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Appropriations for FY2002: Energy and Water Development

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Appropriations are one part of a complex federal budget process that includes budget resolutions, appropriations (regular, supplemental, and continuing) bills, rescissions, and budget reconciliation bills. The process begins with the President's budget request and is bounded by the rules of the House and Senate, the Congressional Budget and Impoundment Control Act of 1974 (as amended), the Budget Enforcement Act of 1990, and current program authorizations.

This report is a guide to one of the 13 regular appropriations bills that Congress passes each year. It is designed to supplement the information provided by the House and Senate Appropriations Subcommittees on Energy and Water. It summarizes the current legislative status of the bill, its scope, major issues, funding levels, and related legislative activity. The report lists the key CRS staff relevant to the issues covered and related CRS products.

Summary

The Energy and Water Development appropriations bill includes funding for civil works projects of the Army Corps of Engineers, the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies. The Bush Administration requested $22.5 billion for these programs for FY2002 compared with $23.6 billion appropriated in FY2001. The House bill, (H.R. 2311), passed on June 28, 2001, allocated $23.7 billion for these programs. The Senate approved its version of the bill July 19, 2001, with $25.0 billion. The final bill appropriating $25.086 billion was approved by both houses on November 1, 2001 and enacted on November 12, 2001 as P.L. 107-66.

Key issues involving Energy and Water Development appropriations programs included:

- authorization of appropriations for major water/ecosystem restoration initiatives for the Florida Everglades and California "Bay-Delta";
- general provisions concerning operation of federal water projects on the Missouri River;
- proposed reductions in spending for solar and renewable energy;
- the electrometallurgical treatment of nuclear spent fuel for storage and disposal, a process that opponents contend raises nuclear proliferation concerns;
- cost and management of the National Ignition Facility (NIF) in DOE's Nuclear Weapons Stewardship program;
- restricted funding of physical sciences research in DOE contrasted with major increases in life sciences research in the National Institutes of Health; and
- proposed higher funding for DOE's civilian nuclear waste management program as the Department nears a decision on building a waste repository under Nevada's Yucca Mountain.

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Most Recent Developments

The House and Senate approved $25.086 billion in appropriations for energy and water development programs, $2.1 billion more than the Administration's request. The act funds the Corps at $4.49 billion, Interior at $914 million, and DOE at $14.54 billion. The bill was signed (P.L. 107-66) by the President on November 12, 2001.

A point of debate in the final passage of H.R. 2311 was an attempt by some Members to increase funding of DOE's nonproliferation programs by $131 million to help secure nuclear materials in Russia. The bill's managers blocked the move but promised to try to obtain funding in another bill. On November 28 the House passed H.R. 3338, the FY2002 Defense Appropriations and Emergency Supplemental bill, without the additional nonproliferation funding, after blocking a move to include it. However, the Senate-passed version of the bill included similar funding, and on December 20 both the House and the Senate passed a conferenced H.R. 3338 with the Senate nonproliferation funding included ($226 million). In addition, the supplemental bill included $30.3 million in security funding for the Bureau of Reclamation and $139 million for the Corps of Engineers.

Status

Table 1. Status of Energy and Water Appropriations, FY2002

Subcommittee Markup		House Report	House Passage	Senate Report	Senate Passage	Conf. Report	Conference Report Approval		P.L. 107-66
House	Senate						House	Senate	
6/19/01	7/12/01	H.Rept. 107-112	6/28/01	S.Rept. 107-39	7/19/01	H.Rept. 107-258	11/1/01	11/1/01	11/12/01

Overview

The Energy and Water Development Appropriations Act 2002, P.L. 107-66, includes funding for civil works projects of the Army Corps of Engineers, the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies, including the Nuclear Regulatory Commission (NRC) and the Appalachian Regional Commission (ARC). The Administration requested $22.5 billion for these programs for FY2002, compared with $23.6 billion appropriated for FY2001. The House bill contained $23.7 billion and the Senate bill $25.0 billion. The final bill (P.L. 107-66) appropriated $25.086 billion.

For the Corps of Engineers, the Administration sought $3.9 billion in FY2002, about $600 million less than the amount appropriated for FY2001. The House-passed bill, H.R. 2311, contained $4.47 billion. The Senate-passed version of H.R. 2311 contained $4.305 billion. The final bill approved $4.49 billion. The Administration requested $820 million for FY2002 for the Department of the Interior programs included in the Energy and Water bill—the Bureau of Reclamation and the Central Utah Project. This would have been an increase of approximately $3.3 million over FY2001. The House-passed version of H.R. 2311 included $843 million for the DOI programs, and the Senate-passed version included $884 million. The final bill appropriated $914 million.

The request for DOE programs was $18.1 billion, about $276 million less than the previous year. The House bill approved $18.75 billion, the Senate bill $20.2 billion. The final bill appropriated $19.5 billion. The major activities in the DOE budget are energy research and development, general science, environmental cleanup, and nuclear weapons programs. (Funding of DOE's programs for fossil fuels, energy efficiency, and energy statistics is included in the Interior and Related Agencies appropriations bill, H.R. 2217. The FY2002 net appropriations request for these programs was $1.5 billion. For details see CRS Report RL31006, *Appropriations for FY2002: Interior and Related Agencies.*) For the Nuclear Regulatory Commission and other independent agencies funded in Title IV of the Energy and Water bill, the net appropriations requested for FY2002 was $182 million, compared to $172 million appropriated for FY2001. The House bill contained $136 million and the Senate bill $197 million. The final bill approved $184 million.

Table 2. Energy and Water Development Appropriations, FY1995 to FY2002

(budget authority in billions of current dollars*)

FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 (Req.)
20.7	19.3	20.0	21.2	21.2	21.2	23.9	22.5

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

Table 2 includes budget totals for energy and water appropriations enacted for FY1995 to FY2001 and the Administration's request for FY2002. Tables 3-7 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 FY2001 - FY2002.

Title I: Corps of Engineers

The House-passed version of H.R. 2311 recommended $4.468 billion for the civil projects of the U.S. Army Corps of Engineers (Corps) for FY2002, an increase of $568 million above the Administration's request of $3.900 billion. The Senate-passed version recommended $4.305 billion. The final bill appropriated $4.486 billion.

Table 3. Energy and Water Development AppropriationsTitle I: Corps of Engineers

(in millions of dollars)

Program	FY 2001*	FY2002 Request	House H.R. 2311	Senate H.R. 2311	P.L. 107-66
Investigations & Planning	160.6	130.0	163.3	152.4	154.3
Construction	1,716.2	1,324.0	1,671.9	1,570.8	1,715.9
Flood Control, Mississippi River	350.5	280.0	347.7	328.0	346.0
Operation and Maintenance	1,897.8	1,745.0	1,864.5	1,833.3	1,874.8
Regulatory	124.7	128.0	128.0	128.0	127.0
General Expenses	151.7	153.0	153.0	153.0	153.0
FUSRAP	139.7	140.0	140.0	140.0	140.0

Total	4,541.1	3,900.0	4,468.2	4,305.5	4,486.1**

*Figures reflect enacted levels for FY2001 as reported by the House Appropriations Committee.

**Total reflects $25 million recission for Coastal Emergencies.

Key Policy Issues—Corps of Engineers

Funding for the Corps' civil works program has often been a contentious issue between the Administration and Congress, with final appropriations typically providing more funding than requested by the Administration, regardless of which political party controls the White House and Congress. For FY2001, for example, Congress added $480 million (12%) to the $4.08 billion requested by the Clinton Administration. Similarly, the FY2002 bill as passed the House would have funded the Corps at almost 15% more than requested by the Bush Administration, and the final bill appropriated slightly more than that.

Proposed Corps Reforms

The Corps has come under increasing criticism over the way it evaluates and undertakes its projects. Some have called for major agency "reforms"; others have called for review of Corps programs and policies. The 106th Congress, in passing the Water Resources Development Act (WRDA) of 2000 (P.L. 106-541, Section 216), directed the Corps to contract with the National Academy of Sciences to study the feasibility of establishing an independent review panel for Corps project studies. Further legislation proposing changes to the project development and authorization process was introduced in the 107th Congress.

