Order Code RL32852

CRS Report for Congress
Received through the CRS Web

Energy and Water Development: FY2006 Appropriations

Updated December 16, 2005

Coordinated by Carl E. Behrens
Resources, Science, and Industry Division

The annual consideration of appropriations bills (regular, continuing, and supplemental) by Congress is part of a complex set of budget processes that also encompasses the consideration of budget resolutions, revenue and debt-limit legislation, other spending measures, and reconciliation bills. In addition, the operation of programs and the spending of appropriated funds are subject to constraints established in authorizing statutes. Congressional action on the budget for a fiscal year usually begins following the submission of the President's budget at the beginning of the session. Congressional practices governing the consideration of appropriations and other budgetary measures are rooted in the Constitution, the standing rules of the House and Senate, and statutes, such as the Congressional Budget and Impoundment Control Act of 1974.

This report is a guide to the regular appropriations bills that Congress considers each year. It is designed to supplement the information provided by the House and Senate Appropriations Subcommittees on Energy and Water Development. It summarizes the status of the bill, its scope, major issues, funding levels, and related congressional activity, and is updated as events warrant. The report lists the key CRS staff relevant to the issues covered and related CRS products.

NOTE: A Web version of this document with active links is available to congressional staff at [http://beta.crs.gov/cli/level_2.aspx?PRDS_CLI_ITEM_ID=73].

Energy and Water Development: FY2006 Appropriations

Summary

The Energy and Water Development appropriations bill in the past included funding for civil works projects of the Army Corps of Engineers (Corps), the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies.

After the budget request for FY2006 was submitted in February 2005, both the House and the Senate Appropriations Committees reorganized their subcommittee structure and with it the content of the various appropriations bills to be introduced. In the case of Energy and Water Development, the only changes were the consolidation of DOE programs that had previously been funded by the Interior and Related Agencies bill. When these programs are included, the requested amount for FY2006 Energy and Water Development totals $29.75 billion. For FY2005, $30.17 billion was appropriated for comparable programs.

On May 18, 2005, the House Appropriations Committee reported out H.R. 2419 (H.Rept. 109-86), with a total appropriation of $29.75 billion, including the programs formerly funded in the Interior and Related Agencies bill. The House passed the bill May 24. The Senate Appropriations Committee reported out its version of H.R. 2419 on June 16 (S.Rept. 109-84), and the Senate passed it June 30. The Senate bill totaled $31.245 billion.

On November 7, 2005, the House-Senate Conference on H.R. 2419 agreed to a bill funding Energy and Water Development programs at $30.49 billion (H.Rept. 109-275). The House approved the conference report November 9, and the Senate November 14. President Bush signed the bill November 19 (P.L. 109-103).

Key budgetary issues involving these programs include:

- the effects of performance-based budgeting and Hurricanes Katrina and Rita on Army Corps of Engineers priorities, and limiting the reprogramming of funds from one Corps project to another and restricting the use of multiyear contracts (Title I);
- support of major ecosystem restoration initiatives, such as Florida Everglades (Title I) and California "Bay-Delta" (CALFED) (Title II);
- funding for the proposed national nuclear waste repository at Yucca Mountain, Nevada (Title III: Nuclear Waste Disposal);
- funding for developing nuclear warheads, in light of congressional action last year to cut funding for the Robust Nuclear Earth Penetrator and for a "Modern Pit Facility" to build nuclear weapons components (Title III: Nuclear Weapons Stockpile Stewardship); and
- plans to reduce the time necessary to prepare the Nevada Test Site to resume nuclear weapons testing (Title III: Nuclear Weapons Stockpile Stewardship).

This report will be updated as events warrant.

Key Policy Staff

Area of Expertise	Name	CRS Division	Telephone
General	Carl Behrens Carol Glover	RSI RSI	7-8303 7-7353
Corps of Engineers	Nicole Carter Steve Hughes	RSI RSI	7-0854 7-7268
Bureau of Reclamation	Betsy Cody	RSI	7-7229
Solar and Renewable Energy	Fred Sissine	RSI	7-7039
Nuclear Energy	Mark Holt	RSI	7-1704
Science Programs	Daniel Morgan	RSI	7-5849
Nuclear Weapons Stewardship	Jonathan Medalia	FDT	7-7632
Nonproliferation and Terrorism	Carl Behrens	RSI	7-8303
DOE Environmental Management	David Bearden	RSI	7-2390
Power Marketing Administrations	Betsy Cody	RSI	7-7229
Bonneville Power Administration	Betsy Cody	RSI	7-7229
Fossil Energy Research	Marc Humphries	RSI	7-7264
Naval/Strategic Petroleum Reserve	Robert Bamberger	RSI	7-7240
Energy Conservation	Fred Sissine	RSI	7-7039
Budget Data and Report Preparation	Carol Glover	RSI	7-7353

Division abbreviations: RSI = Resources, Science, and Industry; FDT= Foreign Affairs, Defense, and Trade.

Contents

Most Recent Developments 1

Status 1

Overview 2

Title I: Corps of Engineers 4
- Key Policy Issues — Corps of Engineers 5
  - Financial Management: Reprogramming and Contracting 5
  - Corps Budget and the Agency's Backlog of Projects 5
  - Ecosystem Restoration 7

Title II: Department of the Interior 9
- Central Utah Project and Bureau of Reclamation: Budget In Brief 10
- Key Policy Issues — Bureau of Reclamation 11
  - Background 11
  - CALFED 11
  - Security 11
  - Other Issues 12

Title III: Department of Energy 12
- Key Policy Issues — Department of Energy 14
  - Energy Efficiency and Renewable Energy 14
  - Electricity Delivery and Energy Reliability 15
  - Policy Directions in Congressional Reports 16
  - Nuclear Energy 18
  - Fossil Energy Research, Development, and Demonstration 21
  - Strategic Petroleum Reserve 23
  - Science 24
  - Nuclear Waste Disposal 26
  - Nuclear Weapons Stockpile Stewardship 28
  - Nonproliferation and National Security Programs 34
  - Environmental Management and Cleanup 36
  - Power Marketing Administrations 42

Title IV: Independent Agencies 44
- Key Policy Issues — Independent Agencies 44
  - Nuclear Regulatory Commission 44
  - Denali Commission 45

For Additional Reading 46
- CRS Issue Briefs 46
- CRS Reports 46

List of Tables

Table 1. Status of Energy and Water Development Appropriations, FY2006 . . . 1
Table 2. Energy and Water Development Appropriations, FY1999 to FY2006 . . 2
Table 3. Energy and Water Development Appropriations Summary 3
Table 4. Energy and Water Development Appropriations Title I:
Corps of Engineers 4
Table 5. Energy and Water Development Appropriations Title II:
Central Utah Project Completion Account 9
Table 6. Energy and Water Development Appropriations Title II:
Bureau of Reclamation 9
Table 7. Energy and Water Development AppropriationsTitle III:
Department of Energy 13
Table 8. Energy Efficiency and Renewable Energy Programs 16
Table 9. Congressionally Directed Projects in EERE and OE 17
Table 10. FutureGen Funding Profile 23
Table 11. Funding for Weapons Activities 28
Table 12. NNSA Future Years Nuclear Security Program 29
Table 13. DOE Defense Nuclear Nonproliferation Programs 35
Table 14. Environmental Management Program Appropriations 37
Table 15. Energy and Water Development Appropriations Title IV:
Independent Agencies 44

Energy and Water Development: FY2006 Appropriations

Most Recent Developments

The Bush Administration's FY2006 budget request was released in February 2005. After the budget was submitted, both the House and the Senate Appropriations Committees voted to reorganize the subcommittee structure, and with it the programs included in specific appropriations bills. Under the reorganization, the Energy and Water Development appropriations bill acquired Department of Energy (DOE) programs that previously had been included in the appropriations bill for Interior and Related Agencies. Including these programs, the requested amount for FY2006 Energy and Water Development totaled $29.75 billion. For FY2005, $30.17 billion was appropriated for comparable programs (including emergency supplemental appropriations for the Corps of Engineers).

The House Appropriations Energy and Water Development Subcommittee marked up its bill on May 11, 2005, and the full committee reported out H.R. 2419 on May 18 (H.Rept. 109-86). The House passed the bill May 24. H.R. 2419 would have appropriated $29.75 billion for FY2006 for energy and water development programs, including those formerly included in the Interior and Related Agencies bill.

The Senate Appropriations Committee reported out its version of H.R. 2419 on June 16 (S.Rept. 109-84). The bill totaled $31.245 billion. The Senate approved the bill June 30 by a vote of 92-3.

On November 7, 2005, the House-Senate conference on H.R. 2419 agreed to a bill funding these programs at $30.49 billion. The House approved the conference report (H.Rept. 109-275) on November 9; the Senate approved it on November 14. President Bush signed the bill on November 19 (P.L. 109-103).

Status

Table 1. Status of Energy and Water Development Appropriations, FY2006

Subcommittee Markup		House Report	House Passage	Senate Report	Senate Passage	Conf. Report	Conference Report Approval		Public Law
House	Senate						House	Senate	
5/11/05	6/14/05	109-86	5/24/05	109-84	6/30/05	109-275	11/9/05	11/14/05	P.L. 109-103

Overview

The Energy and Water Development bill has historically included funding for civil works projects of the U.S. Army Corps of Engineers (Corps), the Department of the Interior's Bureau of Reclamation (BOR), most of DOE, and a number of independent agencies, including the Nuclear Regulatory Commission (NRC) and the Appalachian Regional Commission (ARC). With the reorganization of the appropriations subcommittees, DOE programs that had been funded in the Interior and Related Agencies bill were transferred to the Energy and Water Development bill. The Bush Administration's request was $29.747 billion for all of the programs now included in the Energy and Water bill for FY2006, compared with $30.169 billion appropriated for FY2005.

The House bill, H.R. 2419, as reported out by the House Appropriations Committee May 18 and passed by the House May 24, would have appropriated $29.746 billion for energy and water development programs for FY2006. The Senate version of H.R. 2419, as reported out by the Senate Appropriations Committee June 16 and passed by the Senate June 30, would have appropriated $31.245 billion.

The conference report on H.R. 2419 (H.Rept. 109-275) funded FY2006 programs at $30.488 billion. The major actions by the conference committee were to raise funding for the Corps of Engineers by $749 million over the requested amount, in the wake of the Katrina and Rita disasters, and to resolve a difference in the House and Senate bills regarding reprogramming of funding and contracts for Corps projects. (See Title I, Corps of Engineers.) The conference also reduced funding for the Yucca Mountain nuclear waste disposal project. (See Title III, Department of Energy, Nuclear Waste Disposal.)

Table 2 includes budget totals for energy and water development appropriations enacted for FY1999 to FY2006.

Table 2. Energy and Water Development Appropriations, FY1999 to FY2006

(budget authority in billions of current dollars)

FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06
21.2	21.2	23.9	25.2	26.1	26.7	30.2[a]	30.5[a]

Note: These figures represent current dollars, exclude permanent budget authorities, and reflect rescissions.

a. Includes DOE programs transferred from Interior and Related Agencies Appropriations bill.

Table 3 lists totals for each of the four titles. The table also lists several "scorekeeping" adjustments of accounts within the four titles, reflecting various expenditures or sources of revenue besides appropriated funds. These adjustments affect the total amount appropriated in the bill but are not included in the totals of the individual titles. Amounts listed in this report are derived from the report of the conference committee on H.R. 2419 (H.Rept. 109-275).

Table 3. Energy and Water Development Appropriations Summary
($ billions)

Title	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
Title I: Corps of Engineers	5,376.9	4,332.0	4,746.0	5,298.0	5,383.0
Title II: CUP & BOR	1,017.5	951.1	1,011.5	1,081.1	1,065.0
Title III: Department of Energy	24,419.2	24,213.3	24,317.9	25,077.3	24,289.9
Title IV: Independent Agencies	289.3	234.2	207.3	306.7	271.1
E&W Subtotal	**31,103.0**	**29,730.6**	**30,282.6**	**31,763.0**	**31,009.0**
Scorekeeping Adjustments					
Plant Replacement reduction (Title I)	—	—	(18.6)	—	—
Central Valley (Title II)	(46.4)	(44.0)	(44.0)	(44.0)	(44.0)
Colorado River Basins, WAPA (Title III)	(23.0)	(23.0)	(23.0)	(23.0)	(23.0)
Uranium Fund (Title III)	(463.0)	(451.0)	(451.0)	(451.0)	(451.0)
Reclassification of PMA receipts (Title III)	—	433.0	—	—	—
NRC Revenue Adjustment (Title IV)	—	358.1	—	—	—
Fossil Energy Advance Approp. (Title III)	—	(257.0)	—	—	—
Other	(401.7)	—	—	—	(3.0)
E&W Total	**30,169.3**	**29,746.7**	**29,746.0**	**31,245.0**	**30,488.0**

Source: H.Rept. 109-275.
Note: Details may not add to totals due to rounding.

For the Corps in FY2006, the Administration requested $4.32 billion, a decrease of $1.044 billion from the enacted appropriation for FY2005. It asked for $951 million for FY2006 for the Department of the Interior (DOI) programs included in the Energy and Water Development bill: the Bureau of Reclamation and the Central Utah Project. This would have been a decrease of $66 million from the FY2005 funding level. The House bill would have funded the Corps at $4.746 billion, and the DOI programs at $1.011 billion. The Senate bill would have appropriated $5.298 billion for the Corps and $1.081 billion for the Interior programs. The conference bill provided $5.383 billion for the Corps and $1.065 billion for the DOI programs.

The FY2006 request for DOE programs was $24.213 billion, about $200 million less than the previous year. The House bill would have appropriated $24.318 billion, and the Senate bill $25.077 billion. The major activities in the DOE budget are

energy research and development, general science, environmental cleanup, and nuclear weapons programs. Also included in the DOE total is funding of DOE's programs for fossil fuels, energy efficiency, and energy statistics, which had historically been included in the Interior and Related Agencies appropriations bill. The conference bill funded all DOE programs at $24.290 billion.

The FY2006 request for funding the independent agencies in Title IV of the bill was $234 million, compared with $289 million appropriated for FY2005. The House bill reduced the funding to $207 million. The Senate bill would have appropriated $307 million. The conference bill appropriated $271 million.

Tables 4 through 15 provide budget details for Title I (Corps of Engineers), Title II (Department of the Interior), Title III (Department of Energy), and Title IV (independent agencies) for FY2005-FY2006.

Title I: Corps of Engineers

The Energy and Water Development appropriations bill approved by the House, H.R. 2419, included $4.746 billion for the Corps' FY2006 budget, $414 million more than requested.[1] In its version of H.R. 2419, the Senate Appropriations Committee included $552 million more than was included in the House version. The conference report for H.R. 2419 provided $5.383 billion for the agency (see **Table 4**), increasing the agency's funding by $749 million more than the amount requested by the Administration.

Table 4. Energy and Water Development Appropriations Title I: Corps of Engineers

($ millions)

Program	FY2005[a]	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
Investigations and Planning	143.7	95.0	100.0	180.0	164.0
Construction	1,781.7	1,637.0	1,900.0	2,086.7	2,372.0
Flood Control, Mississippi River	327.9	270.0	290.0	433.3	400.0
Operation and Maintenance	2,298.8	1,979.0	2,000.0	2,100.0	1,989.0
Regulatory	143.8	160.0	160.0	150.0	160.0
General Expenses	165.7	162.0	152.0	165.0	154.0
FUSRAP[b]	163.7	140.0	140.0	140.0	140.0

[1] The Administration in the FY2006 budget request proposed that electricity receipts from the Power Marketing Administrations (PMAs) reimburse the Corps directly for its operation and maintenance (O&M) activities at selected hydropower facilities (approximately $181.0 million for FY2006) by reclassifying the receipts from mandatory to offsetting collections. The Administration's proposal was not adopted in the final bill.

