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Special Report - Senate FY 2011 Energy and Water Appropriations and California Implications - August 2010

On July 22, 2010, the Senate Appropriations Committee reported S. 3635 (S.Rpt. 111-228), the Fiscal Year 2011 Energy and Water Development Appropriations by a vote of 17-12. The bill provides a total of \$35,073,700,000 for energy and water development and related agencies for fiscal year 2011, \$804,574,000 less than the budget request and \$1,095,700,000 more than the FY10 appropriations.

This document provides a California-oriented analysis of the appropriations prepared by the staff of the California Institute for Federal Policy Research. It is available on the Institute's website at:

<http://www.calinst.org/pubs/ew11senate.shtml> or alternatively in pdf format at <http://www.calinst.org/pubs/ew11senate.pdf>.

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CORPS OF ENGINEERS

The fiscal year 2011 budget request for the Corps of Engineers is composed of \$4,939,000,000 in new budget authority. This is a decrease of \$186,000,000 from the fiscal year 2010 request. The budget request is \$506,000,000 less than the fiscal year 2010 enacted amount.

The Committee Report states: "The Committee is concerned that the administration is not placing the proper economic value on the Corps' Civil Works program when budgetary resources are parceled out. At a time when this existing infrastructure, the foundation of our economic security and quality of life, is depreciating much faster than it is being recapitalized, when our increasing population is placing much greater stress on the Nation's vital water resources, when shifts in population centers mean new and different problems, and when a growing environmental awareness requires new solutions to persistent problems, this underfunding is unacceptable and threatens our continued well-being. Infrastructure budgets have to be increased. If not, the Nation will continue to face unscheduled outages, damaged and incomplete infrastructure, and other emergency situations that must be dealt with through ever-increasing emergency appropriations.

General Investigations

The Committee recommends \$166,000,000 for general investigations. The FY10 appropriations were \$166 million and the budget request for FY11 was \$104 million. This appropriation funds studies to determine the need, engineering feasibility, economic justification, and the environmental and social suitability of solutions to water and related land resource problems; and for preconstruction engineering and design work, data collection, and interagency coordination and research activities. The following

are the congressionally-designated projects in California funded:

- Aliso Creek - \$250,000 Feinstein
- Arroyo Seco Watershed - \$150,000 Feinstein
- Central Valley Int. Flood Management Study - \$500,000 Feinstein, Boxer
- Coyote Dam - \$250,000 Feinstein
- LA County Drainage Area [LACDA] Water Conservation and Supply, Whittier Narrows Dam - \$200,000 Feinstein
- Los Angeles River Ecosystem Restoration - \$200,000 Boxer
- Lower Cache Creek, Yolo County, Woodland and Vicinity - \$100,000 Feinstein, Boxer
- Lower Mission Creek - \$250,000 Feinstein, Boxer
- Matilija Dam - \$100,000 Feinstein, Boxer
- Merced County Streams - \$250,000 Feinstein, Boxer
- Middle Creek - \$400,000 Feinstein
- Pajaro River - \$300,000 Feinstein, Boxer
- Redwood City Harbor - \$200,000 Feinstein
- Sacramento River Flood Control [Grr] (System Evaluation) - \$600,000 Feinstein
- Sac-San Joaquin Delta, Delta Islands and Levees - \$282,000 Feinstein, Boxer
- San Diego County Shoreline (Oceanside) - \$200,000 Feinstein
- San Francisquito Creek - \$300,000 Feinstein, Boxer
- San Joaquin River Basin, Frazier Creek - \$150,000 Feinstein
- San Joaquin River Basin, Lower San Joaquin River - \$500,000 Feinstein, Boxer
- Joaquin River Basin, West Stanislaus County, Orestimba Creek - \$223,000 Feinstein
- San Joaquin River Basin, White River and Dry Creek - \$150,000 Feinstein
- Santa Clara River Watershed - \$250,000 Feinstein
- South San Francisco Shoreline - \$500,000 Feinstein
- St. Helena-Napa River - \$150,000 Boxer
- Sun Valley Watershed - \$200,000 Feinstein
- Tijuana River Environmental Restoration - \$50,000 Boxer
- Westminster, East Garden Grove - \$279,000 Feinstein

