EXECUTIVE BUDGET SUMMARY (Cont'd)

Federal Energy Management Program

The President, in a recent Executive Order, has also placed emphasis on improving the energy efficiency and environmental quality of the Federal sector. The EERE Federal Energy Management Program (FEMP) has developed contractual mechanisms to attract substantial private sector funds to improve the energy efficiency of Federal facilities.

EnergySmart Schools

In FY 1999, the Secretary of Energy launched the EnergySmart Schools partnership as part of an interagency effort to improve the nation's schools. EnergySmart Schools brings together public and private sector resources to reduce energy bills and improve the learning environment in schools, redirecting the savings to our children's education. Schools can potentially save up to \$1.5 billion in energy costs, and over 3.6 million metric tons of carbon dioxide emissions by 2010. The EnergySmart Schools initiative utilizes existing programs, including the State Energy Programs, Rebuild America, Clean Cities, Energy Star, and the President's Million Solar Roofs Initiative, along with partners' efforts to provide technical assistance, an information clearinghouse, technology demonstrations, guidance in financing mechanisms and design, and education in energy awareness to school districts around the country. These efforts will begin to overcome the barriers to improved school energy efficiency. Finally, the partnership will increase student, teacher and community awareness of energy related issues, including financial management, air quality, climate change, and new technologies.

Distributed Power

EERE is coordinating program efforts to advance small-scale, on-site power generation as an alternative to centralized baseload power generation. This "distributed generation"—based on photovoltaics, concentrating solar power, fuel cells, gas turbines, hydrogen technologies, or hybrid fossil/renewable power systems—can greatly reduce energy use and carbon dioxide emissions. EERE has launched the Combined Heat and Power initiative to develop and deploy systems that produce both electricity and thermal energy from a single power source. In addition, EERE is supporting demonstrations of residential and building-sized hydrogen/natural gas fuel cells for off-grid applications.

Million Solar Roofs

EERE sector programs are combining efforts to support the President's Million Solar Roofs Initiative, facilitating the installation of photovoltaic and solar hot water systems on one million buildings across the nation by 2010. Million Solar Roofs is implemented by the EERE Office of Power Technologies, in cooperation with EERE Office of Buildings, State and Community Programs and the Federal Energy Management Program.

EXECUTIVE BUDGET SUMMARY (Cont'd)

The Department's energy R&D programs are conducted in partnership with the National Laboratories, private sector companies, non-governmental organizations, universities, other Federal agencies, and state and local entities. EERE works with States to deploy energy technologies by collaborating with state energy offices and local communities to showcase technology applications and to provide technical assistance. States work closely with EERE on research, development and deployment of energy technologies under Memorandum of Understanding agreements that call for State participation in the identification of research needs in the long term and in the planning and performance of joint research.

Major Changes

Managing for Results

Continuous management improvement is central to the effective and efficient accomplishment of the mission of the Office of Energy Efficiency and Renewable Energy (EERE). Specific reforms that have been accomplished in the past year as well as new initiatives are summarized below:

Strategic Planning and Technology Roadmaps: Consistent with the Government Performance and Results Act, EERE has developed a new strategic plan. The strategic plan sharpens the Office's focus on business strategies that will improve the efficiency and effectiveness of operations.

Increasing Competition: In FY 1999, EERE substantially increased its competitive funding of grants and cooperative agreements. EERE awarded more than 90% of funds for new discretionary financial assistance awards on a competitive basis in FY 1999 compared with 24% in FY 1996. EERE intends to continue to sharpen its competitive strategies in FY 2001.

Much of the increased competition was carried out through the issuance of two broad-based competitive solicitations. The first solicitation involved information dissemination, outreach, training, and related technical analysis and technical assistance activities. This solicitation, which had a total dollar value of approximately \$15 million in FY 1999 funding, was designed to increase energy efficiency and the use of renewable energy and alternative fuels and involved activities which often had been awarded by individual EERE programs on a noncompetitive basis in the past. Following a rigorous merit review process, EERE awarded approximately 140 agreements out of a total of more than 530 applications. The second broad-based solicitation involved research, development, and demonstration (RD&D) of energy efficiency and renewable energy technologies. EERE awarded approximately 40 grants and cooperative agreements under this solicitation, with a total dollar value of approximately \$7 million.