The House Appropriations Committee acknowledged the on-going criticisms in its report accompanying H.R. 2311, and noted its belief that a study of navigation improvements on the Upper Mississippi River and Illinois Waterway was "poorly managed by the Corps...." The House Appropriations Committee also commented on the accusations that Corps officials were improperly trying to expand the civil works program; the report states "[t]he Committee finds this criticism to be somewhat absurd." The Senate Appropriations Committee also acknowledged recent criticisms of the Corps and stated it "is satisfied that the Corps has responded professionally to the issues raised...." Both Committees note that the Corps has a backlog of approximately $40 billion in projects. (For more information, see CRS Report RL30928, *Army Corps of Engineers: Reform Issues for the 107th Congress.*)

Auburn Dam Study

Section 103 of H.R. 2311, as reported from the House Appropriations Committee, would have directed the Corps to include an "alternatives analysis" of a multipurpose Auburn Dam as part of its American River watershed long-term study. However, as part of the rule adopted for consideration of the bill on the House floor, the provision was dropped.

Congress has repeatedly debated complex measures to increase flood protection along the American River in California, in large part to protect the City of Sacramento. Proposals have included strengthening existing levees and flood warning systems, changing the operation of an existing dam on the river, and building a large new multi-purpose dam near Auburn. Debates over the Auburn Dam and other water supply proposals for the area have been particularly contentious – most recently during consideration of the Water Resources Development Act of 1999. Environmentalists generally oppose construction of a high dam at or near the Auburn site, while others interested in developing water supplies for the area have continued to support a multi-purpose Auburn dam. Others weighing in on the debate have advocated strengthening levees and

taking other measures to increase flood protection for the City of Sacramento in lieu of building a large, multi-purpose dam.

Missouri River Water Flows

After extended debate in both the House and the Senate, Section 116 of the final bill included Senate language that prohibits the use of funds "to accelerate the schedule to finalize the Record of Decision for the revision of the Missouri River Master Water Control Manual and any associated changes to the Missouri River Annual Operating Plan." The provision was a temporary compromise of an on-going issue that had led President Clinton to veto the previous year's Energy and Water Development appropriations bill.

The central issue behind the revision of the manual is how to operate dams along the Missouri River. Their operation determines the timing of water releases, which affect competing uses of the river such as barge traffic, threatened and endangered species protection, and upstream recreation. In November 2000, the U.S. Fish and Wildlife Service (FWS) issued a biological opinion pursuant to the Endangered Species Act, which recommended altering dam operations to provide higher springtime water releases to benefit the pallid sturgeon. This change is also believed by some to benefit other threatened and endangered species affected by current dam operations. The Corps has issued a draft implementation plan and is currently evaluating the effects of the proposed spring rise on other Missouri River water users. The Corps is scheduled to release the new Master Manual no earlier than 2003.

The House-passed version of H.R. 2311 prohibited using funds to "revise" the manual "if such revision provides for an increase in the springtime water release program during the spring heavy rainfall and snow melt period in the States that have rivers draining into the Missouri River below the Gavins Point Dam." Opponents of the House provision claimed it threatened to stop all work on the manual; the Senate version contained a milder prohibition against "accelerating" the process. During Senate floor debate both sides agreed to an amendment to allow the Corps to consider alternatives for species recovery other than the much debated "spring rise" recommended in the FWS biological opinion. The amended provision also directed the Corps to consider the views of other federal and non-federal agencies and individuals "to ensure that other congressionally authorized purposes are maintained." This language was included in Section 116 of the final bill.

Everglades

Implementation of a Comprehensive Everglades Restoration Plan (CERP) was authorized in the Water Resources Development Act of 2000 (Title VI). Funding for CERP activities, as well as other Everglades restoration projects is included in both the annual Energy and Water Development Appropriations Act (for the Corps) and in the annual Department of the Interior and Related Agencies Appropriations Act (for DOI agencies such as the National Park Service and Fish and Wildlife Service). The Energy and Water bill also includes funding for other Everglades and South and Central Florida projects. For FY01, approximately $150 million for the South Florida ecosystem was in the Administration request. In addition, the request included $28 million to fund the first of the WRDA 2000 pilot restoration activities. The final bill included approximately $95 million for existing Central and Southern Florida project construction; $20 million for Everglades ecosystem restoration (for CERP activities); and $26 million for Kissimmee river restoration. (For more information, see CRS Report RL20702, South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan.)

Title II: Department of the Interior

For the Department of the Interior, the Energy and Water Development bill provides funding for the Bureau of Reclamation (BOR) and the Central Utah Project Completion Account. For FY2002 the President requested $783.5 million for BOR and $36.2 million for the Central Utah Project Completion Account (gross current authority). The final appropriation for FY2001 (P.L. 106-377) included $776.5 million for BOR, approximately $10 million more than enacted for FY2000, and $39.9 million for the Central Utah Project Completion Account, the same as enacted for FY2000. The House-passed version of H.R. 2311 included $36.2 million for the Central Utah Project (CUP) – the same as requested – and $806.7 million for BOR. The Senate-passed version included $884 million for both programs: $36.2 million for the CUP, and $848 million for BOR. The final bill appropriated $36.2 million for CUP and $878 million for BOR, for a total of $914 million.

Table 4. Energy and Water Development Appropriations Title II: Central Utah Project Completion Account

(in millions of dollars)

Program	FY2001	FY2002 Request	House H.R.2311	Senate S.1171	P.L. 107-66
Central Utah project construction and oversight	25.7	25.5	25.5	25.5	25.5
Mitigation and conservation activities*	14.1	10.8	10.8	10.8	10.8
Total, Central Utah Project	39.8	36.3	36.3	36.2	36.2

* Includes funds available for Utah Reclamation Mitigation and Conservation Commission activities and $5 million for the contribution authorized by §402(b)(2) of the Central Utah Project Completion Act (P.L. 102-575). Totals do not reflect permanent appropriations of approximately $1.2 million.

Table 5. Energy and Water Development Appropriations Title II: Bureau of Reclamation

(in millions of dollars)

Program	FY2001	FY2002 Request	House H.R.2311	Senate S.1171	P.L. 107-66
Water and related resources	678.9	648.0	691.2	732.5	762.5
California Bay-Delta (CALFED)	0.0	20.0	0.0	0.0*	0.0
Loan program account	9.3	7.5	7.5	7.5	7.5
Policy & Admin.	50.2	53.0	53.0	53.0	53.0
Central Valley Project (CVP) Restoration Fund	38.4	55.0	55.0	55.0	55.0
Gross Current Authority	**776.5**	**783.5**	**806.7**	**848.0**	**878.0**

*The Senate Appropriations Committee recommended $40 million for CVP activities that support the CALFED program, but no funding for the program itself.

Background on Reclamation Policy

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 Corps built hundreds of flood control and navigation projects, BOR's mission was to develop water supplies and to reclaim arid lands in the West, primarily for irrigation. Today, BOR manages more than 600 dams in 17 western states, providing water to approximately 10 million acres of farmland and 31 million people. BOR is the largest supplier of water in the 17 western states and the second largest hydroelectric power producer in the Nation.

Key Policy Issues—Bureau of Reclamation

The FY2002 request for Water and Related Resources, BOR's primary account for managing water and energy projects and programs, was $648.0 million, $31 million less than the FY2001 appropriation. The House recommended $679.0 million for this account, and the Senate recommended $732.5 million. The final bill appropriated $762.5 million for the Water and Related Resources Account.

Included in the Water and Related Resources request was $21million for Garrison Diversion Unit in North Dakota, $20.5 million for Mni Wiconi rural water supply project in South Dakota, and $12 million for Animas-La Plata in Colorado. The House bill included $21 million for the Garrison, $25.5 million for the Mni Wiconi, and $16 million for Animas-La Plata. The Senate bill included $24 million for Garrison, $26 million for Mni Wiconi and $16 million for Animas-La Plata. The final bill funded Garrison at $22.5 million, Mni Wiconi at $30 million, and Animas-La Plata at $16 million. (Figures for these three projects do not include funds for operations, management, and rehabilitation or repair.)