The following are Presidentially-directed California projects:

- California Coastal Sediment Master Plan - \$900,000
- Coyote and Berryessa Creeks, - \$500,000
- Malibu Creek Watershed - \$210,000
- Solana-Encinitas Shoreline - \$307,000
- Sutter County - \$339,000
- Upper Penitencia Creek - \$177,000

Middle Creek, California - The Committee recommends \$400,000 for preconstruction engineering and design studies. Clear Lake is the largest natural lake entirely within the borders of California. The project would restore the natural functions of the Middle Creek/Clear Lake ecosystem and contribute to the goals of the North American Waterfowl Management Plan.

Construction, General

The Committee recommendation for General Construction is \$1,780,000,000. The administration request for the Construction, General account is \$1,690,000,000, a decrease of \$341,000,000 from the fiscal year 2010 enacted amount. The following are the California projects funded:

(in thousands of dollars)

- American River Watershed (Common Features) - Budget Est. \$4,200; Comm. Rec. \$4,200
 - American River Watershed (Folsom Dam Modifications)- Budget Est. \$78,000 78,000
 - American River Watershed (Folsom Dam Raise & Bridge)- Budget Est. \$500; Comm. Rec.\$500
 - CALFED Levee Stability Program - Comm. Rec. \$5,000
 - Corte Madera Creek - Comm. Rec. \$500
 - Farmington Recharge Demonstration Program - Comm. Rec. \$500
 - Guadalupe River - Comm. Rec. \$200
 - Hamilton Airfield Wetlands Restoration - Budget Est. \$20,000; Comm. Rec. \$11,750
 - Harbor/South Bay Water Recycling Project, Los Angeles - Comm. Rec. \$2,000
 - Los Angeles River Demonstration Projects - Comm. Rec. \$1,000
 - Mid-Valley Area Levee Reconstruction - Comm. Rec. \$1,500
 - Murrieta Creek - Comm. Rec. \$3,500
 - Napa River - Comm. Rec. \$2,100
 - Napa River, Salt Marsh Restoration - Budget Est. \$12,000; Comm. Rec. \$12,000
 - Oakland Harbor (50 Foot Project) - Budget Est. \$4,330; Comm. Rec. \$4,330
 - Placer County - Comm. Rec. \$1,000
 - San Francisco Bay to Stockton - Comm. Rec. \$500
 - Sacramento Deepwater Ship Channel - Budget Est. \$12,500; Comm. Rec. \$12,500
 - Sacramento River Bank Protection Project - Budget Est. \$10,000; Comm. Rec. \$10,000
 - Sacramento River, Glenn-Colusa Irrigation District - Comm. Rec. \$700
 - San Luis Rey River - Comm. Rec. \$2,500
 - San Ramon Valley Recycled Water - Comm. Rec. \$459
 - Santa Ana River Mainstem - Budget Est. \$25,000; Comm. Rec. \$25,000
 - South Sacramento County Streams - Budget Est. \$4,800; Comm. Rec. \$4,800
 - Success Dam and Reservoir (Dam Safety) - Budget Est. \$500; Comm. Rec. \$1,000
 - Tahoe Basin Restoration, CA & NV - Comm. Rec. \$4,000
 - Upper Guadalupe River - Comm. Rec. \$2,500
 - West Sacramento - Budget Est. \$5,000; Comm. Rec. \$5,000
 - Yuba River Basin - Comm. Rec. \$3,500
 - Estuary Restoration Program (Public Law 106-457): Colorado Lagoon - \$1,000,000 Feinstein
- American River Watershed (Common Features) - \$4,200,000
 - American River Watershed (Folsom Dam Modifications) - \$78,000,000
 - American River Watershed (Folsom Dam Raise & Bridge) - \$500,000

Hamilton Airfield Wetlands Restoration - The Committee recommendation includes \$11,750,000 for this tidal wetland restoration project. This reduction from the budget request is based on updated information from the Corps.

