



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Science

## **DOE Office of Science Update**

Linda G. Blevins, Senior Technical Advisor  
Office of the Deputy Director for Science Programs

Michael S. Zarkin, Director  
Office of Grants and Contracts Support

National Council of University Research  
Administrators (NCURA) 58<sup>th</sup> Annual Meeting  
August 8, 2017  
Washington, DC

These slides will be posted for access by the public at:  
<http://science.energy.gov/sc-2/presentations-and-testimony/>

# Department of Energy Mission Areas

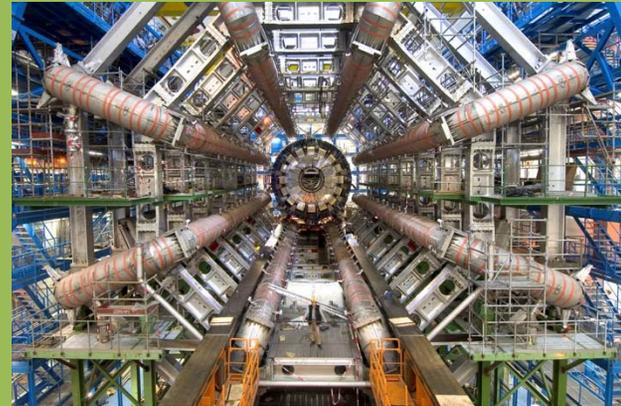
## Energy



## Nuclear Safety and Security



## Science



## Environmental Cleanup



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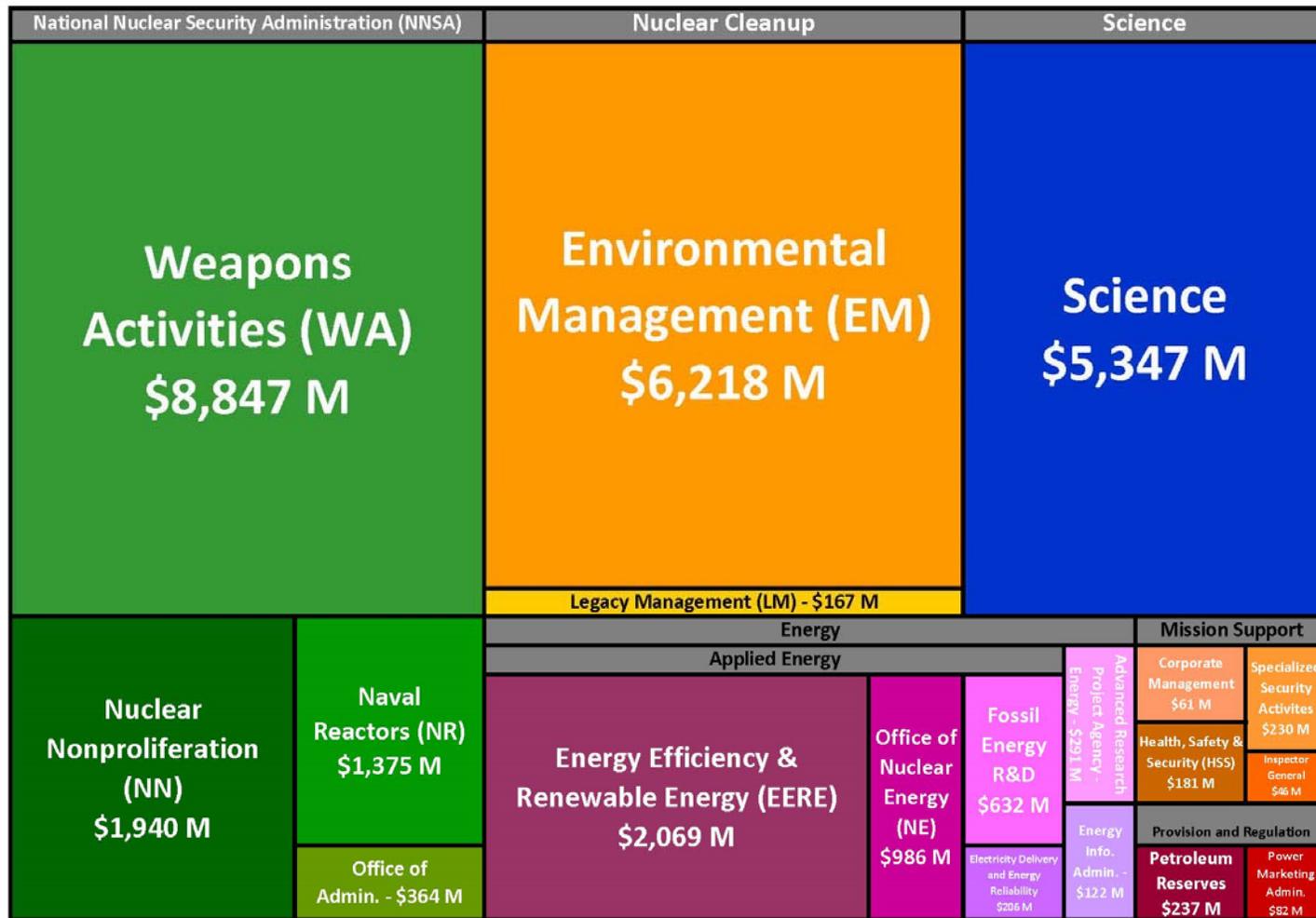
## Working with DOE

- **The Department of Energy has been described as the department of windmills, weapons, quarks, and quagmires**
- **DOE Federal personnel are organized by program offices—some of which are at considerable geographic separation**
- **Program offices may use different information systems and restrict access from other offices**
- **Please direct inquiries appropriately: there is no overall or central DOE “grants” or “research” office**



# The DOE Portfolio (~\$30B Total)

Department of Energy - FY 2016 Enacted - \$29,603 M



\* Representation does not include - \$199 M for All Other DOE



# Working with DOE

Office	Mission	Information System	Location(s)
Office of Science	Basic research	PAMS	Germantown, MD (program) Chicago, IL (awards)
ARPA-E	High-risk applied research	ARPA-E Exchange	Washington, DC
EERE	Energy efficiency, renewable energy	EERE Exchange	Golden, CO
Office of Fossil Energy	Applied research	FedConnect	Germantown, MD (program) Washington, DC (program) Pittsburgh, PA (awards) Morgantown, WV (awards)

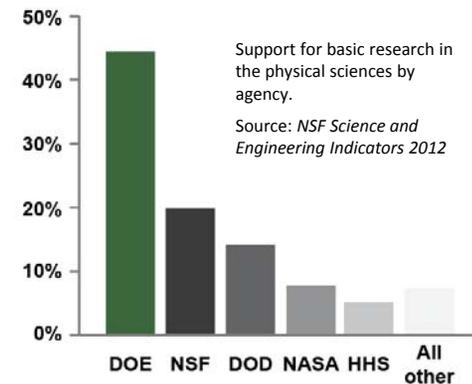
*Golden, CO, is home to EERE's Golden Field Office*

*The National Energy Technology Lab in Pittsburgh and Morgantown supports all of DOE's applied research programs*



# The DOE Office of Science

- **The mission of the DOE Office of Science is to deliver the scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States.**
- **The mission is accomplished by funding**
  - The Frontiers of Science
  - The 21st Century Tools of Science
  - Science for Energy
- **The Office of Science is the Nation's largest Federal sponsor of basic research in the physical sciences (47%).**
- **FY17 Budget was \$5.4B**
- **Six program offices**
  - Advanced Scientific Computing Research (ASCR)
  - Biological and Environmental Research (BER)
  - Basic Energy Sciences (BES)
  - Fusion Energy Sciences (FES)
  - High Energy Physics (HEP)
  - Nuclear Physics (NP)