The House Appropriations Committee did not fund the President's request of $20 million for the California Bay-Delta Restoration Program (Bay-Delta, or CALFED). As it did last year, the Committee stated it would not fund the Administration's request until the program received an authorization for such appropriations. No funds were provided for CALFED in FY2001. When the Senate Appropriations Committee reported out S. 1171 July 12, Senator Reid, Chairman of the Energy and Water Subcommittee, said the bill funded $40 million of CALFED-related projects under other accounts, in the absence of authorizing legislation. Although an attempt was made on the Senate floor to cut this funding by $10 million (as an offset for another unrelated program), the amendment was tabled on a 56-44 vote (S.Amdt. 1018; vote #238). The final bill included $30 million in the Water and Related Resources account for projects supporting the goals of CALFED; however, it did not fund the CALFED program per se. The Conference Committee report, while keeping language similar to the Senate bill, directs funding toward several specific CALFED-related projects, including planning for the Sites Reservoir ($0.75 million) and assessment of raising Shasta Dam ($1.9 million).

Funding for CALFED was requested in BOR's budget, but the appropriation would be allocated among several federal agencies. According to BOR, there are still unobligated prior year funds that may be used for some CALFED projects. The final bill also included $15 million for the Klamath project in Oregon. (For more information on these issues, see CRS Issue Brief IB10019, *Western Water Issues.*)

Title III: Department of Energy

The Energy and Water Development bill includes funding for most of DOE's programs. Major DOE activities in the bill include research and development on renewable energy and nuclear power, general science, environmental cleanup, and nuclear weapons programs. The Administration's FY2002 request for DOE programs in the Energy and Water bill was $18.1 billion, about $200 million less than the amount appropriated for FY2001. The House bill contained $18.7 billion and the Senate bill $20.1 billion. The final bill appropriated $19.5 billion for DOE programs in Title III. (The FY2002 appropriation request for DOE's programs for fossil fuels, energy efficiency, the Strategic Petroleum Reserve, and energy statistics, included in the Interior and Related Agencies appropriations bill, was $1.50 billion. The final bill, P. L. 107-63, appropriated $1.77 billion for these programs. For details, see CRS Report RL31006, *Appropriations for FY2002: Interior and Related Agencies.*)

Table 6. Energy and Water Development Appropriations Title III: Department of Energy

(in millions of dollars)

Program	FY2001*	FY2002 Request	House H.R. 2311	Senate S.1171	P.L. 107-66
Energy Supply R&D					
Solar and Renewable	375.8	276.7	376.8	435.0	396.0
Nuclear Energy	259.9	223.1	224.1	264.1	250.5
Other	44.6	44.5	39.4	42.0	38.3
Subtotal	680.3	544.2	640.3	741.1	684.8
Adjustments	(19.8)	0	(1.0)	(5.0)	(18)
Total, Energy Supply	660.6	544.2	639.3	736.1	666.7
Uranium Enrichment					
Maint. & Remediation	392.5	363.4	393.4	408.7	418.4
General Science					
High Energy Physics	726.1	716.1	716.1	725.1	716.1
Nuclear Physics	369.9	360.5	361.5	373.0	360.5
Basic Energy Sciences	1,013.4	1,004.7	1,006.7	1,040.7	1,003.7
Bio. & Env. R&D	501.3	443.0	445.9	490.0	527.4
Fusion	255.0	248.5	248.5	248.5	248.5
Adv. Scientific Computing	170.0	163.0	163.0	163.0	158.1
Other	199.7	229.0	231.6	233.4	236.6
Adjustments	(79.3)	(4.9)	(6.9)	(4.9)	(17.7)
Total, General Science	3,180.3	3,159.9	3,166.4	3,268.8	3,233.1
Non-Defense Environmental Management	277.2	228.6	227.9	228.6	236.4

Program	FY2001*	FY2002 Request	House H.R. 2311	Senate S.1171	P.L. 107-66
National Nuclear Security Administration (NNSA)					
Weapons	5,006.1	5,300.0	5,123.8	6,062.9	5,429.2
Nuclear Nonproliferation	872.3	773.7	845.3	880.5	803.6
Naval Reactors	688.6	688.0	688.0	688.0	688.0
Office of Administrator	10.0	15.0	10.0	15.0	312.6
Total, NNSA	6,577.0	6,776.8	6,667.3	7,646.4	7,233.5
Defense Environmental Management					
Environ. Restoration	4,963.5	4,548.7	5,174.5	5,389.9	5,234.6
Defense Facilities Closure Projects	1,080.3	1,050.6	1,092.9	1,080.5	1,092.9
Environ. Rest. Privatization	65.0	141.5	143.2	157.5	153.5
Total, Defense Env. Man.	6,108.9	5,740.8	6,410.6	6,627.9	6,481.0
Other Defense Activities	584.4	527.6	501.2	564.2	544.0
Defense Nuclear Waste	199.7	310.0	310.0	250.0	280.0
Total, Defense Activities	13,468.1	13,355.1	13,875.4	15,088.5	14,538.5
Departmental Admin. (net)	74.9	83.8	71.8	71.1	73.0
Office of Inspector General	31.4	31.4	32.4	30.0	32.4
Power Marketing Administrations (PMA's)					
Southeastern	3.9	4.9	4.9	4.9	4.9
Southwestern	28.0	28.0	28.0	28.0	28.0
Western	165.5	169.5	172.2	169.5	171.9
Falcon & Armistad O&M	2.7	2.7	2.7	2.7	2.7
Total, PMA's	200.1	205.1	207.8	205.1	207.5
FERC (revenues)	175.2 (175.2)	181.2 (181.2)	181.2 (181.2)	181.2 (181.2)	184.1 (184.1)
Civilian Nuclear Waste	190.1	135.0	133.0	25.0	95.0
Adjustments	(172.0)				
Total, Title III	**18,303.1**	**18,106.6**	**18,747.4**	**20,062.0**	**19,501.1**

*Figures reflect enacted levels for FY2001 as reported by the House Appropriations Committee.

Key Policy Issues—Department of Energy

Funding to Combat Terrorism

The Department of Energy is a major participant in activities to combat terrorism, largely because of its role in producing and maintaining nuclear weapons capability. According to OMB's August 2001 report to Congress (see the online version at [http://www.whitehouse.gov/omb/legislative/nsd_annual_report2001.pdf]), the FY2002 request included $792.5 million for these activities, of which $307 million was concerned with weapons of mass destruction (WMD), in this case nuclear weapons. This compared with $710 million appropriated for FY2001, $324 million of it for WMD defense. (These funds are distributed among several activities listed in Table 6 above. The OMB report does not specify how much is attributed to individual activities.)

The major portion of this funding is for physical security of DOE's facilities, and the increase in requested funding would be directed to this activity: $691 million requested for FY2002 compared to $594 million appropriated for FY2001.

Other DOE activities, identified by OMB as combating terrorism, include preparing for and responding to terrorist acts, $47 million appropriated for FY2001, $45 million requested for FY2002, and research and development, $68 million appropriated for FY2001, $56 million requested for FY2002.

In its report filed October 30 [H.Rept. 107-258], the Conference Committee said it expected new security requirements that arise because of the September 11 attacks to be addressed within the $40 billion emergency supplemental appropriation, or to be included in the FY2003 budget submission. The Committee also directed the Secretaries of the Army, Energy and Interior each to submit a report to the Appropriations Committees by February 15, 2002, identifying all known physical security requirements that have surfaced since the attacks, and the degree to which they have been funded.

Additional funding for DOE's anti-terrorist activities was included in H.R. 3338, the FY2002 Defense Appropriations and Emergency Supplemental Appropriations bill, passed by both House and Senate on December 20. $118 million was added to DOE's weapons program accounts to increase security at nuclear weapons complex facilities, and $226 million went to the Nonproliferation and National Security Programs. (See below.)