Mid Valley Area Levee Reconstruction - The Committee recommendation includes \$1,500,000 to complete the design of areas two and four of the reconstruction of this flood control project. The project includes levee reconstruction through installing landside berms with toe drains, ditch relocation, embankment modification, slurry cut-off walls, and developing land for fish and wildlife mitigation.

Oakland Harbor - Within the Committee's recommendation, \$2,087,000 is recommended as a repayment to the Port of Oakland to settle the port's payments in excess of the local cost share on the 42-foot construction project DACW07-95-003.

Tahoe Basin Restoration - The Committee recommends \$4,000,000 for planning, design, and construction assistance for environmental restoration, resource protection and development projects in Lake Tahoe Basin. These projects are part of the \$2,500,000,000 local, State, Federal and private watershed restoration effort referred to as the Lake Tahoe Environmental Improvement Program [EIP]. Of the funds provided, \$2,700,000 are recommended for construction of the Incline and Third Creek restoration project.

Operation and Maintenance, General

The Committee recommendation is \$2,495,000,000, compared to FY 2010 Appropriations of \$2,400,000,000, and the Budget estimate of \$2,361,000,000. The following are the California projects funded:

(In Thousands)

- Black Butte Lake - \$2,367
- Buchanan Dam, HV Eastman Lake -\$ 2,119
- Channel Islands Harbor -\$ 4,600
- Coyote Valley Dam, Lake Mendocino -\$ 6,190
- Dry Creek (Warm Springs) Lake & Channel - \$9,471
- Farmington Dam - \$450
- Hidden Dam, Hensley Lake - \$2,163
- Humboldt Harbor and Bay - \$5,848
- Inspection of Completed Works - \$4,604
- Isabella Lake - \$1,956
- Los Angeles County Drainage Area - \$7,035
- Marina Del Rey - \$5,050
- Merced County Streams - \$401
- Mojave River Dam - \$522
- Morro Bay Harbor - \$1,590
- New Hogan Lake - \$2,476
- New Melones Lake, Downstream Channel - \$1,929
- Newport Bay Harbor - \$1,280
- Oakland Harbor - \$7,500
- Oceanside Harbor - \$1,520
- Pine Flat Lake - \$3,378
- Pinole Shoal Management Study - \$2,500
- Project Condition Surveys - \$2,132
- Richmond Harbor - \$8,375
- Sacramento River (30 Foot Project) - \$3,585
- Sacramento River and Tributaries (Debris Control) - \$1,475
- Sacramento River Shallow Draft Channel - \$161
- San Francisco Bay, Delta Model Structure - \$1,087
- San Francisco Harbor and Bay (Drift Removal) - \$3,090
- San Francisco Harbor - \$2,776
- San Joaquin River, Port of Stockton - \$6,500
- San Pablo Bay and Mare Island Strait - \$2,750
- Santa Ana River Basin - \$4,883
- Santa Barbara Harbor - \$2,040
- Scheduling Reservoir Operations - \$1,751
- Success Lake - \$2,529

- Suisun Bay Channel - \$2,980
- Terminus Dam, Lake Kaweah - \$2,133
- Ventura Harbor - \$2,840
- Yuba River - \$121

Marina Del Rey - The Committee recommends an additional \$3,000,000 for dredging this project, the largest man-made harbor in the United States with nearly 6,000 boat slips and home to a U.S. Coast Guard cutter. The harbor also serves as the key rescue support for the Los Angeles International Airport.

San Francisco Harbor - The Committee is concerned that significant coastal erosion is occurring in the vicinity of the San Francisco Main Ship Channel, jeopardizing municipal wastewater infrastructure. The Committee expects that the Corps should complete its planning studies and the environmental requirements for a potential project to prevent further deterioration in fiscal year 2011 and directs the Corps to take all steps necessary to proceed to construction no later than fiscal year 2012.

