Science
Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for science activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or facility or for plant or facility acquisition, construction, or expansion, and purchase of not more than 25 passenger motor vehicles for replacement only, including one law enforcement vehicle, one ambulance, and one bus, $5,152,752,000, to remain available until expended: Provided, That $193,300,000 shall be available until September 30, 2015 for program direction.

Explanation of Change

Appropriation language updates reflect the funding and replacement passenger motor vehicle levels requested in FY 2014.

Science
Office of Science

Overview
Appropriation Summary by Program

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Advanced Scientific Computing Research	428,304	443,566	465,593
Basic Energy Sciences	1,644,767	1,698,424	1,862,411
Biological and Environmental Research	592,433	613,287	625,347
Fusion Energy Sciences	392,957	403,450	458,324
High Energy Physics	770,533	795,701	776,521
Nuclear Physics	534,642	550,737	569,938
Workforce Development for Teachers and Scientists	18,500	18,613	16,500
Science Laboratories Infrastructure	111,800	112,485	97,818
Safeguards and Security	80,573	81,066	87,000
Program Direction	185,000	186,132	193,300
Small Business Innovation Research/Technology Transfer (SBIR/STTR) (SC funding)	114,125	0	0
Subtotal, Office of Science	4,873,634	4,903,461	5,152,752
SBIR/STTR (Other DOE funding)	61,346	0	0
Total, Science appropriation/Office of Science[a]	4,934,980	4,903,461	5,152,752

*FY 2013 amounts shown reflect the P.L. 112-175 Continuing Resolution level annualized to a full year. These amounts are shown only at the "congressional control" level and above; below that level a dash (—) is shown.

[a] SBIR/STTR:

- FY 2012 Current: SBIR: $100,584,000 was reprogrammed within SC and $54,089,000 was transferred from other DOE programs; STTR: $13,541,000 was reprogrammed within SC and $7,257,000 was transferred from other DOE programs. The transfer amounts include $1,574,000 of SBIR and $189,000 of STTR that are associated with the FY 2011 SBIR/STTR assessment, but was transferred during FY 2012.
- FY 2014 Request: SBIR: $113,793,000 and STTR: $16,253,000 (from SC only).

Office Overview and Accomplishments

The Office of Science mission is to deliver the scientific discoveries and major scientific tools that transform our understanding of nature and advance the energy, economic, and national security of the United States. The Office of Science accomplishes its mission and advances national goals by supporting:

- *The Frontiers of Science*—discovering nature's mysteries from the study of subatomic particles, atoms, and molecules that are the building blocks of the materials of our everyday world to the DNA, proteins, and cells that are the building blocks of entire biological systems;

- *The 21st Century Tools of Science*—providing to the Nation's researchers more than 30 national scientific user facilities, the most advanced tools of modern science including accelerators, colliders, supercomputers, light sources, neutron sources, and facilities for studying the nanoworld; and
- *Energy and Environmental Science*—advancing a clean energy agenda through fundamental research on energy production, conversion, storage, transmission, and use and advancing our understanding of the earth and its climate through basic research in atmospheric and environmental sciences and climate change.

The Office of Science is the Nation's largest Federal sponsor of basic research in the physical sciences and the lead Federal agency supporting fundamental scientific research for energy. The Office of Science FY 2014 request supports about 25,000 investigators at over 300 U.S. academic institutions and at all of the DOE laboratories. Each of the programs in the Office of Science supports research to probe the most fundamental questions of its disciplines. In chemistry, material sciences, and biology, the questions probe the world we live in, encompassing both non-living and the living things:

- How do the remarkable properties of materials, such as catalysts, emerge from the atomic and electronic constituents and how can we control those properties?
- How can we master the nanoscale in order to create new materials with capabilities rivaling those of living things?
- How do materials behave under extreme temperature, pressure, or electromagnetic conditions?
- How can we achieve a systems-level understanding of a microbe or community of microbes to ultimately model and predict characteristics from genetic and environmental interactions?
- What are the roles of earth system components (atmosphere, land, oceans, sea ice, and the biosphere) in determining climate?