Renewable Energy

In May 2001, the Bush Administration issued its revised FY2002 budget request for Renewable Energy programs at DOE. Despite a "growing need for clean and affordable energy," it proposed to cut Renewable Energy funding from $375.7 million in FY2001 to $276.7 million (excluding funding for programs under the Office of Science)—a decrease of $99.0 million (26%) below the FY2001 level. The final bill provided $396 million for renewable energy programs – $120 million more than the request and $20 million, or 5%, above the FY2001 level.

For the technology programs, the Administration requested $36.8 million less for photovoltaics, $19.5 million less for wind, $13.1 million less for geothermal, and $11.8 million less for concentrating solar power. Also, for the support and implementation programs, it eliminated the Renewable Energy Program for American Indians and cut $2.5 million from the International Renewable Energy Program.

The House Appropriations Committee, in reporting out H.R. 2311, reversed some of the cuts proposed by the Administration. The Committee's report language said the request has "no clear rationale to explain the selective budget cuts" and no "apparent coordination" with the *National Energy Policy* report. At the same time, the report cited a 2000 study by the National Academy of Public Administration that found an absence of clear goals, priorities, work program, and milestones. The Committee report also stressed that DOE technology programs *are* designed for long-term energy solutions, not immediate relief to the energy crisis, which *is* better addressed by incentives other than appropriations. The House bill provided $376.8 million for renewable energy, which is $100.2 million (36%) above the request and essentially level with the FY2001 appropriation.

Relative to the FY2001 appropriation, however, the House bill included significant cuts in some individual programs. Under technology programs, there were cuts of $5.9 million for Concentrating Solar Power and $2.0 million for Small Hydro. A $9.1 million cut for support and implementation programs included reductions of $6.6 million to eliminate the Renewable Energy Program for American Indians, $2.0 million for International Renewables, and $1 million for Program Support. These funding reductions were offset by proposed increases of $6.0 million for Photovoltaics and $8.0 million for Electric/Storage, which included $4.0 million for the Transmission Reliability Program and $2.9 million for the Superconductivity Program.

In reporting out S. 1171, the Senate Appropriations Committee, noted that although the Administration's National Energy Policy report recognized the importance of renewables, "... the Administration's budget, even as amended, it provided inadequate resources to accomplish these goals." Thus, the Committee recommended, and the Senate approved, $435 million, which is $158.3 million more than the request, and $58.2 million more than the House recommendation. Relative to the House recommendation, the Senate bill had $11.8 million less for Photovoltaics, and $1.5 million less for Departmental Energy Management. However, it also included $12.0 million more for Biomass Power, $11.0 million more for Electric/Storage, $8.0 million more for Hydrogen, $7.4 million more for Concentrating Solar Power, $7.0 million more for the National Renewable Energy Lab (NREL), and $6.3 million more for Small Hydro.

Also, the Senate bill had $59.3 million more than the FY2001 appropriation. Further, relative to the FY2001 level, the Senate bill had $5.8 million less for Photovoltaics, $2.6 million less for Renewable American Indian Resources, and $2.0 million less for International Renewables. However, it also included $19.0 million more for Electric/Storage, $12.2 million more for Biomass Power, $8.0 million more for Hydrogen, and $8.0 million more for NREL. The funding for NREL included $5.0 million to address electric power needs in the Southwest.

The final bill appropriated $396.0 million, which was $19.2 million more than the House recommendation and $39.0 million less than the Senate recommendation. Also, the final bill level was $20.3 million, or 5%, more (excluding inflation) than the FY2001 appropriation. This included increases of $11.0 million for Electric/Storage, $6.0 million for Biomass/Biofuels and $4.0 million for Hydrogen. However, the final bill level also had a $7.1 million, or 33%, cut for Renewable Support and Implementation, including reductions of $3.6 million for Renewable American Indian Resources and $2.0 million for International Renewables.

Nuclear Energy

For nuclear energy programs—including reactor research and development, space power systems, and closing of surplus facilities—the Bush Administration requested $223.1 million for FY2002, $35 million below the FY2001 appropriation. The House-passed bill provided $224.1 million,

while the Senate approved $264.1 million. The enacted measure provides $250.1 million, about $10 million below the FY2001 level but more than $25 million above the request.

The Bush Administration requested $18.1 million for FY2002 for the "nuclear energy research initiative" (NERI), a program to support innovative nuclear energy research projects, only about half the FY2001 level. The final FY2002 Energy and Water Development Appropriations bill provides $32 million for this program.

The new "nuclear energy technologies" program would have been reduced in the Administration request from $7.5 million in FY2001 to $4.5 million in FY2002; the enacted bill provides $12 million. The program is designed to produce a "Generation IV Technology Roadmap" for near-term commercial deployment of advanced nuclear power plants. Included in the approved FY2002 funding is $3 million for sharing the nuclear industry's costs of applying to the Nuclear Regulatory Commission (NRC) for early site permits, combined operating licenses, and design certifications for new reactors and reactor technology, as well as $2 million for testing new reactor designs, fuels, and materials at DOE national laboratories. DOE issued an interim report on new technology deployment in May 2001 under the program.

Another $4.5 million was requested for "nuclear energy plant optimization" (NEPO), a research program to improve the economic competitiveness of existing nuclear power plants. That level is $500,000 below the FY2001 appropriation, but the final Energy and Water bill increases the program to $7 million.

The DOE budget justification contends that federally funded nuclear power research will help ensure the future availability of "the only proven large-scale power source that has unlimited potential to provide reliable electricity without producing environmentally damaging air emissions." However, environmental groups and other members of the "Green Scissors Campaign" have targeted DOE's nuclear R&D for elimination, contending that "the highly dangerous radioactive waste that results from nuclear power eliminates it as an acceptable alternative."[1]

Controversy has also been generated by the "electrometallurgical treatment" of DOE spent fuel, a process in which metal fuel is melted and highly radioactive isotopes are electrochemically separated from uranium and plutonium. DOE decided in September 2000 that such treatment would be the best way to render sodium-bonded spent fuel—particularly from the closed Experimental Breeder Reactor II (EBR-II) in Idaho—safe for long-term storage and disposal. DOE requested $15.8 million for the treatment program in FY2002, plus $10.0 million for further development of the process. The $25.8 million total request for the two programs, funded under Nuclear Facilities Management, represents a boost of about $1 million over FY2001. The House-passed bill further increased the programs to $26.1 million, the Senate approved the requested funding level, and the enacted bill adopted the higher House level.

Opponents of electrometallurgical treatment contend that it is unnecessary and that the process could be used for separating plutonium to make nuclear weapons. They note that the process uses much of the same technology and equipment developed for the plutonium-fueled Integral Fast Reactor, or Advanced Liquid Metal Reactor, which was canceled by Congress in 1993 partly because of concerns about nuclear weapons proliferation.

No funding was requested for a DOE program established by Congress last year called Advanced Accelerator Applications (AAA), which received an appropriation of $68 million in FY2001 through the Office of Nuclear Energy and the Office of Defense Programs. The primary purposes

[1] Green Scissors 2001: Cutting Wasteful and Environmentally Harmful Spending. Green Scissors Campaign. [http://www.greenscissors.org/energy/neri.htm]

of the AAA program are to study the use of powerful particle accelerators for producing tritium for nuclear weapons and for transmuting long-lived radioactive waste into shorter-lived isotopes. The House-passed bill would have provided no new funding for the program, but the Senate approved a total of $70 million – $55 million under Other Defense Activities and $15 million to close out the Accelerator Production of Tritium (APT) program. The enacted bill provides $50 million for the AAA program, including $4.5 million for research on spent fuel treatment in Nevada. No funding was provided for APT. The bill's conferees directed DOE to prepare a report by May 2002 on nuclear waste transmutation options.