# The Office of Science Supports Research at More than 300 Institutions Across the U.S.



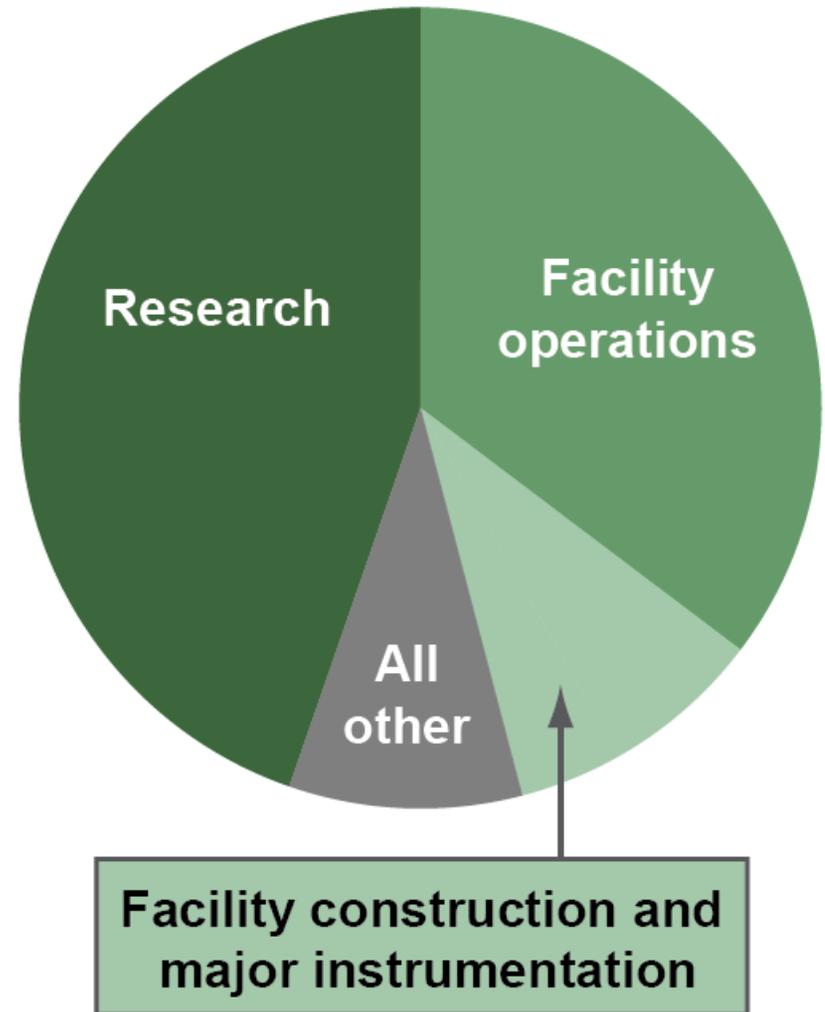
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<http://science.energy.gov/>

# Office of Science Numbers

- **The Office of Science (SC) is a steward for 10 of 17 DOE national labs and operates about 30 major scientific user facilities.**
- **Approximately 1/2 of the budget supports operations of the scientific user facilities and construction of new facilities; the other 1/2 supports research at the national laboratories and universities.**
- **About 1/3 of SC research funding goes to support grants at more than 300 colleges and universities nationwide.**
- **In FY 2016, SC supported ~19,000 Ph.D.s, postdoctoral researchers, graduate students, and undergraduates.**
- **~32,000 users of scientific facilities a year**
  - ~1/2 of the annual facility users come from universities;
  - ~1/4 of the users come from DOE national laboratories;
  - the remaining come from industry, other agencies, foundations, and international entities.



# Where We Are



The Office of Science's leadership is in the Forrestal Building in downtown Washington, DC

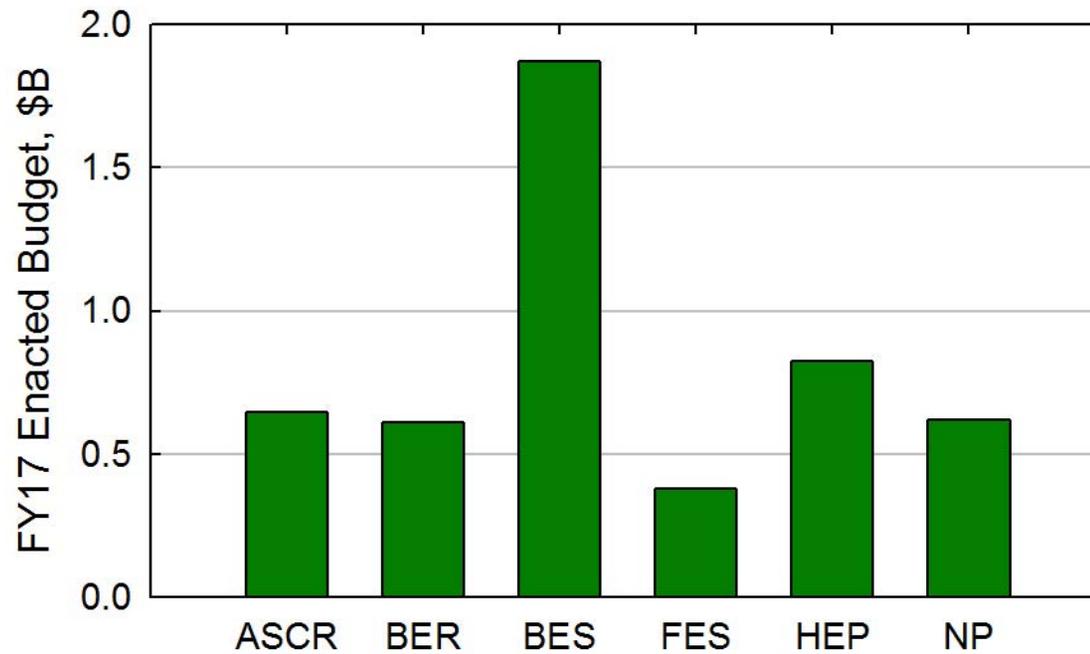
The Office of Science's program staff are mostly in the Germantown Building in the Washington, DC, suburbs



The Office of Science's awards are negotiated and administered by staff in the Chicago Office at the Argonne National Laboratory—25 miles from Chicago.



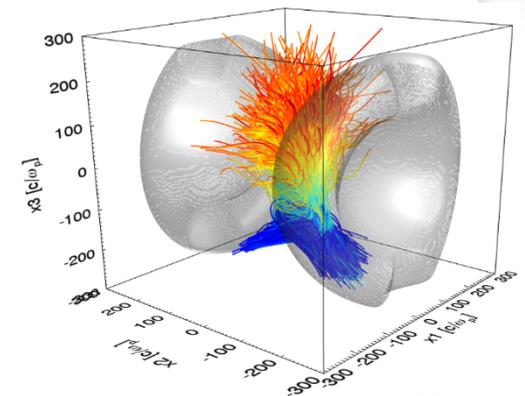
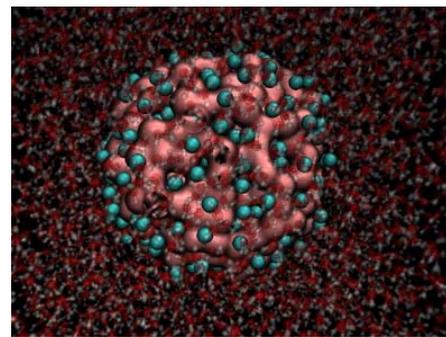
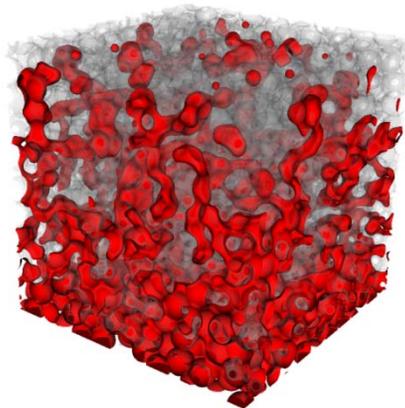
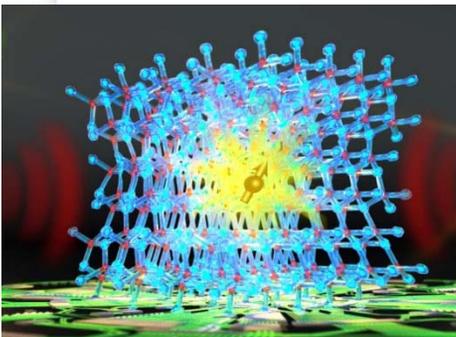
# FY2017 Enacted Budget by Program Office



# Advanced Scientific Computing Research (ASCR)

Computational and networking capabilities to extend the frontiers of science and technology

- **Exascale Computing Initiative (ECI) and Exascale Computing Project (ECP).** The ECP is initiated as a joint ASCR/NNSA partnership using DOE's formal project management processes. A new budget line was created for the SC-ECP in FY 2017.
- **Facilities** operate optimally and with >90% availability; deployment of 200 petaflop upgrade at OLCF and site preparations for exascale machines and NERSC-9 and upgrade of ESnet.
- **SciDAC partnerships** were recompeted in FY 2017 with new institutes and partnerships that span basic science priorities.
- **Applied Mathematics research** addresses challenges of increasing complexity and **Computer Science research** and **Research and Evaluation Partnerships** explores technologies "beyond Moore's law" including testbeds.
- The **Computational Sciences Graduate Fellowship** is funded at \$10,000K.