In high energy and nuclear physics, the questions probe the subatomic world and origins of the universe:

- What lies beyond the Standard Model?
- What are dark energy and dark matter?
- What is the nature of neutrinos?
- What is the nature of neutron stars and dense nuclear matter?
- What governs the behavior of quarks and gluons?

In plasma and fusion science, the questions probe the 4th state of matter and its control:

- What governs the behavior of self-heated plasmas?
- Can we reduce and control turbulence in plasmas?
- How do plasmas interact with other forms of matter and with light?
- How do the distinct properties of high energy density systems alter hydrodynamic behavior?

Supporting all of these research areas are advances in the numerical methods, mathematical analysis techniques, algorithms, and innovative code development that make possible scientific discovery through computation and simulation using some of the world's fastest computers.

The Office of Science also provides the Nation's researchers with state-of-the-art national scientific user facilities. Many of these facilities extend the frontiers of measurement science, allowing researchers to probe the subatomic, atomic, molecular, and biological worlds and to understand the correlations between structure and function in each of these size regimes—from the subatomic world to entire biological systems. Other facilities extend the frontiers of computation and simulation, allowing researchers to examine phenomena that would be impossible to create in the laboratory. Still other facilities provide researchers with the opportunity to build nanosystems from the bottom up. The scientific user facilities offer capabilities unmatched anywhere in the world, enabling the U.S. to remain at the forefront of science, technology, and innovation. Nearly 29,000 researchers from universities, national laboratories, industry, and international partners are expected to use the Office of Science scientific user facilities in FY 2014.

In FY 2014, the Office of Science continues the construction of new user facilities and facility upgrades to continue to support world class research capabilities in the United States. Ongoing construction and related activities include the 12 GeV Upgrade at the Continuous Electron Beam Accelerator Facility, the U.S. Contributions to ITER Project, the Linac Coherent Light Source-II (LCLS-II) and the Advanced Photon Source (APS) Upgrade

projects, initial construction of the Facility for Rare Isotope Beams (FRIB), and continued development of end stations and instruments for the National Synchrotron Light Source-II (NSLS-II) in its early operations. The FY 2014 request begins construction of the Muon to Electron Conversion Experiment (Mu2e) and initiates a new MIE for the Muon g-2 experiment. Planning for the future is an ongoing process involving significant input from the scientific community. Years of research and development (R&D) are often required to determine the technical feasibility and design options for a facility to deliver desired capabilities and maximize the science potential. To that end, the Office of Science FY 2014 request supports R&D in several targeted areas to keep future facilities options open. This includes R&D on superconducting undulators and soft x-ray self-seeding related to next-generation light sources, emerging computer hardware related to energy management and fault tolerance, advanced accelerator technologies such as superconducting magnets and beam dynamics relevant to future accelerator systems for high energy physics and broader applications, beam cooling techniques and energy recovery linacs relevant to a possible next-generation collider, and conceptual studies of potential fusion power systems.

The research programs and the scientific user facilities together provide the foundation for targeted investments by the Office of Science in research to advance energy research and our understanding of climate change. These include investments such as the three DOE Bioenergy Research Centers (BRCs), the Energy Frontier Research Centers (EFRCs), two Energy Innovation Hubs in Fuels from Sunlight and Batteries and Energy Storage, and atmospheric process and climate modeling research. The BRCs have been highly productive in their first five years of operations, generating significant research accomplishments and disseminating results through peer-reviewed publications and intellectual property; they have collectively produced over 1,100 publications and over 400 items of intellectual property (invention disclosures, licenses, patent filings, and patents). Many EFRCs have reported that their fundamental scientific advances are already impacting both technology research and industry. The 46 Centers have authored over 3,400 peer-reviewed publications, have filed over 60 invention disclosures and over 200 patents/applications, and have issued at least 22 licenses for EFRC-generated patents in their first three years. The EFRCs report that more than 30 companies are using the results of EFRC research, including small start-ups.