DOE requested $38.4 million to shut down the Fast Flux Test Facility (FFTF) at Hanford, Washington, the same as the FY2001 funding level. FFTF, a sodium-cooled research reactor originally designed to support the commercial breeder reactor program, has not operated since 1992 and had been maintained in standby condition. The Clinton Administration had considered restarting the reactor for nuclear research and medical isotope production but decided in January 2001 to permanently shut it down. The Bush Administration budget request appeared to concur with that decision. However, after the budget was issued, Energy Secretary Abraham suspended DOE's final decision on closing FFTF until late July 2001 to allow time for further study. Abraham announced a further review of the medical isotope production option on August 1, 2001. The House-passed bill included the funding initially requested for closing the facility. The Senate also provided the full funding request but directed DOE to give the House and Senate Appropriations panels a report after the latest FFTF review was completed. The enacted bill also provides the full funding request, but the conferees specified that the money be used only for FFTF shutdown activities "until 90 days after receipt of the Secretary's recommendations for alternative actions at FFTF and the approval of those recommended alternative actions" by the House and Senate Appropriations Committees.

Science

DOE's science programs consist of a wide variety of basic research activities designed to explore fundamental science and engineering issues about energy. The programs are high-energy physics, nuclear physics, basic energy sciences (BES), biological and environmental research (BER), fusion energy sciences, and advanced scientific computing. Through the Office of Science programs, DOE is the third largest supporter of basic research and the largest supporter of physical science research in the federal government.

For FY2002, DOE requested $3.160 billion for Science, 0.6% below the FY2001 level. The House-passed bill provided $3.166 billion, 0.2% over the request, but 0.4% below the FY2001 level. The House noted its strong support of most of the research funded by the Office of Science, but stated that constrained resources prevented any significant increase in funding for FY2002. The House also directed DOD to prepare a report that provides a strategy for improving the connection between the research funded by the Office of Science and energy technology development. The Senate appropriated $3.269 billion for the Office of Science, 3.4% above the request and the FY2001 level. The Senate expressed concern, however, that this increase was inadequate, and that budget constraints made it impossible to provide these programs with the funds they deserve. The final bill provides $3.233 billion, $53 million above the FY2001 level and $73 million above the request.

DOE requested an increase in funding for BES by 1.3% as a result of an increase of $17.4 million in construction funding for the Spallation Neutron Source (SNS), a large physics research facility at Oak Ridge National Laboratory. The House provided an increase of $2 million over the request for BES for FY2002 and the full request for the SNS construction. The Senate approved an

increase of $36.0 million above the request for BES. The final bill provides $1.004 billion for BES, $1 million below the request, including full funding for the SNS.

For BER, DOE's request is 8.2% below the FY2001 level because of the completion of 24 projects mandated by Congress in the FY2001 appropriations. DOE did not request additional funds for those projects. The House bill provided an increase of $2.9 million above the request, which would put the BER program 7.6% below the FY2001 level. The Senate approved an increase of $47.0 million above the request for BER. One new initiative is being proposed this year, the Genomes-to-Life project, within BER, that follows from the human genome sequencing project. The new project would make use of DOE computational and advanced imaging capabilities to examine the behavior of proteins encoded by DNA, and to build computer models of cellular behavior. The House-passed bill would fully fund this project. The Senate approved a $10 million increase over the request for this initiative. The final bill approved a level of $527.4 million for BER, $84.4 million above the request. Most of the increase is for projects specifically identified by Congress. The conferees did not approve any such projects included in either the separate House or Senate bills.

Funding for the nanoscience initiative begun this year is expected to remain at current levels. DOE did request $4 million for the establishment of three to five nanoscale science research centers. The House indicated its support for this initiative but directed DOE to ensure that the nanoscience centers be selected on a competitive, peer review basis. The Senate approved funding to meet the full request for these centers and expressed its strong support for the program. The final bill included $3 million to begin engineering and design for these three nanoscience centers. DOE also requested level funding for the advanced scientific computing and networking initiative, announced last year, that are housed in the Advanced Scientific Computing Research (ASCR) program. The House and Senate bill provided the full request for the Advanced Scientific Computing program. The final bill, however, reduced this amount by $5 million below the request. In the report accompanying the final bill, Congress expressed its support for the Scientific Discovery through Advanced Computing program. It also urged DOE to ensure maximum involvement of the academic community in the ASCR program.

The House directed DOE to provide a rationale linking the programs within the Office of Science and the nations' energy needs. It stated that DOE does not seem to have a clear plan or policy making that connection and that there was little coordination between the Office of Science and the DOE Energy Resource R&D programs. Neither the Senate or the final bill, however, contained this language. The House also directed DOE to prepare an implementation plan to transfer safety and health regulation of its nuclear facilities at the non-defense laboratories to the Nuclear Regulatory Commission and Occupational Safety and Health Administration in FY2003. Currently, DOE is self-regulating as authorized by the Atomic Energy Act of 1954. The facilities that would be affected include all of DOE's major basic research facilities that generate nuclear reactions. Again, such language did not accompany the Senate or the final bill.

Nuclear Weapons Stockpile Stewardship

Congress established this 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 established by Congress in the FY2000 National Defense Authorization Act (P.L. 106-65, Title XXXII) within the Department of Energy (DOE). Its central goal is to maintain the safety and reliability of the U.S. nuclear stockpile without nuclear testing. In a 1994 statement that is still in effect, the Department of Defense, as the customer of DOE's nuclear weapons, did not require DOE to undertake "new-design nuclear

warhead production," but required DOE to "[d]emonstrate capability to refabricate and certify weapon types in [the] enduring stockpile" and "[m]aintain capability to design, fabricate, and certify new warheads."

Stockpile stewardship consists of all activities in NNSA's Weapons Activities program, for which $5,300.0 million was requested and $5,429.2 million was appropriated for FY2002, compared to $5,006.2 million appropriated for FY2001. Appropriations conferees stated that the FY2002 appropriation was actually $400.9 million above the request. While the request included $271.1 million for program direction activities, the final legislation transferred that funding to the Office of the NNSA Administrator, effectively reducing the Weapons Activities request to $5,028.9 million. The three main elements of stockpile stewardship, described below, with their requested and appropriated amounts, respectively, are Directed Stockpile Work, $1,043.8 million and $1,045.8 million; Campaigns, $1,996.4 million and $2,167.1 million; and Readiness in Technical Base and Facilities, $1,447.0 million and $1,553.1 million. The final legislation also provides $200.0 million for a new program to upgrade nuclear weapons complex facilities and infrastructure.

In earlier action on the measure, the House-passed bill, H.R. 2311, funded Weapons Activities at $5,123.9 million. The Senate Appropriations Committee reported S. 1171 on July 12 with $6,062.9 million for Weapons Activities. Energy and Water Subcommittee Chairman Harry Reid said the bill's funding was "a huge increase, but necessary to get the NNSA...programs back on track." The committee's report (S.Rept. 107-39) noted such concerns as the long time before new components for aging weapons can be certified, an "unacceptable decline in the physical plants," and the lack of progress toward establishing an enduring production complex. The Senate passed the bill on July 19 without amending the Weapons Activities section.

NNSA manages two major programs in addition to Weapons Activities: Defense Nuclear Nonproliferation ($773.7 million requested, $803.6 million appropriated; see below) and Naval Reactors ($688.0 million requested and appropriated). Total funding for NNSA, including the foregoing elements and several smaller ones, was $6,776.8 million requested and $7,233.5 million appropriated.

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.

Directed Stockpile Work (DSW)

This program involves work directly on nuclear weapons in the stockpile, such as monitoring the condition of weapons and maintaining them through repairs, refurbishment, life extension, and modifications. It includes R&D to support activities to be undertaken for specific warheads. FY2002 activities include refurbishment of the W87 warhead for the MX (Peacekeeper) missile, development engineering to modify the fins on certain B61 bombs, studies to examine aging of the secondary stage (thermonuclear component) of other B61 bombs, a study on life extension and upgrades to the W80 cruise missile warhead, and engineering on the W76 warhead for Trident missiles to extend the warhead's life, upgrade certain components, and refurbish elements of the nuclear explosive package. Conferees expressed concern that the Administration's Nuclear Posture Review, which was nearing completion when the conference bill was passed, could result in funds spent by NNSA in early FY2002 being "wasted effort." Accordingly, the conferees instructed NNSA to minimize use of FY2002 Weapons Activities funds for "weapon-unique

investments." They expressed particular concern about refurbishing the W80 warhead given that DOD had not budgeted any funds to extend the life of the air-launched cruise missile, which carries the W80, and accordingly required advance approval by the Armed Services and Appropriations Committees for using FY2002 funds for long-term life extension of that warhead.