# Basic Energy Sciences (BES) Research Priorities

Understanding, predicting, and controlling matter and energy at the electronic, atomic, and molecular levels

## ▪ **Transformative Opportunities for Discovery Science**

- Five new transformative opportunities that have the potential to further transform key technologies involving matter and energy

## ▪ **Quantum Materials and Chemistry**

- Discover novel materials and chemistries whose properties result from strong and coherent interactions of constituent electrons with each other, the atomic lattice, or light. Focus on low-dimensional systems, multilayered two-dimensional structures, and studies of electronic properties.

## ▪ **Catalysis Science**

- Develop the understanding of catalytic mechanisms required to discover and design novel selective catalysts for conversions of complex feedstocks using lower temperature and pressures.

## ▪ **Energy-Water Issues**

- Generate fundamental knowledge of the role, dynamics, and control of aqueous systems in energy and chemical conversions to better understand the interdependency of energy-water use and production.

## ▪ **Energy Storage**

- Provide the scientific foundation for next-generation energy storage, building on in situ and operando measurements and comprehensive computer models to capture coupled electro-chemical-mechanical phenomena, including dynamics and mesoscale effects.

## ▪ **Crosscutting: Synthesis and Instrumentation**

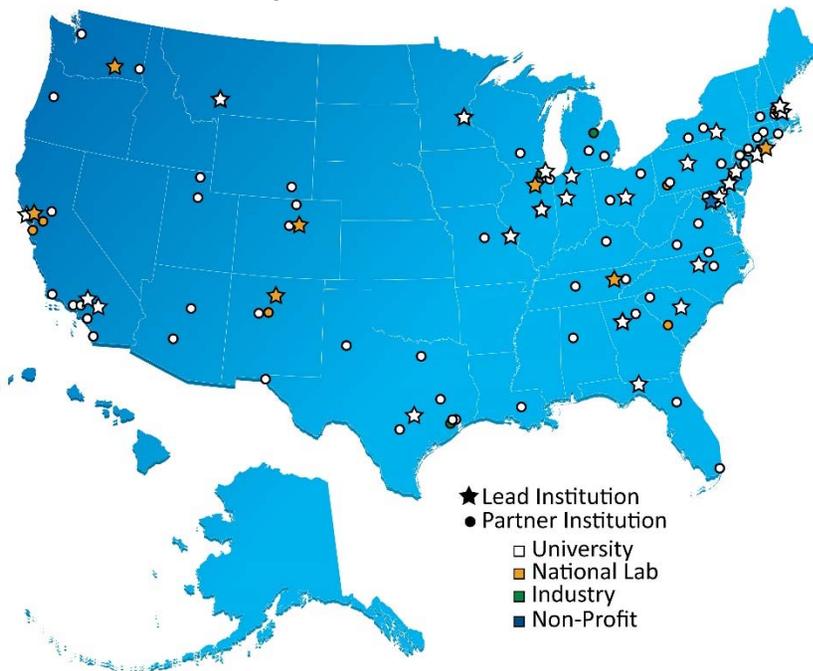
- Investigate controlled synthesis and assembly of nanoscale materials and molecules into functional matter with desired properties, low temperature synthesis under mild conditions, and bio-inspired synthetic approaches.
- Develop real-time monitoring tools, *in situ* diagnostic techniques, and instrumentation to study changes in structure and properties of materials and chemical processes at the levels of atoms and molecules in real-world systems.



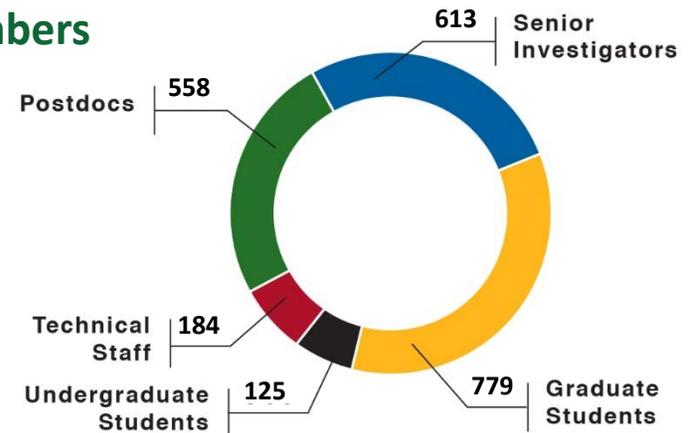
# BES - Energy Frontier Research Centers

## Current EFRCs

- 36 awards of \$2-4M per year for 4 years
- Lead institutions by type: **26 universities; 9 DOE national laboratories; 1 nonprofit organization**
- Over 115 participating institutions, located in 34 states plus the District of Columbia



## EFRC Members



- Planned open recompetition of the EFRC program in FY 2018, soliciting both new and renewal proposals
- Continued focus on the use of the team research modality to tackle “grand challenges” and “transformative opportunities” identified in BESAC reports
- Emphasis on emerging science priorities related to quantum materials and chemistry, catalysis, synthesis, instrumentation, next-generation energy storage, future nuclear energy, and energy-water issues



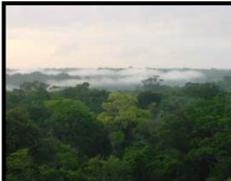
# Biological and Environmental Research (BER)

Integrating observations and experimental capabilities for predictive systems-level understanding

**Biological Systems Science supports fundamental research to achieve a predictive systems-level understanding of microbes and plants.**

Explore frontiers of genome-enabled biology

- Renewable and sustainable bioenergy resources
- Function & organization of plant and microbial systems
- Mechanisms of carbon storage/cycling in plant biomass and microbial communities
- Biosystems design
- Data integration, analysis and sharing within a systems biology knowledgebase
- Multimodal integrative bioimaging research
- DOE Joint Genome Institute; the only federally-funded genome sequencing and analysis facility for non-medical plants, microbes and microbial communities



**Earth and Environmental Systems Sciences supports a portfolio of integrated, systems-level Earth science.**

Understand Earth systems and the biosphere

- Representation of clouds and aerosols in atmospheric systems
- Carbon cycle interactions in Earth systems
- Predictive understanding of terrestrial and subsurface ecosystems
- World-leading capabilities in Earth System modeling
- ARM facility; world's longest-running ground-based facility for studying the atmosphere's energy balance, aerosols and clouds
- EMSL; 45+ capabilities for aerosol chemistry, biosystems, bio & geochemistry, and interfacial science



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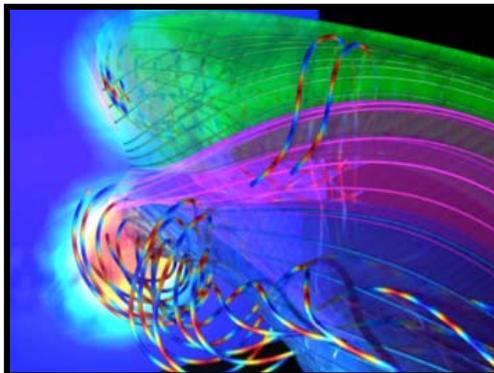
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# Fusion Energy Sciences (FES)