Program	FY2005[a]	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
Flood Control and Coastal Emergencies	348.0	70.0	—	43.0	—
Office of the Asst. Secretary of the Army	4.0	—	4.0	—	4.0
Subtotal, Title I	**5,376.9**	**4,513.0**	**4,746.0**	**5,298.0**	**5,383.0**
Reclassification of PMA receipts	—	(181.0)	—	—	
Total Title I	**5,376.4**	**4,332.0**	**4,746.0**	**5,298.0**	**5,383.0**

Source: H.Rept. 109-275
a. Amounts include $372.4 million, from P.L.108-324, in storm damage-related emergency funding, and $400 million from Hurricane Katrina supplemental (P.L. 109-62)
b. "Formerly Utilized Sites Remedial Action Program."

Key Policy Issues — Corps of Engineers

Financial Management: Reprogramming and Contracting. The conference report included compromise language between the House and Senate Appropriations Committees, which had expressed in their respective reports different levels of dissatisfaction with the Corps' financial management, particularly the reprogramming of funds across projects and the use of multiyear continuing contracts for projects. Language in H.R. 2419 after conference would change the Corps' ability to reprogram, to use continuing contracts, and to allocate project funds on a quarterly rather than an annual basis.[2]

Corps Budget and the Agency's Backlog of Projects. The Corps civil works program has been criticized by some observers as an agglomeration of projects with no underlying design. These observers see the Corps backlog of authorized activities as one example of this lack of focus. Estimates of the backlog's size vary from $11 billion to more than $50 billion depending on which projects are included. Although some observers view the backlog as nothing more than a "to do" list for the Corps, others are concerned that projects are facing construction delays and related cost overruns because of the spread of available appropriations across an increasing portfolio of projects.

---

[2] For example, it would restrict the Corps' ability to increase or decrease the funding for a project to no more than $2 million or 50% of that year's appropriation, whichever is less. Another change in the approach to Corps appropriations is the decision not to use the *savings and slippage* convention. In previous years, since not all Corps activities are accomplished as planned, appropriations for the principal Corps accounts included a reduction for savings and slippage to account for the *slip* of spending (e.g., due to delays caused by weather, nonfederal sponsor financing, or a decision not to proceed) and the *savings* from a project costing less than estimated. Application of the S&S contributed to the quantity of the reprogramming being performed by the Corps. The approach taken in the conference report is to stop applying S&S and reduce the need for reprogrammings, by requiring the agency to provide quarterly, rather than annual, allocations to projects.

The conferees requested from the Corps a list of its 10 priority flood damage reduction and navigation projects following Hurricanes Katrina and Rita, based on the agency's professional engineering judgement. However, according to the conference report, "the conferees have largely provided the budget request for individual water resources projects" because of the agency's inability to provide Congress with the requested priority-setting information.

Many Corps policy proposals in the President's FY2006 budget request were aimed at reducing the construction backlog, while making progress on Corps projects within current fiscal constraints and national priorities. The request attempted this largely by starting no new projects and distributing funds across projects based on performance measures. Although the House bill adopted some of the changes proposed by the Administration, the House Appropriations Committee expressed a view of how to structure the Corps portfolio that would go beyond the changes proposed by the Administration. H.Rept. 109-86 stated, "the Civil Works program needs to be managed as a program and not as a collection of individual projects" to respond to what the committee sees as "little or no systematic approach to the Nation's water and coastal infrastructure underlying the selection of which projects received funding." The House Appropriations Committee reiterated in its report the value of a five-year plan and strategic vision to guide budget requests.

The report by the Senate Appropriations Committee approached the Corps' budget from a perspective distinct from that of the House and the Administration. The Senate report referred to the benefits of the previous "big tent" budgeting approach where all aspects of water resources were jointly developed and discussed. The Senate report, however, was critical of the "lack of leadership" at the agency.

Performance-Based Budgeting. The FY2006 request tackled the Corps construction backlog on a number of fronts. One way the FY2006 request tried to address the Corps backlog of projects was to develop the budget request using a performance-based budgeting approach for determining which projects to fund for construction (and to a lesser extent maintenance); the performance measures were based on their economic and environmental returns. The construction projects selected for funding were chosen largely on their having either a high ratio of remaining benefits to remaining costs, or, for environmental projects, a high cost-effectiveness. The House Appropriations Committee noted in its report that it "supports the concept of focusing limited resources on completing high-value projects already under construction, and the Committee recommendation is based in large part on the Administration's performance-based approach."

In its report, the Senate Appropriations Committee, in contrast, largely rejected the Administration's performance-based budgeting and suggested that the agency seriously reexamine its budget model. The report argues that the approach used in the FY2006 budget request "promotes discord among various water resources interests," "led to a skewed set of results with a few strong winners and many losers," and is "very unbalanced among planning, construction, and maintenance." The Senate report includes funds for numerous projects funded in neither the House bill nor the Administration's requests.

The conference report acknowledged the Administration's efforts but recognized the limitations of the Administration's metrics. Accordingly, the conference report directs the Corps to contract with the National Academy of Public Administration to study and recommend metrics for allocating Corps construction appropriations across projects.

Priorities and New Starts. To address the budget backlog, the Administration's request limited the number of new activities started to only one construction project and three planning activities. The President's request would fund construction projects that could be completed in FY2006 and projects considered by the Administration to be priorities, similar to the President's FY2005 request. The nine national priority projects for FY2006 included the New York and New Jersey Harbor Deepening project, restoration projects in the Florida Everglades and the Upper Mississippi River system, and projects to meet environmental requirements in the Columbia River Basin and the Missouri River basin. H.Rept. 109-86 for the most part adopts the "no new starts" of the President's request; however, not all of the President's priority projects receive the full amount requested and some appropriations were added to some ongoing construction projects. S.Rept. 109-84 rejected the "decimated" planning program, commented on the importance of planning for the agency, and would fund a much larger set of projects than the Administration's request and the House-passed bill. The Senate and conference reports did not comment on new construction starts.

Project Suspensions. Using the performance-based budgeting criteria, the Administration identified 35 active construction projects to be studied for possible suspension (i.e., to buy out current construction contracts, rather than to complete them). The FY2006 request would provide an $80 million fund with which to cancel contacts for these projects. Most of the projects proposed for suspension were included in the FY2005 request and have local project sponsors that have made investments and raised funds for their share of construction costs. The House chose not to restore funding for about half of the projects on the suspension list; rather than funding a suspension account, the committee requested more information on the cost of suspending these projects. The Senate and conference bills restored funding for more than two-thirds of the projects proposed for suspension.

Ecosystem Restoration. A significant addition to the Corps' mission in recent years is a role in large environmental restoration programs, raising concerns that funding for these programs could displace funding for other traditional water resources activities. Many large-scale ecosystem restorations are in the planning phases or are awaiting congressional authorization; these will require additional funds as they move into the more cost-intensive construction and implementation phases. Other restoration activities are taking place in the context of addressing the environmental and species impacts of previously constructed projects. The FY2006 request would provide $510 million for aquatic ecosystem restoration.

Coastal Louisiana. The conference report provides $10 million for coastal Louisiana ecosystem restoration studies, which is less than the $20 million requested by the Administration. The conference report provides $8 million for a comprehensive coastal hurricane protection study, which had not been included in the President's request.

Funding for the investments needed to restore hurricane storm damage protection to coastal Louisiana for the 2006 hurricane season is being pursued through reallocation of $1.6 billion of the $62.3 billion in supplemental appropriations provided by Congress for emergency hurricane response; $250 million of the $1.6 billion would be for Gulf coastal ecosystem projects that help reduce storm damage risk. For more information on appropriations for the Corps work related to Hurricanes Katrina and Rita, see CRS Report RS22239, *Emergency Supplemental Appropriations for Hurricane Katrina Relief*, by Jennifer E. Lake and Ralph M. Chite.

Everglades. The Corps plays a significant coordination role in the restoration of the Central and Southern Florida ecosystem. The President's request for FY2006 includes $137 million for the Corps' construction projects in the region, up from $130 million in the FY2005 request and $121.25 in the enacted FY2004 appropriations in P.L. 108-447. The FY2006 budget request supports the state of Florida's efforts to accelerate work on certain projects. The House Appropriations Committee has provided $137 million for the South Florida Ecosystem Everglades Restoration program.

The $137 million in the House-passed bill would fund Everglades activities that were previously budgeted separately — the Central and Southern Florida Project, the Kissimmee River Restoration Project, and the Everglades and South Florida Restoration Projects — and the Modified Water Deliveries Project ($35 million in Corps appropriations for FY2006). The addition of the Modified Water Deliveries Project followed the President's budget proposal that the project no longer be funded solely through Department of Interior appropriations.[3] The budget request called for the Corps to broaden its role in the project, by having the agency jointly fund it with the Department of the Interior. The Administration's position is that the Corps should pay for $124 million of the remaining $191 million required to complete the project during FY2006 through FY2009. This proposal has raised a question: Is the Corps authorized to receive appropriations to work on the project? According to the H.Rept. 109-86 the Corps has sufficient authority to receive and expend funds to proceed with project construction. But according to S.Rept. 109-84, the Senate Appropriations Committee did not fund the Modified Waters Project because it "does not believe sufficient current authorization exists for the Corps to fund the work."

The Senate bill also rejects the consolidation of the Everglades projects together in one line-item; instead, it provides $77 million for the Central and Southern Florida project, $13 million for the Kissimmee River project, and $12 million for the Everglades and South Florida project. It also provides $3 million for a Florida Keys Water Quality Improvement project. These projects total $105 million.

The conference report also rejects the consolidation of the Everglades projects into one line-item; instead, it provides $77 million for the Central and Southern Florida project, $13 million for the Kissimmee River project, and $12 million for the

---

[3] For more information on the Modified Waters Deliveries Project, see CRS Report RS21331, *Everglades Restoration: Modified Water Deliveries Project*, by Pervaze A. Sheikh.

Everglades and South Florida project. It also provides $2 million for a Florida Keys Water Quality Improvement project. The bill also provides $35 million for the Modified Water Deliveries Projects. These projects total $139 million.

In addition to funding for Corps activities through Energy and Water Development appropriations, federal activities in the Everglades are funded through Department of the Interior appropriations bills. For more information on Everglades funding for Interior agencies, see CRS Report RL32893, *Appropriations for FY2006: Interior, Environment, and Related Agencies*, coordinated by Carol Hardy-Vincent and Susan Boren.

Title II: Department of the Interior

For the Department of the Interior, the Energy and Water Development bill provides funding for the Central Utah Project Completion Account and the Bureau of Reclamation (BOR).

Table 5. Energy and Water Development Appropriations Title II: Central Utah Project Completion Account

($ millions)

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
Central Utah Project Construction	30.6	31.7	31.7	31.7	31.7
Mitigation and Conservation Activities	15.3	1.0	1.0	1.0	1.0
Oversight & Administration	1.7	1.7	1.7	1.7	1.7
Total, Central Utah Project	**47.6**	**34.4**	**34.4**	**34.4**	**34.4**

Source: H.Rept. 109-275.

Table 6. Energy and Water Development Appropriations Title II: Bureau of Reclamation

($ millions)

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
Water and Related Resources[a]	852.6	801.6	832.0	899.6	883.5
Hydropower Direct Financing Offset	—	(30.0)	—	—	—
Policy & Administration	57.7	57.9	57.9	57.9	57.9
CVP Restoration Fund (CVPRF)	54.6	52.2	52.2	52.2	52.2
Calif. Bay-Delta (CALFED)	—	35.0	35.0	37.0	37.0
Drought Conditions, NV (emergency)	5.0	—	—	—	—
Gross Current Authority	**969.9**	**916.7**	**977.1**	**1,046.7**	**1,030.6**

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
CVP Collections[b]	(46.4)	(43.9)	(43.9)	(43.9)	(43.9)
Net Current Authority	**923.6**	**872.8**	**933.2**	**1,002.8**	**986.7**
Total, Title II	**1,017.6**	**951.1**	**1,011.5**	**1,081.1**	**1,065.0**

Source: H.Rept. 109-275

a. Does not include supplemental appropriations of $5M for the Southern Nevada Water Authority authorized by P.L. 108-324.

b. In its request, the Bureau lists CVPRF Collections as an "offset"; the House Appropriation Committee does not.

Central Utah Project and Bureau of Reclamation: Budget In Brief

The Administration requested $34.4 million for the Central Utah Project (CUP) Completion Account for FY2006, a decrease of $13.6 million (28%) from the FY2005 request and appropriation of roughly $48.0 million. The FY2006 request for the Bureau of Reclamation (BOR) totals $946.7 million in gross current budget authority. This amount is $23.2 million less than enacted for FY2005. The FY2006 request includes a $43.9 million "offset" for the Central Valley Project (CVP) Restoration Fund, and a Hydropower Direct Financing offset of $30.0 million (transferred from the Western Area Power Administration (WAPA) account in Title III), yielding a "net" current authority of $872.8 million for BOR — $51.2 million less than enacted for FY2005.

The House and Senate bills, and the conference bill (P.L. 109-103), provided $34.4 million for the CUP Completion Account, the same amount requested. The House bill provided a total of $977.14 million in gross current budget authority for FY2006 for BOR. This amount is $7.22 million more than enacted (gross current budget authority) for FY2005, and $60.4 million more than requested (assuming the $43.9 million is not treated as an offset, as is done by the House). The Senate bill provided a total of $1,046.7 million in gross current budget authority for FY2006 for BOR; the final bill provided $1,030.6 million.

BOR's single largest account, Water and Related Resources, encompasses the agency's traditional programs and projects, including construction, operations and maintenance, the Dam Safety Program, Water and Energy Management Development, and Fish and Wildlife Management and Development, among others. The Administration requested $801.6 million for the Water and Related Resources Account for FY2006. This amount is $51 million (nearly 6%) less than enacted for FY2005. The decreases appear to be fairly evenly spread among smaller projects, with more significant decreases for some larger projects, such as the Central Arizona Project and the Miscellaneous Project Programs of the Central Valley Project. The House provided $832 million for the Water and Related Resources Account; the Senate $899.1 million. The Senate bill provides more funding for certain rural water supply projects, the Title 16 program, and several projects in southwestern states. The conference bill provided $833.5 million.

Key Policy Issues — Bureau of Reclamation

Background. Most of the large dams and water diversion structures in the West were built by, or with the assistance of, the Bureau of Reclamation (BOR). Whereas the Army Corps of Engineers built hundreds of flood control and navigation projects, BOR's mission was to develop water supplies, primarily for irrigation to reclaim arid lands in the West. Today, BOR manages hundreds of dams and diversion projects, including more than 300 storage reservoirs in 17 western states. These projects provide water to approximately 10 million acres of farmland and 31 million people. BOR is the largest wholesale supplier of water in the 17 western states and the second-largest hydroelectric power producer in the nation. BOR facilities also provide substantial flood control, recreation, and fish and wildlife benefits. At the same time, operations of BOR facilities are often controversial, particularly for their effect on sensitive fish and wildlife species and conflicts among competing water users.