Campaigns

These are "focused scientific and engineering efforts" that seek to "develop and maintain special capabilities and tools needed for continued certification of the stockpile ... in the absence of underground nuclear testing." For FY2002, there are 17 campaigns, with requests ranging from $1.3 million to $747.1 million. Examples (with FY2002 and FY2001 appropriations, respectively) are: Enhanced Surveillance ($82.3 million vs. $106.7 million), which seeks to assess lifetimes of weapons components and predict defects resulting from aging; Advanced Design and Production Technologies ($75.5 million vs. $75.7 million), which seeks to improve individual manufacturing processes, integrate product information, and develop the ability to fabricate complex parts in small lots; and Tritium Readiness ($196.9 million, vs. $167.0 million), which is developing means of using a commercial light water reactor to produce tritium, an isotope of hydrogen that is a key ingredient in nuclear weapons. "Nuclear Weapons Stewardship R&D," below, offers details on key R&D programs, including some funded by Campaigns.

One campaign that has attracted much congressional interest, and the greatest increase above the FY2002 request ($128.5 million requested, $219.0 million appropriated), is Pit Manufacturing and Certification. Pits are the fissile cores of nuclear warheads that trigger the thermonuclear secondary stage. The United States has been unable to produce pits for use in stockpiled weapons since 1989, when DOE suspended pit production at Rocky Flats Plant (CO). As a result, the United States has been unable to make all-new nuclear warheads of existing or advanced new designs. The campaign supports two pit projects: installation of a low-capacity pit production facility, and supporting R&D, at Los Alamos National Laboratory; and planning for a higher-capacity pit facility. R&D, procurement, and construction costs for the two projects might total some $5 billion over two decades. The appropriated amount includes $213.0 million, which NNSA told Congress in September 2001 was the projected FY2002 cost for the program; $2.0 million for pit activities not specifically supporting the W88 warhead for the Trident II missile; and $4.0 million for preconceptual design activities for the higher-capacity pit facility.

In earlier action on this issue, the House Appropriations Committee recommended the requested amount for FY2002, but asserted that DOE cannot show "that it has a viable plan to manufacture and certify pits on the schedule dictated by national security needs," criticized the project as "years behind schedule and hundreds of millions of dollars over the original cost estimate," and stated that it will judge NNSA's success on how well the pit project succeeds. The Senate Appropriations Committee recommended increasing funding by $109.2 million to $237.7 million. The committee sought to "fully fund" all relevant activities, viewing the current schedule, which would not certify a pit for use in the stockpile until FY2009, as "unacceptable."

Readiness in Technical Base and Facilities (RTBF)

This program provides infrastructure and operations at the nuclear weapons complex sites. The request included eight categories. By far the largest was Operations of Facilities ($830.4 million requested, $897.8 million appropriated). Other large categories include Program Readiness, which supports activities occurring at multiple sites or in multiple programs ($188.1 million requested, $192.0 million appropriated), Material Recycle and Recovery ($101.3 million $90.3 million appropriated), and Construction ($1,447.0 million requested, $1,553.1 million appropriated). Specific RTBF items in the final legislation include an additional $25.0 million for

Pantex Plant, an additional $10.0 million for Y-12 Plant, $10.0 million for the National Center for Combating Terrorism at the Nevada Test Site, and $88.9 million for nuclear weapons incident response.

Nuclear Weapons Stewardship R&D

An important part of the stockpile stewardship program is aimed at developing the science and technology to maintain the nation's nuclear weapons stockpile in the absence of nuclear testing. Principal activities are the development of computational capabilities that can simulate weapons explosions and perform other important computations, and experimental facilities to simulate and test various aspects of weapons behavior without resorting to a full-scale explosion. DOE's weapons R&D efforts are spread across all three stewardship programs: directed stockpile work, campaigns, and readiness in technical base and facilities (RTBF).[2]

For FY2002, DOE requested $2.506 billion for nuclear weapons R&D, an increase of 6.2% above the FY2001 level. Included in the request are $738.0 million for Advanced Simulation and Computing (ASC), $467.9 million for Inertial Confinement Fusion (ICF) (including $245.0 million for the National Ignition Facility (NIF)) and $379.7 million for other R&D within the Campaigns account; $305.5 million for Stockpile R&D within the Directed Stockpile Work (DSW) account; and $614.5 million for R&D within the RTBF account. All of these amounts are above the current year's level except Advanced Computing, which would receive $9 million less than FY2001.

For FY2002, increased activity is expected on assessment and certification of selected weapons within the stockpile. Funding for advanced radiography is scheduled to decline because of the completion of the Dual Axis Radiographic Hydrodynamic Test (DARHT) facility at Los Alamos. Under the Advanced Scientific Computing activity, efforts are expected to focus on developing the 30 TeraOps supercomputer at Los Alamos National Lab and the visual interactive environment for weapon simulation strategy that would permit researchers realtime visualization of the output of ASC computers. Under RBTF, funding added by Congress for FY2001 in support of pulsed power and microelectronics research at Sandia National Laboratory would not be requested for FY2002.

For the NIF project, construction funding would increase by 24.2%. The FY2002 request meets the requirements of the project "rebaseline" submitted to Congress in September 2000 as a result of the large cost overrun incurred in 1999. The FY2002 request does not make any change in the scope or mission of the facility. Currently, first laser light is expected in June 2004 and the project is scheduled to be completed in September 2008. In the ICF request justification, DOE noted that the level of funding it is requesting for NIF risk reduction and technology development activities is less than that recommended in the rebaseline. DOE states, however, that lower funding is acceptable given the priorities of the entire stockpile stewardship budget request for FY2002.

The House bill provided $2.44 billion for nuclear weapons R&D, 2.7% below the request but 3.3% above the FY2001 level. The House cut $100 million from the request for the Advance Simulation and Computing program. The noted advances in the private sector in high performance computing technology as well as the Committee's support of the Advanced Scientific Computing Research (ASCR) program in the DOE Office of Science in arguing that the ASC program in DOE's Office of Defense Programs may need to rethink its current strategy. The

[2] Stockpile stewardship R&D is not a separate category in the budget. The programs included in the section were identified based on previous DOE categorizations.

House approved full funding for NIF construction but did note its concerns about the program. In particular, it cited a recent GAO report about the project and directed DOE to address the GAO findings.[3] The House also added $25 million to the ICF program for work on high average power lasers. All other activities within the weapons R&D program would be funded at full request by the House-passed bill.

The Senate approved $2.79 billion for nuclear weapons R&D, 11.3% above the request and 18.3% above the FY2001 level. The Senate noted that while significant progress has been made in developing the science and technology for stockpile stewardship, the certification capability is still a long way off.

The Senate approved an increase of $59.68 million for directed stockpile work R&D, an additional $25.29 million for advanced radiography, an increase of $24.5 million for inertial confinement fusion, and an increase of $34.0 million for advanced simulation and computing (ASC). The extra advanced radiography funds are to be used for design of an advanced hydrodynamic test facility while the additional ASC funds are for various ASC construction projects. The Senate also appropriated an increase of $65 million above the request for construction of the microsystems and engineering science applications project at Sandia National Laboratory. As for NIF, the Senate approved full funding but noted that a high level of oversight and management attention was still necessary for the project. The Senate also noted the GAO report and expressed concern that individuals with NIF oversight responsibility when it suffered major cost overruns, are still in that role.

