

Department of Energy Appropriations: FY 2013

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The Department of Energy (DOE) programs of interest to the geosciences include programs for renewable energy and activities within the Office of Science, such as the Basic Energy Science program which has a geoscience division. Also of interest is the Yucca Mountain site characterization activities and environmental remediation of the nuclear weapons complex.

Fiscal Year 2013 (FY13) Department of Energy Appropriations Process

<u>Account</u>	<u>Enacted FY12</u> (\$million)	<u>President's</u> <u>FY13 Request</u> (\$million)	<u>House Action</u> (\$million)	<u>Senate Action</u> (\$million)	<u>Conference Committee</u> <u>Action</u> (\$million)
Department of Energy (total)	25,748	27,155	26,093		
Energy Efficiency and Renewable Energy	1,810	2,337	1,381		
--Geothermal	38	65			
--Hydropower	59	20			
--Hydrogen and Fuel Cell Technology	104	80			
--Solar	289	310			
--Wind	93.2	95			
--Biomass	199	270			
Fossil Energy R&D	346.7*	420.6	554		
-- Natural Gas Technologies	15	17			
-- Petroleum - Oil Technology	5	0			
-- Coal	368.4	275.9			
--Fossil Energy Environmental Restoration	7.9	5.9			
Office of Science	4,874	4,992	4,801		
--ARPA-E	275	350			
--Basic Energy Sciences	1,688	1,799.6			
---Chemical Sciences, Geosciences, and Energy Biosciences	325	349.4			

--Biological and Environmental Research	609.6	625			
---Climate Env Sci Research	298	315.5			
Environmental Management					
--Defense Environmental Clean-up	5,003	5,472			
--Non-Defense Environmental Clean-up	235	199			
---Uranium Enrichment D&D Funding	472	442			
Civilian Radioactive Waste Management					
--Nuclear Waste Disposal	0	0			
--Defense Nuclear Waste Disposal	0	0			

*Recission has not been applied to total or subprograms in this table, so totals do not reflect reductions in FY 2012.

President's Request

Department of Energy (DOE) Secretary Steven Chu held a briefing on February 13, 2012, to discuss President Obama's \$27.2 billion budget proposal for DOE in fiscal year (FY) 2013. The budget highlights the administration's continued push for job-creating clean energy technologies and a shift away from dependence on oil, Chu said. The secretary made a case for U.S. competitiveness in the global clean energy market when he asked, "do we want the clean energy technologies of tomorrow to be invented in America by American innovators, made by American workers and sold around the world, or do we want to concede those jobs to competitors?" Chu stated that in 2012, for the first time since 2008, the U.S. reclaimed the role as the leader in federal clean energy investments.

The FY 2013 budget proposal would allocate \$4.992 billion to the Office of Science, a 2.6 percent increase from FY 2012. The Office of Science provides 45 percent of the federal funding for the nation's basic research in physical and energy related sciences and supports 25,000 graduate and undergraduate students and staff at over 300 institutions. The Office of Basic Energy Sciences (BES) within the Office of Science would receive \$1.8 billion, an increase of 6.2 percent from FY 2012.

The Office of Chemical Sciences, Geosciences, and Biosciences within BES would receive \$349.4 million. This is a \$33.4 million increase and is predominantly due to a \$10 million increase for Chemical Transformations Research and a \$10 million increase for Energy Frontier Research Collaborations - work between BES and the Office of Energy Efficiency and Renewable Energy (EERE).

The Biological and Environmental Research Office (BER) within the Office of Science would receive \$625.3 million, an increase of 2.5 percent from FY 2012.

The Office of Climate and Environmental Sciences within BER would receive \$315.6 million. The Environmental System Science program would receive \$11.7 million to support an ecosystem experiment focused on the relationship between climate change and Arctic permafrost ecosystems and will initiate a new project exploring the relationship between climate and the tropics. The increase would also support ongoing subsurface biogeochemical research. Climate and Earth System Modeling would be increased (+ \$4.4 million) to improve model resolution and validation. The Atmospheric Radiation Measurement (ARM) Climate Research Facility would be given an increase to fully operate a new mobile facility in Alaska and a permanent site in the Azores.

The Office of Workforce Development for Teachers and Scientists within the Office of Science would receive \$14.5 million, a decrease of 21.6 percent from FY 2012. The cuts would come in part from the Science Graduate Fellowship Program, which received no funding in the FY 2013 proposed budget after receiving \$5 million in FY 2012.