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

The Committee Report states: "As with the Corps of Engineers budget, the Committee does not believe that the administration properly values the economic input of the Bureau of Reclamation's programs to the national economy. Reclamation's budget amounted to a meager 0.21 percent of the \$530,000,000,000 in nondefense discretionary spending in fiscal year 2010. Or more broadly, Reclamation's budget amounted to 0.03 percent of the entire \$3,540,000,000,000 fiscal year 2010 Federal budget.

"The Committee urges the administration to assess the value of Reclamation's programs to the national economy and derive a level of investment from that impact that is commensurate with the outputs of this critical infrastructure.

"The fiscal year 2011 budget request for the Bureau of Reclamation is composed of \$1,064,697,000 in new budget authority. The budget request is \$23,019,000 less than the fiscal year 2010 enacted amount but is an increase of \$44,014,000 from the fiscal year 2010 request. . . .

"The largest account in Reclamation's budget is the Water and Related Resources account. The administration budget proposal includes \$913,582,000 for this account. This is a decrease of \$37,576,000 from the fiscal year 2010 enacted amount, but it is an increase of \$20,457,000 more than the administration's fiscal year 2010 budget request.

"The Central Valley Project Restoration Fund is proposed at \$49,915,000 for fiscal year 2011. This is an increase of \$14,557,000 over the fiscal year 2010 enacted amount. This account is primarily funded from revenues collected from water and power customers. Levels of funding in this account are based on a 3-year rolling average of revenues collected.

"The California Bay-Delta Restoration account is proposed at \$40,000,000 for fiscal year 2011. This is the same as the fiscal year 2010 enacted amount. The Committee notes that this is a \$9,000,000 increase over the administration's fiscal year 2010 budget request."

Water and Related Resources

An appropriation of \$938,600,000 is recommended by the Committee for general investigations of the Bureau of Reclamation. The FY 2010 Appropriations were \$951,158,000, and the FY 2011 Budget estimate was \$913,582,000.

The Committee recommendations for specific California projects are as follows (Resources Management = RM; Facilities OM&R= FOM&R) (*in thousands*):

- All American Canal-Imperial Dam Electrification rehabilitation - RM \$1,000
- Cachuma Project - RM \$787 FOM&R \$614
- California Investigations Programs - RM \$233
- Calleguas Mun. Water Dis. Recycling Project - RM \$1,400
- Central Valley Project:
 - American River Div., Folsom Dam Unit/Mormon Island - RM \$2,551; FOM&R \$7,833
 - Auburn-Folsom South Unit - RM \$1,400
 - Delta Division - RM \$14,004; OM&R \$6,004
 - East Side Division - RM \$1,458; FOM&R \$2,943
 - Friant Division - RM \$9,733; FOM&R \$3,342
 - Miscellaneous Project Programs - RM \$12,949; FOM&R \$910
 - Replacement Adds. & Extraordinary Maint. - RM \$0; FOM&R \$21,656
 - Sacramento River Division - RM \$41,642; FOM&R \$1,722
 - San Felipe Division - RM \$1,173; FOM&R \$6
 - San Joaquin Division - RM \$400
 - Shasta Division - RM \$925; FOM&R \$9,566
 - Trinity River Division - RM \$12,331; FOM&R \$4,330
 - Water and Power Operations - RM \$1,483; FOM&R \$8,408
 - West San Joaquin Div., San Luis Unit - RM \$8,367; FOM&R \$7,033
 - Yield Feasibility Investigation - RM \$448
- Lake Tahoe Regional Wetlands Development - RM \$94; FOM&R \$0
- Long Beach Area Water Reclamation & Reuse Proj. - RM \$1,000
- Long Beach Desalination Project - RM \$1,000; FOM&R \$0
- Mokelumne River Regional Water Storage & Conjunctive - RM \$500
- Orland Project - FOM&R \$767
- Rancho California Water District - RM \$250
- Salton Sea Research Project - RM \$400
- San Diego Area Water Reclamation Proj. - RM \$4,969
- San Diego Four Reservoir Intertie - RM \$500
- San Jose Water Reclamation and Reuse Project - RM \$242
- Soboba - RM \$4,000
- Solano Project - RM \$1,498; FOM&R \$2,337
- Southern California Investigations Program - RM \$762
- Ventura River Project - RM \$203; FOM&R \$9