The Office of Science has long been a leader of U.S. scientific discovery and innovation. Over the decades, Office of Science investments have played a central role in initiating the modern biotechnology revolution and have helped the transition from observing natural phenomena to the science of control and directed design at the nanoscale. We have pushed the frontiers of our understanding of the origins of matter and the universe, and we have built and operated the large-scale scientific facilities that collectively form a major pillar of the current U.S. scientific enterprise. These investments and accomplishments have led to new technologies and created new businesses and industries, making significant contributions to our Nation's economy and quality of life. Scientific accomplishments in FY 2012 enabled by the Office of Science programs are described in the program narratives. Additional descriptions of recent science discoveries can be found at http://science.energy.gov/stories-of-discovery-and-innovation/.

The Office of Science appropriation includes ten programs:

- *Advanced Scientific Computing Research* supports research to discover, develop, and deploy computational and networking capabilities to analyze, model, simulate, and predict complex phenomena important to DOE.
- *Basic Energy Sciences* supports fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels in order to provide the foundations for new energy technologies.
- *Biological and Environmental Research* supports fundamental research focused on three scientific drivers: exploring the frontiers of genome-enabled biology; discovering the physical, chemical, and biological drivers and environmental impacts of climate change; and seeking the geological, hydrological, and biological determinants of environmental sustainability and stewardship.
- *Fusion Energy Sciences* supports research to expand the fundamental understanding of matter at very high temperatures and densities and to build the scientific foundation of fusion energy.

- *High Energy Physics* supports research toward understanding how the universe works at its most fundamental level by discovering the most elementary constituents of matter and energy, probing the interactions among them, and exploring the basic nature of space and time itself.
- *Nuclear Physics* supports research to discover, explore, and understand all forms of nuclear matter, supporting experimental and theoretical research to create, detect, and describe the different forms and complexities of nuclear matter that can exist in the universe, including those that are no longer found naturally.
- *Workforce Development for Teachers and Scientists* supports activities that engage students and professionals in science, technology, engineering, and mathematics (STEM) to help ensure that DOE has a sustained pipeline of skilled and diverse workers to support the mission, administer its programs, and conduct its research.
- *Science Laboratories Infrastructure* focuses on ensuring the continued mission readiness of Office of Science laboratories through investment in facilities to maintain the capability of those assets.
- *Safeguards and Security* supports the Department's research mission by ensuring appropriate levels of protection at the ten SC laboratories.
- *Program Direction* supports the Federal workforce overseeing SC investments in scientific research and national scientific user facilities.

The Office of Science is responsible for the oversight of ten DOE national laboratories: Ames Laboratory, Argonne National Laboratory, Brookhaven National Laboratory, Fermi National Accelerator Laboratory, Lawrence Berkeley National Laboratory, Oak Ridge National Laboratory, Pacific Northwest National Laboratory, Princeton Plasma Physics Laboratory, SLAC National Accelerator Laboratory, and Thomas Jefferson National Accelerator Facility.

Alignment to Strategic Plan

Office of Science activities align to three objectives from the DOE Strategic Plan: extend our knowledge of the natural world, deliver new technologies to advance our mission, and sustain a world-leading technical workforce. In support of these strategic objectives and its mission, the Office of Science funding requests and performance expectations presented in the budget are focused on four areas:

- *Research*: Support fundamental research to increase our understanding of and enable predictive control of phenomena in the physical and biological sciences.
- *Facility Operations*: Maximize the reliability, dependability, and availability of the SC scientific user facilities.
- *Future Facilities*: Build future and upgrade existing facilities and experimental capabilities to ensure maximum benefit from the investments in SC scientific user facilities.
- *Scientific Workforce*: Contribute to the effort aimed at ensuring that DOE and the Nation have a sustained pipeline of highly skilled and diverse science, technology, engineering, and mathematics (STEM) workers.