The Advanced Research Project Agency-Energy (ARPA-E) would be given \$350 million a 27.3 percent increase from FY 2012. Chu clarified that ARPA-E funds high risk research that has the potential to be a "game-changer." He continued, "If 90 percent of what we are investing in works, we are not investing in the right thing." Chu made it clear that ARPA-E is closely monitoring funding by announcing the termination of 35 funded projects since 2009 due to the failure to reach designated goals.

The budget proposal would provide \$2.3 billion, a 29.1 percent increase from FY 2012, to EERE with \$65 million proposed for the Geothermal Technology program, a 71.1 percent increase from FY 2012.

The budget proposal would allocate \$420.6 million to the Office of Fossil Energy Research and Development. This appears as an

increase over the FY 2012 enacted level of \$346.7 million but the FY 2012 enacted level includes \$187 million in rescissions of prior year balances. As a result, the proposed FY 2013 levels for many programs are reductions. The Coal program (- \$92.5 million), the Unconventional Fossil Energy Technologies program (- \$5 million), Program Direction (- \$4.2 million), Fossil Energy Environmental Restoration program (- \$2 million), and Plant and Capital Equipment (- \$3.5 million) all would receive reductions. The Natural Gas Technologies program would receive the only increase (+ \$2 million) in the Office of Fossil Energy Research and Development.

The Coal Program would see reductions in Carbon Capture (- \$8.5 million), Carbon Storage (- \$20 million), Advanced Energy Systems (- \$45 million) and Cross-Cutting Research (- \$19 million) to “shift focus toward technologies that have potential benefits to both existing and new fossil-fueled power plants.”

Part of the proposed increase to the Natural Gas Technologies program (+ \$12 million) is intended for a collaborative research effort between DOE, the Environmental Protection Agency (EPA), and the U.S. Geological Survey on hydraulic fracturing. The rest of the \$17 million proposed budget would be used to investigate natural gas hydrates in the Arctic as a potential fossil resource.

House Action

The full House passed the fiscal year (FY) 2013 Energy and Water Development and Related Agencies Appropriations bill (H.R.5325) on June 6, 2012 by a vote of 255-165. The bill funds the Department of Energy, the Army Corps of Engineers, and parts of the Department of the Interior. The committee crafted the bill within a total discretionary spending framework passed in the House budget resolution (H. Con. Res. 34) of \$1.028 trillion instead of the \$1.047 trillion spending cap agreed to in the Budget Control Act of 2011 (P.L. 112-25). Because of this and other concerns, the White House released a Statement of Administration Policy on May 31 that said the President would veto the bill as it is written.

Below are some highlights of direction offered by the committee in their report (House Report 112-462) of interest to the geosciences community.

Department of Energy

Management of Spent Nuclear Fuel and Defense Waste. - The Committee believes that the Administration's refusal to honor the requirements of the Nuclear Waste Policy Act of 1982 regarding Yucca Mountain has significantly set back this country's nuclear spent fuel and waste management strategy. By unilaterally halting the Yucca Mountain High-Level Waste Geological Repository, the Administration is unable to take responsibility for this nation's spent fuel and high level waste. As a result, the Department's fiscal year 2011 Financial Report shows the estimated liability taxpayers are now faced with to be more than \$19,000,000,000, nearly \$4,000,000,000 more than a year ago. This liability will likely only grow as the full consequences of the Administration's Yucca Mountain policy become clear. In addition, high-level defense waste in sites across the country now have no disposition pathway, presenting the likelihood that the federal government will have to pay penalties to the states as deadlines for removal are missed. Finally, the credibility of the federal government has been further eroded by the Administration's actions to halt the program and its refusal to request a legislative alternative to current law.

The Committee notes that although the Administration's Blue Ribbon Commission recommendations have not been considered in whole or in part by Congress, the Administration requests funding for several of these recommendations in an attempt to shift attention from its Yucca Mountain policy. Several proposed activities would only be necessary as a consequence of the Administration's Yucca Mountain policy, such as efforts to increase the nuclear waste confidence rule past its current 60 years. The Committee rejects all such proposals. Additionally, the bill makes clear that any activities funded from the Nuclear Waste Fund must be in support of Yucca Mountain.