In the final bill, Congress provided $2,629.0 million for nuclear weapons R&D for FY2002, 4.9% above the request and 11.4% above the FY2001 level. Included in the appropriation are $349.0 million for directed stockpile work R&D, $1,631.8 million for campaigns (including $506.4 million for ICF and $729.8 million for the ASC program), and $658.1 million for R&D activities within RTBF. An additional $25 million was provided for continued R&D and design of the advanced hydrodynamic test facility. The ICF program was appropriated an additional $39.5 million, and the full request for NIF construction funding was provided.

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 newly established National Nuclear Security Administration (NNSA).

The Bush Administration's FY2002 request for these programs was $773.7 million, a decrease of $100.5 million from FY2001. Most of the reductions would have been Research and Development, Arms Control, and International Materials Protection, Control and Accounting (IMPCA) programs, which would have been reduced 16%, 32% and 18% respectively. Construction of the MOX Fuel Fabrication Facility, which is intended for disposing of U.S. surplus weapons plutonium by using it as fuel in nuclear power reactors, would have received a large increase, from $26 million in FY2001 to $63 million in FY2002.

The House bill, H.R. 2311, restored some of the Administration's proposed cuts, increasing R&D $10 million to $216 million, and boosting IMPCA $51 million to $190 million. Arms control, however, would have been reduced further under the House bill, to $75.7 million. The total nonproliferation and national security program funding in the House bill was $845.3 million. S.

[3] For a detailed discussion of the NIF project see CRS Report RL30540, *The National Ignition Facility: Management, Technical, and Other Issues,* by Richard Rowberg, RL30540.

1171, as passed by the Senate July 19, funded these programs at $880.5 million. The final bill appropriated $803.6 million.

The Conference Committee voted down a proposal by Representative Edwards to redirect $130 million from other weapons program funding to increase non-proliferation activities in the Former Soviet Union. Promises were made to seek funding in other appropriations bills, and during floor debate on the bill November 1 Energy and Water Development Subcommittee Chairman Callahan repeated the promise to Representative Edwards. On November 28 the House passed H.R. 3338, the FY2002 Defense Appropriations and Emergency Supplemental bill, without the additional nonproliferation funding, after blocking a move to include it. However, the Senate-passed version of H.R. 3338 contained $226 million for DOE's Defense Nuclear Nonproliferation programs (Division b, Chapter 5), and that funding survived in the conference bill passed by both House and Senate December 20. Included in the additional $226 million was $78 million for Nonproliferation and Verification R&D, $15 million for the IPP and NCI programs within Arms Control, $120 million for Materials Protection, Control and Accounting, $10 million for international Nuclear Safety, and $3 million for program administration. This FY2002 funding is in addition to the $803.6 million appropriated in the Energy and Water Development Appropriations Act, P. L. 107-66.

Environmental Management

DOE's Environmental Management Program (EM) is responsible for cleaning up environmental contamination and disposing of radioactive waste at DOE nuclear sites. DOE requested $6.33 billion for the program for FY2002, nearly $450 million below the comparable FY2001 level. This includes $5.74 billion for defense-related EM and $592 million for non-defense EM. The House-passed bill included $699 million more than the request, for a total of $7.03 billion. The Senate approved $7.28 billion, nearly $950 million above the request. The enacted bill provides $7.14 billion, $170 million above the FY2001 level and $803 million above the request.

The FY2002 EM budget request was based on the program's accelerated cleanup strategy, which attempts to maximize the number of sites that can be completely cleaned up by the end of FY2006. DOE managers contend that substantial long-term savings can be gained by focusing on completing work at those sites, allowing the earliest possible termination of infrastructure costs. Major sites scheduled for shutdown during that period are included in the "defense facilities closure projects" account, for which $1.05 billion was requested, about $30 million below the FY2001 level; the House voted to boost that amount by about $40 million and the Senate by $30 million, and the enacted bill provides the higher House level. The largest facilities under that account are the Rocky Flats site in Colorado and the Fernald site in Ohio.

Another $912 million was requested for "site/project completion," for cleanup activities to be finished by 2006 at DOE sites that will remain in operation. The House voted $1.04 billion for that program, while the Senate approved $1 billion. The final bill provides the Senate-passed level, specifying an additional $77.3 million for cleanup projects at the Savannah River Site in South Carolina, the Hanford Site in Washington, and other DOE locations.

Despite the 2006 cleanup goal, the bulk of EM's funding is in the defense and non-defense "post-2006 completion" accounts, plus a separate account for the Office of River Protection that handles high-level waste disposal at Hanford. This category includes cleanup projects that are expected to continue significantly after 2006. The Administration sought $2.92 billion for post-2006 completion, nearly $300 million below the FY2001 level; the House bill would have provided $3.39 billion and the Senate $3.59 billion. The enacted measure adds $389.5 million to the budget request for projects at the Idaho National Engineering and Environmental Laboratory,

Savannah River, Hanford, and other sites, for a total of $3.57 billion. The final bill also provides $1.033 billion for the Office of River Protection, $221 million above the request.

Civilian Nuclear Waste

DOE requested $445 million for the civilian nuclear waste program in FY2002 – more than $50 million (14%) above the FY2001 base appropriation of $391 million. The House voted to cut the request by $2 million. However, the Senate voted to cut the program to $275 million, a move that drew controversy during floor debate. The final bill provides $375 million for the program.

As required by the Nuclear Waste Policy Act, DOE is studying Yucca Mountain, Nevada, as the potential site for a national waste repository, currently scheduled to open in 2010. In recommending deep cuts in the waste program, the Senate Appropriations Committee contended in its report that DOE had spent $8 billion on waste site studies without showing that Yucca Mountain would be suitable. The Senate Committee report described a number of potential problems with Yucca Mountain and recommended that DOE not issue a recommendation to build a repository at the site until completing work on key technical issues. Senate Energy and Water Subcommittee Chairman Harry Reid of Nevada strongly opposes using Yucca Mountain as a national nuclear waste repository.

The Senate Appropriations Committee's recommended funding cut for the nuclear waste program drew significant opposition on the Senate floor. Senator Murkowski warned that the reduction would delay the program by several years and force layoffs of 650 federal and contractor personnel working on the Yucca Mountain project. In response to such criticism, Senator Reid added a Sense of the Senate resolution to the Energy and Water Appropriations bill that urged Senate conferees to "ensure that the levels of funding included in the Senate bill for the Yucca Mountain program are increased to an amount closer to that included in the House-passed version. . . ."

Even with the funding increase sought by the Bush Administration, the next several program milestones would have been pushed back, according to the budget request. A final Environmental Impact Statement (FEIS) for the proposed Yucca Mountain repository and the accompanying site recommendation by the Secretary of Energy will be delayed from FY2001 to FY2002, and perhaps further, according to recent press reports.[4] If the site is recommended by the Secretary and approved by the President, a license application to the Nuclear Regulatory Commission (NRC) would not be submitted until FY2003, rather than FY2002 as previously planned. Energy and Water Conferees directed DOE to submit the site recommendation and FEIS by February 28, 2002, and to begin terminating Yucca Mountain activities if the findings were negative.

Funding for the program comes from two sources. Under the FY2002 budget request, $135 million was to be provided from the Nuclear Waste Fund, which consists of fees paid by nuclear utilities, and $310 million from the defense nuclear waste disposal account, which pays for disposal of high-level waste generated by the nuclear weapons program. The House bill provided the full request for the defense account and cut $2 million from the Nuclear Waste Fund appropriation. The Senate would have provided $25 million from the Nuclear Waste Fund and $250 million from the defense account. The final bill provides $95 million from the Nuclear Waste Fund and $280 million from the defense account.

The 2010 target for opening a permanent repository is 12 years later than the Nuclear Waste Policy Act deadline of January 31, 1998, for DOE to begin taking waste from nuclear plant sites.

[4] Hiruo, Elaine. "Bechtel SAIC, DOE Negotiating How Long Any Yucca Mt. Application Should Be Delayed." *Platts NuclearFuel*. October 15, 2001. p. 1.

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, although specific damages have not yet been determined. In August 2000, a U.S. appeals court ruled that utilities could sue DOE for damages without first pursuing administrative remedies.