Supporting DOE Priority Goals

Maintaining existing and selecting new discovery-class scientific user facilities are among the Office of Science's most important activities. Prioritization across fields of science is required, cognizant of the importance of the science that the facility would support, the readiness of the facility for construction, and the estimated cost of the facility. Therefore SC supports the following DOE Priority Goal:

- *Prioritization of scientific facilities to ensure optimal benefit from Federal investments.* By September 30, 2013, formulate a 10-year prioritization of scientific facilities across the Office of Science based on (1) the ability of the facility to contribute to world-leading science, (2) the readiness of the facility for construction, and (3) an estimated construction and operations cost of the facility.

Goal/Program Alignment Summary

	Research	Facility Operations	Future Facilities	Workforce
Advanced Scientific Computing Research	43%	53%	4%	0%
Basic Energy Sciences	44%	45%	11%	0%
Biological and Environmental Research	66%	34%	0%	0%
Fusion Energy Sciences	35%	15%	50%	0%
High Energy Physics	50%	35%	15%	0%
Nuclear Physics	32%	55%	13%	0%
Workforce Development for Teachers and Scientists	0%	0%	0%	100%
Science Laboratories Infrastructure	0%	0%	100%	0%
Total, Office of Science	44%	40%	15%	1%

Explanation of Changes

The Office of Science FY 2014 request is for $5.15 billion, growing by $218 million or 4.4% relative to the FY 2012 Appropriation. Net of SBIR/STTR funding transferred from other DOE programs, which has not yet been transferred in FY 2014, this reflects growth of $279 million or 5.7% over the two years, which is an annualized growth rate of 2.8%. This growth, within the context of an overall budget that stays within the FY 2014 discretionary funding cap established by the Budget Control Act of 2011 and amended by the American Taxpayer Relief Act of 2012, demonstrates that investment in scientific discovery and innovation remains a high priority for the President.

Advanced Scientific Computing Research grows $37.3 million or 8.7%. Increases support for research and evaluation prototypes for next-generation computing systems, investments in research and tools underpinning data-intensive science, and upgrades for production computing at NERSC.

Basic Energy Sciences grows $217.6 million or 13.2%. Increases support the operation of most scientific user facilities at near-optimal levels. Support is continued for the construction of LCLS-II and NSLS-II, and for Major Items of Equipment for the Advanced Photon Source Upgrade and the NSLS-II Experimental Tools projects. Core research at the FY 2012 level is supported, in addition to two Energy Innovation Hubs and the portfolio of EFRCs, which is re-competed.

Biological and Environmental Research increases by $32.9 million or 5.6%. Increases biological systems science support biosystem design tools, integrative analysis of experimental data sets to examine cross-scale (molecules to mesoscale) relationships, and optimal facility operations. Radiological Sciences decreases as several research activities are completed. New observations of clouds, aerosols, and sensitive ecosystems will address uncertainty in climate models.

Fusion Energy Sciences increases $65.4 million or 16.6%. Funding for the U.S. Contributions to the ITER project grows to $225 million, as the project enters into its full construction phase. Research and operations on two scientific user facilities increase, and research in high energy density laboratory plasmas decreases as activities are consolidated.

High Energy Physics increases by $6.0 million or 0.8%. Investments support full operations of existing HEP facilities, the planned construction funding profile for the new Mu2e experiment, and a new MIE for the Muon g-2 experiment.

Nuclear Physics increases $35.3 million or 6.6%. The increase supports funding for the construction of Facility for Rare Isotope Beams (FRIB). NP core research and national user facilities operations are increased, while the construction of the 12 GeV CEBAF Upgrade project ramps down as the project nears completion.