The recommendation includes \$25,000,000 for Nuclear Waste Disposal to support the Yucca Mountain High-Level Waste Geological Repository, including \$5,000,000 to support local communities who have formally consented to host it. The Committee includes this support in recognition that Nye County, the county which encompasses the Yucca Mountain area, has given its formal consent to host Yucca Mountain. The Committee notes that geological repositories will be needed in addition to Yucca Mountain. If the Congress provides the authority for such repositories, as well as for a consensus-based siting process, the Committee will consider support for such activities at that time. In the meantime, the bill contains a prohibition on using funds to close the Yucca Mountain license application or to take actions which would irrevocably remove Yucca Mountain as an option for a repository.

Educational Activities. - The Department is prohibited from funding fellowship and scholarship programs in fiscal year 2013 unless they were explicitly included in the fiscal year 2013 congressional budget request justification documents and are not excluded in this recommendation. Any new or ongoing programs that the Department wishes to fund in fiscal year 2014 must be detailed in the fiscal year 2014 budget request documents. This direction shall be followed in future fiscal years unless countermanded by the Committee.

Further, the Department is directed to report to the Committee, not later than 90 days after enactment of this Act, a comprehensive listing of educational activities at the Department funded with fiscal year 2012 appropriations, including all fellowships, scholarships, workforce training programs, and primary and secondary school activities. For each activity, the report shall include the fiscal year 2012 funding level, purpose, out-year mortgages, and Department account and program within which the activity resides. This report shall be submitted in future fiscal years unless countermanded by the Committee.

Senate Action

Appropriations Hearings

- March 27, 2012: House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies Hearing to Review the Fiscal Year 2013 Budget Proposal for the Department of Energy's Office of Energy Efficiency and Renewable Energy, Office of Fossil Energy, and Office of Electricity Delivery and Energy Reliability
- March 20, 2012: House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies Hearing to Review the Department of Energy's Office of Science Budget Request for Fiscal Year 2013
- February 28, 2012: House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies Hearing to Receive Testimony on the Department of Energy's Budget for Fiscal Year 2013
- February 16, 2012: Senate Energy and Natural Resources Committee Hearing to Receive Testimony on the Department of Energy's Budget for Fiscal Year 2013

House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies Hearing to Review the Fiscal Year 2013 Budget Proposal for the Department of Energy's Office of Energy Efficiency and Renewable Energy, Office of Fossil Energy, and Office of Electricity Delivery and Energy Reliability

March 27, 2012

Witnesses:

Henry Kelly

Department of Energy, Acting Assistant Secretary for the Office of Energy Efficiency and Renewable Energy

Charles McConnell

Department of Energy, Acting Assistant Secretary for the Office of Fossil Energy

Patricia Hoffman

Department of Energy, Assistant Secretary for the Office Electricity Delivery and Energy Reliability

Members Present:

Rodney Frelinghuysen (R-NJ), Chair

Peter Visclosky (D-IN), Ranking Member

Rodney Alexander (R-LA)

John Olver (D-MA)

Steve Womack (R-AR)

Alan Nunnelee (R-MS)

On March 27, 2012 the House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies held a hearing to review the Department of Energy's (DOE) proposed budget for fiscal year (FY) 2013 for the Office of Energy Efficiency and Renewable Energy (EERE), the Office of Fossil Energy (FE), and the Office of Electricity Delivery and Energy Reliability (OE). The assistant secretaries of their respective offices were present to field questions from the panel. The \$4.992 billion budget request by the Department of Energy includes \$2.337 billion for EERE, \$650.8 million for FE, and \$143 million for OE. President Obama released his FY 2013 budget proposal on February 13, 2012.

Chairman of the Subcommittee Rodney Frelinghuysen (R-NJ) opened by calling Obama's budget request more "ideological than practical." He disapproved of the cut in funding for FE, which he believes could play a key role in reducing the high prices at the

pump. Frelinghuysen further disapproved of the cuts to the nuclear energy budget and the increase to the EERE budget. He expressed his concern about renewable energy when he said, “Even the rosier scenarios for renewable energy predict only a marginal contribution in the coming decades.” He concluded by criticizing the cuts to nuclear and fossil energy research proclaiming that this will only “continue the flight of companies to less regulated markets.”