CALFED. The Administration requested $35 million for the California Bay-Delta Restoration Account (Bay-Delta, or CALFED) for FY2006. According to BOR, the requested funds will be used for implementation of Stage 1 activities, including the Environmental Water Account, water use efficiency, conveyance, ecosystem restoration, storage studies, and program administration. The House approved $35 million for the CALFED Account and included a breakdown of project funding within the accompanying House Report (H.Rept. 109-86). The Senate bill included $37 million for the CALFED Account; however, the Senate Appropriations Committee Report (S.Rept. 109-84) did not include a breakdown of CALFED project funding. The final bill also included $37 million for CALFED. (For more information on CALFED, see CRS Report RL31975, *CALFED Bay-Delta Program: Overview of Institutional and Water Use Issues*, by Betsy A. Cody and Pervaze Sheikh.)

Security. The Administration requested $50 million for site security for FY2006. This amount is roughly $18 million more than enacted for FY2005. The bulk of the request is for facility operations/security. Funding covers such activities as administration of the security program (e.g. surveillance and law enforcement), anti-terrorism activities, and physical emergency security upgrades. (For more information, see CRS Report RL32189, *Terrorism and Security Issues Facing the Water Infrastructure Sector*, by Claudia Copeland and Betsy A. Cody.)

Beginning in FY2005 and continuing for FY2006, BOR has planned to assign a portion of site security costs to water users for repayment based on existing project cost allocations for operations and maintenance activities. The House Appropriations Committee for FY2006 acknowledged the long-held practice of assigning annual O&M costs to project beneficiaries and estimated the collection of $10 million in site security reimbursement payments. It provided $40 million for site security, which together with the $10 million in expected collections equals the Administration's budget request. The Senate Appropriations Committee provided $50 million for site security, but directed BOR to provide a report to the committee by May 2007 detailing planned reimbursable and nonreimbursable costs. The committee further directed the Commissioner not to begin the reimbursement process until Congress directs him to do so.

The conference bill adopted the House position, including $10 million in security reimbursements, but the conferees directed BOR to report on planned reimbursements within 60 days after enactment.

Other Issues. The final bill also included language (Section 205) authorizing BOR to enter into grants, cooperative agreements, etc., for improvements that will conserve water, increase water use efficiency, or enhance water management through measurement or automation at existing projects. The language essentially authorizes the Bureau's Water 2025 program, a grant-making program for water conservation and innovative water management activities. The General Provisions also include sections directing $95 million to be spent for water flow and restoration efforts related to the Walker River Basin in Nevada (Section 208), and a study authorization for updating benefit, cost, and design information related to Auburn Dam in California (Section 209).

Title III: Department of Energy

Until this year, the Energy and Water Development bill has included funding for most, but not all, of DOE's programs; some other DOE programs were funded in the Interior and Related Agencies bill. Major DOE activities historically funded by the Energy and Water bill include research and development on renewable energy and nuclear power, general science, environmental cleanup, and nuclear weapons programs.

The subcommittee reorganization of the appropriations committees transferred DOE's programs for fossil fuels, energy efficiency, the Strategic Petroleum Reserve, and energy statistics, formerly included in the Interior and Related Agencies appropriations bill, to the Energy and Water Development bill. Including the transferred programs, the total request for Title III for FY2006 was $24.213 billion, compared to $24.419 billion appropriated for FY2005 (excluding the adjustments noted in **Table 3**). The House Appropriations Committee recommended $24.318 billion, and the House approved that amount in passing H.R. 2419. The Senate version of H.R. 2419 would have appropriated $25.077 billion. The conference bill, P.L. 109-103, appropriated $24.290 billion.

In reporting out H.R. 2419, the House Appropriations Committee listed the transferred programs in Title III so as to integrate them with the existing programs. In particular, the energy efficiency programs transferred from the Interior bill were combined with the renewable energy programs in the Energy and Water bill into a single account, Energy Efficiency and Renewable Energy Supply R&D. The Senate and the conference followed the same order. In **Table 7** below, the Title III programs are listed in the order presented in the House report.

Table 7. Energy and Water Development Appropriations
Title III: Department of Energy
($ millions)

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P. L. 109-103
Energy Supply & Conservation					
Energy Efficiency & Renewables	1,248.9	1,200.4	1,235.8	1,253.8	1,185.7
Electricity Transmission & Distribution	120.2	95.6	99.9	178.1	163.5
Nuclear Energy	385.6	389.9	377.7	449.9	420.2
Environment, Safety, Health	27.8	30.0	26.0	30.0	28.0
Other	(6.4)	—	—	33.5	33.5
Adjustments	30.9	33.5	23.5	—	—
Total, Energy Supply & Cons.	1,806.9	1,749.5	1,762.9	1,945.3	1,831.0
Fossil Energy R&D	571.9	748.5	502.5	641.7	598.0
Clean Coal Technology (Deferral)	(257.0)	—	—	—	(20.0)
Naval Petrol. & Oil Shale Reserves	17.8	18.5	18.5	21.5	21.5
Elk Hills School Lands Funds	72.0	84.0	84.0	84.0	84.0
Strategic Petroleum Reserve	169.7	166.0	166.0	166.0	166.0
Northeast Home Heating Oil Rsrv.	4.9	—	—	—	—
Energy Information Administration	83.8	85.9	86.4	85.9	86.2
Non-Defense Environmental Cleanup	439.8	349.9	319.9	353.2	353.2
Uranium Decontamination and Decommissioning Fund	495.0	591.5	591.5	561.5	562.2
Science					
High Energy Physics	736.4	713.9	735.9	716.9	723.9
Nuclear Physics	404.8	370.7	408.3	419.7	370.7
Basic Energy Sciences	1,104.6	1,146.0	1,173.1	1,241.0	1,146.0
Bio. & Env. R&D	581.9	455.7	525.7	503.7	585.7
Fusion	273.9	290.6	296.2	290.6	290.6
Advanced Scientific Computing	232.5	207.1	246.1	207.1	237.1
Other	276.4	284.4	286.3	329.3	284.3
Adjustments	(10.7)	(5.6)	(5.6)	(5.6)	(5.6)
Total, Science	3,599.9	3,462.7	3,666.1	3,702.7	3,632.7

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P. L. 109-103
Nuclear Waste Disposal	343.2	300.0	310.0	300.0	150.0
Departmental Admin. (net)	117.5	157.0	130.9	158.0	129.8
Office of Inspector General	41.2	43.0	43.0	43.0	42.0
National Nuclear Security Administration (NNSA)					
Weapons	6,331.6	6,630.1	6,181.1	6,554.0	6,433.9
Nuclear Nonproliferation	1,493.0	1,637.2	1,501.0	1,729.0	1,631.2
Naval Reactors	801.4	786.0	799.5	799.5	189.5
Office of Administrator	353.4	343.9	366.9	343.9	341.9
Total, NNSA	8,979.4	9,397.2	8,848.4	9,426.5	9,196.5
Defense Environmental Cleanup	6,808.3	6,015.0	6,468.3	6,366.8	6,192.4
Other Defense Activities	687.1	636.0	702.5	665.0	642.0
Defense Nuclear Waste Disposal	229.2	351.5	351.5	277.0	350.0
Total, Defense Activities	16,704.0	16,399.7	16,370.7	16,735.2	16,380.8
Power Marketing Administrations (PMA) [a]					
Southeastern	5.2	—	5.6	5.6	5.6
Southwestern	29.1	3.2	30.2	30.2	30.2
Western	171.7	54.0	227.0	240.8	234.0
Falcon & Armistad O&M	2.8	—	2.7	2.7	2.7
Total, PMAs	208.8	57.1	265.5	279.2	272.5
FERC (revenues)	210.0 (210.0)	220.4 (220.4)	220.4 (220.4)	220.4 (220.4)	220.4 (220.4)
Total, Title III	**24,419.2**	**24,213.3**	**24,317.9**	**25,077.3**	**24,289.9**

Source: H.Rept. 109-275.

a. The FY2006 request proposes that PMAs use their electricity receipts to pay for PMA program direction and O&M activities, rather than having their receipts placed into the Treasury and appropriations made for these activities. The House and Senate did not follow this procedure.

Key Policy Issues — Department of Energy

DOE is the home of a wide variety of programs with different functions and missions. In the following pages, the programs are described, and major issues identified, in approximately the order in which they appear in the budget tables as listed in **Table 7**.

Energy Efficiency and Renewable Energy. The FY2006 budget request noted that the "Administration's energy efficiency and renewable energy programs have the potential to produce substantial benefits for the nation — both now and in the future — in terms of economic growth, increased energy security and a cleaner environment." In particular, the request aimed to "accelerate" the development of

hydrogen-powered fuel cell vehicles. The Hydrogen program aims to facilitate industry commercialization of infrastructure for those vehicles by 2015. Goals for other energy end-use and production technologies generally seek to improve energy efficiency and performance while reducing costs.

The Administration's FY2006 request sought $1,200.4 million for DOE's Energy Efficiency and Renewable Energy (EERE) programs, which was $48.5 million, or 4%, less than the FY2005 appropriation. The main increases were for Fuel Cells ($8.7 million), Hydrogen ($5.1 million), and Facilities ($4.9 million). The main cuts were for Industrial programs (-$18.3 million), Biomass (-$16.0 million), Advanced Combustion Vehicles (-$8.6 million), Buildings (-$7.5 million), Small Hydro (-$4.4 million), Clean Cities (-$4.1 million), International Renewables (-$3.4 million), State Energy Program (-$3.2 million), and Tribal Energy (-$1.5 million). Further, at least $75.9 million in congressional earmarks were to be reprogrammed or eliminated, including Hydrogen (-$37.6 million), Biomass (-$35.3), and Intergovernmental (-$3.0 million). See **Table 8** below.

For FY2006, the House approved $1,236.8 million for EERE programs. This is $36.4 million, or 3%, more than the FY2006 request. Subsequently, the Senate bill included $1,253.8 million, which is $17.0 million more than the House. This included increases of $32 million for Vehicle Technologies, $6 million for Biomass, and $5 million for Weatherization. Also, it included decreases of $15 million for Program Direction, $10 million for Wind, $2.4 million for Industrial Technologies, and $1 million for International Renewables. Compared with the FY2005 appropriation, the Senate approved $4.9 million, or 0.4%, more for EERE programs. This included $7.5 million, or 0.8%, less for R&D and $12.5 million more for grants. Both the House and Senate reports showed about $57 million in congressionally directed projects (CDPs, or "earmarks") for EERE projects.

For FY2006, the conference committee approved $1,185.7 million for EERE programs. This is $63.2 million (or 5%) less than the FY2005 appropriation. R&D is reduced by $70.3 million, of which the transfer of Distributed Energy Resources to the new Office of Electricity Delivery and Energy Reliability (OE) accounts for $60.6 million. Other changes in R&D include increases of $17.0 million for Vehicles, $14.9 million for Facilities, and $2.8 million for Buildings; and decreases of $17.9 million for Industrial Programs, $13.5 million for Hydrogen, and $4.5 million for Small Hydro. Also, Weatherization grants increase by $15.3 million, whereas State Energy Grants fall by $8.2 million and Gateway Deployment drops by $9.3 million.

Many EERE programs contain a sizable amount of funding for congressionally directed projects. The total amount of EERE earmarks nearly doubles from $85.9 million in FY2005 to $165.6 million in FY2006 (see **Table 9**).

Electricity Delivery and Energy Reliability. The request included $95.6 million for the former Office of Electricity Transmission and Distribution; the House approved $99.8 million, which was $4.2 million more than the request. Meanwhile, the new Office of Electricity Delivery and Energy Reliability (OE) was formed by merging the former OETD and the Office of Energy Assurance. For OE, the Senate bill would have appropriated $178.1 million, including $60.6 million for the Distributed Energy Program, which is transferred from EERE to OE.

Table 8. Energy Efficiency and Renewable Energy Programs
($ in millions)

Program	FY2005[a]	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
Hydrogen Technologies	94.6	99.1	99.1	99.1	81.1
Fuel Cell Technologies	74.9	83.6	83.6	83.6	76.1
Biomass & Biorefinery Systems	89.1	72.2	86.2	92.2	91.6
Solar Energy	85.8	84.0	84.0	84.0	84.0
Wind Energy	41.3	44.2	44.2	34.2	39.2
Geothermal Technology	25.6	23.3	23.3	23.3	23.3
Small Hydropower	5.0	0.5	0.5	0.5	0.5
Vehicle Technologies	166.9	165.9	167.9	199.9	183.9
Building Technologies	67.1	58.0	65.0	67.0	70.0
Industrial Technologies	75.3	56.5	58.9	56.5	57.4
Distrib. Energy Resources*	60.6	56.6	56.6	—	—
Federal Energy Management	20.1	19.2	19.2	19.2	19.2
Facilities & Infrastructure	11.4	16.3	16.3	16.3	26.3
Intergovernmental	326.5	310.1	321.1	325.1	320.1
— Weatherization Grants	224.7	225.4	235.4	240.4	240.0
Program Management	110.0	110.0	111.0	153.0	113.0
R&D Subtotal	980.0	934.0	960.4	972.4	909.7
Grants Subtotal	268.9	266.4	276.4	281.4	276.0
Use of Prior Year Balances	(5.3)	—	—	—	—
Total Appropriation, EE &RE	1,248.9	1,200.4	1,236.8	1,253.8	1,185.7
Office of Electricity Delivery & Energy Reliability (OE)*	120.2	95.6	99.8	178.1	163.5

Source: H.Rept. 109-275.

*The Senate Committee recommendation moves the Distributed Energy Program from EERE to OE.

Policy Directions in Congressional Reports. The FY2006 House Appropriations Committee's report noted that DOE "delayed in meeting legal deadlines for issuing approximately twenty new and updated" appliance efficiency standards. Thus the Committee "strongly urges the Secretary to expedite the process, and requests that the Secretary report to the Committee by December 1, 2005, on plans to accelerate standards rulemakings, including:

- A timeline for work on issuing the three highest priority standards, with an explanation for the additional delays announced in December 2004;

- A plan for addressing the backlog of standards rulemakings that have missed legal or internal deadlines, including a list of the affected products and deadlines, timelines for action on each product, and funding requirements to complete each rulemaking; and

- A description of how the Department will meet the time-frame goals of the 'Process Improvement' rule,[4] or of how the process should be changed so that the Department can meet the goals."

Additionally, the FY2006 Senate Appropriations Committee's report gave four administrative directions. First, the committee noted its support for the National Academy of Science's recommendations for hydrogen programs and "requests that the Department integrate their recommendations into the program." Second, the committee "recommends that the Department not expend any funds to support offshore wind energy research until the Federal rules and permitting requirements are implemented through legislation." Third, the committee directed that the Energy Secretary "consider transferring" certain demand-side management activities from the Building Technologies program to the Office of Electricity Delivery and Energy Reliability (OE). At minimum, the committee calls for a report to show that activities under the two programs do not duplicate each other. Fourth, the committee "directs that the six Regional Offices be consolidated into two locations, the Golden Field Office and the National Energy Technology Laboratory," by June 1, 2006.

The Conference Committee's report language contains three key policy directives. First, the report contains a list (pp. 143-145, summarized in **Table 9** below) of congressionally directed projects and specifies that if these project totals exceed 20% of a subaccount, DOE is given discretion to "fund these projects within other Energy Supply and Conservation subaccounts"(p. 138). The rapid growth in earmarks has raised concerns about staffing at national laboratories, impacts on certain programs, and the possible need to scale back Government Performance and Results Act (GPRA) performance targets for some R&D programs. Second, the report says that full funding is provided for DOE's six regional offices, but acknowledging that the Administration does not plan to request funding for these offices in FY2007, it "directs that the regional offices be consolidated into the Project Management Center at the Golden (Colorado) Field Office and the National Energy Technology Laboratory (West Virginia) not later than September 30, 2006." Third, the report calls for a "report on appliance efficiency standards as directed in the House report."