Matter at very high temperatures and densities and the scientific foundations for fusion

## FY 2018 Budget Request

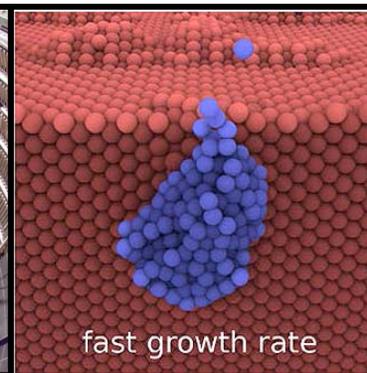
- Research is supported for the DIII-D and NSTX-U national programs.
- DIII-D will operate for 18 weeks. While NSTX-U is down for repair, team scientists will analyze previous data, support the recovery of operations, and perform collaborative research on other spherical tokamak facilities.
- Support increases for Scientific Discovery through Advanced Computing activities.
- Support continues for U.S. research involvement on international machines EAST (China), KSTAR (Korea), and W7-X (Germany).
- HEDLP research is focused on the MEC instrument at LCLS.
- General plasma science activities continue, including the partnership with NSF.
- U.S. contributions to ITER Project will support design and fabrication of the central solenoid magnet modules and structures and other in-kind hardware components.



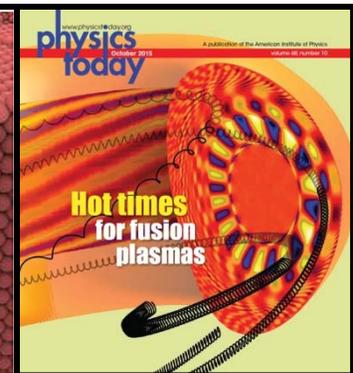
Magnetic reconnection driven by 3-D flux-ropes interaction in the Large Plasma Device



New central solenoid magnet inside NSTX-U Upgrade



Growth of helium bubbles that degrade tungsten performance



Gyrokinetic simulation of energetic ions in tokamak plasma

# High Energy Physics (HEP)

Understanding how the universe works at its most fundamental level

- The HEP mission is to understand how our universe works at its most fundamental level:
  - Discover the most elementary constituents of matter and energy
  - Probe the interactions between them
  - Explore the basic nature of space and time
- In May 2014 the Particle Physics Project Prioritization Panel (P5) released a report presenting an actionable long-term strategy for U.S. particle physics that enables discovery and maintains the U.S. position as a global leader in particle physics.
  - The P5 report identified five intertwined science drivers, compelling lines of inquiry that show great promise for discovery:
    - Use the **Higgs boson** as a new tool for discovery
    - Pursue the physics associated with **neutrino mass**
    - Identify the new physics of **dark matter**
    - Understand **cosmic acceleration**: dark energy and inflation
    - **Explore the unknown**: new particles, interactions, and physical principles

	Energy Frontier	Intensity Frontier	Cosmic Frontier
Higgs Boson	●		
Neutrino Mass		●	●
Dark Matter	●	●	●
Cosmic Acceleration			●
Explore the Unknown	●	●	●

- Science drivers identify the scientific motivation while the **Energy, Intensity, and Cosmic Research Frontiers** provide a useful categorization of experimental techniques



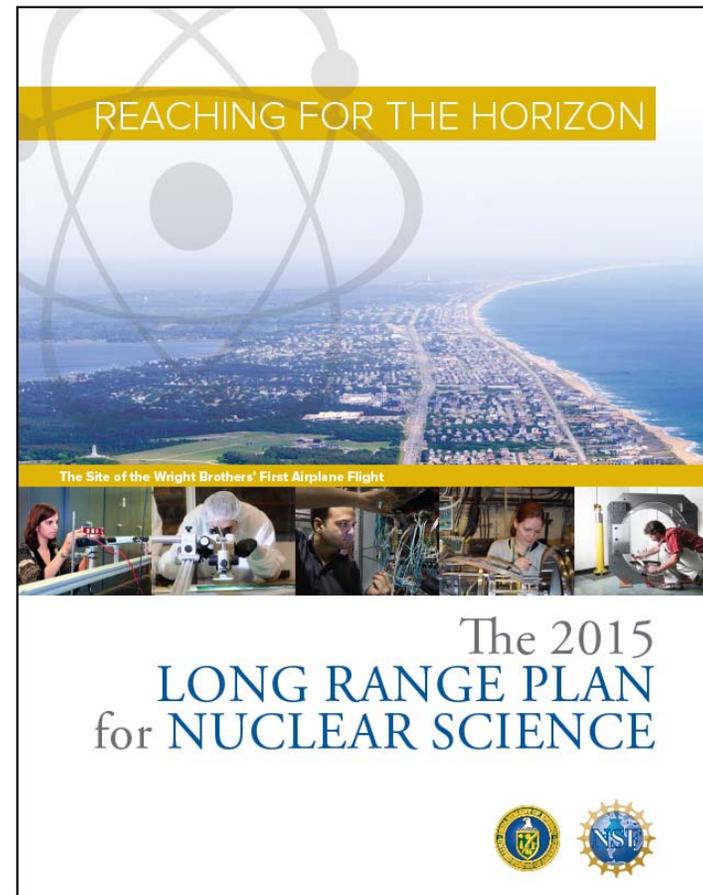
# Nuclear Physics (NP)

Discovering, exploring, and understanding all forms of nuclear matter

## The 2015 Long Range Plan for Nuclear Science

### Recommendations:

1. Capitalize on investments made to maintain U.S. leadership in nuclear science.
2. Develop and deploy a U.S.-led ton-scale neutrino-less double beta decay experiment.
3. Construct a high-energy high-luminosity polarized electron-ion collider as the highest priority for new construction following the completion of FRIB.
4. Increase investment in small-scale and mid-scale projects and initiatives that enable forefront research at universities and laboratories.



NP Research Programs: **Medium Energy NP, Heavy Ion NP, Low Energy NP, Nuclear Theory, Nuclear Data and Nuclear Theory Computing, Accelerator R&D, Isotope Development.**



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University researchers can become involved in many ways.

- **Read about the core research areas on our websites and contact program managers to discuss whether your ideas fit within their programs.**
- **Volunteer to become a reviewer or participate in a workshop.**
- **Incorporate our large scientific user facilities into your research. Apply to compete for time at one of them.**
- **Follow federal advisory committee meetings.**
- **Respond to open and topical solicitations.**





Department of Energy  
Office of Science  
Washington, DC 20585

<http://science.energy.gov/~media/grants/pdf/FullFundingMemo.pdf>

January 29, 2014

MEMORANDUM FOR OFFICE OF SCIENCE GRANT AND COOPERATIVE  
AGREEMENT APPLICANTS AND RECIPIENTS

FROM:

PATRICIA M. DEHMER   
ACTING DIRECTOR, OFFICE OF SCIENCE

SUBJECT:

FULL FUNDING FINANCIAL ASSISTANCE AWARDS  
UNDER \$1 MILLION

On Friday, January 17, 2014, President Obama signed the Consolidated Appropriations Act, 2014, funding the Federal Government through September 30, 2014.

Section 310 of Division D of the act states

Notwithstanding section 301(c) of this Act, none of the funds made available under the heading 'Department of Energy—Energy Programs—Science' may be used for a multiyear contract, grant, cooperative agreement, or Other Transaction Agreement of \$1,000,000 or less unless the contract, grant, cooperative agreement, or Other Transaction Agreement is funded for the full period of performance as anticipated at the time of award.

The Office of Science's financial assistance awards have historically been made for three- to five-year project periods with funding provided annually in discrete budget periods. We will no longer fund awards with a project period total cost of \$1,000,000 or less in this way. Any new or renewal financial assistance award with a project period total cost of \$1,000,000 or less will be funded in full.