Ranking Member of the Subcommittee Peter Visclosky (D-IN) opened by emphasizing that there is no “magic bullet” short term solution to lower prices at the pump. However, he was encouraged by the progress made in the improvements of vehicle technology and he hoped to see continued improvements in biofuels and battery storage technology. Visclosky applauded the increase in the budget for the Office of Advanced Manufacturing when he said, “I believe strengthening American manufacturing and returning to making things in America is not only the best source of job creation and economic recovery, it is the only viable option.” He approved of the shift in the funding emphasis from FE to EERE but he wants to hear what DOE is doing to “provide cleaner, low-carbon electricity generation using domestic resources of coal and natural gas.”

Acting Assistant Secretary of EERE Henry Kelly opened his testimony by hailing EERE as a key component in Obama’s “all of the above” energy strategy. Kelly said EERE’s three main goals are to reduce the nation’s dependence on petroleum-based fuels for transportation, to expand electricity sources, and to increase the energy efficiency of buildings and factories. He proclaimed that the pursuit of these goals will help spur job growth. He pointed to the battery technology in electric cars as an example of the payoff of EERE research and development. Kelly closed by stating that 60 percent of the EERE proposed budget for FY 2013 is dedicated to energy efficiency and 40 percent is dedicated to renewable energy technology.

Assistant Secretary of OE Patricia Hoffman opened her testimony by stating OE’s mission to lead the charge in modernizing the grid and enhancing the safety and reliability of the nation’s infrastructure. She said the FY 2013 budget proposal will keep OE moving “strategically and steadily” towards improving the grid. Hoffman briefly mentioned some of the highlights of the budget request including \$20 million for the establishment of the Electricity Systems Hub, \$30 million for CyberSecurity for Energy Delivery Systems, and \$10 million for the Advanced Modeling Grid Research program.

Acting Assistant Secretary of FE Charles McConnell opened his testimony by emphasizing that the goal of FE is to ensure that the nation remains able to use our abundant domestic supply of coal, oil, and natural gas. McConnell stated that \$420.6 million in the proposed budget will be allotted to the research and development of carbon capture utilization and storage (CCUS). CCUS involves the injection of carbon dioxide emissions into oil and gas wells to aide in the recovery of the lingering amounts of oil and gas. Once the last amounts of oil and gas have been extracted the carbon dioxide emissions can then be stored in the ground. McConnell said that first generation commercial scale CCUS technology demonstrations are currently underway across the country. McConnell stated that \$12 million in the proposed budget has been allotted to the research and development of oil and gas technology. FE will take part in a study with the United States Geological Survey and the Environmental Protection Agency to investigate hydraulic fracturing with the goal of ensuring the long term sustainability of the technology. He closed by reviewing the \$195.6 million allotted to the management, operation, and security of the Strategic Petroleum Reserve (SPR).

Frelinghuysen opened the question and answer period by questioning Kelly on what actions EERE is doing to lower prices at the pump. Kelly said that the EERE budget is principally a research and development budget, so the biggest affect that EERE can have is on the funding of technologies that will decrease U.S. reliance on petroleum-based fuels. He said that past research into biofuels has resulted in a successful program where 10 percent of the current gasoline supply is now ethanol-based. Kelly commented that EERE research and development has been equally successful in developing lighter vehicle materials, which has increased fuel efficiency thus decreasing consumption.

Visclosky and Frelinghuysen jointly criticized Kelly for recent DOE press releases that announce the funding of projects through the multi year grant program. The issue with these multi year grant programs is that they appropriate grant money from future budgets when there is no way of predicting what type of appropriations the grants will receive in future budgets. Frelinghuysen and Visclosky said that DOE needs to consult the subcommittee before promising these funds. Kelly insisted that that the subcommittee members were informed of these appropriations at least at the staff level.

Congressman Steve Womack (R-AR) expressed concern over the “crisis” at the pump and the negative impact it is having on the American people. He questioned why the U.S. does not take advantage of the domestic natural gas boom by creating a fleet of natural gas powered vehicles. Kelly responded that the most imminent incorporation of natural gas powered vehicles will be with heavy trucks. He said that the technology for these vehicles has already been developed but the lack of infrastructure is holding the industry back.

