

CONFERENCE REPORT TO ACCOMPANY H.R. 4818 - CONSOLIDATED APPROPRIATIONS ACT, 2005


Office of Science Section


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→ Science

The Science account funds the Department's work on high energy physics, nuclear physics, biological and environmental sciences, basic energy sciences, advanced scientific computing, maintenance of the laboratories' physical infrastructure, fusion energy sciences, safeguards and security, science workforce development, and science program direction. The conference agreement provides \$3,628,902,000. The conferees encourage the Department to request sufficient funds for the Office of Science in fiscal year 2006 to operate user facilities for as much time as possible, to enhance user support, and to upgrade essential equipment at the Department's Science user facilities.

The conferees reiterate their support for broader participation by universities in DOE's research programs, including existing user facilities and potential new user facilities. The conferees are aware of the Office of Science's strategy for future facilities. Where existing facilities provide capabilities critical to a new user facility, co-location is appropriate; where this is not the case, the location of new user facilities

should be openly competed. Regardless of location, broad participation in design by staff from national laboratories, user faculty from colleges, universities, and industrial investigators and groups should be sought. All of these user groups must have access to these capabilities on a competitive basis.

 High energy physics.—The conference agreement provides \$741,629,000 for high energy physics research. The control level is at the High Energy Physics level. The conferees encourage the Department to proceed with the Dark Energy Mission even if the primary science of the mission and mission development must be pursued by the Department so as to avoid schedule delays resulting from implementing the mission jointly with NASA. International cooperation and appropriate launch arrangements should be pursued where appropriate. The conferees recognize that an excellent and energized science team has been assembled for this exciting mission. Within available funds, the conferees redirect \$5,000,000 from the Science Laboratories Infrastructure construction funds at the Stanford Linear Accelerator Center MEL-001 Subproject 36 to the High Energy Physics account for the research program at SLAC.

 Nuclear physics.—The conference agreement provides \$408,040,000 for nuclear physics. An additional \$5,000,000 is provided to continue research and development and initiate concept design activities for the Rare Isotope Accelerator, and an additional \$7,000,000 is provided to increase utilization of the user facilities in the Nuclear Physics program.

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Biological and environmental research.—The conference agreement includes \$576,590,000 for biological and environmental research. The conference agreement provides an additional \$10,000,000 to initiate Project Engineering and Design for the proposed new facility for the production and characterization of proteins and molecular tags. The Conferees do not agree with the Department's strategy of restricting competition for such a facility to only the DOE national laboratories. The Department should present in the fiscal year 2006 budget request an alternate procurement strategy for this and future Genomes to Life (GTL) facilities that will maximize rather than limit competition and will allow universities and other entities to compete with DOE national laboratories for these new GTL facilities. The Department is encouraged to consult with NASA, which for decades has conducted competitions for the development of research instrumentation among universities, NASA, DOE, and other government laboratories, and other entities including for-profit corporations.

The conference agreement includes \$2,000,000 for a science building at Waubonsee Community College in Illinois; \$1,000,000 for digital playback hardware and software for Recording for the blind and dyslexic; \$600,000 for All Children's Hospital in Florida; \$300,000 for Eckerd College in Florida; \$2,000,000 for Applied Research and Technology Park electrical and communication infrastructure improvements in Springfield, Ohio; \$250,000 for a Multiple Sclerosis, Alzheimer's, Parkinson's, Lou Gehrig's Imaging System at the Cleveland Clinic in Ohio; \$125,000 for Duchenne Muscular Dystrophy research-related equipment at Children's National Medical Center in the District of Columbia; \$125,000 for Duchenne Muscular Dystrophy research-related equipment at the University of Washington-Seattle; \$500,000 for the Northeast Regional