Rescind immediately the entire value of any grant or cooperative agreement with a

## Early Career Research Program: Purpose

- **To support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the disciplines supported by the DOE Office of Science.**
- **Universities and national labs eligible**
  - University grants at least \$150,000 per year for 5 years for summer salary & expenses.
  - Lab awards at least \$500,000 per year for 5 years for full annual salary & expenses
- **Plan is for about 300 active awards in steady state**
  - 200 university awards & 100 lab awards
- **Roughly \$80M in funding for new and ongoing awards each year**
  - About 60 new awards (40 university & 20 lab) per year in steady state



## Early Career Research Program: Eligibility

- **No more than ten (10) years can have passed between the year the Principal Investigator's Ph.D. was awarded and the year of the deadline for the proposal.**
- **DOE National Laboratories**
  - full-time, permanent, non-postdoctoral employee.
- **U.S. Academic Institutions**
  - untenured Assistant Professor or Associate Professor on the tenure track.
- **An employee with a joint appointment between a university and a DOE national laboratory must apply through the institution that pays his or her salary and provides his or her benefits; the eligibility criteria above must also be met.**



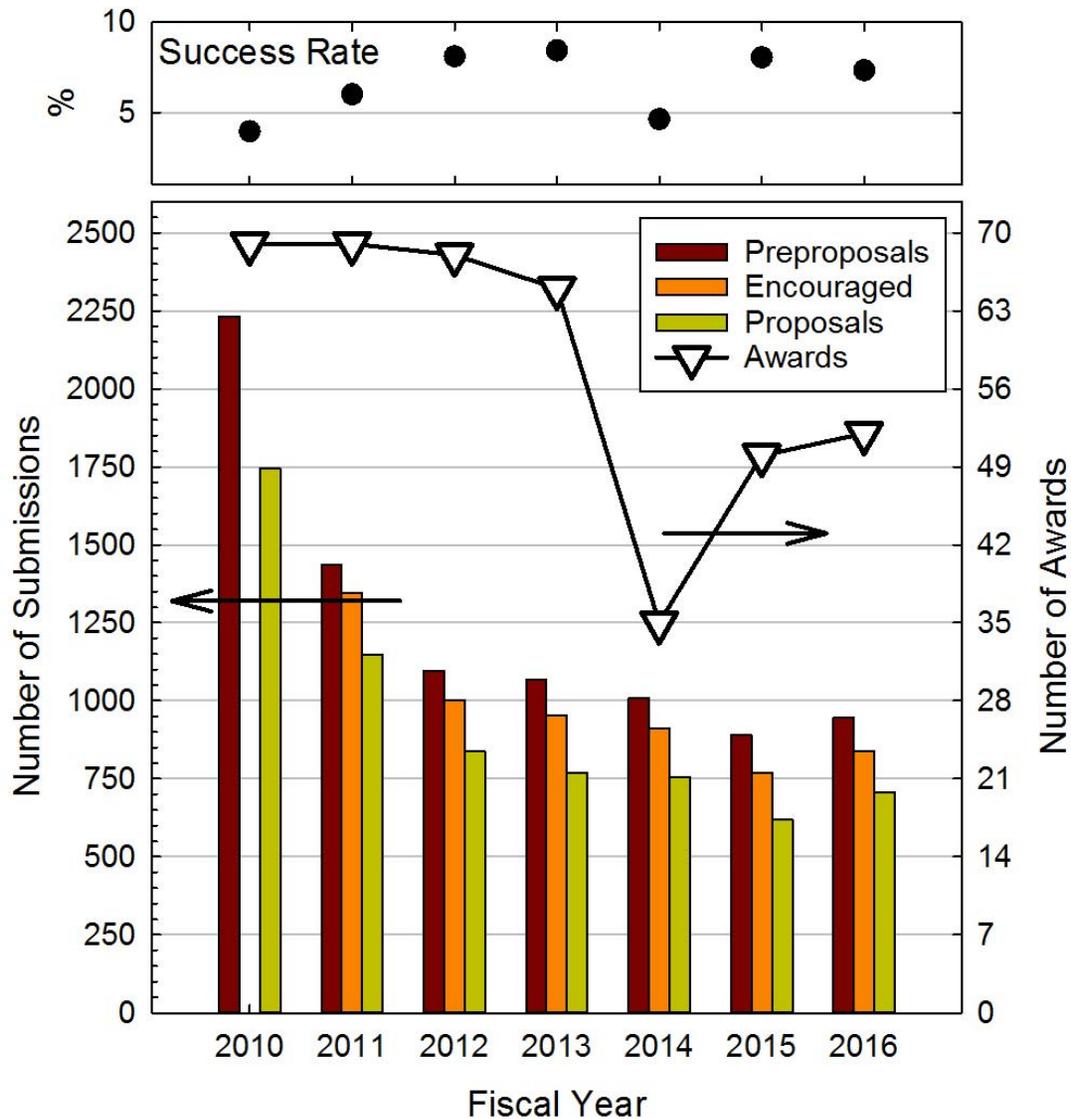
# Early Career Research Program: Special Rules

## General Rules:

- **Preproposals are required.**
- **A full proposal is not allowed if the work proposed in the preproposal is not responsive to the research topics identified in the solicitation.**
- **No co-PIs.**
- **A PI can submit one proposal per competition.**
- **A PI cannot participate more than three times.**
- **No letters of recommendation.**
- **Optional letters of collaboration, if included, must use a template.**
- **For DOE National Laboratories**
  - A letter from the lab director confirming that the proposed research idea fits within the scope of Office of Science-funded programs at the lab is required.
  - Lab scientists must charge at least 50% of their time to the award.
  - Execution of funding is at the PI's discretion according to the approved budget.
  - Employing lab addresses funding transition issues when the award ends.



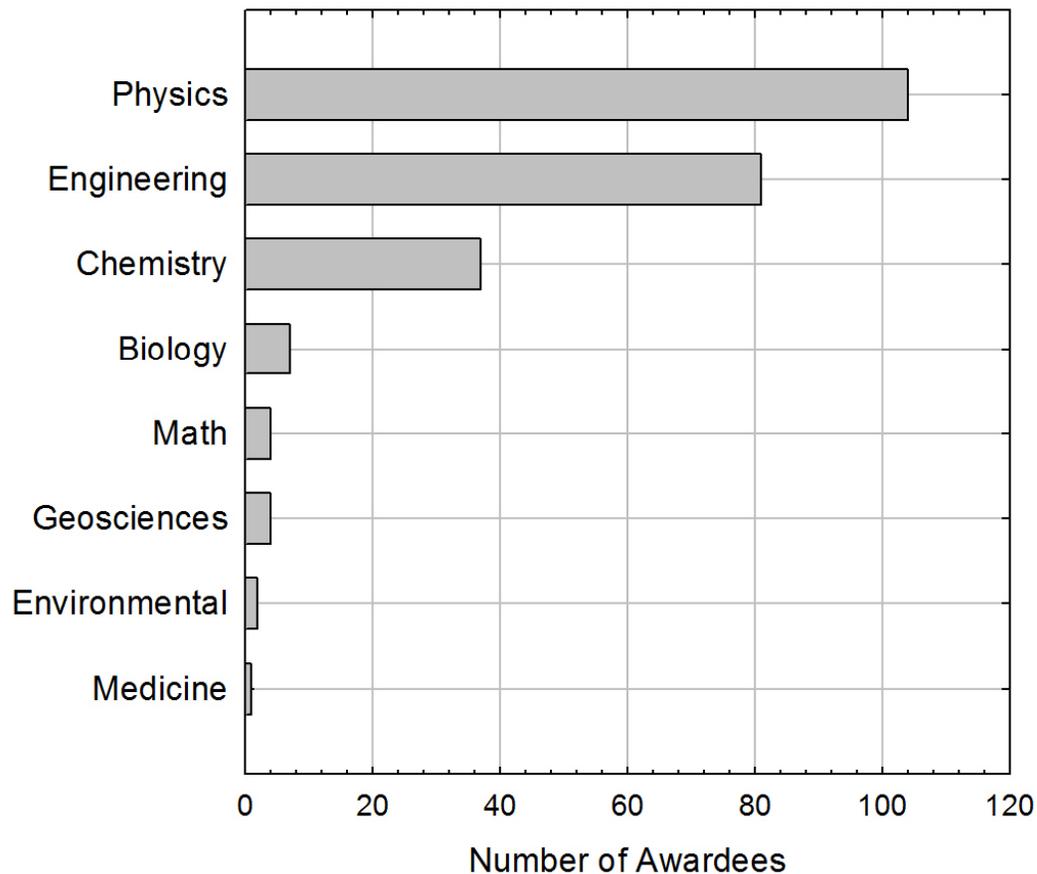
# Demand is high for the Early Career Research Program.