High-Risk, High-Reward Research[a]

The Office of Science incorporates high-risk, high-reward basic research elements in its research portfolios to drive scientific discoveries and technological breakthroughs. High-risk, high-reward research ideas that challenge current thinking, yet are scientifically sound, are integrated with other mission-driven fundamental research within the Office of Science program portfolios, projects, and individual awards. The Office of Science continues to emphasize cultivating and improving the program management practices and policies that foster support for this research. Committees of Visitors composed of external experts review SC program portfolios triennially to assess, among other things, the balance and impact of the portfolios.

Several mechanisms are used by the Office of Science to identify and develop high-reward research topics, including Federal advisory committees, program and topical workshops, interagency working groups, National Academies studies, and special Office of Science program solicitations. These activities have identified opportunities for new, compelling research and guide the programs in determining future funding priorities. As examples, some of these opportunities are captured in the following reports: *Research at the Intersection of the Physical and Life Sciences*, by the National Research Council (2010); *Grand Challenges for Biological and Environmental Research: A Long-Term Vision*, by the Biological and Environmental Research Advisory Committee (2010); *Science for Energy Technology: Strengthening the Link between Basic Research and Industry*, by the Basic Energy Sciences Advisory Committee (2010); *Research Opportunities in Plasma Astrophysics*, FES workshop report (2010); *Report of the Extreme-scale Solvers: Transition to Future Architectures*, ASCR workshop report (2012); *Fundamental Physics at the Intensity Frontier* workshop report (2011); *New Worlds, New Horizons in Astronomy and Astrophysics, the astronomy and astrophysics decadal survey* (Astro2010 report), by the National Research Council (2010); and *Nuclear Physics: Exploring the Heart of the Matter*, by the National Research Council (2012).

Basic and Applied R&D Coordination

Coordination between the Department's basic research and applied technology programs is a high priority for the Secretary of Energy. The Department has a responsibility to coordinate its basic and applied research programs to effectively integrate R&D conducted by the science and technology communities (e.g., national laboratories, universities, and private companies) that support the DOE mission. The Department's efforts have focused on improving communication and collaboration between federal program managers and increasing opportunities for collaborative efforts among researchers targeted at the interface of scientific research and technology development to ultimately accelerate DOE mission and national goals.

Coordination between the basic and applied programs is enhanced through activities such as joint planning meetings and technical community workshops, joint annual contractor/awardee meetings, joint research solicitations, jointly-funded scientific facilities, and the program management activities of the DOE Small Business Innovation Research and Small Business Technology Transfer programs. Additionally, co-funding research activities and facilities at the DOE laboratories and funding mechanisms that encourage broad partnerships are also means by which the Department facilitates greater communication and research integration within the basic and applied research communities. Specific collaborative activities are highlighted in the "Basic and Applied R&D Coordination" sections of each individual Office of Science program budget justification narrative.

[a] In compliance with the reporting requirements in the America COMPETES Act of 2007 (P.L. 110-69, section 1008).

Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR)

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR	FY 2014 Request
Advanced Scientific Computing Research	0	—	14,899
Basic Energy Sciences	0	—	52,945
Biological and Environmental Research	0	—	19,756
Fusion Energy Sciences	0	—	6,672
High Energy Physics	0	—	21,457
Nuclear Physics	0	—	14,317
SBIR/STTR (SC funding)	114,125	—	0
Subtotal, SBIR/STTR	114,125	—	130,046
SBIR/STTR transfer from other DOE programs	61,346	—	N/A
Total, SBIR/STTR	175,471	—	N/A

SBIR and STTR funding is transferred from research programs across the Department to the Small Business Innovation Research/Technology Transfer programs in the Office of Science for distribution to award recipients. All contributing programs participate in the selection of awards.

In FY 2012, 2.95% of funding subject to the SBIR/STTR mandate was transferred (2.6% for SBIR and 0.35% for STTR). In FY 2013, the rate increases to 3.05% (2.7% for SBIR and 0.35% for STTR) and increases to 3.20% in FY 2014 (2.8% for SBIR and 0.4% for STTR). The FY 2012 SBIR/STTR reprogramming (SC funding) and transfer (other DOE programs) is complete so funding is reflected within the SBIR/STTR program in tables. For FY 2014, the reprogramming and transfer have not yet occurred, so SBIR/STTR funding is included within the various SC and other DOE programs that contribute SBIR/STTR funding.