Cancer Center in Scranton, Pennsylvania; \$250,000 for Ohio State University for environmental research in cooperation with Earth University; \$125,000 for the University of Akron, Ohio, Polymer Center; \$125,000 for the Ohio Northern University, Ada, Ohio, Science and Pharmacy Building; \$250,000 for the Alabama A&M University; \$600,000 for University of Texas at Arlington optical medical imaging equipment; \$1,000,000 for the Missouri Alternative and Renewable Energy Technology Center, Crowder College; \$600,000 for the San Antonio, Texas, Cancer Research and Therapy Center; \$250,000 for the University of South Alabama Cancer Center; \$1,250,000 for the Virginia Commonwealth University Massey Cancer Center; \$250,000 for the Saint Francis Hospital, Delaware, Cardiac Catheterization Lab; \$450,000 for the Jacksonville University Environmental Science Center; \$600,000 for the Houston, Texas, Alliance for Nanohealth; \$250,000 for the Virginia Science Museum; \$1,000,000 for the Polly Ryon Memorial Hospital, Texas; \$250,000 for the St. Thomas University Minority Science Center, Miami, Florida; \$500,000 for Project Intellicare, Roseville, California; \$250,000 for the Virginia Polytechnic Institute Center for High-Performance Learning Environment; \$500,000 for Georgia State University; \$700,000 for the Michigan Research Institute for life science research; \$700,000 for the University of Arizona Environment and Natural Resources Phase II Facility; \$250,000 for the Children's Hospital of Illinois ambulatory care project; \$700,000 for the Loma Linda University, California, Medical Center synchrotron expansion; \$250,000 for the University of Dubuque, Iowa, Environmental Science Center; \$250,000 for the Ball State University, Indiana, Bioenergetics Research Initiative; \$600,000 for the Clearfield Area School District, Pennsylvania, Energy Initiative; \$500,000 for Digital Cardiology equipment at

Children's Hospital and Research Center, Oakland, California; \$750,000 for the National Childhood Cancer Foundation; \$250,000 for the Roswell Park Cancer Institute, New York, Center for Genetics and Pharmacology; \$250,000 for Bucknell University, Pennsylvania, Materials Science Laboratory; \$1,000,000 for the Science Center at Mystic Seaport, Connecticut; \$250,000 for the Saratoga Hospital, New York, radiation therapy center; \$600,000 for the San Joaquin Community Hospital, Bakersfield, California; \$700,000 for the Syracuse University, New York, Environmental Systems Center; \$600,000 for the University of Tennessee Sim Center; and \$250,000 for the St. Mary's Hospital, Kankakee, Illinois.

The conference agreement includes \$575,000 for the Derby Center for Science and Mathematics at Lyon College in Arkansas; \$1,000,000 for the Rush Presbyterian St. Lukes Medical Center in Illinois; \$1,000,000 for Medical Research and Robotics at the University of Southern California; \$750,000 for the Advanced Building Efficiency Testbed at Carnegie Mellon University; \$1,000,000 for DePaul University Biological Sciences; \$500,000 for the Philadelphia Educational Advancement Alliance; \$750,000 for Northwestern University Institute of Bioengineering and Nanoscience in Medicine; \$500,000 for the Rensselaer Polytechnic Institute Center for Bioscience; \$750,000 for St. Peter's Biotechnical Research in New Jersey; \$160,000 for the Berkshire Environmental Center in Massachusetts; \$500,000 for the Center for the Environment at the University of Massachusetts; \$1,000,000 for technical upgrades at St. Joseph Hospital in Arizona; \$515,000 for the Center for Science at the University of San Francisco in California; \$1,000,000 for Augsburg College in Minnesota; \$1,000,000 for the Bronx Community Center for Sustainable Energy; \$500,000 for Marquette General Hospital in

Marquette, Michigan; \$1,500,000 for the Illinois Indiana Super-Grid Program connecting Argonne National Laboratory and Purdue and Notre Dame Universities; \$1,000,000 for the Purdue Calumet Water Environmental Institute; \$1,000,000 for the Multi-Discipline Engineering Institute at Notre Dame in Indiana; and \$1,000,000 for the Energy Efficiency Project at Valparaiso University in Indiana.