Power Marketing Administrations

DOE's four Power Marketing Administrations (PMAs) developed out of the construction of dams and multi-purpose water projects during the 1930s that are operated by the Bureau of Reclamation and the Army Corps of Engineers. The original intention behind these projects was conservation and management of water resources, including irrigation, flood control, recreation and other objectives. However, many of these facilities generated electricity for project needs. The PMAs were established to market the excess power; they are the Bonneville Power Administration (BPA), Southeastern Power Administration (SEPA), Southwestern Power Administration (SWPA), and Western Area Power Administration (WAPA).

The power is sold at wholesale to electric utilities and federal agencies "at the lowest possible rates ... consistent with sound business practice," and priority on PMA power is extended to "preference customers," which include municipal utilities, co-ops and other "public" bodies. The PMAs do not own the generating facilities, but they generally do own transmission facilities, except for Southeastern. The PMAs are responsible for covering their expenses and repaying debt and the federal investment in the generating facilities.

The 104th Congress debated sale of the PMAs and did, in 1995, authorize divestiture of one PMA, the Alaska Power Administration. There has been no press to dispose of the remaining PMAs, and none seems likely given the broader uncertainties governing electric utility restructuring.

The Administration's request for SEPA, SWPA, and WAPA for FY2002 was $205.1 million, a very slight increase over the FY2001 appropriation of $200.1 million. The House-passed H.R. 2311 increased the Western PMA by $2.7 million to $172.2 million, bringing the total PMA budget to $207.8 million. The Senate approved $205.1 million, consistent with the request. The conferees settled on $207.5, a very slight reduction from the House-approved level. The conferees stipulated that not less than $200,000 would be provided to WAPA to conduct a technical analysis of the costs and feasibility of transmission expansion methods and technologies.

BPA receives no annual appropriation, but funds some of its activities from a permanent borrowing authority, currently $3.75 billion. For FY2002 BPA plans to borrow $374.5 million, to be used for transmission system construction, system replacement, energy resources, fish and wildlife, and capital equipment programs. BPA also requested an additional $2 billion in permanent borrowing authority "to address critical infrastructure needs." The Senate bill included the additional $2 billion for the permanent authority, but the House Appropriations Committee said it did not have enough information to approve the increase. No increase in permanent borrowing authority was included in the final bill.

Beginning with FY2001, the PMAs were authorized to use power revenues from their customers to fund power purchases to supplement federal generation. Previously, under the Purchase Power and Wheeling Program (PPW), the PMAs used appropriated funds for these purchases. One probable reason for the change was that the money appropriated to the PMAs under PPW was repaid to the Treasury rather than to DOE. This meant that the PPW appropriation was fully scored against the caps on discretionary domestic spending with which DOE must comply. The House and Senate continued to favor this approach for FY2002.

Federal Energy Regulatory Commission (FERC)

The appropriations provisions for FERC are generally not controversial, since the agency receives in fees the entire cost of operations. In the version of H.R. 2311 reported out by the House Appropriations Committee, however, was a provision prohibiting FERC from using funds to authorize construction of the Gulfstream Natural Gas Project, which would pipe natural gas from the Gulf of Mexico from Mobile, AL, to Florida. When the bill came up on the floor of the House June 28, an amendment by Representative Davis of Florida to strike the prohibiting language was defeated by a vote of 210 to 213. The provision does not appear in S. 1171 as reported by the Appropriations Committee July 12.

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 7. Energy and Water Development Appropriations Title IV: Independent Agencies

(in millions of dollars)

Program	FY2001	FY2002 Request	House H.R.2311	Senate S.1171	Conf.
Appalachian Regional Commission	66.3	66.3	71.3	66.3	71.3
Nuclear Regulatory Commission (Revenues) Net NRC*	481.9 (448.0) 33.9	506.9 (463.2) 43.7	516.9 (473.5) 43.4	511.9 (468.2) 48.7	516.9 (473.5) 43.4
Defense Nuclear Facilities Safety Board	18.5	18.5	18.5	18.5	18.5
Nuclear Waste Technical Review Board	2.9	3.1	3.1	3.5	3.1
Denali Commission	30.0	29.9	--	40.0	38.0
Delta Regional Authority	20.0	20.0	--	20.0	10.0
Total	**171.9**	**181.7**	**136.5**	**197.0**	**184.5**

*Includes appropriations from the Nuclear Waste Fund, and excludes the NRC Inspector General's Office

Key Policy Issues—Independent Agencies

Nuclear Regulatory Commission

The Nuclear Regulatory Commission (NRC) requested a total budget of $513.1 million for FY2002, including $6.2 million for the NRC inspector general's office. The funding request provided an increase of $25.8 million from FY2001, including a boost of nearly $700,000 for the inspector general's office. 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-passed bill added $10 million to the NRC budget request to help cover the anticipated costs of reviewing new reactor designs and applications for early site permits for potential new reactors. According to the House Appropriations Committee report, "Industry has recently indicated intent to submit at least one early site permit application . . . in fiscal year 2002, and several firms have already initiated preliminary discussions with the NRC regarding new reactor designs." Following the House action, the Senate also provided a $10 million increase from the budget request to cover the costs of new license reviews, design certifications, and site permits. The enacted Energy and Water bill provides the $516.9 million approved by both Houses.

The House approved NRC's requested increase for the NRC inspector general's office, but the Senate voted to hold the office to the FY2001 level of $5.5 million. The final bill includes the higher House figure, bringing total NRC funding to $523.1 million.

The House and Senate Appropriations Committees sharply criticized NRC in 1998 for allegedly failing to overhaul its regulatory system in line with improvements in nuclear industry safety. The committees contended, among other problems, that NRC's regional offices were inconsistent with one another, that NRC was inappropriately interfering with nuclear plant management, and that numerous NRC review processes were outdated and unnecessary. But the panels praised NRC for changing its regulatory process during the FY2000 budget cycle, and have continued supporting the agency's regulatory initiatives. On the other hand, industry critics have raised concerns that NRC's new procedures may result in relaxed safety oversight.

For most of the past decade, NRC's budget has been offset 100% by fees on nuclear power plants and other licensed activities, including the DOE nuclear waste program. The nuclear power industry had long contended that the fee structure required nuclear reactor owners to pay for a number of NRC programs, such as foreign nuclear safety efforts, from which they did not directly benefit. To account for that concern, the FY2001 Energy and Water Appropriations Bill included an NRC proposal to phase down the agency's fee recovery to 90% during the subsequent 5 years – two percentage points per year. As a result, 96% of the FY2002 NRC appropriation – minus $23.7 million transferred from the Nuclear Waste Fund to pay for licensing activities involving the proposed Yucca Mountain, Nevada, nuclear waste repository – is to be offset by fees on licensees. However, the bill approved by the Senate would have required that fees cover only half of the $10 million added to the NRC request to pay for reviews of new licenses, permits, and certifications. The Energy and Water Conferees did not go along with the Senate position, so the enacted bill requires that fees recover 96% of the additional $10 million, as with the rest of the NRC budget.

For Additional Reading

CRS Issue Briefs

CRS Issue Brief IB88090. Nuclear Energy Policy

CRS Issue Brief IB92059. Civilian Nuclear Waste Disposal.

CRS Issue Brief IB10041. Renewable Energy: Tax Credit, Budget, and Electricity Restructuring Issues

CRS Issue Brief IB10019. Western Water Issues.

CRS Reports

CRS Report RL30307. Department of Energy Programs: Programs and Reorganization Proposals.

CRS Report 96-212. Civilian Nuclear Spent Fuel Temporary Storage Options.

CRS Report RL30445. Department of Energy Research and Development Budget for FY2001: Description and Analysis.

CRS Report RS20702. South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan.

CRS Report RL30928. Army Corps of Engineers: Reform Issues for the 107th Congress.

CRS Report RS20569. Water Resource Issues in the 107th Congress.

CRS Report RS20866. The Civil Works Program of the Army Corps of Engineers: A Primer.

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

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