Congressman Alan Nunnelee (R-MS) inquired about the SPR and how the U.S. manages the deposit and withdrawal of the SPR’s reserves. McConnell replied that the SPR holds half of the global supply of stored emergency reserves in four underground locations along the Gulf Coast. He said there are enough reserves in the SPR to run the U.S. for 90 days. McConnell asserted that decisions on the release of oil from the SPR is determined on a policy basis and the job of FE is to have the SPR ready in the case

**House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies Hearing to
Review the Department of Energy's Office of Science Budget Request for Fiscal Year 2013**

March 20, 2012

Witness:

Bill Brinkman

Director, Office of Science, Department of Energy

Members:

Rodney Frelinghuysen (R-NJ)

Peter Visclosky (D-IN)

Steve Womack (R-AR)

John Olver (D-MA)

On March 20, 2012 the House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies held a hearing to discuss the Department of Energy's (DOE) Office of Science budget for fiscal year (FY) 2013, an increase of 2.4 percent over the enacted FY 2012 level. Director of the Office of Science Bill Brinkman was present to field questions from the subcommittee on the \$4.992 billion budget request. President Obama released his FY 2013 budget proposal on February 13, 2012.

In his opening statement, Chairman of the Subcommittee Rodney Frelinghuysen (R-NJ) assured Brinkman that although the contributions by DOE to basic research may not be well known the importance of the products of basic research are.

Frelinghuysen stated that last year the subcommittee fought hard for the Office of Science in the FY 2012 budget, but the final budget came out \$500 million below the Obama Administrations proposed level. He praised the FY 2013 budget request by saying it recognizes the tough fiscal times that the country is in. However, he said that some investments in the proposal still follow a "doubling" budget pattern, not a "flat" funding pattern.

Ranking Member of the Subcommittee Peter Visclosky (D-IN) opened by calling the two percent increase in the Office of Science budget "significant" in "our constrained fiscal environment". Visclosky emphasized that in such tough fiscal times the Office of Science has to be increasingly thoughtful and efficient in funding programs for the U.S. to maintain leadership in the global science and technology realm. Visclosky expressed concern over the duplication and interaction of programs like the Energy Innovation Hubs, Advanced Research Projects Agency-Energy (ARPA-E), and the Energy Frontier Research Centers. He concluded by saying he looked forward to hearing from Brinkman where he believes we should be investing in science and how it will fit into the Obama Administration's energy strategy.

Brinkman began his testimony by thanking the Subcommittee for their support of the Office of Science and he reemphasized the importance of funding for basic research. Brinkman asserted that the Office of Science is doing their part to ensure that the U.S. remains the global leader in clean energy science and technology. He thanked the Subcommittee for their support of Energy Innovation Hubs including the Fuels from Sunlight Hub and the new Batteries and Energy Storage Hub. Brinkman said the Office of Science remains committed to the International Thermonuclear Experimental Reactor (ITER) project, a facility that will support the world's first burning plasma, in hope of producing energy from sustained nuclear reactions. He was careful to emphasize that although the U.S. is assisting in funding the international based ITER project, 80 percent of that funding will be spent in the United States.

Frelinghuysen questioned Brinkman on why the budget proposal cut \$50 million in funding for ITER and if that will hinder America's role in the project. Brinkman responded that the Office of Science is short on funding this year and that this set back will have to be compensated for in future budgets. He emphasized that the decrease in funding does not lessen the commitment of the U.S. to ITER and said, "We do not want ITER to fail on behalf of the U.S." Brinkman said Office of Science had to cut programs that were not making the strongest impact to ensure it was as efficient as it could be. Frelinghuysen questioned Brinkman on the state of the global computing race. Brinkman said that we have momentarily fallen behind the Chinese and Japanese in terms of computing power. The Chinese have built one of the world's most powerful computers with American parts and they are looking ahead to building another machine with Chinese parts. Brinkman assured Frelinghuysen that DOE and the Office of Science have a plan to put the U.S. back at the top of the global computing race. This response transitioned into a question from Frelinghuysen on the state of exascale computing. Exascale computing represents a one thousand fold increase in computing power from the current petascale computing power. Brinkman responded that the jump to exascale computing power is

a step by step process and the Office of Science is moving forward toward this capability. He put the progress of this capability in perspective when he said an exascale computer designed with current technology would require its own power plant.

John Oliver (D-MA) asked Brinkman why fusion technology, which is widely believed to be the “holy grail” of clean energy, decreased in funding. Oliver questioned how in coming years the Office of Science plans on funding both domestic fusion projects and the international ITER fusion project, which alone is slated to receive \$250 million in 2014 and \$300 million in 2015.