Office of Science
Funding by Site by Program

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Ames Laboratory			
Advanced Scientific Computing Research	300	—	80
Basic Energy Sciences	23,145	—	19,817
Biological and Environmental Research	500	—	500
Fusion Energy Sciences	192	—	0
Workforce Development for Teachers and Scientists	219	—	0
Safeguards and Security	993	—	952
Total, Ames Laboratory	25,349	—	21,349
Ames Site Office			
Program Direction	472	—	461
Argonne National Laboratory			
Advanced Scientific Computing Research	83,267	—	74,306
Basic Energy Sciences	220,950	—	252,139
Biological and Environmental Research	24,061	—	26,137
Fusion Energy Sciences	90	—	90
High Energy Physics	21,533	—	15,952
Nuclear Physics	28,195	—	27,807
Workforce Development for Teachers and Scientists	942	—	0
Science Laboratories Infrastructure	40,000	—	0
Safeguards and Security	8,858	—	8,858
Total, Argonne National Laboratory	427,896	—	405,289
Argonne Site Office			
Program Direction	3,446	—	3,996
Berkeley Site Office			
Program Direction	4,002	—	4,159

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Brookhaven National Laboratory			
Advanced Scientific Computing Research	529	—	231
Basic Energy Sciences	266,921	—	247,105
Biological and Environmental Research	19,144	—	19,151
Fusion Energy Sciences	46	—	0
High Energy Physics	58,060	—	51,185
Nuclear Physics	186,720	—	185,673
Workforce Development for Teachers and Scientists	613	—	0
Science Laboratories Infrastructure	15,500	—	0
Safeguards and Security	12,696	—	11,866
Total, Brookhaven National Laboratory	560,229	—	515,211
Brookhaven Site Office			
Program Direction	4,907	—	5,200
Chicago Office			
Advanced Scientific Computing Research	46,098	—	24,162
Basic Energy Sciences	278,662	—	319,044
Biological and Environmental Research	143,992	—	114,048
Fusion Energy Sciences	155,737	—	93,032
High Energy Physics	129,539	—	116,178
Nuclear Physics	92,212	—	121,374
Workforce Development for Teachers and Scientists	150	—	0
Science Laboratories Infrastructure	1,385	—	1,385
Safeguards and Security	133	—	42
Program Direction	35,069	—	29,844
SBIR/STTR	175,471	—	0
Total, Chicago Office	1,058,448	—	819,109

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Fermi National Accelerator Laboratory			
Advanced Scientific Computing Research	265	—	90
Basic Energy Sciences	35	—	30
High Energy Physics	403,596	—	368,189
Nuclear Physics	550	—	25
Workforce Development for Teachers and Scientists	115	—	0
Science Laboratories Infrastructure	0	—	34,900
Safeguards and Security	3,856	—	3,433
Total, Fermi National Accelerator Laboratory	408,417	—	406,667
Fermi Site Office			
Program Direction	2,425	—	2,554
Golden Field Office			
Workforce Development for Teachers and Scientists	572	—	0
Idaho National Laboratory			
Basic Energy Sciences	1,700	—	0
Biological and Environmental Research	790	—	0
Fusion Energy Sciences	2,222	—	2,610
Workforce Development for Teachers and Scientists	96	—	0
Total, Idaho National Laboratory	4,808	—	2,610