All American Canal - The Committee has recommended \$1,000,000 to initiate the Imperial Dam Electrification Rehabilitation project. The Committee understands that a repayment contract will have to be negotiated with the Imperial Irrigation District under the provisions of Public Law 111-11, Title IX, Subtitle G—Aging Infrastructure before any funding can be provided for the project.

Central Valley Project - American River Division - \$920,000 has been recommended above the budget request for the El Dorado Irrigation District Temperature Control Device.

Central Valley Project - Miscellaneous Project Programs - The Committee recommendation includes \$2,000,000 for anadromous fish screens.

Central Valley Project - Friant Division - The Committee recommendation includes \$8,000,000 for the San Joaquin River Restoration. These funds should be utilized in conjunction with and in advance of those funds available from the San Joaquin River Restoration Fund. The Committee encourages the timely completion of all environmental review, feasibility, and design documents to allow for construction to begin in fiscal year 2011 on the Friant-Kern and Madera Canals Capacity Correction projects, and further encourages the expeditious completion of studies to inform the hatchery and genetics management plan and other actions necessary for reintroduction of salmon in 2012.

Central Valley Project Restoration Fund

The Committee recommends an appropriation of \$49,915,000 for the Central Valley Project Restoration Fund, the same as the Budget request. Appropriations in FY 2010 were \$35,358,000.

California Bay-Delta Restoration (including transfer of funds)

The Committee recommendation includes an appropriation of \$40,000,000 for the CALFED Bay-Delta Program, the same as the Budget request and FY 2010 Appropriations.

DEPARTMENT OF ENERGY

Energy Programs

Energy Efficiency and Renewable Energy

The Committee recommendation is \$2,287,800,000 for Energy Efficiency and Renewable Energy, as compared to the FY10 Appropriations of \$2,242,500,000, and the Budget request of \$2,355,473,000.

Wind Energy - The recommendation is \$123,000,000 for wind energy.

Congressionally Directed Spending Items - The Committee includes \$147,600,000 for the following list of projects that provide for research, development, and demonstration of energy efficiency or renewable energy technologies or programs. The Committee reminds recipients that statutory cost sharing requirements may apply to these projects. The following California projects are included:

- City of San Jose Smart LEED Streetlights, CA - \$600,000 Senator Feinstein
- City of Yreka Biomass Facility, CA - \$500,000 Senator Feinstein
- Mendocino County for the Strategic Woody-Biomass Initiative - \$450,000 Senators Feinstein,

Boxer

- San Francisco Bay Area Biosolids to Energy Project, CA - \$500,000 Senator Feinstein
- San Francisco Electric Vehicle Initiative - \$300,000 Senator Boxer

Electricity Delivery and Energy Reliability

The Committee provides \$190,180,000 for Electricity Delivery and Energy Reliability, compared to Appropriations for FY2010 of \$171,982,000 and the FY11 Budget Estimate of 2011 of \$185,930,000. The Committee recommends continued development and use of the Electricity Infrastructure Operations Centers for researching, developing and deploying technologies to better manage and control the electrical grid.

Non-Defense Environmental Cleanup

The Committee's recommendation for Non-Defense Environmental Cleanup is \$244,163,000, compared to FY10 Appropriations of \$244,673,000 and the Budget estimate for 2011 of \$225,163,000.

Science

The Committee recommends \$5,012,000,000 for the Office of Science, compared to FY10

Appropriations of \$4,903,710,000 and the FY11 Budget estimate of \$5,121,437,000. The Report states: “The Committee understands that changing the Nation’s decades-long dependence on imported oil and unfettered emission of carbon dioxide requires fundamental changes in the ways we produce, store, and use energy. To meet these strategic challenges, the United States will have to develop new technologies that require scientific breakthroughs that come only with fundamental understanding of new materials and chemical processes. The Committee believes the funding increase in fiscal year 2011 will support initiatives to advance scientific understanding for new energy technologies.