EXECUTIVE BUDGET SUMMARY (Cont'd)

Refining Merit Review Procedures: In FY 1999, EERE refined its objective merit review processes through new regulations and additional guidance and training, and these guidance and training efforts will continue in FY 2000. In conjunction with the two broad-based solicitations, more than 100 people involved with the selection process received training on merit review and competitive selection procedures. In addition, during the summer of 1999, approximately 75 EERE management and staff attended comprehensive training sessions on financial assistance policies and procedures. During 1999, the review of proposals by independent reviewers helped assure the selection of the highest quality projects.

Managing Smarter: In FY 1999, EERE initiated a number of actions to improve its overall management processes. The Assistant Secretary appointed a Management Improvement Team and contracted with the National Academy of Public Administration to review EERE management practices. In addition, he established a Chief Operating Officer in EERE who directs the new Office of Planning, Budget and Management and is responsible for corporate management functions. This new office has made significant progress in implementing business management systems to assist program managers in tracking technical milestones, costs, and schedules and promote increased accountability. In recent months, EERE also finalized its Strategic Management System. The Strategic Management System strengthens the operational planning process, including improvements in budget formulation, budget execution, and procurement planning by FY 2002.

Leveraging Federal Investments by Expanding Partnerships with Federal, State, and Other Entities: EERE is strengthening its partnerships with other government entities and the private sector to better leverage the Federal investment in RD&D and to facilitate the deployment of new technologies. For example, EERE has made substantial progress on an initiative to establish joint efforts with State organizations pursuing energy technology R&D. In 1999, the Department completed a landmark model agreement with the California Energy Commission which will greatly facilitate research activities between State research organizations and DOE's national laboratories. With Congressional support, EERE also developed a mechanism to support joint work with the States in several priority R&D areas.

EXECUTIVE BUDGET SUMMARY (Cont'd)

Site Funding and Federal and Contractor Staffing Profiles

In support of its priorities, EERE submits the following FY 2001 Congressional Request. The table below covers both the Energy Conservation and Energy Supply Appropriations.

Energy Efficiency and Renewable Energy Programs FY 2001 Congressional Budget Request (in thousands of dollars)				
Program	FY 1999	FY 2000	FY 2001 Request	Program Change
Building Technology, State and Community Sector	\$ 261,135	\$ 283,998	\$ 339,759	55,761
Federal Energy Management Program	23,764	23,918	29,468	5,550
Industrial Sector	162,775	175,200	184,026	8,826
Transportation Sector	198,665	232,760	250,870	18,110
Policy and Management	38,039	42,866	46,377	3,511
Solar and Renewable Resources Technologies	332,319	310,116	409,500	99,384
Total Program Funding	1,016,697	1,068,858	1,260,000	191,142
PODRA and Prior Year Balances	(66,384)	(821)	0	
Transfer from Biomass Energy Development ^{a/}	0	(25,000)	(2,000)	
Total Budget Authority ^{b/}	\$ 950,313	\$ 1,068,037	\$ 1,260,000	191,963

^{a/} Non-add for Energy Conservation under OMB scoring rules. The transaction is applied against the U.S. Treasury, where the account resides.

^{b/} Total Budget Authority figures take into account prior year balances and receipts associated with the Petroleum Overcharge Distribution and Restitution Act (PODRA), and Contractor Travel Savings.

EXECUTIVE BUDGET SUMMARY (Cont'd)

Federal Staffing at Field and Headquarters (FTEs)			
Field and Headquarters Sites	FY 1999	FY 2000	FY 2001
Energy Efficiency Programs			
Building Technology, State and Community Sector			
Headquarters	73	81	81
Federal Energy Management Program			
Headquarters	21	30	32
Transportation Sector			
Headquarters	55	62	62
Oak Ridge Operations Office	<u>1</u>	<u>1</u>	<u>1</u>
Subtotal	56	63	63
Industry Sector			
Headquarters	56	63	63
Chicago Operations Office	6	6	6
Idaho Operations Office	<u>4</u>	<u>4</u>	<u>4</u>
Subtotal	66	73	73
Policy and Management			
Headquarters	64	62	60
Golden Field Office	29	30	30
Atlanta Regional Office	20	25	25
Boston Regional Office	12	18	18
Chicago Regional Office	16	20	20
Denver Regional Office	22	27	27
Philadelphia Regional Office	17	19	19
Seattle Regional Office	<u>19</u>	<u>22</u>	<u>22</u>
Subtotal	<u>199</u>	<u>223</u>	<u>221</u>
Subtotal FTEs, Energy Efficiency Programs	415	470	470