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Lawrence Berkeley National Laboratory			
Advanced Scientific Computing Research	118,066	—	115,158
Basic Energy Sciences	164,873	—	153,254
Biological and Environmental Research	138,531	—	137,670
Fusion Energy Sciences	5,508	—	0
High Energy Physics	56,186	—	57,877
Nuclear Physics	24,646	—	18,521
Workforce Development for Teachers and Scientists	598	—	0
Science Laboratories Infrastructure	12,975	—	0
Safeguards and Security	5,427	—	5,093
Total, Lawrence Berkeley National Laboratory	526,810	—	487,573
Lawrence Livermore National Laboratory			
Advanced Scientific Computing Research	39,410	—	7,580
Basic Energy Sciences	4,856	—	3,106
Biological and Environmental Research	16,506	—	15,364
Fusion Energy Sciences	15,222	—	7,279
High Energy Physics	2,226	—	1,290
Nuclear Physics	2,312	—	1,676
Workforce Development for Teachers and Scientists	54	—	0
Total, Lawrence Livermore National Laboratory	80,586	—	36,295
Los Alamos National Laboratory			
Advanced Scientific Computing Research	6,910	—	6,526
Basic Energy Sciences	38,595	—	31,416
Biological and Environmental Research	23,593	—	25,741
Fusion Energy Sciences	6,652	—	2,280
High Energy Physics	3,155	—	1,725
Nuclear Physics	10,622	—	14,378
Workforce Development for Teachers and Scientists	182	—	0
Total, Los Alamos National Laboratory	89,709	—	82,066

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
National Energy Technology Laboratory			
Workforce Development for Teachers and Scientists	120	—	0
National Renewable Energy Laboratory			
Advanced Scientific Computing Research	186	—	186
Basic Energy Sciences	14,028	—	8,123
Biological and Environmental Research	1,755	—	932
Workforce Development for Teachers and Scientists	75	—	0
Total, National Renewable Energy Laboratory	16,044	—	9,241
Nevada Site Office			
Basic Energy Sciences	244	—	244
New Brunswick Laboratory			
Science Laboratories Infrastructure	0	—	900
Safeguards and Security	8	—	0
Program Direction	6,214	—	5,948
Total, New Brunswick Laboratory	6,222	—	6,848
Oak Ridge Institute for Science and Education			
Advanced Scientific Computing Research	3,146	—	0
Basic Energy Sciences	1,214	—	100
Biological and Environmental Research	5,718	—	3,178
Fusion Energy Sciences	1,394	—	494
High Energy Physics	1,388	—	0
Nuclear Physics	1,063	—	412
Workforce Development for Teachers and Scientists	13,213	—	0
Safeguards and Security	1,845	—	1,645
Total, Oak Ridge Institute for Science and Education	28,981	—	5,829

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Oak Ridge National Laboratory			
Advanced Scientific Computing Research	103,362	—	90,922
Basic Energy Sciences	322,307	—	308,649
Biological and Environmental Research	79,029	—	75,348
Fusion Energy Sciences	123,041	—	239,193
High Energy Physics	50	—	150
Nuclear Physics	26,156	—	25,562
Safeguards and Security	9,016	—	9,016
Total, Oak Ridge National Laboratory	662,961	—	748,840
Oak Ridge National Laboratory Site Office			
Program Direction	4,655	—	6,051
Oak Ridge Office			
Advanced Scientific Computing Research	523	—	0
Basic Energy Sciences	882	—	0
Biological and Environmental Research	797	—	0
Fusion Energy Sciences	215	—	0
High Energy Physics	535	—	0
Nuclear Physics	642	—	0
Science Laboratories Infrastructure	5,338	—	5,751
Safeguards and Security	18,444	—	18,795
Program Direction	37,525	—	34,081
Total, Oak Ridge Office	64,901	—	58,627