Table 9. Congressionally Directed Projects in EERE and OE
($ in millions)

Program	FY2004	FY2005	FY2006 P.L. 109-103	FY2006 to FY2005	FY2006 Percent of Total
Hydrogen Technologies	20.1	21.4	43.0	21.5	53%
Biomass & Biorefinery	41.2	35.3	48.8	13.5	53%

[4] This rule appears in 61 FR 36974. In it, DOE sets a self-imposed goal to complete rulemakings within three years, including 18 months from Advanced Notice of Proposed Rulemaking to issuance of a final rule.

Program	FY2004	FY2005	FY2006 P.L. 109-103	FY2006 to FY2005	FY2006 Percent of Total
Solar Energy	1.1	10.2	14.4	4.2	17%
Wind Energy	1.4	4.6	13.0	8.4	33%
Geothermal Technology	1.0	1.9	3.8	1.9	5%
Vehicle Technologies	—	—	29.0	29.0	16%
Building Technologies	—	—	5.4	5.4	8%
Distributed Energy Resources	1.0	1.0	—	—	—
Intergovernmental	5.9	4.2	4.8	0.6	1%
Program Management	8.4	7.4	3.5	(3.9)	-3%
EE & RE Total	80.2	85.9	165.6	79.7	14%
Office of Electricity Delivery & Energy Reliability (OE)	28.6	35.1	36.9	1.7	23%

Source: DOE Budget Request FY2006; H.Rept. 109-275.

(For more information, see CRS Issue Brief IB10020, *Energy Efficiency: Budget, Oil Conservation, and Electricity Conservation Issues*; and CRS Issue Brief IB10041, *Renewable Energy: Tax Credit, Budget, and Electricity Production Issues*, both by Fred Sissine.) See also the DOE website at [http://www.eere.energy.gov/].

Nuclear Energy. For nuclear energy research and development — including advanced reactors, fuel cycle technology, nuclear hydrogen production, and infrastructure support — P. L. 109-103 provides $557.6 million, $57.6 million above the FY2005 appropriation. Of that funding, $137.4 million would come from the Other Defense Activities and Naval Reactors appropriations accounts, reducing the nuclear energy program's net appropriation in the Energy Supply and Conservation account to $420.2 million.

The Administration had requested $513.8 million for FY2006, of which $123.9 million was from Other Defense Activities. The House raised the Administration's total request slightly to $515.1 million, $5.2 million above the FY2005 appropriation. An additional reimbursement of $13.5 million from the Naval Reactors account would have left a net appropriation of $377.7 million under Energy Supply and Conservation. Much of the defense and naval reactors reimbursement covers defense-related management and security at the Idaho National Laboratory (INL), which has been transferred to the nuclear energy program from DOE's environmental management program. The nuclear energy program is run by DOE's Office of Nuclear Energy, Science, and Technology.

The House shifted an $18.7 million uranium disposal program from the nuclear energy office to the National Nuclear Security Administration, a move agreed to by the conferees. An amendment adopted at the House Appropriations Committee markup transferred $10 million from the "Nuclear Power 2010" program (discussed below) to the "weatherization" assistance program.

The Senate bill included a $60 million boost from the Administration request, to a total of $573.8 million. The panel approved the proposed $123.9 million under

Other Defense Activities, leaving $449.9 million for Nuclear Energy under Energy Supply and Conservation.

The final appropriation of $557.6 million includes $10 million in the Advanced Fuel Cycle Initiative to accelerate design work on an engineering-scale demonstration of spent nuclear fuel reprocessing technology.

"The benefits of nuclear power as an emissions free, reliable, and affordable source of energy are an essential element in the Nation's energy and environmental future," according to DOE's budget justification. However, opponents have criticized DOE's nuclear research program as providing wasteful subsidies to an industry that they believe should be phased out as unacceptably hazardous and economically uncompetitive.

Nuclear Power 2010. President Bush's specific mention of "safe, clean nuclear energy" in his 2005 State of the Union Address indicated the Administration's interest in encouraging construction of new commercial reactors — for which there have been no U.S. orders since 1978. DOE's efforts to restart the nuclear construction pipeline are focused on the Nuclear Power 2010 Program, which will pay up to half of the nuclear industry's costs of seeking regulatory approval for new reactor sites, applying for new reactor licenses, and preparing detailed plant designs. The program is intended to provide assistance for advanced versions of existing commercial nuclear plants that could be ordered within the next few years.

The Nuclear Power 2010 Program is helping three utilities seek NRC approval for potential nuclear reactor sites in Illinois, Mississippi, and Virginia. In addition, three industry consortia in 2004 applied for a total of $650 million over the next several years to design and license new nuclear power plants and conduct a feasibility study. DOE awarded an initial $13 million to the consortia in 2004. The FY2006 budget request included $56.0 million for the program, a 12.9% boost over FY2005. After the $10 million transfer adopted during Committee markup, the House approved $46.0 million for Nuclear Power 2010. The Senate bill includes a $20 million increase from the budget request, to $76.0 million. The conference agreement provides $66.0 million.

The nuclear license applications under the Nuclear Power 2010 program would test the "one step" licensing process established by the Energy Policy Act of 1992 (P.L. 102-486). Even if the licenses are granted by the Nuclear Regulatory Commission (NRC), the industry consortia funded by DOE have not committed to building new reactors. Loan guarantees and tax credits to encourage construction of new reactors are included in the Energy Policy Act of 2005 (P.L. 109-58).

Generation IV. Advanced commercial reactor technologies that are not yet close to deployment are the focus of DOE's Generation IV Nuclear Energy Systems Initiative, for which $45.0 million was requested for FY2006, about 12.5% above FY2005. The House approved the same amount, and the Senate bill included a $15.0 million increase from the request, to $60 million. The conference agreement provides $55 million, of which $40 million is for the Next Generation Nuclear Plant discussed below.

The Generation IV program is focusing on six advanced designs that could be commercially available around 2020-2030: two gas-cooled, one water-cooled, two liquid-metal-cooled, and one molten-salt concept. Some of these reactors would use plutonium recovered through reprocessing of spent nuclear fuel. The Administration's May 2001 *National Energy Policy* report contends that plutonium recovery could reduce the long-term environmental impact of nuclear waste disposal and increase domestic energy supplies. However, opponents contend that the separation of plutonium from spent fuel poses unacceptable environmental risks and, because of plutonium's potential use in nuclear bombs, undermines U.S. policy on nuclear weapons proliferation.

Advanced Fuel Cycle Initiative. The development of plutonium-fueled reactors in the Generation IV program is closely related to the nuclear energy program's Advanced Fuel Cycle Initiative (AFCI), for which the Administration requested $70.0 million — 3.8% above the FY2005 level. According to the budget justification, AFCI will develop and demonstrate nuclear fuel cycles that could reduce the long-term hazard of spent nuclear fuel and recover additional energy. Such technologies would involve separation of plutonium, uranium, and other long-lived radioactive materials from spent fuel for re-use in a nuclear reactor or for transmutation in a particle accelerator. The program includes longstanding DOE work on electrometallurgical treatment of spent fuel from the Experimental Breeder Reactor II (EBR-II) at INL.

The House added $5.5 million to the AFCI budget request "to accelerate the development and selection of a separations technology no later than the end of FY2007 that can address the current inventories of commercial spent nuclear fuel, and prepare an integrated spent nuclear fuel recycling plan," according to the Appropriations Committee report.

The Senate voted to add $15 million to the budget request, with $10 million for design of an Engineering Scale Demonstration of Uranium Extraction Technology (UREX) being developed by DOE's Savannah River Technology Center.

The conference agreement provides $80 million for AFCI, including $10 million for the engineering-scale demonstration project. DOE is directed to submit a "spent nuclear fuel recycling technology plan" to the appropriations committees by next March 1 and select a preferred reprocessing technology by the end of FY2007.

Nuclear Hydrogen Initiative. In support of President Bush's program to develop hydrogen-fueled vehicles, DOE requested $20.0 million in FY2006 for the Nuclear Hydrogen Initiative, an increase of 124% from the FY2005 level. The House approved the same amount, and the Senate Appropriations Committee recommended $30.0 million. The conferees approved $25.0 million. According to DOE's FY2005 budget justification, "preliminary estimates ... indicate that hydrogen produced using nuclear-driven thermochemical or high-temperature electrolysis processes would be only slightly more expensive than gasoline" and result in far less air pollution.

An advanced reactor that would demonstrate co-production of hydrogen and electricity — the Next Generation Nuclear Plant (NGNP) — was allocated $25.0 million from DOE's Generation IV program by the FY2005 omnibus appropriations conference report. The Senate bill directed that $40 million of the FY2006

Generation IV allocation be used for the NGNP program. In particular, the Senate Appropriations Committee urged that DOE complete a design competition for the NGNP by the end of FY2006 so that the reactor could begin operating at INL by 2017. As noted above, the conferees agreed with the Senate's $40 million allotment for NGNP from the Generation IV program.

Other Reactor Research. DOE again requested no new funding specifically for the Nuclear Energy Research Initiative (NERI), which provides grants for research on innovative nuclear energy technologies. According to the DOE budget justification, NERI projects will instead be pursued at the discretion of individual nuclear R&D programs. NERI received an appropriation of $2.5 million for FY2005. New funding also was not requested for the Nuclear Energy Plant Optimization program (NEPO), which received $2.5 million in FY2005. NEPO supports cost-shared research by the nuclear power industry on ways to improve the productivity of existing nuclear plants. The House agreed to eliminate the funding for both programs. The Senate bill also provided no separate funding for NERI and NEPO, but it allocated specific funding for NERI projects within other nuclear energy programs. The programs are not specifically mentioned in the conference report.

Fossil Energy Research, Development, and Demonstration. The Bush Administration's FY2006 budget request of $491.5 million for fossil energy research and development was 14.1% less than the amount enacted for FY2005 ($571.9 million) and 25.4% less than the enacted amount for FY2004 ($659 million). Major funding categories and amounts included Coal and Other Power Systems ($351.0 million), Natural Gas Technologies ($10.0 million), Oil Technology ($10.0 million), and Program Direction and Management Support ($98.0 million). The conference agreement supported funding Fossil Energy programs at $598 million, 4.5% greater than FY2005 and 22% more than the Administration's request. Funding was higher in all major funding categories: Coal and Other Power systems, $380 million; Natural Gas Technologies, $33 million; Oil Technology, $32 million; and Program Direction and Management Support, $107 million. The use of prior-year balances ($20 million) in the House and Senate reports was rescinded by the conference agreement.

DOE proposed to terminate both the Natural Gas and Oil Technology programs based on a Program Assessment Rating Tool review which rated both programs ineffective. Congressional support of Natural Gas and Oil Technology programs has been significantly higher than the Bush Administration's request in previous years. The House would direct the Administration to report to the House and Senate appropriation committees on a strategic plan that will better articulate its investment strategy and the successes of the natural gas and petroleum technology programs. The conference agreement does not support the termination of either program.

The Administration requested $68 million for its Clean Coal Power Initiative (CCPI), which included $18 million for FutureGen, a project to demonstrate co-production of electricity and hydrogen from coal with no emissions. According to DOE's budget justification, CCPI is a "cost-shared program between the government and industry to rapidly demonstrate emerging technologies in coal-based power generation and to accelerate their commercialization." Nearly $400 million has been appropriated since FY2002. CCPI is along the lines of the Clean Coal Technology Program (CCTP), which began in the late 1980s. It has completed most of its projects

and has been subject to rescissions and deferrals since the mid-1990s. CCTP eventually is to be phased out.

The conference supported funding CCPI and FutureGen at the levels requested by the Administration. However, while both agree that there is an unused previously appropriated balance of $257 million from the Clean Coal Technology Program, the Administration requested to rescind the money and incorporate the funds into the fossil fuel account for FutureGen activities as an advanced appropriation to be used in FY2007 and beyond. Instead, the conference agreement supports deferring the $257 million, while acknowledging that the funds will be used for the FutureGen program in fiscal years 2007 and beyond (see FutureGen funding schedule in **Table 10** below). The conference report also acknowledges that the Administration's request for CCPI was "woefully short" of its stated $200 million annual commitment. The Senate version would have supported $100 million for CCPI Programs in FY2006.

The Administration's goal was to increase Coal R&D, other than CCPI and FutureGen, by 5.9% to $218 million, whereas nearly all other fossil fuel programs were slated to be cut. Within the Coal R&D, the Administration requested $56.4 million for gasification research in FY2006. The conference funded Coal R&D (other than CCPI and Future Gen) at $250 million and supported the Administration's request for gasification research. This level of increase indicates a greater commitment by the Administration and Congress to the integrated gasification combined cycle (IGCC) technology aimed at commercialization. There is sustained investment in IGCC because of its potential benefits from reduced NOx, SOx, mercury, and fine particulate matter emissions. Moreover, lower CO2 emissions through greater plant efficiencies and/or potential sequestration could be substantial. Funding for DOE's Carbon Sequestration program will increase significantly, from $45.4 million in FY2005 to $67 million in FY2006 — nearly the same level as the Administration's request. The House would have funded the Carbon Sequestration program at $50 million, whereas the Senate bill supported the Carbon Sequestration Program at $74 million.

The Senate bill included spending for Plant and Equipment ($23 million, primarily for infrastructure improvements at the National Energy Technology Lab) and Congressionally Directed Projects ($25.1 million), neither included in the House-passed bill or the Administration request. The conference agreement supported $20 million for Plant and Equipment.

In its report on the FY2005 funding bill, the House Appropriations Committee expressed disappointment with the emphasis of the Administration's request on funding new, long-term energy research efforts, such as FutureGen, at the expense of ongoing energy programs that could yield energy savings and emissions reductions over the next decade. The Committee recommended restoring many of the proposed reductions for research to improve fossil energy technologies, contending that it would be "fiscally irresponsible" to discontinue research in which major investments have been made before that research is concluded.

Table 10. FutureGen Funding Profile
($ millions)

FY	DOE Direct	Other Cash Flows	Total
2004-2005	27	2	11
2006	18	7	25
2007	50	25	75
2008	100	44	144
2009	89	75	164
2010	57	66	123
2011-2018	159	224	383
Total	500	450	950

Source: U.S. Department of Energy, Office of Fossil Energy, FutureGen, Integrated Hydrogen, Electric Power Production and Carbon Sequestration Research Initiative, March 2004.

Strategic Petroleum Reserve. The Strategic Petroleum Reserve (SPR), authorized by the Energy Policy and Conservation Act (P.L. 94-163) in late 1975, consists of caverns formed out of naturally occurring salt domes in Louisiana and Texas in which roughly 685 million barrels of crude oil are stored.[5] The purpose of the SPR is to provide an emergency source of crude oil which may be tapped in the event of a presidential finding that an interruption in oil supply, or an interruption threatening adverse economic effects, warrants a drawdown from the reserve. A Northeast Heating Oil Reserve (NHOR) was established during the Clinton Administration. NHOR houses 2 million barrels of home heating oil in above-ground facilities in Connecticut, New Jersey, and Rhode Island.

In mid-November 2001, President Bush ordered that the SPR be filled to capacity (then 700 million barrels) using royalty-in-kind (RIK) oil. This is oil turned over to the federal government as payment for production from federal leases. Acquiring oil for the SPR by RIK avoids the necessity for Congress to make outlays to finance direct purchase of oil; however, it also means a loss of revenues to the Treasury in so far as the royalties are paid in wet barrels rather than in cash. Deliveries of RIK oil began in the spring of 2002 and ended in August 2005 when the SPR reached 700 million barrels.[6] Some policymakers objected to RIK fill, arguing that this oil should have instead be released to tight markets. The Administration argued that the volumes involved, varying between 65,000-200,000 barrels per day of deliveries to the SPR, were too small to have any discernible effect on crude and product prices.