Brinkman responded that “obviously” the Office of Science is going to have to find funding from other sources because it is unlikely they will be able to fully fund ITER and continue to fund domestic fusion projects. Oliver questioned why costs for ITER have grown so drastically over the last couple of years. Brinkman attributed the growing cost to bad management of the ITER project and the lack of a decisive design. Brinkman assured Oliver that prices will not continue to climb because the ITER project plan has been revamped and that permanent designs are now in place.

Steve Womack (R-AR) asked Brinkman to describe to a lay citizen why the U.S. needs to advance its computing power to exascale capability. Brinkman responded that a large portion of science is running models and these models have a tremendous amount of minute intricacies. To run these models with all the required intricacies and variables demands extraordinary computing capacity. He added that the military could use this computing power as well to simulate nuclear weapons testing.

-APR

House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies Hearing to Receive Testimony on the Department of Energy’s Budget for Fiscal Year 2013

February 28, 2012

Witness:

Steven Chu

Secretary of Energy

Subcommittee Members Present:

Rodney Frelinghuysen (R-NJ), Chair

Peter Visclosky (D-IN), Ranking Member

Chaka Fattah (D-PA)

Mike Simpson (R-ID)

John Oliver (D-MA)

Steve Womack (R-AR)

Alan Nunnelee (R-MS)

Rodney Alexander (R-LA)

Full Committee Members Present:

Hal Rogers (R-KY), Chair

Norm Dicks (D-WA), Ranking Member

Jerry Lewis (D-CA)

On February 28, 2012 the House Committee on Appropriations Subcommittee on Energy and Water Development, and Related Agencies held a hearing to receive testimony on the President’s fiscal year (FY) 2013 budget request for the Department of Energy (DOE). Secretary of Energy Steven Chu was present to answer questions from the subcommittee. President Obama released his FY 2013 budget proposal on February 13, 2012.

Subcommittee Chairman Rodney Frelinghuysen (R-NJ) opened by stating his concern for the increase in the Office of Energy Efficiency and Renewable Energy, which accounts for one third of the overall proposed budget increase. Frelinghuysen addressed rising gas prices by questioning the decrease in funding for fossil fuel research and development (R&D) when he asked, “Given that consumers are angered by higher gas and oil prices, and one major energy source, fossil energy, is substantially cut from last year, how does your budget relate to the real world outside of Washington where energy costs are eating up family budgets?” He further criticized DOE by pronouncing, “Back home, many people are frankly disgusted that these investments of taxpayer dollars have been wasted.” Frelinghuysen conveyed mixed emotions for the proposed nuclear waste clean-up and security budget. He praised the funding of nuclear security programs at the National Nuclear Security Administration but disagreed with the funding of recommendations by the Blue Ribbon Commission on America’s Nuclear Future.

Ranking Member of the Subcommittee Peter Visclosky (D-IN) opened by proposing suggestions to the Obama Administration’s energy strategy when he said, “We need to change the entire energy mix, introduce competition into the system, and ensure that

we are not captive to any one source of energy.” Visclosky questioned the degree to which DOE energy technology investments are focusing on improving American manufacturing. He pronounced that the deployment and commercialization efforts in energy research and development should place a “strong bias” on improving American technology. He shared Frelinghuysen’s concerns over Blue Ribbon Commission funding, and added further concern over the allocation of \$300 million to the United States Enrichment Corporation (a private company that handles the Paducah Gas Diffusion Plant for the Department of Energy; gaseous diffusion of uranium hexafluoride is needed for nuclear power plant energy feedstock).

In his opening statement Chairman of the Full Committee Hal Rogers (R-KY) stated that threats to close the Strait of Hormuz from a “belligerent Iran” and China’s efforts in “monopolizing new foreign sources” have driven up gasoline prices and once again thrust national energy security into the public debate. Rogers doubted the seriousness of the Obama Administration’s claims of an “all of the above” energy strategy when he said, “The recent denial of the Keystone XL pipeline seem[s] to insinuate that this administration is not serious about responsibly diversifying our energy portfolio.” He further criticized the Obama Administration for their dismissal of coal in the national energy strategy.

Ranking Member of the Full Committee Norm Dicks (D-WA) opened by calling the proposed budget, “A sensible proposal that carries on our investments in important national programs in defense, science, and energy efficiency.” He commended the proposed budget’s increases for nuclear weapons activities and for the Office of Energy Efficiency and Renewable Energy. He hailed the 29 percent increase for the Office of Energy Efficiency and Renewable Energy as “important to establish and maintaining our lead in the manufacturing and deployment of new energy technologies.” Dicks closed by expressing his disappointment with the decision to provide no funding for the Yucca Mountain nuclear waste repository project.