The conference agreement provides \$11,000,000 for the Mental Illness and Neuroscience Discovery Institute in New Mexico; \$1,800,000 for Military Spirit in New Mexico; \$2,000,000 for the Academic Center Sustainable Design Project at St. Francis College, New York; \$3,000,000 for the University of Louisville Pediatric Clinical Proteomic Center; \$2,000,000 for the University of Louisville Institute for Advanced Materials; \$2,000,000 for the Advanced Bioreactor located in Butte, Montana; \$1,200,000 to expand the Center for Integrated and Applied Environmental Toxicology at the University of Southern Maine; \$500,000 for the University of Tennessee Cancer Institute; and \$500,000 for St. Jude Children's Research Hospital in Tennessee.

The conference agreement includes \$250,000 for the Huntsman Cancer Institute; \$500,000 for the Mega-Voltage Cargo Imaging Development Applications for the Nevada Test Site; \$500,000 for the California Hospital Medical Center PET /CT Fusion Imaging System; \$500,000 for the Luci Curci Cancer Center Linear Accelerator; \$500,000 for Project Intellicare in California; \$750,000 for the University Medical Center in Las Vegas, Nevada; \$500,000 for the Southern California Water Education Center;

\$500,000 for Live Cell Molecular Imaging System at the University of Connecticut; \$500,000 for the St. Francis Hospital Wilmington, Delaware, MRI and Cardiac Catherization Laboratory; \$500,000 for the University of Delaware for the Delaware Biology Institute; \$500,000 for the University of Nevada-Las Vegas School of Public Health; \$250,000 for the Latino Development and Technology Center; \$250,000 for the Swedish American Health Systems; \$250,000 for DePaul University Chemistry Lab Renovation Project; \$250,000 for the Edward Hospital Cancer Center; \$500,000 for the Mary Bird Perkins Cancer Center; \$500,000 for the Morgan State University Center for Environmental Toxicology; \$500,000 for the Suburban Hospital in Montgomery County, Maryland; \$500,000 for the University of Massachusetts at Boston Multidisciplinary Research Facility and Library; \$500,000 for the Martha's Vineyard Hospital; \$750,000 for the Nevada Cancer Institute; \$500,000 for the Mercy Hospital Grayling, Michigan Rural Healthcare Advancement Initiative; \$750,000 for the Health Sciences Complex at Creighton University; \$500,000 for the Hackensack University Medical Center Women and Children's Pavilion; \$500,000 for the Kennedy Health System Linear Accelerator; \$750,000 for the University of Buffalo Center of Excellence in Bioinformatics; \$500,000 for the Hospital for Special Surgery National Center for Musculoskeletal Research; \$500,000 for the New University in New York City; \$500,000 for the Radiochemistry research facility at the University of Nevada-Las Vegas; \$250,000 for the Hauptman-Woodward Medical Research Institute; \$1,000,000 for the Vermont Institute of Natural Science; and \$750,000 for the Tahoe Center for Environmental Services.

Molecular Medicine.—The conferees continue to support research that brings together PET imaging, systems biology and nanotechnology to develop new molecular

imaging probes. These probes should provide a biological diagnosis of disease that *it is* informative of the molecular basis of disease and specific for guiding the development of new molecular therapies.

The conferees are concerned about consequence mitigation activities and public health impacts associated with the threat of any radiological event and strongly encourage the Department to develop therapeutic radiological countermeasures to protect against exposure to the effects of ionizing radiation. The conferees are aware of the potential of inositol radiation and encourages the Department to support research of this emerging technology. The conferees recommend that the Department fund medical therapy research and other treatment options to protect the public health against radiation exposure.

The conferees strongly support the Department's efforts to maintain the scientific infrastructure of the Nation's structural biology assets, and encourage the Department to work to address the needs within the broader community. The Department should continue to work constructively with the non-profit entity operating the X4A and X4C beamlines to fund state-of-the art detectors, goniometers, and automated sample changing equipment, using available funds.