The current program costs for the SPR are almost exclusively dedicated to maintaining SPR facilities and keeping the SPR in readiness should it be needed.

---

[5] In the wake of Hurricanes Katrina and Rita, modest amounts of SPR crude were loaned or sold. The borrowed oil will be fully restored by May 2006, and the oil sold was 11 million barrels. At the conclusion of these transactions, the SPR should be restored to roughly 690 million barrels.

[6] The capacity of the SPR is measured at 727 million barrels; however, the President's Order was issued when the capacity was 700 million barrels and it specified fill to that level.

Congress agreed to a funding level of $174.6 million for the program in FY2005, including $4.9 million for the NHOR. The Administration request for FY2006 for the SPR was $166.0 million, a reduction of nearly $4 million from the FY2005 appropriation. No new money was requested for the NHOR in FY2006, owing to the use of prior-year balances of $5.3 million. Both the House and Senate bills funded the SPR at the requested level, and this level was adopted by the conferees in their final bill.

For more information, see CRS Issue Brief IB87050, *The Strategic Petroleum Reserve*, by Robert Bamberger.

Science. The DOE Office of Science conducts basic research in six program areas: basic energy sciences, high-energy physics, biological and environmental research, nuclear physics, fusion energy sciences, and advanced scientific computing research. Through these programs, DOE is the third-largest federal funder of basic research and the largest federal funder of research in the physical sciences.[7] For FY2006, DOE requested $3.463 billion for Science, a decrease of 4% from the FY2005 appropriation of $3.600 billion. The House provided $3.666 billion; the Senate, $3.703 billion; and the final bill, $3.633 billion. The final figure is $170 million more than the request and an increase of 1% from FY2005.

The requested funding for the largest program, basic energy sciences, was $1.146 billion, a 4% increase above FY2005. Construction of the Spallation Neutron Source is expected to be completed in the third quarter of FY2006, so the request for this facility included less funding for construction but for the first time included the cost of operations. Operations will also begin at four of the five new Nanoscale Science Research Centers. (The fifth is still under construction and is expected to begin operations in FY2008.) Some have expressed concern that operations funding for these facilities will result in reduced grant funding for other research in the basic energy sciences program. The House provided an increase of $27 million more than the request, and the Senate provided an increase of $95 million, but the final bill provided the requested amount.

The request for fusion energy sciences was $291 million, a 6% increase. In 2003, the United States rejoined negotiations on construction of the International Thermonuclear Experimental Reactor (ITER), a fusion facility whose other participants include China, the European Union, Japan, Russia, and South Korea. The requested FY2006 budget for fusion energy sciences included $50 million related to ITER and estimated that the total U.S. share of the project will be $1.1 billion through FY2013.

When the FY2006 budget was released, the international partners remained split on where ITER should be located, a decision that was originally expected in November 2003. Agreement on a site in France was officially announced on June 28, 2005, which was after the House passed H.R. 2419 and after the Senate committee reported it, but three days before the bill was passed by the Senate.

---

[7] Based on 2004 data from Tables C-29 and C-22 of National Science Foundation, Division of Science Resources Statistics, *Federal Funds for Research and Development: Fiscal Years 2002, 2003, and 2004*, NSF 05-307 (February 2005).

The House provided an increase of $6 million over the request, and directed that this $6 million plus $29 million of the funding requested for ITER should be devoted to U.S.-based fusion research. As in previous years, the House report directed DOE to fund ITER out of additional resources, not through reductions in the domestic program, and expressed its preparedness to eliminate future U.S. funding for ITER if this is not done. A floor amendment by Representative Boehlert, chairman of the House Science Committee, added a provision (Sec. 504) that would have delayed an international agreement on U.S. funding for ITER until March 1, 2006. The Senate bill included the requested amount for fusion energy sciences, but reduced ITER funding by $28 million to pay for increased facility operating time (see below). The conference agreement provided the requested amount, included language similar to that of the House report regarding funding ITER out of additional resources, and called for a study of the program by the Government Accountability Office, but it did not include the language of the Boehlert amendment. During House debate on the conference report, Representative Boehlert stated, "I will do everything in my power to kill the ITER project if there is not an agreement by March that the domestic fusion program has to be scaled back to pay for ITER."

All four of the other Office of Science programs were reduced in the FY2006 request. The request for high-energy physics was $714 million, down 3%; biological and environmental research was $456 million, down 22%; nuclear physics was $371 million, down 8%; advanced scientific computing research was $207 million, down 11%. Most of the decrease for biological and environmental research corresponded to the completion of congressionally directed one-time projects.

The House restored high-energy physics to its FY2005 level of $736 million; increased biological and environmental research by $70 million, including $35 million for "congressionally directed university and hospital earmarks"; restored nuclear physics to $408 million, slightly above the FY2005 level; and increased advanced scientific computing research by $39 million to support development of a leadership-class supercomputer. The Senate bill increased high-energy physics and nuclear physics by $3 million and $49 million respectively to increase facility operating time (see below); increased biological and environmental research by $48 million, mostly to accelerate the Genomes to Life program (a total of $51 million for 48 congressionally directed projects would come from within available funds); and provided the requested amount for advanced scientific computing research. The conference agreement provided $724 million for high-energy physics; $586 million for biological and environmental research, including $130 million for 161 congressionally directed projects (which superseded the ones in the House and Senate reports); $371 million for nuclear physics; and $237 million for advanced scientific computing research.

The FY2005 appropriations conference report (H.Rept. 108-792) encouraged DOE "to request sufficient funds for the Office of Science in FY2006 to operate user facilities for as much time as possible." For the facilities funded by four of the six Science programs, the FY2006 budget request included "a reduction in operating hours due to funding limitations." The major facilities of the basic energy sciences program will be capable of operating for users for a total of 32,200 hours in FY2006, but the budget request stated that only a total of 28,800 hours are scheduled. The Tevatron complex at Fermilab, funded by the high-energy physics program, will be capable of operating for 4,800 hours, but is scheduled for only 4,560. The four

facilities of the nuclear physics program will be capable of operating for a total of 22,765 hours, but are scheduled for only a total of 14,695. The three fusion energy sciences facilities will be capable of operating for a total of 3,000 hours, but are scheduled for only 680. In each of these cases, the difference between optimal hours and scheduled hours was less in FY2005 than was requested in the FY2006 budget.

The House increases for basic energy sciences, fusion energy sciences, and nuclear physics included $20 million, $14 million, and $32 million respectively for maintaining facility operating time at FY2005 levels. The Senate bill provided a total of $100 million to restore operating time to optimal levels: $20 million in basic energy sciences, $28 million in fusion energy sciences, $49 million in nuclear physics, and $3 million in high-energy physics. The conference agreement did not mention the operating time issue.

Nuclear Waste Disposal. DOE's Office of Civilian Radioactive Waste Management (OCRWM) is responsible for developing a nuclear waste repository at Yucca Mountain, Nevada, for disposal of nuclear reactor spent fuel and defense-related high-level radioactive waste. OCRWM's funding comes from two appropriations accounts: the Nuclear Waste Disposal account, for which DOE requested $300 million, and Defense Nuclear Waste Disposal, with a request of $351.4 million. Appropriations under the Nuclear Waste Disposal account come from the Nuclear Waste Fund, which holds disposal fees paid by nuclear utilities.

OCRWM's total budget request of $651.4 million was about 14% above the FY2005 level but only about half the amount that the FY2005 budget justification said would have been needed to open the Yucca Mountain repository by DOE's previous goal of 2010. Upon releasing the budget request, program officials announced that the repository's opening would be delayed at least two years and that a Yucca Mountain license application to the Nuclear Regulatory Commission (NRC) would be delayed as well.

Because of those delays, the House raised the waste program's funding by $10 million, to $661.4 million, so that OCRWM could begin moving spent fuel from nuclear reactor sites to "centralized interim storage at one or more DOE sites within FY2006," according to the House Appropriations Committee report. Possible sites named by the committee include Hanford, WA; Idaho National Laboratory; and Savannah River, SC.

Members from states named as potential nuclear waste storage sites raised concerns about the report language during the floor debate. Representative Hobson, chairman of the Subcommittee on Energy and Water Development, assured Representative Otter that the report language would not affect a DOE agreement with the State of Idaho prohibiting commercial spent fuel storage at Idaho National Laboratory. The Chairman also entered into a colloquy with Representative Spratt to clarify that the report language would not modify provisions in the Nuclear Waste Policy Act that limit DOE interim storage facilities.

The Senate bill provided $300 million under Nuclear Waste Disposal and $277 million under Defense Nuclear Waste Disposal, for a total of $577 million — nearly the same as the previous two fiscal years. The Senate panel's report did not include

any language on interim storage of spent fuel, and several Senators reportedly criticized the House report language during committee markup.[8]

The conference agreement provides $500 million for nuclear waste disposal — $150 million from the Nuclear Waste Fund and $350 million from the Defense Nuclear Waste Disposal Account. Of the defense waste funding, $50 million is provided for DOE to develop a spent nuclear fuel recycling plan, in conjunction with the technology development plan required under the Advanced Fuel Cycle Initiative. The detailed program plan is to be submitted by March 31, 2006, and a "site selection competition" for an integrated reprocessing facility is to begin by June 30, 2006. A reprocessing site is to be selected in FY2007 and construction to begin in FY2010. "The site competition should not be limited to DOE sites, but should be open to a wide range of other possible federal and nonfederal sites on a strictly voluntary basis," according to the conference report. Applicants for a reprocessing facility can receive up to $5 million per site, up to a total of $20 million, to prepare detailed proposals.

For FY2005, the Administration's budget request for the nuclear waste program had assumed that Congress would enact legislation to offset most of the program's spending with revenue from the waste fees paid by nuclear power plants. As a result, the FY2005 net appropriation request was only $131 million, significantly less than the previous year's appropriation. However, Congress did not approve the funding offset proposal, and congressional appropriators then had to work to find additional appropriations for the nuclear waste program to prevent a large budget cut. For FY2006, the Administration again proposed that nuclear waste funding be offset by fees, but the budget request did not assume the proposal would be enacted and therefore included full funding through appropriations.

The Nuclear Waste Policy Act of 1982 (NWPA, P.L. 97-425), as amended, names Yucca Mountain as the sole candidate site for a national geologic repository. Congress passed an approval resolution in July 2000 (H.J.Res. 87, P.L. 107-200) that authorized the Yucca Mountain project to proceed to the licensing phase.

If the repository opened in 2012 (which currently appears unlikely), DOE would begin taking waste from plant sites nearly 15 years later than the Nuclear Waste Policy Act deadline of January 31, 1998. Nuclear utilities and state utility regulators, upset over DOE's failure to meet the 1998 disposal deadline, have won two federal court decisions upholding the department's obligation to meet the deadline and to compensate utilities for any resulting damages. Utilities have also won several cases in the U.S. Court of Federal Claims. The nation's largest nuclear utility, Exelon Corporation, reached a breach-of-contract settlement with the federal government in August 2004 that may total $600 million if DOE does not begin taking spent fuel before 2015.

Further delays in the Yucca Mountain program could result from a July 2004 court decision that overturned a key aspect of the Environmental Protection Agency's (EPA) regulations for the repository. A three-judge panel of the U.S. Court of

---

[8] Hiruo, Elaine. "Senate FY-06 Bill Report Takes Technical View of Waste Management." *NuclearFuel*. June 20, 2005. p. 1.

Appeals for the District of Columbia Circuit ruled that EPA's 10,000-year compliance period was too short, but it rejected several other challenges to the standards.

More controversy erupted in March 2005 with the release of e-mail messages from Yucca Mountain scientists that indicated that some of their data and documentation may have been fabricated. The House Appropriations Committee report cited all those problems as reasons for establishing a DOE interim storage program. (For more information, see CRS Issue Brief IB92059, *Civilian Nuclear Waste Disposal*, by Mark Holt.)

Nuclear Weapons Stockpile Stewardship. Congress established the Stockpile Stewardship Program in the FY1994 National Defense Authorization Act (P.L. 103-160) "to ensure the preservation of the core intellectual and technical competencies of the United States in nuclear weapons." The program is operated by the National Nuclear Security Administration (NNSA), a semiautonomous agency within DOE that Congress established in the FY2000 National Defense Authorization Act (P.L. 106-65, Title XXXII). It seeks to maintain the safety and reliability of the U.S. nuclear stockpile.

Stockpile stewardship consists of all activities in NNSA's Weapons Activities account. The three main elements of stockpile stewardship, described next, are Directed Stockpile Work (DSW), Campaigns, and Readiness in Technical Base and Facilities (RTBF). **Table 11** presents funding for these elements. NNSA manages two programs outside of Weapons Activities: Defense Nuclear Nonproliferation, discussed later in this report, and Naval Reactors.

Most stewardship activities take place at the nuclear weapons complex, which consists of three laboratories (Los Alamos National Laboratory, NM; Lawrence Livermore National Laboratory, CA; and Sandia National Laboratories, NM and CA), four production sites (Kansas City Plant, MO; Pantex Plant, TX; Savannah River Site, SC; and Y-12 Plant, TN), and the Nevada Test Site. NNSA manages and sets policy for the complex; contractors to NNSA operate the eight sites.

Table 11. Funding for Weapons Activities

($ millions)

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109-103
DSW	1,346.1	1,421.0	1,283.7	1,458.8	1,386.2
Campaigns	2,304.8	2,080.4	1,911.7	2,098.0	2,144.6
RTBF	1,657.1	1,631.4	1,610.9	1,696.3	1,647.9
Other[a]	1,028.6	1,497.3	1,374.9	1,301.2	1,255.3
Total	**6,331.6**	**6,630.1**	**6,181.1**	**6,554.4**	**6,433.9**

Sources: H.Rept. 109-86, S.Rept. 109-84, H.Rept. 109-275.
Note: Details may not add to totals due to rounding.

a. Includes Secure Transportation Asset, Nuclear Weapons Incident Response, Facilities and Infrastructure Recapitalization Program, Environmental Projects and Operations, Safeguards and Security, and several adjustments.

The FY2006 request includes data from NNSA's Future Years Nuclear Security Program (FYNSP), which projects the budget and components through FY2010 (see **Table 12**).

Table 12. NNSA Future Years Nuclear Security Program
($ millions)

	FY2006	FY2007	FY2008	FY2009	FY2010
DSW	1,421.0	1,459.3	1,487.5	1,516.2	1,545.4
Campaigns	2,080.4	2,034.7	2,043.9	2,027.7	2,027.7
RTBF	1,631.4	1,745.5	1,817.1	1,915.8	2,000.1
Other[a]	1,497.3	1,540.8	1,573.0	1,617.6	1,688.4
Total	6,630.1	6,780.4	6,921.4	7,077.2	7,261.6

Source: U.S. Department of Energy. Office of Management, Budget, and Evaluation/CFO. *Department of Energy FY 2006 Congressional Budget Request.* Volume 1, National Nuclear Security Administration. DOE/ME-0046, February 2005, p. 54.

Note: Details may not add to totals because of rounding.

a. Includes Secure Transportation Asset, Nuclear Weapons Incident Response, Facilities and Infrastructure Recapitalization Program, Environmental Projects and Operations, Safeguards and Security, and several adjustments.