EXECUTIVE BUDGET SUMMARY (Cont'd)

Federal Staffing at Field and Headquarters (FTEs)			
Field and Headquarters Sites	FY 1999	FY 2000	FY 2001
Solar and Renewable Resources Technologies			
Golden Field Office	16	22	22
Idaho Operations Office	1	1	1
Headquarters	<u>90</u>	<u>98</u>	<u>98</u>
Subtotal, Solar and Renewable Resources Technologies	107	121	121
Total Energy Efficiency and Renewable Energy	522	591	591

Program Performance Measures

The following long range goals provide the basis for EERE priorities under the Energy Conservation account for FY 2000:

- Advance the Partnership for a New Generation of Vehicles goal of developing, by 2004, prototype mid-sized cars, capable of 80 miles per gallon and two-third reductions in nitrogen oxides (NO_x) and carbon dioxide (CO₂) emissions, without compromising safety, comfort, performance, and cost.
- By 2010, improve the efficiency of the nation's most energy intensive industries and reduce energy-related releases of carbon dioxide, sulfur oxides, nitrogen oxides, particulates, and other wastes by as much as 25 percent on a per-unit basis.
- By 2010, improve the energy efficiency of the nation's new homes by 50 percent; new commercial buildings by 30 to 50 percent; and existing buildings by 20 percent, compared to 1996 usage, and displace 2 quads per year with an energy cost saving of more than \$13.5 billion.
- By 2010, improve energy efficiency in Federal buildings by 35 percent over 1985 levels.

EXECUTIVE BUDGET SUMMARY (Cont'd)

Program Benefits

The following tables present the benefits resulting from Energy Efficiency Programs. The first table presents estimated benefits to date—this likely undercounts the full impact of Energy Efficiency Programs. The second table presents estimated future benefits. Estimates are derived through an analytical process that uses independent peer review.

Office of Energy Efficiency and Renewable Energy Energy Efficiency Accomplishments through the Year 1999						
	Total Primary Energy Displaced (Quadrillion BTUs)		Energy Cost Savings (\$ billions)		Carbon Reductions (million metric tons)	
	1999	Cumulative	1999	Cumulative	2000	Cumulative
Transportation Sector	0.6	3.3	3.7	26.4	8.9	65.3
Industry Sector	0.2	1.6	0.9	4.4	3.2	29.5
Building Technology, State and Community Sector	2.1	12.6	15.2	90.6	33.8	201.3
Federal Energy Management Program	0.1	0.4	0.2	1.2	1.3	8.1
Note: Not a portion of the benefits from EERE's energy efficiency programs are captured. Other benefits, such as productivity improvements and other emission and solid/liquid waste reductions, have also been realized. These benefits will continue to accrue over the lifetime of technologies.						

EXECUTIVE BUDGET SUMMARY (Cont'd)

Office of Energy Efficiency and Renewable Energy Energy Efficiency Programs Projected Benefits by Sector through the Year 2020									
	Total Primary Energy Displaced (Quadrillion BTUs)			Energy Cost Savings (\$ billions)			Carbon Reductions (million metric tons)		
	2005	2010	2020	2005	2010	2020	2005	2010	2020
Transportation Sector <i>(oil savings in quads)</i>	0.2-0.3 <i>(0.5-0.6)</i>	0.9-1.0 <i>(1.4-1.5)</i>	2.5-2.5 <i>(2.8-3.2)</i>	1.7-3.3	8.4-9.9	20.1-22.6	3.8-4.6	17.9-19.5	46.0-50.1
Industry Sector	0.6	1.4-1.5	3.8-4.8	2.1-2.2	5.5-6.8	17.3-19.3	10.3-11.9	26.0-26.7	65.3-99.8
Building Technology, State & Community Sector	0.5-0.6	1.0-1.3	1.9-2.7	3.0	8.4-10.3	15.0-21.7	9.2-11.2	17.1-23.0	34.4-47.4
Federal Energy Management Program	.05	.07	.07	0.3	0.4	0.3	1.0	1.2	1.2
<p>Note: The program benefit ranges are developed through an impact analysis process undertaken annually by the Office of Energy Efficiency and Renewable Energy (EERE). EERE's sectors analyze the impacts their programs will have on energy savings, cost savings, and carbon reductions if all program goals are met. These estimates are externally reviewed by Arthur D. Little. An integrated analysis model run by an external contractor controls for interaction effects. The integrated analysis model accounts for inter- and intra-sector double-counting as well as market trends, including reductions in new electricity generation created by reduced demand. Totals for Transportation include impacts from the Biofuels program funded under Energy and Water.</p>									