Secretary of Energy Steven Chu opened his testimony by reiterating President Obama’s State of the Union message by saying, “[The U.S. must] win the future by out-innovating, out-educating and out-building the rest of the world, while at the same time addressing the deficit.” Chu said that the \$27.2 billion proposed DOE budget accomplishes the goals of bolstering the nation’s economy and security through supporting groundbreaking science and research, reducing U.S. dependence on oil by accelerating clean energy technology, and ensuring national security by minimizing the potential for nuclear proliferation. The budget would allocate \$4.9 billion to the Office of Science and \$2.3 billion to the Office of Energy Efficiency and Renewable Energy.

Frelinghuysen began the question and answer portion by questioning Chu about how DOE is ensuring federally funded U.S. based R&D will lead to U.S. based manufacturing and jobs. Chu responded that DOE is doing all they can to ensure U.S. based technology transitions to U.S. based companies. He cited an example in which DOE attempted to take legal steps to insure that U.S. based BP Solar would not migrate abroad. Chu and Frelinghuysen had a prolonged exchange in which Chu explained the difficulties in keeping budding technology development within the U.S., while Frelinghuysen continually questioned what DOE was actively doing to ensure this. Congressman Chaka Fattah (D-PA) later followed up by agreeing with Frelinghuysen that DOE should be doing everything within their power to retain jobs and manufacturing for U.S. federally funded technologies.

Dicks asked Chu for an update on the status of the Yucca Mountain repository project and how much it would cost to get the project moving forward again. Chu responded that the fate of the Yucca Mountain project is in the court system and that he will follow up with the congressman on the monetary estimate. Dicks asked Chu to provide an overview of the Blue Ribbon Commission’s findings in their 2012 report. Chu said that the report recognized the situation as a problem that needs to be resolved. The report suggested that the U.S. adopt nuclear waste repository programs similar in scope to those abroad in countries like Sweden. Dicks closed by expressing confidence that the Yucca Mountain repository will eventually get approved.

Congressman Mike Simpson (R-ID) encouraged Chu to work with Congress in pushing legislation to enforce the Blue Ribbon Commission’s recommendations. Simpson expressed his disappointment in the imbalance of funding in the electricity portfolio. He said nuclear and coal produce 70 percent of the nation’s electricity yet renewable energies would receive more funding. He finished by proclaiming that this is the first time he has seen a “retrenchment” in nuclear energy funding by the Obama Administration.

Congressman Rodney Alexander (R-LA) inquired about hydraulic fracturing, specifically on the goal of the joint study by DOE, the Environmental Protection Agency (EPA), and the United States Geological Survey (USGS). Chu proclaimed that the goal of this study is to “help industry know what is happening and develop this resource in an environmentally responsible way” particularly through USGS’s expertise in “how fluids move through rock.” He emphasized that the Obama Administration is not attempting to cripple the hydraulic fracturing industry.

-APR

February 16, 2012

Witnesses:

Steven Chu

Secretary, Department of Energy

Members Present:

Jeff Bingaman (D-NM), Chair

Lisa Murkowski (R-AK), Ranking Member

Ron Wyden (D-OR)

John Barrasso (R-WY)

Maria Cantwell (D-WA)

Jim Risch (R-ID)

Bernard Sanders (I-VT)

Rand Paul (R-KY)

Debbie Stabenow (D-MI)

Dan Coats (R-IN)

Mark Udall (D-CO)

Rob Portman (R-OH)

Jeanne Shaheen (D-NH)

John Hoeven (R-ND)

Al Franken (D-MN)

Joe Manchin (D-WV)

Chris Coons (D-DE)

On February 16, 2012, the Senate Committee on Energy and Natural Resources held a hearing to receive testimony on the President's fiscal year (FY) 2013 budget request for the Department of Energy (DOE). Secretary of Energy Steven Chu was present to answer questions from the committee. President Obama released his FY 2013 budget proposal on February 13, 2012. Chairman Jeff Bingaman (D-NM) began his opening statement by praising the Obama Administration's budget request for attempting to limit America's deficit while increasing funding for DOE. He hailed the increase in funding for DOE as "an investment in our nation's energy future that will boost our economic growth and global competitiveness, protect the environment and allow the U.S. to continue important nuclear non-proliferation work." Bingaman said he strongly supports the budget increases in geothermal, solar, wind, and biomass energy, which he claimed will usher America's transition to cleaner technologies. He said that increased funding for research in carbon capture sequestration (CCS) and research to minimize the environmental impact of shale gas will allow the U.S. to cultivate its natural energy resources.