- The process of encouraging proposal submission based on preproposal fit began in FY2011.
- Proposal submission is encouraged for 85-90% of preproposals.
- Proposals are received from about 80% of those encouraged to submit.
- The number of awards was low during FY2014 - FY2016 because of the transition to full funding, which is expected to take two more years (FY2017 and FY2018).
- Awards for FY2017 are being processed and have not been made public.
- This year's announcement is not yet on the street.

# About 1/3 of our academic awardees in the Early Career Research Program are in engineering departments

Academic Department Types of University Awardees  
DOE SC Early Career Research Program, FY2010 - FY2015



- Physics includes physics, astronomy, etc.
- Engineering includes all engineering plus computer science, materials science, engineering physics, etc.
- Biology includes biology, bacteriology, biological sciences
- Math includes math, statistics



# Annual Open Solicitation

<http://science.energy.gov/grants/foas/open/>

## FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



U. S. Department of Energy  
Office of Science

### FY 2017 Continuation of Solicitation for the Office of Science Financial Assistance Program

Funding Opportunity Number: DE-FOA-0001664  
Announcement Type: Amendment 000001  
CFDA Number: 81.049

Issue Date: 09/30/2016

Pre-Application Due Date:

Optional

Application Due Date:

**Not Applicable**  
This Funding Opportunity Announcement (FOA) will remain open until September 30, 2017 or until replaced by a successor FOA. Applications may be submitted any time during this period.

**AMENDMENT:** The purpose of this amendment is to add an updated link for Grants.gov. See page ii for complete information.

Open throughout the year.

Funding Opportunity Announcements can be more specific, too. (The Office of Science issues about 40 FOAs per year.)

Submission is through Grants.gov.

You may submit an optional preproposal / white paper electronically.



## Recent Examples of Topical Solicitations: Watch [science.energy.gov/grants/foas/open/](http://science.energy.gov/grants/foas/open/) for future opportunities

Org	Solicitation Name	Solicitation Number	Closing Date
FES	Collaborative Fusion Energy Research in the DIII-D National Program	DE-FOA-0001762	9/21/2017
HEP	FY 2018 Research Opportunities in High Energy Physics	DE-FOA-0001781	9/12/2017
FES	Collaborative Research on International and Domestic Spherical Tokamaks	DE-FOA-0001784	9/1/2017
FES	Theoretical Research in Magnetic Fusion Energy Science	DE-FOA-0001757	8/18/2017
HEP	DOE Traineeship in Accelerator Science and Engineering	DE-FOA-0001782	7/31/2017
HEP	FY2017 Research Opportunities in Accelerator Stewardship	DE-FOA-0001779	7/17/2017
FES	Plasma Science Facilities	DE-FOA-0001713	5/5/2017
ASCR	Scientific Discovery through Advanced Computing: Partnership in Nuclear Energy Research	DE-FOA-0001674	4/5/2017
BER	Subsurface Biogeochemical Research	DE-FOA-0001724	4/5/2017
ASCR / NP	Scientific Discovery through Advanced Computing: Nuclear Physics	DE-FOA-0001698	2/24/2017
FES	Scientific Discovery through Advanced Computing: Integrated Simulation Partnerships in Fusion Energy	DE-FOA-0001670	2/21/2017
BER	Plant Feedstocks Genomics for Bioenergy: A Joint Research Funding Opportunity Announcement USDA, DOE	DE-FOA-0001688	2/15/2017
HEP	U.S.-Japan Science and Technology Cooperation Program in High Energy Physics	DE-FOA-0001699	1/15/2017
BER	Atmospheric System Research Program	DE-FOA-0001638	11/22/2016

# Office of Science Statement on Digital Data Management

science.energy.gov/funding-opportunities/digital-data-management/

All proposals submitted to SC for research funding are required to include a Data Management Plan

Detailed requirements and further information on:

- Suggestions for what to include in a Data Management Plan
- Supplemental guidance and requirements from SC Program Offices
- Links to information about data management resources at SC user facilities
- Definitions of key terms
- FAQs

The screenshot shows the Office of Science website page for the 'Statement on Digital Data Management'. The page features a navigation menu with options like 'Programs', 'Laboratories', 'User Facilities', 'Universities', 'Funding Opportunities', 'News', and 'About'. A search bar is located in the top right corner. The main content area includes a 'Statement on Digital Data Management' section with a 'Print' button and 'Text Size' options. The statement text discusses the Office of Science's mission and the importance of digital data management. A 'Table of Contents' is provided, listing sections such as 'Principles', 'Requirements', 'Additional Guidance', 'Additional Requirements and Guidance from Office of Science Program Offices', 'Information about Data Management Resources at Office of Science User Facilities', 'Glossary', 'FAQs', and 'References'. A 'Principles' section is also visible, stating that the Office of Science affirms the following principles related to the management of digital research data.

# Portfolio Analysis and Management System (PAMS)



Portfolio Analysis And Management System

<https://pamspublic.science.energy.gov/>

Login

Existing User

Monday 18<sup>th</sup> August 2014 06:18:30 P.M. ET

## Existing User Login

Username

Password

Login

[Forgot Password](#)

### New User Registration

- [Search Solicitations](#)
- [Create New PAMS Account](#)

### Other Links

- [Recommended Settings](#)
- [Contact Us](#)
- [PAMS External User Guide](#)

### System Use Notification

You are accessing a US Government Information System, which includes servers, network devices, and storage media.

Unauthorized or improper use of this system may result in disciplinary action, as well as civil and criminal penalties.

By using this information system, you understand and consent to the following:

- You have no reasonable expectation of privacy regarding any communications or data transiting or stored on this information system. At any time, and for any lawful Government purpose, the government may monitor, intercept, and search and seize any communication or data transiting or stored on this information system.
- Any communication or data transiting or stored on this information system may be disclosed or used for any lawful Government purpose.

# PAMS Status – Functionality by Iteration

Iteration	Content	Status
<b>Iteration 1: Submissions</b>	• <b>1a:</b> Collect grant proposals submitted to Grants.gov and package them for review	• Complete
	• <b>1b:</b> Collect pre-proposals, letters of intent and lab technical proposals	• Complete
<b>Iteration 2: Manage Reviewer Pool</b>	• Maintain information on parties who participate in proposal reviews	• Complete
<b>Iteration 4: Proposal Review</b>	• Coordinate and document proposal reviews	• Complete
<b>Iteration 3: Selection and Award</b>	<ul style="list-style-type: none"> <li>• Document decisions to select or decline proposals</li> <li>• Initiate actions for awards and modifications</li> </ul>	• Complete
<b>Iteration 5: Post-Award Actions</b>	• <b>5a:</b> Receive and process progress reports and award modification requests (NCE, etc.), Public Abstracts website	• Complete
	• <b>5b:</b> Electronic COV Module	• Complete
	• <b>5c:</b> Flexible Reporting	• TBD
<b>Iteration 6: Solicitations</b>	• Plan, prepare and issue FOAs and lab calls	• TBD
<b>Iteration 7: Closeout</b>	• Process final progress reports	• TBD
<b>Iteration 8: Lab Funds</b>	• Review and recommend lab funding	• TBD



# PAMS Status as of 7/27/2017

- We began using PAMS to receive Grants.gov proposals in October 2011.
- The external PAMS site was launched in May 2012.  
<https://pamspublic.science.energy.gov/>
- The review functionality was launched March 2013.
- The awards functionality was launched mid-November 2013.
- The post-award functionality was launched the end of January 2015.
- The COV functionality was launched late November 2016.