Directed Stockpile Work (DSW). This program involves work directly on nuclear weapons in the stockpile, such as monitoring their condition; maintaining them through repairs, refurbishment, life extension, and modifications; R&D in support of specific warheads; and dismantlement. The FY2006 DSW request would support life extension programs for three nuclear warheads: B61 (gravity bomb), W76 (for Trident I and II submarine-launched ballistic missiles), and W80 (for cruise missiles). It would fund surveillance and maintenance for nine warhead types, some work on retired warheads, and some management and technology work not linked to a specific warhead.

The FY2005 Consolidated Appropriations Act reduced DSW to $1,346.1 million, from $1,406.4 million requested. Probably the most noticed provisions were elimination of the $27.6 million request for the Robust Nuclear Earth Penetrator (RNEP), and transfer of the $9.0 million request for the Advanced Concepts Initiative (ACI) to a new program, Reliable Replacement Warhead. Congress debated RNEP and ACI in the FY2004 and FY2005 budget cycles; in addition, the Senate debated RNEP in the FY2006 budget cycle.

RNEP is a study of the cost and feasibility of modifying existing nuclear bombs to enable them to penetrate into the ground before detonating, thereby magnifying their effect on a buried target. (See CRS Report RL32130, *Nuclear Weapon Initiatives: Low-Yield R&D, Advanced Concepts, Earth Penetrators, Test Readiness*, by Jonathan Medalia, and CRS Report RL32347, *"Bunker Busters": Robust Nuclear Earth Penetrator Issues, FY2005 and FY2006*, by Jonathan Medalia.) RNEP's supporters argue that it is needed to attack hard and deeply buried targets (such as

leadership bunkers or chemical weapons production facilities) in countries of concern, thereby deterring or defeating such nations; critics reply that RNEP would lower the threshold for use of nuclear weapons and prompt other nations to develop nuclear weapons to deter U.S. attack.

Congressional concern about RNEP arose in part because the FY2005 NNSA request projected $484.7 million for the program for FY2005-FY2009. While RNEP was a study, this figure was provided in response to a congressional requirement that five-year costs be included in the budget request. The figure represented a projection based on experience with other programs, DOE indicated. It was not possible to provide a more precise number until the cost and feasibility study was completed. Further, the figure projected the cost based as if the program were to progress beyond a study into development, although moving the program beyond the study stage would have required an Administration decision and congressional approval.

For FY2006, NNSA requests $4.0 million for the RNEP study, projects another $14.0 million for FY2007, and then projects no further funds. (The Department of Defense (DOD) budget includes an additional $4.5 million for RNEP for FY2006, mainly for linking RNEP to the B-2 bomber. The Energy and Water bill does not deal with DOD programs, so it does not address DOD's RNEP request.) NNSA funds would be used to complete the study. H.R. 2419 as passed by the House deletes all NNSA funds for RNEP. The bill as reported by the Senate Appropriations Committee recommends $4.0 million. On June 30, the Senate rejected an amendment by Senator Feinstein to delete all RNEP funds from the Energy and Water bill, 43-53, and subsequently passed the bill, 92-3. In late October, while the energy and water conference was underway, NNSA dropped its request for RNEP funding. In response, the conference report provides no funds for that program.

ACI was controversial in the FY2005 budget cycle. Critics claimed that its purpose was to develop a low-yield "mini-nuke" that would make nuclear weapons more usable; supporters responded that NNSA was not working on a mini-nuke and that ACI would help develop and maintain weapons design expertise. The Administration requested $9.0 million for ACI for FY2005. The omnibus bill provided no funds for ACI; instead, the conference report stated that "the same amount is made available for the Reliable Replacement Warhead [RRW] program to improve the reliability, longevity, and certifiability of existing weapons and their components." The Administration requested no funds for ACI for FY2006.

NNSA requested $9.4 million for RRW for FY2006. It stated that the program "is to demonstrate the feasibility of developing reliable replacement components that are producible and certifiable for the existing stockpile" and to initially provide replacement pits (first-stage cores) "that can be certified without Underground Tests." It projected these amounts: FY2007, $14.8 million; FY2008, $14.4 million; FY2009, $29.6 million; and FY2010, $29.0 million. The out-year figures simply transfer the funds planned for ACI to RRW; the short time, less than two months, between enactment of the FY2005 Consolidated Appropriations Act and the submission of the FY2006 budget request did not allow preparation of a detailed five-year budget for RRW. H.R. 2419 as passed by the House included $25.0 million for RRW; the bill as passed by the Senate included $25.4 million. The conference bill provides $25.0 million. (See CRS Report RL32929, *Nuclear Weapons: The Reliable Replacement Warhead Program*, by Jonathan Medalia.)

Although RRW is a small program in relation to the total NNSA budget, the House Appropriations Committee, in its report, views it as enabling many large changes: transitioning the nuclear weapons complex "from a large, expensive Cold War relic into a smaller, more efficient modern complex;" allowing "long-term savings by phasing out the multiple redundant Cold War warhead designs that require maintaining multiple obsolete production technologies;" "obviat[ing] any reason to move to a provocative 18-month test readiness posture" by increasing warhead reliability and reducing the need to test; permitting a reduction in Advanced Simulation and Computing funds by redirecting them to current warhead maintenance programs pending initiation of RRW; and supporting other changes and budget decisions as well. The Senate Appropriations Committee's report (S.Rept. 109-84) states that the recommended funding increase for RRW is "to accelerate the planning, development and design for a comprehensive RRW strategy that improves the reliability, longevity and certifiability of existing weapons and their components." The conference report emphasizes that RRW design work "must stay within the military requirements of the existing deployed stockpile" and any design "must stay within the design parameters validated by past nuclear tests." Other goals that the conference report sets for RRW are improving manufacturing practices, reducing cost, and increasing performance margins to support a reduction in stockpile size.

In other actions on DSW, H.R. 2419 as passed by the House includes a Sustainable Stockpile Initiative that would include an RRW implementation plan, nuclear weapons complex reconfiguration, consolidation of fissile material that might be used in weapons, and accelerated warhead dismantlement. The bill raises funding for dismantlement by $75.0 million, to $110.3 million. The bill as passed by the Senate provides $15.0 million for dismantlement. The conference bill provides $60.0 million for dismantlement under DSW.

Campaigns. These are "multi-year, multi-functional efforts" that "provide specialized scientific knowledge and technical support to the directed stockpile work on the nuclear weapons stockpile." For FY2006, there are six campaigns, each of which has multiple components: Science; Engineering; Inertial Confinement Fusion and High Yield; Advanced Simulation and Computing; Pit Manufacturing and Certification; and Readiness.

The FY2005 omnibus bill contained $2,304.8 million for Campaigns, vs. $2,393.8 million requested. Conferees expressed concern over a slip in the target date, from 2010 to 2014, for achieving ignition with the National Ignition Facility (NIF; see below), and directed several studies on this topic. Conferees also focused on the Pit Manufacturing and Certification Campaign, which is working to produce "pits" (the fissile core of the primary stage of nuclear weapons) and to certify them for use in the stockpile. Congress provided $130.9 million, vs. $132.0 million requested, for W88 pit manufacturing. Congress reduced funds for the Modern Pit Facility (MPF), a proposed manufacturing facility to become operational around 2021, from $29.8 million requested to $6.9 million, and barred use of funds to select a construction site for MPF in FY2005.

For FY2006, NNSA requested $2,080.4 million for Campaigns, vs. $2,304.8 million appropriated for FY2005. Many items within Campaigns have significance for policy decisions. As one example, the Science Campaign's goals include improving the ability to assess warhead performance without nuclear testing,

improving readiness to conduct tests should the need arise, and maintaining the scientific infrastructure of the nuclear weapons laboratories. H.R. 2419 as passed by the House reduces funds for Campaigns; the bill as passed by the Senate provides a slight net increase. The conference bill contains $2,144.6 million.

H.R. 2419 as passed by the House eliminates MPF funds until "capacity requirements tied to the long-term stockpile size are determined" and "until the long-term strategy for the physical infrastructure of the weapons complex has incorporated the Reliable Replacement Warhead strategy." The bill as passed by the Senate provides the amount requested for MPF, $7.7 million. The conference bill provides no funds for MPF. Conferees directed NNSA to focus on improving manufacturing capability at a facility (TA-55) at Los Alamos National Laboratory, currently used to produce pits on a small scale.

The test readiness posture — the time between a presidential order to resume testing and the conduct of the test — has been controversial. In FY2004, the defense authorization conference report called for a posture of at most 18 months, while the energy and water conference report called for NNSA "to focus on restoring a rigorous test readiness program that is capable of meeting the current 24-month requirement before requesting significant additional funds to pursue a more aggressive goal of an 18-month readiness posture." The FY2005 omnibus conference report did not address the topic, and for FY2006 NNSA requested $25.0 million for Test Readiness, part of the Science Campaign, "to continue improving the state of readiness to reach an 18-month test-readiness posture in FY2006." H.R. 2419 as passed by the House reduces Test Readiness from $25.0 million to $15.0 million. The committee continues to oppose the 18-month readiness posture and added RRW to its rationale for that position. The bill as passed by the Senate provides $25.0 million for test readiness. The conference bill provides $20.0 million for test readiness, a reduction of $5.0 million; at the same time, it increases by $5.0 million the funds for subcritical experiments (experiments using high explosives and fissile material configured so as not to support a nuclear chain reaction), which are held only at Nevada Test Site.

The Engineering Campaign includes the Enhanced Surveillance Program (ESP), for which NNSA requests $96.2 million for FY2006. This program seeks to develop "predictive capabilities for early identification and assessment of stockpile aging concerns ... to give NNSA a firm basis for determining when systems must be refurbished." It is of interest to Congress because it is conducting experiments to determine the service life of pits based on plutonium aging characteristics; the result will bear on a decision to build MPF. H.R. 2419 as passed by the House reduces ESP to $76.0 million. The bill as passed by the Senate provides $111.2 million for ESP. "Funding increases will enable the development and implementation of these new [surveillance] techniques, and improving their readiness for RRW and the sustainable stockpile." The conference bill provides $100.2 million for ESP.

According to NNSA, the Inertial Confinement Fusion and High Yield Campaign "is to develop laboratory capabilities to create and measure extreme conditions ... approaching those in a nuclear explosion, and conduct weapons-related research in these environments." A key part of this campaign is the National Ignition Facility (NIF), a partly completed facility at Lawrence Livermore National Laboratory that is already the world's most powerful laser. For FY2006, NNSA requests $141.9 million for NIF construction, and H.R. 2419 as passed by the House contains that

sum. The Senate Appropriations Committee notes that the planned five-year budget projection for Weapons Activities in the FY2006 request is reduced by $3.0 billion compared to the FY2005 request, and directs that no funds be expended on NIF construction "in order to focus on supporting a comprehensive stewardship program." The conference bill provides the requested amount for NIF construction.

Readiness in Technical Base and Facilities (RTBF). This program provides infrastructure and operations at the nuclear weapons complex sites. The FY2005 omnibus bill provided $1,657.1 million for RTBF, vs. $1,474.5 million requested. RTBF has six subprograms. By far the largest is Operations of Facilities ($1,112.6 million appropriated for FY2005, $1,160.8 million requested for FY2006). Others include Program Readiness, which supports activities occurring at multiple sites or in multiple programs ($105.4 million appropriated for FY2005, $105.7 million requested for FY2006), and Material Recycle and Recovery, which recovers plutonium, enriched uranium, and tritium from weapons production and disassembly ($86.3 million appropriated for FY2005, $72.7 million requested for FY2006). Construction is a separate category within RTBF; the FY2005 appropriation was $275.1 million, and the FY2006 request is $243.0 million.

H.R. 2419 as passed by the House reduces RTBF to $1,610.9 million from an FY2006 request of $1,631.4 million. It increases Operations of Facilities by $44.0 million, adding funds to maintain the Y-12 and Pantex Plants. The bill funds most other RTBF elements at the level requested. A key exception was eliminating $55.0 million requested for a Chemistry and Metallurgy Research Facility Replacement (CMRR) at Los Alamos to delay construction until DOE "determines the long-term plan for developing the responsive infrastructure required to maintain the nation's existing nuclear stockpile and support replacement production anticipated for the RRW initiative." The bill as passed by the Senate provides $1,696.3 million for RTBF. The largest change is an increase of $39.7 million in Operations of Facilities. The Senate bill provides $65.0 million for CMRR. The conference bill provides $1,647.9 million for RTBF, including $55.0 million for CMRR.

Other Programs. Weapons Activities includes four smaller programs in addition to DSW, Campaigns, and RTBF.

- Secure Transportation Asset provides for the transport of nuclear weapons, components, and materials safely and securely. It includes special vehicles used for this purpose, communications and other supporting infrastructure, and threat response. The FY2005 appropriation was $199.7 million, and the FY2006 request is $212.1 million. H.R. 2419 as passed by the House and by the Senate provides the amount requested, as does the conference bill.

- Nuclear Weapons Incident Response provides for use of DOE assets to manage and respond to a nuclear or radiological emergency within DOE, in the United States, or abroad. The FY2005 appropriation was $98.4 million, and the FY2006 request is $118.8 million. H.R. 2419 as passed by the House and by the Senate provides the amount requested, as does the conference bill.

- Facilities and Infrastructure Recapitalization Program provides for deferred maintenance and infrastructure improvements for the nuclear weapons complex. In contrast, RTBF "ensure[s] that facilities necessary for immediate programmatic workload activities are maintained sufficiently," according to NNSA. The FY2005 appropriation was $313.7 million, and the FY2006 request is $283.5 million. H.R. 2419 as passed by the House provides $250.5 million. The bill as passed by the Senate provides $261.8 million. The conference bill provides $150.9 million, with no explanation of the reduction.

- Safeguards and Security provides operations and maintenance funds for physical and cyber security, and related construction, to protect NNSA personnel and assets from terrorist and other threats. Safeguards and Security is a major concern for NNSA. Ambassador Linton Brooks, Administrator of NNSA, stated to the Senate Armed Services Committee on April 4, 2005, "We must now consider the distinct possibility of well-armed and competent terrorist suicide teams seeking to gain access to a warhead in order to detonate it in place. This has driven our site security posture from one of 'containment and recovery' of stolen warheads to one of 'denial of any access' to warheads. This change has dramatically increased security costs for 'gates, guns, guards' at our nuclear weapons sites." The FY2005 appropriation was $751.6 million. The FY2006 request was $740.5 million. H.R. 2419 as passed by the House provided $825.5 million, the bill as passed by the Senate provided the requested amount, and the conference bill provides $805.5 million.

Nonproliferation and National Security Programs. DOE's nonproliferation and national security programs provide technical capabilities to support U.S. efforts to prevent, detect, and counter the spread of nuclear weapons worldwide. These nonproliferation and national security programs are included in the National Nuclear Security Administration (NNSA).

Funding for these programs in FY2005 was $1.422 billion. For FY2006, the Administration requested $1.637 billion. H.R. 2419 as passed by the House contained $1.501 billion. The Senate version of H.R. 2419 would have appropriated $1.729 billion. P.L. 109-103 appropriated $1.631 billion.

In May 2004, DOE consolidated a number of programs — those aimed at repatriating fresh and spent fuel containing highly enriched uranium (HEU) from research reactors around the world supplied by the United States and Russia, and converting reactors that use HEU fuel to operate on low-enriched uranium — into a single Global Threat Reduction Initiative (GTRI) within the Defense Nuclear Nonproliferation Program. Most of the funding for GTRI was redirected from Nonproliferation programs, but some came from Defense Environmental Management programs. DOE said that the target for completion of the program was 2010, and that it would be funded at about $450 million. Funding for GTRI in FY2005 was calculated by DOE at $93.8 million. The request for FY2006 was $98.0 million. H.R. 2419 as passed by the House would have funded the program at $112.0 million; the Senate bill, $109.0 million. P.L. 109-103 appropriated $98.0 million.