**Climate Change Technology Initiative (CCTI)
Departmental Crosscut**

(dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	\$ Change	% Change
Energy & Water Development					
Energy Supply:					
Solar and Renewable	\$332,319	\$310,116	\$409,500	\$99,384	32.0%
Nuclear Energy	0	4,976	5,000	24	0.5%
Subtotal, Energy Supply	332,319	315,092	414,500	99,408	31.5%
Science	13,135	33,000	36,700	3,700	11.2%
Subtotal, Science	13,135	33,000	36,700	3,700	11.2%
Subtotal, Energy & Water	345,454	348,092	451,200	103,108	29.6%
Interior and Related Agencies					
Energy Conservation R&D	518,378	590,242	659,500	69,258	11.7%
Fossil Energy R&D	23,880	38,438	56,100	17,662	45.9%
Energy Information Administration	2,500	3,000	2,500	-500	-16.7%
Subtotal, Interior and Related Agencies	544,758	631,680	718,100	86,420	13.7%
Total, DOE	\$890,212	\$979,772	\$1,169,300	\$189,528	19.3%

State Energy Program (SEP)
Special Project State Grants
(demonstration and deployment efforts through states)

(dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	\$ Change	% Change
Energy Conservation					
Building, State and Community Sector (BTS)					
<i>Rebuild America</i>	\$1,250	\$1,200	\$1,200	\$0	0.0%
State Energy Codes	4,200	4,200	4,200	0	0.0%
Home Energy Rating Systems	250	0	0	0	0.0%
<i>Building America</i>	0	300	300	0	0.0%
Subtotal, BTS	5,700	5,700	5,700	0	0.0%
Federal Energy Management Program	950	950	400	-550	-57.9%
Industry Sector					
Industries of the Future - Specific	800	1,200	1,340	140	11.7%
Industries of the Future - Crosscutting	1,200	1,600	1,460	-140	-8.8%
Subtotal, Industry	2,000	2,800	2,800	0	0.0%
Transportation Sector / Technology Deployment					
Clean Cities	2,700	2,700	3,250	550	20.4%
Energy and Water Development - Energy Supply					
Office of Power Technologies					
Solar and Renewable	1,750	1,750	1,750	0	0.0%
Total, SEP Special Project State Grants	\$13,100	\$13,900	\$13,900	\$0	0.0%

DEPARTMENT OF ENERGY
 FY 2001 CONGRESSIONAL BUDGET REQUEST
 ENERGY CONSERVATION APPROPRIATION
 (Dollars in Thousands)

Energy Efficiency Program
 PROGRAM FUNDING SUMMARY

<u>Program/Subprogram/Activity</u>	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
I. Building Technology, State, and Community Sector, Total	<u>261,135</u>	<u>283,998</u>	<u>339,759</u>
A. Building Research and Standards	60,331	75,408	100,100
B. Building Technology Assistance	187,263	189,459	225,000
C. Cooperative Programs with States	0	2,000	0
D. Energy Efficiency Science Initiative	0	3,900	0
E. Management and Planning	13,541	13,231	14,659
II. Federal Energy Management Program, Total	<u>23,764</u>	<u>23,918</u>	<u>29,468</u>
III. Industry Sector, Total	<u>162,775</u>	<u>175,200</u>	<u>184,026</u>
A. Industries of the Future (Specific)	56,447	66,000	83,900
B. Industries of the Future (Crosscutting)	98,141	94,400	90,826
C. Cooperative Programs with States	0	2,000	0
D. Energy Efficiency Science Initiative	0	3,900	0
E. Management and Planning	8,187	8,900	9,300
IV. Transportation Sector, Total	<u>198,665</u>	<u>232,760</u>	<u>250,870</u>
A. Vehicle Technologies R&D	123,728	141,400	161,220
B. Fuels Utilization R&D	17,473	21,600	24,500
C. Materials Technologies	36,816	42,500	38,500