704 Internal Users

38,706 External Users

208 Solicitations published

9,888 Preproposals

16,175 Letters of Intent

31,145 Proposals

69,107 Individual Reviews Collected



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## What you can do in PAMS

- **View proposals submitted into Grants.gov**
- **Search for Funding Opportunity Announcements**
- **Submit preproposals and letters of intent**
- **PIs can submit budgets to SROs**
- **SROs can submit revised budgets to DOE**
- **PIs can submit public abstracts DOE**
- **DOE national labs can submit proposals to DOE**
- **Admin SROs can manage institution profiles & users**
- **Reviewers can review proposals – mail in or panel**
- **PI can view reviews after a *decision* is made on a proposal**
  - Decisions are made by senior management
  - Requesting a revised budget on a proposal is not a decision



# Working With the Office of Science

## What Gets Submitted Where

Item	System	From Whom	To Whom
Application	Grants.gov	SRO	DOE
Abstract	PAMS	PI	Program manager
Revised Budget	PAMS	PI	SRO
Revised Budget	PAMS	SRO	DOE
No-Cost Extension Request	PAMS	SRO	DOE
Change of PI Request	PAMS	SRO	DOE
PI Transfer Request	PAMS	SRO	DOE
Progress Report	PAMS	PI	DOE
Questions	Email, telephone preferred. PAMS, FedConnect not recommended	Anyone	DOE



# Working With the Office of Science

## Issues With Submissions

- **Applications, once submitted, cannot be changed**
  - Applications may be withdrawn in PAMS before they are released to reviewers
  - Applications may be withdrawn by written request after they are released to reviewers
  - SC has no policy limiting the number of resubmissions (within an FOA's deadline)
- **No-Cost Extension Requests**
  - Must be submitted before the award's end date
  - If the award has expired, contact the program manager—we can bring the award back
  - Revisions to requests cannot be made
- **Progress reports, revised budgets, renewal proposal products**
  - All permit revision
  - All preserve prior versions—a change may be made where needed and the item resubmitted



## Working with the Office of Science Reminders and Deadlines

- **PAMS will send some reminder emails when deadlines pass for *assigned* tasks**
- **There are no reminders for *unassigned* activities, like responding to an FOA or submitting a letter of intent**
- **Reminders are usually sent to the person who can complete the task**
  - Progress reports are submitted by the PI
  - Revised budgets are submitted by the BO/AO/SRO
- **Other interested parties are copied on the email**
- **Note that all *assigned* deadlines are soft: the task remains available even after the deadline**



## Renewal Proposal Products

- **A renewal application needs to describe what has been done during the current project period**
- **Progress reports contain a list of publications and other products**
- **PAMS was designed to collect the products from progress reports and append them to renewal applications—as a convenience to the PI community**
  - Before we had a full set of progress reports in PAMS, the renewal proposal products required some manual data entry
  - Every award up for renewal now has at least one progress report in PAMS, so the proposal products list is pre-populated
- **Renewal applications cannot be reviewed without their products list**



## Grants.gov Workspace is coming

- **Minimal impact for system-to-system applicants using Coeus or similar systems**
- **Legacy process of downloading Java-enabled PDF forms will be ending (with a caveat)**
  - GDG Workspace is optimized for use of online forms
  - GDG Workspace *permits* forms to be downloaded and then uploaded into a particular workspace
- **Open question: How will you work with subawardees?**
  - Could do data entry for them
  - Could give them access to a particular Workspace
  - Could download form from an FOA, email it, receive it back, and then upload it
  - Remember that subaward budget forms are tied (through back-end associations) to the specific opportunity



## Tips for Success

- **Double-check DUNS numbers, particularly for universities that use captive foundations**
- **Use one PDF file for the research narrative and all appendices**
- **Verify your math in the budget**
  - New GDG forms will auto-calculate
  - Ensure use of the correct F&A rate
  - Ensure use of negotiated fringe rate
- **For renewals and supplements: make sure the application is from the same institutional profile that currently holds the award. Please don't do any “back-door” transfers.**



## GONE Act and Closeout

- **Grants Oversight and New Efficiency (GONE) Act of 2016**
- **Objective is that all awards be closed out two years after expiration**
- **Congressional reporting of un-closed out awards**
- **SC has threatened to put awardees on invoice payment to encourage timely closeout of awards**
- **Closeout reports include financial reports, invention / patent certification, and technical report**
  - Reports have different recipients—please check your reporting instructions and checklist!
  - Please bear with us: different recipients using different information systems means that sometimes, one office doesn't know that another office received a required report



## Buy American provisions

- **Memorandum M-17-27, issued by OMB and the Department of Commerce, follows Executive Order 13788, requiring that financial assistance awards maximize the use of goods, products, and materials produced in the U.S.**
- **The Office of Science is not subject to any statutory “Buy American” provisions**
- **DOE has not issued any policy guidance or notices of proposed rulemaking**
- **SC awards usually include a clause that “It is the sense of Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.”**
- **Stay tuned for future developments**



## Standard Terms and Conditions changed April 3

- The standard research terms and conditions were updated to conform to the Uniform Guidance of 2 CFR 200
- NSF continues to host the library at <https://www.nsf.gov/awards/managing/rtc.jsp>
- DOE's specific adoption in April is at [https://www.nsf.gov/pubs/policydocs/rtc/agencyspecifics/doe\\_417.pdf](https://www.nsf.gov/pubs/policydocs/rtc/agencyspecifics/doe_417.pdf).
- DOE maintains special terms and conditions at <https://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>



# The “New” Overtime Rule

- **Labor Department rulemaking on July 6, 2015 (80 FR 38515) scheduled to take effect December 1, 2016**
- **Currently stayed by litigation in Eastern District of Texas**
- ***If the rule goes in to effect, the threshold under which employees are to be paid overtime will be \$47,476 annually***
  - Students are presumably exempt from overtime eligibility
  - Postdocs would be eligible for overtime, unless paid more than the threshold
- **Labor Department published a request for information on July 26**
- **Outcome of litigation is unknowable**
- **If the rule takes effect, it will have an impact on sponsored research**



# Public Abstract Search

<https://pampublic.science.energy.gov/WebPAMSEExternal/interface/awards/AwardSearchExternal.aspx>

The screenshot shows a web browser window displaying the U.S. Department of Energy Office of Science website. The browser's address bar shows the URL <http://science.energy.gov/>. The website header includes the U.S. Department of Energy logo and the text "Office of Science". A navigation menu contains "Programs", "Laboratories", "User Facilities", "Universities", "Funding Opportunities", "News", and "About". The "Funding Opportunities" menu is open, showing a list of options: "Grants & Contracts Support", "Award Search / Public Abstracts", "Find Funding", "Early Career Research Program", "Statement on Digital Data Management", and "Acknowledgements of Federal Support". The "Award Search / Public Abstracts" option is highlighted with a red box. Below the navigation menu, there is a featured article titled "Fermilab Scientists Discover New Four-Flavor Particle" with a "Read More" button. To the right of this article is a large image of two particles. Below the featured article are sections for "Featured Articles" and "Science Headlines", each with a "View All" link and an RSS icon. The "Featured Articles" section includes three articles: "Scientists Guide Gold Nanoparticles to Form 'Diamond' Superlattices", "New Galaxy-Hunting Sky Camera Sees Redder Better", and "UC Names Michael Witherell to Head Lawrence Berkeley National Laboratory". The "Science Headlines" section includes two headlines: "Non-Coding RNA: Antibiotic Tricks a Switch" and "Synchronized Leaf Aging in the Amazon Responsible for Seasonal Increases in Photosynthesis". The browser's status bar at the bottom shows the URL <https://pampublic.science.energy.gov/WebPAMSEExternal/interface/awards/AwardSearchExternal.aspx> and a zoom level of 100%.