High Energy Physics

The Committee recommends \$820,085,000 for High Energy Physics.

Basic Energy Sciences

The Committee recommends \$1,739,115,000 for Basic Energy Sciences. Of these funds, \$151,600,000 is provided for construction activities as requested in the budget. The remaining \$1,587,515,000 is for research. Within available funds, up to \$100,000,000 shall be used to support the 46 Energy Frontier Research Centers. The Committee does not support the creation of new Energy Frontier Research Centers at this time.

Fusion Energy Sciences

The Committee recommends \$384,000,000 for Fusion Energy Sciences. The Report states: “The Committee is concerned by cost increases and schedule delays related to the ITER project. In the last year, the projected start date for ITER has slipped another 10 months to November 2019, or 3 years later than first projected. These schedule changes put U.S. cost estimates at risk as costs escalate for the total project. The Committee encourages the Office of Science to keep the Committee informed about significant decisions and developments related to the ITER project.

“The Committee is encouraged that the Office of Science tasked the National Academy of Sciences with reviewing options to advance inertial fusion energy. The Committee understands that an independent National Academy of Sciences committee will (1) assess the prospects of generating power using inertial confinement fusion, (2) identify scientific and engineering challenges, the costs for manufacturing targets, and research and development objectives to develop an inertial fusion energy demonstration plant, and (3) advise DOE on a roadmap for developing a demonstration plant.

“The Committee believes that this is a practical way of identifying the steps that are needed to develop an inertial fusion energy program and plans to work with DOE to assess the budget needs for this alternative approach to fusion energy. Within available funds, the Committee provides \$4,000,000 to advance inertial fusion energy, which may include experiments using solid state or krypton fluoride lasers, ion beams, or pulsed power, and to help laboratories and universities participate in the National Academy of Sciences review.

“The Committee is encouraged by DOE’s progress in advancing fusion energy sciences. However, the Committee is concerned by the Fusion Advisory Committee finding that the United States risks losing leadership and competitiveness in material science. To successfully harness fusion energy, scientists and engineers must design and build reactor components that can withstand extreme radiation environments and temperature. Since these extreme environments and material needs are common to both magnetic and inertial fusion energy, the Committee encourages DOE to reassess its materials science program and establish a program that would explore science, engineering, and materials issues for both magnetic and inertial fusion energy and build U.S. expertise.

Science Workforce Development

The Committee recommends \$21,000,000 for Workforce Development for Teachers and Scientists program. Of these funds, up to \$5,000,000 shall be available for the graduate fellowship program.

The following congressionally-designated California projects are funded:

- University of California, San Diego Seismic Research - \$1,500,000 Senator Feinstein

Advanced Research Projects Agency - Energy (ARPA -E)

The Committee recommends \$200,000,000 for the Advanced Research Projects Agency - Energy [ARPA-E], compared to the budget request of \$299,966,000. No funds were provided in FY 2010 appropriations.

National Nuclear Security Administration

The Committee recommends \$7,018,835,000 for National Nuclear Security Administration [NNSA] Weapons Activities, an increase of \$10,000,000 above the budget request. This level of funding will allow NNSA to modernize aging infrastructure and maintain the scientific, technological, and engineering capabilities needed to assess the safety, security, and reliability of nuclear weapons.

Directed Stockpile Work - The Committee recommends \$1,874,279,000 for directed stockpile work, a decrease of \$24,100,000 below the request.