PROGRAM FUNDING SUMMARY - Energy Efficiency Program (Cont'd)

<u>Program/Subprogram/Activity</u>	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
D. Technology Deployment	12,723	12,840	17,000
E. Cooperative Programs with States	0	2,000	0
F. Energy Efficiency Science Initiative	0	3,900	0
G. Management and Planning	7,925	8,520	9,650
V. Policy and Management, Total	<u>38,039</u>	<u>42,866</u>	<u>46,377</u>
SUMMARY:			
R&D	518,378	590,242	659,500
ENERGY CONSERVATION GRANTS	166,000	168,500	191,000
SUBTOTAL ENERGY CONSERVATION APPROPRIATION	<u>684,378</u>	<u>758,742</u>	<u>850,500</u>
PODRA and Use of Prior Year Balances	(65,383)	0	0
Transfer from Biomass Energy Development (Non-add)	0	(25,000)	(2,000)
TOTAL ENERGY CONSERVATION APPROPRIATION	<u>618,995</u>	<u>758,742</u>	<u>850,500</u>

PROGRAM FUNDING SUMMARY - Energy Efficiency Program (Cont'd)

<u>Program/Subprogram/Activity</u>	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
I. Building Technology, State, and Community Sector, Total	<u>261,135</u>	<u>283,998</u>	<u>339,759</u>
A. Building Research and Standards	60,331	75,408	100,100
1. Technology Road Maps and Competitive R&D	6,262	6,885	11,000
2. Residential Buildings Integration	9,429	11,948	13,480
3. Commercial Buildings Integration	2,519	4,244	6,460
4. Equipment, Materials, and Tools	42,121	52,331	69,160
B. Building Technology Assistance.	<u>187,263</u>	<u>189,459</u>	<u>225,000</u>
1. Weatherization Assistance Program	133,000	135,000	154,000
2. State Energy Program	33,000	33,500	37,000
3. Community Energy Program	18,589	18,235	27,500
4. Energy Star Program	2,674	2,724	6,500
C. Cooperative Programs with States	0	2,000	0
D. Energy Efficiency Science Initiative	0	3,900	0
E. Management and Planning	<u>13,541</u>	<u>13,231</u>	<u>14,659</u>
1. Evaluation and Planning	5,871	5,321	5,539
2. Program Direction	7,670	7,910	9,120
II. Federal Energy Management Program, Total	<u>23,764</u>	<u>23,918</u>	<u>29,468</u>
A. Project Financing	9,810	9,864	10,364
B. Technical Guidance and Assistance	7,454	7,454	10,204
C. Planning, Reporting, and Evaluation	4,400	4,400	5,400
D. Program Direction	2,100	2,200	3,500
III. Industry Sector, Total	<u>162,775</u>	<u>175,200</u>	<u>184,026</u>
A. Industries of the Future (Specific)	<u>56,447</u>	<u>66,000</u>	<u>83,900</u>
1. Forest and Paper Products Vision	11,753	12,076	17,100

PROGRAM FUNDING SUMMARY - Energy Efficiency Program (Cont'd)