Table 13. DOE Defense Nuclear Nonproliferation Programs
($ millions)

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109- 103
Nonproliferation & Verification R&D	224.0	272.2	335.2	310.2	322.0
Nonproliferation & International Security[b]	91.3	80.2	75.8	90.0	75.0
International Materials Protection, Control and Accounting (MPC&A)[b]	294.7	343.4	428.4	343.4	427.0
Russian Transition Initiatives[a]	40.7	37.9	30.3	50.9	40.0
Elimination of Weapons-Grade Plutonium Production	44.0	132.0	197.0	152.0	176.2
HEU Transparency Implementation	20.8	20.5	20.5	20.5	19.5
Fissile Materials Disposition	613.1	653.1	301.7	653.1	473.5
Global Threat Reduction Initiative[b]	93.8	98.0	112.0	109.0	98.0
Total	**1,422.1**	**1,637.2**	**1,501.0**	**1,729.1**	**1,631.2**

Source: H.Rept. 109-275.

a. DOE proposed changing the program name to Global Initiatives for Proliferation Prevention. The House Appropriations Committee did not agree to the change, but the Senate Appropriations Committee did. P.L. 109-103 kept the previous name.
b. GTRI funding redirected from other programs, primarily Nonproliferation and International Security and MPC&A.

The Nonproliferation and Verification R&D program, which received $224 million for FY2005, would have been funded at $272.2 million in the Administration's FY2006 request. The House-passed H.R. 2419 raised the level to $335.2 million. The Senate bill included $310.2 million. The final bill appropriated $327.0 million. Nonproliferation and International Security programs would have received $80.2 million in the request, compared with $91.3 million in FY2005. The House bill included $75.8 million, the Senate bill $90.0 million. The final bill appropriated $75.0 million. These programs include international safeguards, export controls, and treaties and agreements. A major part of funding for the new GTRI came from the Nonproliferation and International Security programs.

International Materials Protection, Control and Accounting (MPC&A), which is concerned with reducing the threat posed by unsecured Russian weapons and weapons-usable material, would have received $343.4 million under the President's request, compared to $294.7 million appropriated for FY2005. H.R. 2419 as passed by the House included $428.4 million. The Senate bill would have appropriated $343.4 million. P. L. 109-103 funds MPC&A at $422.0 million.

Two programs in the former Soviet Union, Initiatives for Proliferation Prevention (IPP) and the Nuclear Cities Initiatives (NCI), were combined for FY2005 into a single program called "Russian Transition Initiative," aimed at finding nonweapons employment for roughly 35,000 underemployed nuclear scientists from

the former Soviet weapons complex. The FY2005 appropriation for the program was $40.7 million. For FY2006, $37.9 million was requested; DOE renamed the program "Global Initiatives for Proliferation Prevention," to reflect expansion of the work to include retraining and redirection of scientists and technicians from other than the former Soviet Union. The House Appropriations Committee did not agree with the name change and reduced funding to $30.3 million. The Senate Appropriations Committee went along with the name change, raised funding to $50.9 million, and urged DOE to continue the program in Russia and expand it beyond the former Soviet Union. The conference bill appropriated $40.0 million and retained the former name.

Requested funding for the Fissile Materials Disposition program for FY2006 was $653.1 million, compared with $613.1 million in appropriated for FY2005. The program's goal is disposal of U.S. surplus weapons plutonium by converting it into fuel for commercial power reactors, including construction of a facility to convert the plutonium to reactor fuel at Savannah River, SC, and a similar program in Russia. The House Appropriations Committee cut funding for the Savannah River facility sharply, citing delays in agreement with Russia over the program. Total funding for fissile materials disposition in H.R. 2419 as passed by the House would have been $301.7 million. The Senate version of the bill would have funded the program at the requested $653.1 million level. P.L. 109-103 appropriated $473.5 million.

Environmental Management and Cleanup. The Environmental Management program is the largest single function within DOE in terms of funding, representing approximately one-third of the Department's total budget. The primary purpose of the program is to manage radioactive and hazardous wastes, and to remediate contamination from such wastes, at former nuclear weapons sites across the country. The program also addresses waste management and remediation at sites where the federal government conducted civilian nuclear energy research. As such, DOE's Environmental Management program is the largest waste management and environmental cleanup program throughout the federal government, with an annual budget of around $7 billion in recent years. In comparison, annual funding for the cleanup of contamination at Department of Defense sites has been less than $2 billion in recent years, and annual funding for the Environmental Protection Agency's cleanup of the nation's most hazardous private sector sites under the Superfund program has been around $1.25 billion.

As signed into law, the conference agreement on H.R. 2419 provides a total of $6.66 billion in FY2006 for DOE's Environmental Management program. The FY2006 appropriation is $627 million less than the $7.28 billion enacted for FY2005. Although funding is reduced relative to FY2005, the conference amount is $151 million more than the Administration's request of $6.51 billion. Defense sites have traditionally received most of the funding within the Environmental Management program. Of the amount provided for FY2006, $6.19 billion is allocated to a new Defense Environmental Cleanup account, $353 million to a new Non-Defense Environmental Cleanup account, and $562 million to the existing Uranium Enrichment Decontamination and Decommissioning (D&D) Fund. Although the total appropriation for these three accounts is $7.11 billion, this amount is offset by $451 million from the federal contribution to the Uranium Enrichment D&D Fund provided within the Defense Environmental Cleanup account, yielding a total

FY2006 program appropriation of $6.66 billion. See the table below for appropriations by account.

As proposed by the House and the Senate, the conference agreement merges certain accounts that fund the Environmental Management program to form the new defense and nondefense accounts noted above. The accounts for Defense Site Acceleration Completion and Defense Environmental Services are merged into one Defense Environmental Cleanup account to provide a single source of funding for cleanup at former nuclear weapons sites. Most of the $627 million reduction relative to FY2005 is within this new account, discussed below. The accounts for Non-Defense Site Acceleration Completion and Non-Defense Environmental Services are merged into one Non-Defense Environmental Cleanup account to provide a single source of funding for the cleanup of civilian nuclear energy research sites. As in past years, the conference agreement continues a separate account for the Uranium Enrichment D&D Fund, which supports the cleanup of uranium enrichment plants and uranium and thorium processing sites. The Administration had requested funding for FY2006 under the existing account structure, and did not propose any accounting changes similar to that in the conference agreement.

Most of the $627 million reduction below the FY2005 appropriation is within the Defense Environmental Cleanup account. As noted in the table below, overall funding for cleanup at four major sites is reduced, including the Savannah River site in South Carolina, the Idaho National Laboratory, and the Hanford site in the State of Washington. The decline in funding for sites scheduled for closure in 2006 is mostly due to the completion of "physical" cleanup at Rocky Flats.[9] The conference report indicates that a portion of the reduction at the Savannah River site is because of "unresolved seismic issues" that have delayed construction of a salt waste processing facility to treat high-level radioactive waste removed from underground storage tanks. The conference report also reduces prior year balances for this project by $20 million because of these construction delays.

Table 14. Environmental Management Program Appropriations

($ millions)

Environmental Management Program Accounts	FY2005 Enacted	FY2006 Request	FY2006 P.L. 109-103
Defense Environmental Cleanup			
2006 Closure Sites	$1,105.8	$1,008.6	$1,028.6
Savannah River Site	$1,311.4	$1,229.1	$1,170.6
Waste Isolation Pilot Plant	$225.4	$212.6	$230.6

[9] Kaiser-Hill Company, the contractor for the accelerated cleanup of Rocky Flats, announced in October 2005 that "physical" cleanup of the site was complete. Completion of the cleanup is subject to determination by DOE that the contractor has completed all of the work specified under the contract. The adequacy of the cleanup to protect human health and the environment is subject to certification by the Environmental Protection Agency (EPA). Long-term maintenance of remedial actions and monitoring of Rocky Flats likely will continue for many years subsequent to the completion of the physical cleanup work, necessitating some continued funding in the future.

Idaho National Laboratory	$540.6	$531.7	$538.2
Oak Ridge Reservation	$279.9	$186.6	$240.8
Hanford			
Office of River Protection			
Waste Treatment Plant (WTP)	$684.5	$625.9	$526.0
Tank Farm Activities	$364.7	$302.4	$329.5
Total Office of River Protection	$1,049.2	$928.3	$855.5
Other Site Cleanup	$921.8	$749.7	$780.7
Hanford Total	$1,971.0	$1,678.0	$1,636.2
Program Direction	$270.0	$230.9	$243.8
Program Support	$32.7	$32.9	$32.8
Federal Payment to Uranium D&D Fund [a]	$459.3	$451.0	$451.0
Technology Development	$59.7	$21.4	$30.1
NNSA and Nevada off-site [b]	$322.1	$145.1	$302.5
Safeguards and Security	$262.9	$287.2	$287.2
Use of Prior Year Balances	$-32.5	$0.0	$0.0
Total Defense Environmental Cleanup	$6,808.3	$6,015.1	$6,192.4
Non-Defense Environmental Cleanup	$439.6	$349.9	$353.2
Uranium D&D Fund	$495.0	$591.5	$562.2
Uranium D&D Fund Offset [c]	$-459.3	$-451.0	$-451.0
Total Environmental Management	$7,283.6	$6,505.5	$6,656.8

a. D&D = Decontamination and Decommissioning.

b. The reduction in the Administration's request for this activity was due to the proposed transfer of seven sites from DOE's Environmental Management program to NNSA. The conferees rejected the Administration's proposal and reinstated the funding for these sites within DOE's Environmental Management program. However, the conferees did approve the Administration's proposal to fund the disposal of newly generated waste at two sites within the NNSA's accounts.

c Traditionally, the annual federal payment to the Uranium D&D Fund within the Defense Environmental Cleanup account is treated as an offset with respect to the total Environmental Management program funding level.

The conference report attributes a portion of the decrease at the Hanford site to delays in construction of the Waste Treatment Plant (WTP). The purpose of this facility is to "vitrify" high-level radioactive waste removed from underground storage tanks. Vitrification involves the solidification of this waste and encasing it in glass logs for permanent storage in a geologic repository, such as Yucca Mountain. Although FY2006 funding for the WTP is less than appropriated for FY2005, as noted in the table above, the conference report indicates that $98 million remains available from FY2005 that could be used in FY2006. In reference to construction delays, the conferees commented that DOE "needs better control and oversight of the scope, cost and schedule of this project," and directed DOE to report to the Appropriations Committees by December 1, 2005, on the "actions taken to rectify the management failures of this project" and to report quarterly on the status of this project beginning in 2006.

Regarding Hanford, the conferees also noted their concern about DOE's efforts to prevent contaminants from migrating through groundwater into the Columbia River, which is a source for drinking water and agricultural irrigation across the Pacific Northwest. DOE reports that more than 270 billion gallons of groundwater covering an underground area of over 80 square miles at Hanford is contaminated at levels that exceed federal drinking water standards. Members of Congress, states, and communities have expressed ongoing concern regarding the risk to human health and the environment posed by the migration of this contamination into the river. The conferees noted that current technology used in "several remedies is not performing satisfactorily, and there is lack of new technologies to address contamination issues." In response to this concern, the conference agreement provides $10 million for assessing the migration of groundwater contamination into the Columbia River and for introducing new technologies to protect water quality.

The conferees did not approve DOE's proposed transfer of seven sites within the Environmental Management program to the National Nuclear Security Administration (NNSA).[10] Instead, the conferees increased funding above the request to continue support for these responsibilities within the existing programmatic structure. However, as the Administration proposed, the conference agreement does not provide funding within the Environmental Management program for the continued disposal of waste at Lawrence Livermore National Laboratory in California and at the Y-12 site in Tennessee, which is newly generated as a result of activities conducted by the NNSA. Rather, funding for the disposal of newly generated waste at these two sites is provided in the NNSA's accounts.

Cleanup Status. In addition to debate over annual appropriations, there have been many longstanding issues associated with DOE's Environmental Management program. Much attention has focused on the resources and time needed to clean up environmental contamination, and to manage and dispose of radioactive and other hazardous wastes. To date, there are 114 geographic sites within the Environmental Management program (including the seven sites that DOE proposed for transfer to the NNSA), which were contaminated from nuclear weapons production or civilian nuclear energy research. According to DOE, all response actions were complete at 76 of these sites as of the end of FY2003. Congress had appropriated approximately $70 billion through FY2003 for cleanup and site closure since the Environmental Management program was established in FY1989. DOE expects cleanup to be complete at three additional sites by the end of FY2005, and at seven additional sites by the end of CY2006, yielding a total of 86 of the 114 sites with cleanup complete.

Efforts to Accelerate Cleanup. Although cleanup is projected to be complete at many of the remaining sites within a decade, cleanup at the most contaminated sites is not expected to be complete until 2035. DOE's most recent estimate of future costs to complete its planned waste disposal and cleanup activities

---

[10] These sites include (1) Nevada Test Site, (2) Sandia National Laboratory, (3) Separation Process Research Unit, (4) Kansas City Plant, (5) Lawrence Livermore National Laboratory Livermore Site, (6) Lawrence Livermore Laboratory Site 300, and (7) Pantex. In addition, operation of the low-level waste disposal site at the Nevada Test Site and newly generated waste management at Lawrence Livermore National Laboratory and the Y-12 site were also proposed for transfer from the Environmental Management program to the National Nuclear Security Administration within DOE.

is $95 billion from FY2004 through final site closure in 2035. This is a substantially lower estimate than in past years, as a result of cost and time savings DOE expects from its cleanup reform initiative. DOE launched this initiative in FY2003 and signed letters of intent with the Environmental Protection Agency and the states to accelerate cleanup at its major sites. DOE also prepared Performance Management Plans for many of its sites, which outlined how cleanup would be accelerated and costs reduced.

In developing its plans to accelerate cleanup, DOE established baselines for the completion of its planned waste disposal and remedial actions, reflecting defined scope, costs, and schedules. According to DOE, its goals of faster and less costly cleanup are being accomplished through awarding competitive contracts, renegotiating existing contracts with performance-based incentives, working with regulators on more efficient technical and regulatory approaches, deploying innovative technologies, and coordinating with stakeholders and regulators to better define "end states" (i.e., the intended condition or use of each site once cleanup is complete). However, the reductions in costs and time frames resulting from DOE's planned acceleration of cleanup are merely estimates. Actual costs and time frames could differ depending on numerous factors, such as the regulatory approval of actions that DOE wishes to take in the future and the adequacy of these actions to protect human health and the environment over the long term.

Questions have been raised as to how DOE would accomplish its goals of faster and less costly cleanup without weakening environmental protection. Some have contended that more contamination may be left on site rather than removed. Because of the substantial amount of time required for certain types of radioactivity to decay, arguments have been raised that contamination left in place may migrate in unexpected ways over the long term, and result in pathways of exposure that could not have been predicted when the remedy was originally selected. Others counter that completely removing radioactive contamination from all sites to permit unrestricted future land use, and eliminate all future pathways of exposure, would not be economically feasible, and in some cases would be beyond the capabilities of current cleanup technologies.