Stockpile Systems - The Committee recommends \$649,366,000, the same as the request. Of these funds, at least \$165,000,000 shall be used for surveillance activities. The Committee report states: "Over the last several years, the laboratory directors of Los Alamos, Lawrence Livermore, and Sandia National Laboratories, who are responsible for assessing the safety, security, and reliability of the nuclear weapons stockpile every year, have expressed concern that funding shortfalls in the surveillance program may begin to jeopardize the annual assessment process. Furthermore, in September 2009, the JASON study group found NNSA's surveillance program was becoming inadequate and the continued success of stockpile stewardship required a revised surveillance program. A robust surveillance program is required to maintain confidence in the performance of nuclear weapons in the absence of underground nuclear testing. Thus, the Committee is encouraged by NNSA's decision to increase funding for surveillance activities and make changes to the surveillance program to better address aging issues. When NNSA completes its Phase 6.2/6.2A study for the B61 life extension program, the Committee directs NNSA to submit to the Committee both a classified and unclassified report 90 days after the completion of the study with (1) a description of the safety and security features NNSA would add to a refurbished B61 and (2) a cost and benefit analysis of installing the proposed features in the warhead. The cost and benefit analysis should include (1) the costs of science, technology, and engineering to install new safety and security features, (2) the costs of assessing the impact the new features may have on the performance of the nuclear explosive package at the national laboratories, (3) the extent to which the proposed safety and security features address specific safety and security concerns, and (4) why current safety and security features would not be sufficient."

Campaigns

The campaigns support scientific research, experimental activities and advanced computation, which make up the core of the science-based stockpile stewardship program. This program has enabled the U.S. Government to ensure the safety, reliability, and security of our nuclear weapons stockpile without underground nuclear testing for the past 16 years. The Committee recommends \$1,693,630,000 for NNSA Campaigns, which is \$22,900,000 below the request.

Science Campaign - The Committee recommends \$354,300,000, a decrease of \$10,924,000 below the budget request. Within these funds, \$56,050,000 shall be used for advanced certification to advance scientific understanding of safety and security systems for nuclear weapons and to improve the annual

weapons certification process. The Committee continues to strongly support the weapons physics activities at Sandia's Z facility that are critical to sustaining a safe, secure, and effective nuclear stockpile. The Committee provides \$53,296,000 to Sandia's Z facility. An additional \$10,000,000 in funding will help the Z facility conduct plutonium experiments in environments of extreme conditions found in nuclear weapons explosions.

Inertial Confinement Fusion Ignition and High-yield Campaign - The Committee recommends \$481,548,000 as requested. Within these funds, at least \$62,477,000 and \$48,000,000 shall be used for inertial confinement fusion activities at the University of Rochester's Omega facility and Sandia National Laboratory's Z facility, respectively. The Report states: "The Committee is concerned that NNSA has been slow to solicit help and ideas from outside experts with knowledge in inertial confinement fusion to make the first ignition experiments a success. The Committee questions Lawrence Livermore National Laboratory's decision, as the laboratory with lead responsibility for managing ignition experiments, to wait 4 years—and only months before the first ignition experiment is expected to take place—to implement the JASON study group's 2005 recommendation to form a standing external review committee of experts that could provide expert advice on the scientific and technical challenges. Even with the creation of this external review committee, a Government Accountability Office [GAO] study found that the committee currently in place falls short of meeting the intent of the JASON study group recommendation. For example, GAO found that the committee may not be able to give fully objective, candid advice because the committee will take direction from, and report to, Livermore's Director, rather than to NNSA. The Committee strongly supports the creation of an independent advisory board that can evaluate experiments planned at the National Ignition Facility, identify potential weaknesses with the experimental plan, and recommend, if necessary, alternative approaches to address scientific and technical challenges. The Committee also strongly supports the advisory committee's role in setting a strategic direction for inertial confinement fusion and high-energy density physics research and determining how best to use current facilities to advance this scientific field."

Advanced Simulation and Computing - The Report states: "The Committee recommends \$615,748,000 for the Advanced Simulation and Computing [ASC] Campaign as requested. The Committee supports NNSA's efforts to establish a dual validation approach in the annual assessment process. Independent peer review by Los Alamos and Lawrence Livermore National Laboratories, with assistance from Sandia National Laboratory, will increase confidence in the annual assessment of the current stockpile and weapons that are refurbished under life extension programs."