<u>Program/Subprogram/Activity</u>	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
2. Steel Vision	10,308	10,627	10,900
3. Aluminum Vision	7,925	11,178	11,000
4. Metal Casting Vision	5,675	5,797	5,800
5. Glass Vision	4,701	4,830	4,800
6. Chemicals Vision	12,123	12,492	12,500
7. Petroleum Refining Vision	0	2,000	3,000
8. Mining Vision	1,981	3,000	4,000
9. Agriculture Vision	1,981	4,000	13,000
10. Supporting Industries	0	0	1,800
B. Industries of the Future (Crosscutting)	<u>98,141</u>	<u>94,400</u>	<u>90,826</u>
1. Enabling Technologies	18,881	36,000	35,726
2. Distributed Generation	50,103	27,300	17,300
3. Financial Assistance	10,512	11,350	12,000
4. Technical Assistance	18,645	19,750	25,800
C. Cooperative Programs with States	0	2,000	0
D. Energy Efficiency Science Initiative	0	3,900	0
E. Management and Planning	<u>8,187</u>	<u>8,900</u>	<u>9,300</u>
1. Evaluation and Planning	628	1,090	700
2. Program Direction	7,559	7,810	8,600
IV. Transportation Sector, Total	<u>198,665</u>	<u>232,760</u>	<u>250,870</u>
A. Vehicle Technologies R&D	<u>123,728</u>	<u>141,400</u>	<u>161,220</u>
1. Hybrid Systems R&D	41,379	43,000	47,800
2. Fuel Cell R&D	32,909	37,000	41,500
3. Advanced Combustion Engine R&D	36,976	47,800	53,920
4. Cooperative Automotive Research for Advanced Technologies	2,300	1,600	2,800

PROGRAM FUNDING SUMMARY - Energy Efficiency Program (Cont'd)

<u>Program/Subprogram/Activity</u>	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
5. Electric Vehicle R&D	8,664	9,000	9,700
6. Heavy Vehicle Systems R&D	1,500	3,000	5,500
B. Fuels Utilization R&D	<u>17,473</u>	<u>21,600</u>	<u>24,500</u>
1. Advanced Petroleum Based Fuels	6,615	9,500	12,000
2. Alternative Fuels	10,858	12,100	12,500
C. Materials Technologies	<u>36,816</u>	<u>42,500</u>	<u>38,500</u>
1. Propulsion Materials Technology	8,045	9,050	10,000
2. Lightweight Materials Technology	23,426	24,950	22,900
3. High Temperature Materials Laboratory	5,345	8,500	5,600
D. Technology Deployment	<u>12,723</u>	<u>12,840</u>	<u>17,000</u>
1. Clean Cities	7,693	7,700	10,000
2. Testing and Evaluation	2,920	3,000	4,000
3. EPACT Replacement Fuels Program	1,285	1,300	2,000
4. Advanced Vehicle Competitions	825	840	1,000
E. Cooperative Programs with States	0	2,000	0
F. Energy Efficiency Science Initiative	0	3,900	0
G. Management and Planning	<u>7,925</u>	<u>8,520</u>	<u>9,650</u>
1. Technology Assessment and Analysis	1,700	1,700	2,000
2. Program Direction	6,225	6,820	7,650
V. Policy and Management, Total	<u>38,039</u>	<u>42,866</u>	<u>46,377</u>
A. Headquarters	<u>15,109</u>	<u>17,737</u>	<u>16,459</u>
1. Salaries and Related Expenses	5,488	5,650	5,505
2. Contractual Services	9,621	12,087	10,954
B. Golden Field Office	<u>4,790</u>	<u>5,490</u>	<u>5,768</u>
1. Salaries and Related Expenses	2,893	3,175	3,380
2. Contractual Services	1,897	2,315	2,388

PROGRAM FUNDING SUMMARY - Energy Efficiency Program (Cont'd)

<u>Program/Subprogram/Activity</u>	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
C. Regional Offices	<u>13,990</u>	<u>15,489</u>	<u>17,800</u>
1. Salaries and Related Expenses	9,785	11,345	13,427
2. Contractual Services	4,205	4,144	4,373
D. International Market Development Program	2,600	2,600	4,600
E. Information and Communications Program	1,550	1,550	1,750
SUMMARY:			
R&D	518,378	590,242	659,500
ENERGY CONSERVATION GRANTS	<u>166,000</u>	<u>168,500</u>	<u>191,000</u>
SUBTOTAL ENERGY CONSERVATION APPROPRIATION	<u>684,378</u>	<u>758,742</u>	<u>850,500</u>
PODRA and Prior Year Balances	(65,383)	0	0
Transfer from Biomass Energy Development (Non-add)	0	(25,000)	(2,000)
TOTAL ENERGY CONSERVATION APPROPRIATION	<u>618,995</u>	<u>758,742</u>	<u>850,500</u>