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Office of Scientific and Technical Information			
Advanced Scientific Computing Research	163	—	132
Basic Energy Sciences	157	—	132
Biological and Environmental Research	205	—	199
Fusion Energy Sciences	132	—	125
High Energy Physics	140	—	124
Nuclear Physics	135	—	125
Science Laboratories Infrastructure	0	—	200
Safeguards and Security	535	—	472
Program Direction	8,667	—	8,400
Total, Office of Scientific and Technical Information	10,134	—	9,909
Pacific Northwest National Laboratory			
Advanced Scientific Computing Research	8,598	—	5,349
Basic Energy Sciences	25,710	—	20,633
Biological and Environmental Research	124,765	—	106,156
Fusion Energy Sciences	1,774	—	1,735
High Energy Physics	1,894	—	9,060
Nuclear Physics	110	—	83
Workforce Development for Teachers and Scientists	733	—	0
Safeguards and Security	11,317	—	10,731
Total, Pacific Northwest National Laboratory	174,901	—	153,747
Pacific Northwest Site Office			
Program Direction	5,138	—	5,204

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Princeton Plasma Physics Laboratory			
Advanced Scientific Computing Research	94	—	93
Fusion Energy Sciences	76,029	—	63,087
High Energy Physics	237	—	230
Workforce Development for Teachers and Scientists	140	—	0
Safeguards and Security	2,507	—	2,232
Total, Princeton Plasma Physics Laboratory	79,007	—	65,642
Princeton Site Office			
Program Direction	1,706	—	1,763
Sandia National Laboratories			
Advanced Scientific Computing Research	15,843	—	9,090
Basic Energy Sciences	43,996	—	34,063
Biological and Environmental Research	6,339	—	11,019
Fusion Energy Sciences	2,913	—	1,605
Workforce Development for Teachers and Scientists	80	—	0
Safeguards and Security	40	—	0
Total, Sandia National Laboratories	69,211	—	55,777
Savannah River National Laboratory			
Basic Energy Sciences	530	—	430
Biological and Environmental Research	65	—	221
Total, Savannah River National Laboratory	595	—	651

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
SLAC National Accelerator Laboratory			
Advanced Scientific Computing Research	240	—	140
Basic Energy Sciences	211,015	—	285,882
Biological and Environmental Research	4,475	—	4,575
Fusion Energy Sciences	947	—	2,000
High Energy Physics	86,064	—	90,506
Nuclear Physics	75	—	0
Workforce Development for Teachers and Scientists	269	—	0
Science Laboratories Infrastructure	24,110	—	25,482
Safeguards and Security	3,026	—	2,676
Total, SLAC National Accelerator Laboratory	330,221	—	411,261
SLAC Site Office			
Program Direction	2,645	—	2,580
Thomas Jefferson National Accelerator Facility			
Advanced Scientific Computing Research	10	—	29
Basic Energy Sciences	1,850	—	500
Biological and Environmental Research	600	—	600
High Energy Physics	2,847	—	100
Nuclear Physics	140,926	—	131,569
Workforce Development for Teachers and Scientists	287	—	0
Science Laboratories Infrastructure	12,337	—	29,200
Safeguards and Security	1,485	—	1,484
Total, Thomas Jefferson National Accelerator Facility	160,342	—	163,482
Thomas Jefferson Site Office			
Program Direction	1,918	—	1,911

(dollars in thousands)

	FY 2012 Current	FY 2013 Annualized CR*	FY 2014 Request
Washington Headquarters			
Advanced Scientific Computing Research	1,294	—	131,519
Basic Energy Sciences	23,097	—	177,744
Biological and Environmental Research	1,568	—	84,508
Fusion Energy Sciences	843	—	44,794
High Energy Physics	3,083	—	63,955
Nuclear Physics	20,278	—	42,733
Workforce Development for Teachers and Scientists	42	—	16,500
Science Laboratories Infrastructure	155	—	0
Safeguards and Security	387	—	9,705
Program Direction	66,211	—	81,148
Total, Washington Headquarters	116,958	—	652,606
Total, Science	4,934,980	4,903,461	5,152,752

*FY 2013 amounts shown reflect the P.L. 112-175 Continuing Resolution level annualized to a full year. These amounts are shown only at the "congressional control" level and above; below that level a dash (—) is shown.