The conferees noted their continued interest in DOE's cleanup acceleration efforts, specifically whether DOE is meeting its cleanup goals at sites scheduled for completion by 2006, 2012, and 2035, respectively. The conferees requested that DOE submit a "milestone" report twice a year to the House and Senate Appropriations Committees by March 1 and September 1 of each year. Milestones typically are individual cleanup actions to be completed by a specific date, which DOE, EPA, and the states have agreed would fulfill applicable regulatory requirements. As described by the conferees, this new report would track accelerated cleanup milestones at individual sites, indicate whether milestones are being met, and include estimates of annual funding needs and total "life-cycle" costs to complete cleanup. The House Appropriations Committee had requested a similar milestone report in its report on H.R. 2419. The Senate Appropriations Committee did not request such a report but commented that DOE has "succeeded in making significant progress" in accelerating cleanup and encouraged DOE "to continue [to] keep the remaining sites on track."

In addition to language in committee reports on the FY2006 appropriations bills, Members also expressed concern about cleanup progress at a hearing held by the

Senate Energy and Natural Resources Committee on November 15, 2005. Although Members complimented DOE for its efforts to accelerate cleanup at certain sites, such as Rocky Flats, they also commented that improvements could be made in increasing the pace of cleanup and lowering costs at other sites, such as Hanford.

Disposal of Tank Wastes. One of the more controversial issues regarding DOE's cleanup acceleration initiative has been how to dispose of radioactive and chemical wastes stored in underground tanks at the Hanford site, the Savannah River site, and the Idaho National Laboratory. For FY2005, DOE requested $350 million for a "High-Level Waste Proposal" account to prepare for the classification and treatment of some of the tank wastes as "incidental to reprocessing" and to eventually dispose of it as low-level waste or transuranic waste. Of the $350 million request, $249 million would have been for "operating expenses" mostly associated with removal of the liquid tank waste. The remaining $101 million would have been for the construction of three facilities to treat the liquid waste that would be removed from the storage tanks and to process it to separate out the high-level waste for permanent storage.

The most contentious element of DOE's proposal was to leave some of the waste in the tanks, and to dispose of it as low-level waste by mixing and immobilizing it with a cement-like "grout" to seal it in place. Some Members of Congress, states, environmental organizations, and communities opposed DOE's proposal, arguing that none of the tank wastes should be allowed to remain in place. Among the chief concerns was the possibility that the grout might not mix thoroughly with the residual waste to contain it safely and prevent leaks. However, others asserted that there would be limited environmental and public health risk benefit to be gained by removing all of the waste from the tanks. There also were concerns that removal of all of the waste would be technically difficult, pose a significant health and safety risk to the workers, and be very costly.

After considerable debate, the 108th Congress included authority in the Ronald W. Reagan National Defense Authorization Act for FY2005 (P.L. 108-375) for DOE to classify some of the tank wastes at the Savannah River site and the Idaho National Laboratory as other than high-level waste, and to dispose of some of the tank waste by grouting it in place if certain conditions are met. However, the authority was not extended to Washington State, where most of the tank waste is located at the Hanford site. (For further discussion, see CRS Report RS21988, *Radioactive Tank Wastes: Disposal Authority in the Ronald W. Reagan National Defense Authorization Act for FY2005*, coordinated by David Bearden.)

Congress did not create a separate account for DOE's High-Level Waste Proposal in FY2005. However, with the above authority, Congress appropriated $292 million out of the former Defense Site Acceleration Completion account for activities needed to reclassify and treat tank wastes at the Savannah River site and the Idaho National Laboratory in preparation of grouting the residual wastes in place. Congress did not allocate any of this funding for tank waste reclassification at Hanford, as the above authority was not extended to Washington State. Instead, other funds were allocated for ongoing tank waste activities at Hanford.

The Administration's FY2006 request did not include a line-item for a High-Level Waste Proposal account, as it did for FY2005. Although DOE planned to close

one tank at the Idaho National Laboratory in FY2006 with the new waste reclassification authority, the Administration's request did not specify the amount of funding for the closure of this tank. It also did not specify the amount of waste in the tank that may be reclassified and grouted in place. The conference agreement did not specify the amount of funding for the closure of this tank either.

The FY2006 request did specify nearly $84 million for the construction of three waste treatment facilities at the Idaho National Laboratory and the Savannah River site, which were included in DOE's original request for the High-Level Waste Proposal account in FY2005. These facilities would be necessary for DOE to process the waste removed from the tanks prior to grouting any residual waste that may remain upon closure. The conference agreement provides $45 million for these three construction projects, including

- $9.2 million for project engineering and design for the Sodium Bearing Waste Treatment Facility at the Idaho National Laboratory, the same as the Administration requested;

- $35.3 million for project engineering and design for the Salt Waste Processing Facility at the Savannah River site, $31 million more than the Administration's request of $4.3 million; and

- $500,000 for construction of the Salt Waste Processing Facility at the Savannah River Site, $69.5 million less than the Administration's request of $70 million. As noted earlier, the significant reduction in funding is due to construction delays as a result of "unresolved seismic issues."

Office of Legacy Management. Related to the Environmental Management program, the conference agreement provides almost $79 million for DOE's Office of Legacy Management, about the same as requested, and slightly more than the enacted FY2005 amount of $77 million. Of the FY2006 appropriation, $45 million is allocated to former defense sites and related activities, and nearly $34 million is allocated to nondefense sites. Congress provided the funding for DOE to establish this office in the Energy and Water Development Appropriations Act for FY2004 (P.L. 108-137). The primary functions of the Office of Legacy Management are to monitor and maintain remedial actions over the long-term once cleanup is complete, to ensure protection of human health and the environment, and to manage the pensions and benefits of former contractor personnel who performed the cleanup. DOE previously administered these responsibilities under multiple elements of its Environmental Management program.

Power Marketing Administrations. DOE's four Power Marketing Administrations (PMAs) — Bonneville Power Administration (BPA), Southeastern Power Administration (SEPA), Southwestern Power Administration (SWPA), and Western Area Power Administration (WAPA) — were established in response to the construction of dams and multi-purpose water projects operated by the Bureau of Reclamation and the Army Corps of Engineers. In many cases, conservation and management of water resources — including irrigation, flood control, recreation or other objectives — were the primary purpose of federal projects. However, these

facilities often generated electricity to meet project needs; PMAs were established to market the excess power.

Priority for PMA power is extended to "preference customers," which include municipal utilities, co-ops and other "public" bodies. The PMAs sell power to these entities "at the lowest possible rates" consistent with what they describe as "sound business practice." The PMAs are responsible for covering their expenses and for repaying debt and the federal investment in the generating facilities. Their rates are the focus of considerable discussion, and the FY2006 Administration request included a recommendation that Congress raise PMA rates to "market rates." The House rejected this proposal in its Energy and Water appropriations bill. It is not mentioned in the conference report, and no related legislation has been introduced in the 109th Congress. (For more information see CRS Report RL32798, *Power Marketing Administrations: Proposals for Market-Based Rates*, by Kyna Powers.)

The FY2006 Administration request for the PMAs ($57.1 million) was sharply down from FY2005 levels ($208.8 million) — a reduction of 72.6%. This reflects a reduction of $117.8 million for WAPA and $26.0 million for Southwestern. Net appropriations for Southeastern, budgeted at roughly $5.2 million in FY2005, would be eliminated altogether. However, the Administration's request offset these reductions by allowing SEPA, SWPA, and WAPA to credit a portion of their revenues to their appropriation accounts as offsetting collections for program and operating expenses. The House and Senate both rejected this proposal and instead provide appropriations for these activities.

The House-passed bill included $265.5 million for PMAs — a $56.7 million increase from FY2005 appropriations. This appropriation includes $5.6 million for SEPA, $30.2 for SWPA, and $227.0 million for WAPA. The Senate bill included $279.2 million for PMAs — $11.1 million more than the House. This appropriation includes $5.6 million for SEPA, $30.2 million for SWPA, and $240.8 million for WAPA. P.L. 109-103 appropriated $5.6 million for SEPA, $30.2 million for SWPA, $234.0 million for WAPA, and $2.7 million for Falcon and Amisted, for a total PMA appropriation of $272.5 million. (For more information see CRS Report RS22080, *Power Marketing Administrations; Offsetting Collections in the President's FY2006 Budget Proposal*, by Kyna Powers.)

BPA receives no annual appropriation, but funds some of its activities from permanent borrowing authority, which was increased in FY2003 from $3.75 billion to $4.45 billion (a $700 million increase). BPA did not request additional borrowing authority in FY2006, and none was provided by the House, Senate, and conference report. BPA intends to use $487 million of its borrowing authority in FY2006, up from $432 million in FY2005, for generation and transmission services, conservation, energy efficiency, fish and wildlife, and capital equipment programs.

As recommended by the Senate, the conference report prohibits further BPA funding for the Fish Passage Center, which collects and analyzes data on fish movements in the Columbia and Snake rivers and requires that its functions be transferred to other existing entities.

Title IV: Independent Agencies

Independent agencies that receive funding from the Energy and Water Development bill include the Nuclear Regulatory Commission (NRC), the Appalachian Regional Commission (ARC), and the Denali Commission.

Table 15. Energy and Water Development Appropriations Title IV: Independent Agencies
($ millions)

Program	FY2005	FY2006 Request	House H.R. 2419	Senate H.R. 2419	P.L. 109- 103
Appalachian Regional Commission	65.5	65.5	38.5	65.5	65.5
Nuclear Regulatory Commission (Revenues) Net NRC	664.9 (536.8) 128.1	701.7 (567.1) 134.6	714.3 (580.6) 134.6	742.7 (606.1) 136.6	742.7 (624.7) 118.0
Defense Nuclear Facilities Safety Board	20.1	22.0	22.0	22.0	22.0
Nuclear Waste Technical Review Board	3.2	3.6	3.6	3.6	3.6
Denali Commission	66.4	2.6	2.6	67.0	50.0
Delta Regional Authority	6.0	6.0	6.0	12.0	12.0
Total	**289.3**	**234.3**	**207.3**	**306.7**	**271.1**

Source: H.Rept. 109-86; S.Rept. 109-84; H.Rept. 109-275.

Key Policy Issues — Independent Agencies

Nuclear Regulatory Commission. The Nuclear Regulatory Commission (NRC) requested a total budget of $701.7 million for FY2006, including $8.3 million for the NRC inspector general's office. The enacted bill provides a total of $742.7 million, about 11.7% above the FY2005 funding level. Major activities conducted by NRC include safety regulation and licensing of commercial nuclear reactors, licensing of nuclear waste facilities, and oversight of nuclear materials users.

The House approved a $21 million increase over the NRC budget request, to $722.7 million, for additional regulation of the security of spent fuel at nuclear reactor sites. The House Appropriations Committee report cited spent fuel security risks found by a 2004 study by the National Academy of Sciences and expressed dissatisfaction with NRC's response so far. The additional funding was intended "for the NRC to perform the necessary technical analyses and award the contracts to respond to the NAS safety and security recommendations."

The Senate Appropriations Committee agreed with the House's $21 million increase for spent fuel pool security and provided an additional $20 million for licensing of new nuclear power plants, for a total of $742.7 million. The Committee called for NRC to get ready to process three to five applications for new commercial

reactors during the next two years. The conferees agreed with the proposed $41 million in additional spending.

For all homeland security activities, NRC's FY2006 budget request included $61.0 million, a 2% increase over FY2005. NRC oversees force-on-force security exercises at nuclear plants and is requiring revised security plans to reflect increased baseline threats. (For more information on protecting licensed nuclear facilities, see CRS Report RS21131, *Nuclear Power Plants: Vulnerability to Terrorist Attack*, by Carl E. Behrens and Mark Holt.)

To begin reviewing an anticipated DOE license application for a national nuclear waste repository at Yucca Mountain, Nevada, NRC requested $69.1 million — a slight increase over FY2005 but more than double the FY2004 level. The budget request also included safety testing of full-scale casks for transporting nuclear waste by rail and by truck. Because funding was cut for the DOE repository program, the conferees reduced NRC's repository licensing request to $46.1 million.

The Energy Policy Act of 2005 permanently extended a requirement that 90% of NRC's budget be offset by fees on licensees. Not subject to the offset is the $46.1 million from the Nuclear Waste Fund to pay for waste repository licensing and another $2 million for DOE defense waste oversight. That amount plus 10% of the remaining $695 million leaves a net appropriation of $118.0 million.

Denali Commission. The main difference between the FY2006 request for Title IV programs and the amount appropriated for FY2005 is a sharp reduction in funding for the Denali Commission, a regional economic development agency established in 1998. The Administration's proposed reduction is typical. FY2004 funding for the commission was $54.7 million; for FY2005 the Administration requested $2.5 million, and the House bill, H.R. 4614 (108th Congress) did not fund it at all, but the omnibus appropriations act, P.L. 108-447, appropriated $66.5 million. For FY2006, the House-passed H.R. 2419 included the requested $2.6 million. The Senate bill would have appropriated $67 million. P.L. 109-103 appropriated $50 million.

For Additional Reading

CRS Issue Briefs

CRS Issue Brief IB10041. *Renewable Energy: Tax Credit, Budget, and Electricity Production Issues*, by Fred Sissine.
CRS Issue Brief IB10020. *Energy Efficiency: Budget, Oil Conservation, and Electricity Conservation Issues*, by Fred Sissine.
CRS Issue Brief IB92059. *Civilian Nuclear Waste Disposal*, by Mark Holt.
CRS Issue Brief IB10091. *Nuclear Nonproliferation Issues*, by Carl Behrens.
CRS Issue Brief IB88090. *Nuclear Energy Policy*, by Mark Holt and Carl Behrens.

CRS Reports

CRS Report RS20702. *South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan*, by Nicole T. Carter and Pervaze A. Sheikh.
CRS Report RS20569. *Water Resource Issues in the 109th Congress*, by Betsy A. Cody and H. Steven Hughes.
CRS Report RS20866. *The Civil Works Program of the Army Corps of Engineers: A Primer*, by Nicole T. Carter and Betsy A. Cody.
CRS Report RL30478. *Federally Supported Water Supply and Wastewater Treatment Programs*, by the Resources, Science, and Industry Division.
CRS Report RL32189. *Terrorism and Security Issues Facing the Water Infrastructure Sector*, by Claudia Copeland and Betsy A. Cody.
CRS Report RL31098. *Klamath River Basin Issues: An Overview of Water Use Conflicts*, coordinated by Betsy A. Cody.
CRS Report RL32131. *Phosphorus Mitigation in the Everglades*, by Pervaze A. Sheikh and Barbara Johnson.
CRS Report RL31975. *CALFED Bay-Delta Program: Overview of Institutional and Water Use Issues*, by Betsy A. Cody and Pervaze Sheikh.
CRS Report RL32130. *Nuclear Weapon Initiatives: Low-Yield R&D, Advanced Concepts, Earth Penetrators, Test Readiness*, by Jonathan Medalia.
CRS Report RL32347. *Robust Nuclear Earth Penetrator Budget Request and Plan, FY2005-FY2009*, by Jonathan Medalia.
CRS Report RL31993. *Nuclear Warhead 'Pit' Production: Background and Issues for Congress*, by Jonathan Medalia.
CRS Report RL32163. *Radioactive Waste Streams: An Overview of Waste Classification for Disposal*, by Anthony Andrews.
CRS Report RS21131. *Nuclear Power Plants: Vulnerability to Terrorist Attack*, by Carl E. Behrens.
CRS Report RS21442. *Hydrogen and Fuel Cell Vehicle R&D: FreedomCAR and the President's Hydrogen Fuel Initiative*, by Brent D. Yacobucci.
CRS Report RL32543. *Energy Saving Performance Contracts*, by Anthony Andrews.
CRS Report RS22080. *Power Marketing Administrations: Offsetting Collections in the President's FY2006 Budget Proposal*, by Kyna Powers.