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Basic Energy Sciences.—The conference agreement includes \$1,113,530,000 for basic energy sciences. The conference agreement includes \$628,228,000 for materials sciences and engineering research, and \$253,422,000 for chemical sciences, geosciences, and energy biosciences. For purposes of reprogramming during fiscal year 2005, the Department may allocate funding among all operating accounts within Basic Energy

Sciences.

The conference agreement also provides the request of \$7,673,000 for the Experimental Program to Stimulate Competitive Research (EPSCoR).

Intel → Advanced scientific computing research.—The conference agreement includes \$234,340,000 for advanced scientific computing research (ASCR), an increase of \$30,000,000 over the budget request, with not more than \$25,000,000 devoted to hardware. The conferees support the House Report language on ASCR.

Intel → Science laboratories infrastructure.—The conference agreement provides \$42,336,000 for science laboratories infrastructure, including an additional \$5,000,000 to correct safety deficiencies at Science laboratories, and \$6,100,000 additional for excess facilities disposal.

The conference agreement provides the requested amounts of \$1,766,000 for infrastructure support, \$5,079,000 for Oak Ridge landlord costs, and \$24,391,000 for construction of various infrastructure projects (MEL-001). Of this increase, \$5,000,000 additional is provided to continue infrastructure subproject 18 under MEL-001 to support continuing activities at the Pacific Northwest National Laboratory to replace the infrastructure being displaced by the closure of the 300 Area at the Hanford site.

Intel → Fusion energy sciences.—The conference agreement includes \$276,110,000 for fusion energy sciences, an increase of \$12,000,000 over the budget request. The

additional \$12,000,000 is to be used to increase the utilization of existing large and small experiments; further work in inertial fusion technology; take advantage of opportunities in High Energy Density Physics, including research on fast ignition, and large-scale scientific computing; and provide for cost-effective construction and development of the National Compact Stellarator Experiment. The conference notes the delay in site selection for the International Thermonuclear Experimental Reactor (ITER) and directs the Department to reduce its planned expenditures on ITER in fiscal year 2005 in consideration of this delay.

ITd — Safeguards and security.—The conference agreement includes \$73,315,000 for safeguards and security activities at laboratories and facilities managed by the Office of Science.

ITd — Science workforce development.—The conference agreement provides the requested amount of \$7,660,000 for science workforce development. The conferees encourage the Department to provide funds and technical expertise for high school students to participate in the For Inspiration and Recognition of Science and Technology (FIRST) robotics competition.

ITd — Science program direction.—The conference agreement includes \$155,268,000 for science program direction. This amount includes \$89,341,000 for field offices and \$65,927,000 for headquarters. The control level for fiscal year 2005 is at the program account level of Science Program Direction.

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Funding adjustments.—The conference agreement includes an offset of \$5,605,000 for the safeguards and security charge for reimbursable work, as proposed in the budget request. The conference agreement also includes the use of \$5,062,000 of prior year balances.

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NUCLEAR WASTE DISPOSAL

The conference agreement provides ^{346,000,000} \$446,000,000 for Nuclear Waste Disposal. When combined with the ^{231,000,000} \$131,000,000 appropriated from the Defense Nuclear Waste Disposal account, a total of \$577,000,000 will be available for program activities in fiscal year 2005. The conferees have provided \$2,000,000 for the State of Nevada and \$8,000,000 for the Affected Units of Local Government (AULG) for project oversight.

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DEPARTMENTAL ADMINISTRATION

(Including Transfer of Funds)

The conference agreement provides \$332,866,000 for Departmental Administration expenses. Including a transfer of \$92,440,000 from Other Defense Activities, ^{and} revenues of \$122,000,000, the same as estimated by the Congressional Budget Office, this results in a net appropriation of \$118,426,000.

Specific funding levels for each Departmental organization are provided in the accompanying table.

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Reprogramming guidelines.—The conference agreement provides reprogramming authority of \$1,000,000 or 10 percent, whichever is less, within the Departmental