Ranking Member Lisa Murkowski (R-AK) began her opening statement by expressing her disapproval with the budget's mismanagement of the U.S. debt, which she called "the greatest threat to our economy." Murkowski expressed her support of the DOE budget's overall focus on science and research, including geothermal and biofuel research. However, she does not support the abandonment of funding for hydroelectric power and for research and development (R&D) on unconventional natural resource plays.

Secretary of Energy Steven Chu opened by reiterating President Obama's State of the Union message by saying, "[The U.S. must] win the future by out-innovating, out-educating and out-building the rest of the world, while at the same time addressing the deficit." Chu said that the \$27.2 billion proposed DOE budget accomplishes the goals of bolstering the nation's economy and security through supporting groundbreaking science and research, reducing U.S. dependence on oil by accelerating clean energy technology, and ensuring national security by minimizing the potential for nuclear proliferation. The budget would allocate \$5.4 billion to the Office of Science and \$3.2 billion to the Office of Energy Efficiency and Renewable Energy.

Bingaman began the question and answer portion of the hearing by inquiring how the technology specific to the Quadrennial Energy Review Act (S.1703) was addressed in the budget. Chu responded that the taxpayer funded technology was assessed by how effective it was in attracting private industry. He cited the research for hydraulic fracturing the government funded in the 1970's and private industry took over in the early 1990's. Chu made it clear that we have to think long term with energy when he said, "Energy investments are 60-70 year investments."

Murkowski asked the secretary why there was a 66 percent cut in funding for hydroelectric power when he and President Obama had both previously spoken out supporting the clean energy. Chu said that he does still support hydroelectric power but this is one of the tough cuts that had to be made. He said the reason for the cuts stems from the acceptance of hydroelectric power as a

proven clean energy technology combined with the lack of any upcoming dam building projects. However, Chu announced that DOE will continue to fund research on harvesting hydroelectric power from wave and tidal action. Murkowski questioned Chu on why additional money needs to be spent for DOE, the United States Geological Survey (USGS), and the Environmental Protection Agency (EPA) to undertake an assessment of the environmental impacts of hydraulic fracturing when a widely accepted study of hydraulic fracturing has already been done. Chu responded that a further joint assessment by these agencies is imperative to assure that hydraulic fracturing technology can continue to reduce environmental impacts.

Senator Al Franken (D-MN) praised the budget as a “sensible investment in energies of the future.” He believes we need to invest in future energy technologies but cautioned the committee that President Obama’s “all of the above” energy strategy does not mean “all of all of the above.” He used the Deepwater Horizon oil spill as an example saying that ignoring environmental protection procedures undermines the economic well-being and the overall goal of energy independence. Franken asked the secretary about CCS and how we can entice companies to use it. The secretary said that getting companies interested in carbon capture technology is much more enticing when the utilization aspect is involved to enhance oil recovery. Chu said that further research into geologic storage is needed, but if companies are enticed to administer carbon capture technologies it will exponentially increase knowledge of how much carbon dioxide these companies are emitting.

Senator Rand Paul (R-KY) informed Chu about the case of a uranium facility in Paducah, Kentucky where 40,000 14 ton canisters of uranium waste have accumulated over the last fifty years. Paul claimed that if the government does not allow for the enrichment of this uranium, then 1,200 jobs will be lost. Paul asked Chu if he would commit to allowing the enrichment of this uranium to save these jobs. Chu responded that to provide the funds to allow this project to move forward, the U.S. would have to place this uranium out on the open market. The market has changed since the Fukushima incident last year, thus the uranium will not receive as much money. If DOE chose to enrich the waste and continue the project, then ultimately tax payers would have to make up the difference for the money being sold at a lower price, Chu said.

-APR

Sources: Department of Energy; U.S. House of Representatives; United States Senate; Hearing testimony and Thomas.

Please send any comments or requests for information to AGI Geoscience Policy at govt@agiweb.org.

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