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Science

# Newest PAMS Functionality

- **Progress Report Submission to DOE**
  - Submit annually using the federal-wide, standard Research Performance Progress Report (RPPR)
- **Renewal Proposal Products for DOE**
  - Update the product (publications) list during the renewal year
- **Award Modification Requests from Institutions to DOE**
  - No Cost Extensions
  - PI Change
  - PI Transfer to a New Institution
- **Proposal Withdrawals**
- **Award Folders**
- **Demographic data collection**
- **Public Abstract Search**

**PAMS URL:** <https://pamspublic.science.energy.gov>



# New Home Page for PAMS

**U.S. DEPARTMENT OF ENERGY** | Office of Science  
**Portfolio Analysis And Management System**

Home | **Tasks** | Proposals | Awards | Institutions

Welcome | Recently Accessed | Input Registration Code | Tuesday 22<sup>nd</sup> March 2016 01:54:30 PM

### Getting Started with PAMS

› Recommended Settings

#### Tasks Assigned To You

All Tasks	0
Tasks with a deadline	0
Review Proposal(s)	0
Applicant Tasks	0
Awardee Tasks	0
Due within 30 days	0
Late	0
Tasks without a deadline	0

#### Common Actions

For Applicants	For Awardees
<ul style="list-style-type: none"><li>View My Letters of Intent</li><li>View My Preproposal</li><li>View My Proposal</li><li>Submit Revised Budget</li><li>View/Respond to Solicitations</li><li>Submit Public Abstract</li></ul>	<ul style="list-style-type: none"><li>Submit Progress Report</li><li>Submit Commercialization Survey</li><li>View My Awards</li><li>Submit Renewal Proposal Products</li></ul>
For Reviewers	For All Users
<ul style="list-style-type: none"><li>Review Proposal(s)</li></ul>	<ul style="list-style-type: none"><li>Register to Another Institution</li><li>View/Update Profile</li><li>Committee of Visitors</li></ul>

# PAMS Help Desk

- **If you have trouble using PAMS, consult the “External User Guide” on the PAMS website or contact the PAMS Helpdesk**
- **PAMS Help Desk Hours:**
  - Monday through Friday, 9AM – 5:30 PM Eastern Time
  - Closed Federal Holidays
- **Email: [sc.pams-helpdesk@science.doe.gov](mailto:sc.pams-helpdesk@science.doe.gov)**
- **Telephone:**
  - (855) 818-1846 (toll free)
  - (301) 903-9610





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## Questions?

Linda Blevins  
301-903-1293

[linda.blevins@science.doe.gov](mailto:linda.blevins@science.doe.gov)

Mike Zarkin  
301-903-4946

[michael.zarkin@science.doe.gov](mailto:michael.zarkin@science.doe.gov)



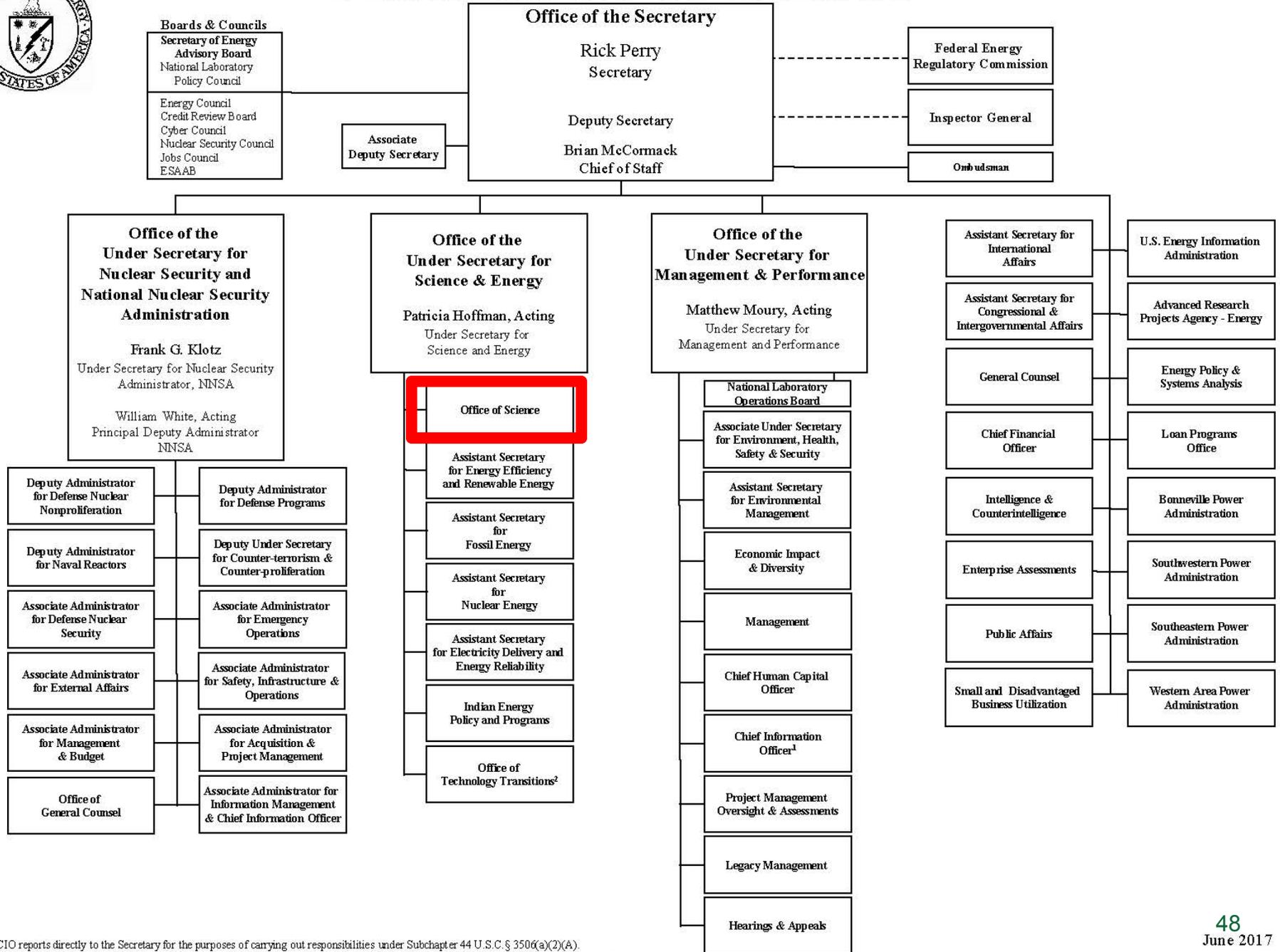
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## Extra Slides



# DEPARTMENT OF ENERGY



<sup>1</sup> The CIO reports directly to the Secretary for the purposes of carrying out responsibilities under Subchapter 44 U.S.C. § 3506(a)(2)(A).

<sup>2</sup> The director of the Office of Technology Transitions also serves as DOE's Technology Transfer Coordinator who reports to the Secretary of Energy

# The DOE Office of Science Research Portfolio

## Basic Energy Sciences

- Understanding, predicting, and ultimately controlling matter and energy flow at the electronic, atomic, and molecular levels

## Advanced Scientific Computing Research

- Delivering world leading computational and networking capabilities to extend the frontiers of science and technology

## Biological and Environmental Research

- Understanding complex biological, climatic, and environmental systems

## Fusion Energy Sciences

- Building the scientific foundations for a fusion energy source

## High Energy Physics

- Understanding how the universe works at its most fundamental level

## Nuclear Physics

- Discovering, exploring, and understanding all forms of nuclear matter



## Background: PAMS Roles and Privileges

- External roles of *PI*, *SRO*, and *Other* are labels and do not determine what a person can do.
- External privileges (rather than roles) determine what a person can do.
- Privileges can be institutional privileges or resource privileges, where a “resource” is a proposal, revised budget, award, progress report, etc.
- Three institutional privileges exist on the external site.
  - Manage Users
  - Manage Institution Profile
  - Submit to DOE (for revised budgets)
- **How do external users get institutional privileges?**
  - The *Administrative SRO/BO/AO* has these three privileges and can give them to or take them away from others at the institution.
  - Anyone with the Manage Users privilege can give or take away the privileges of others at that institution.



## Background: What is an Administrative SRO/BO/AO?

- **An Administrative SRO/BO/AO has the three master privileges for an institution:**
  - Manage Institution Profile, Manage Users, Submit to DOE
- **Every institution is different, and they can manage access to awards and submissions according to their own business process. PAMS gives them the tools to do this.**
- **Each Administrative SRO is given access to each award at the institution. They can then give access to others.**
- **Since we have been using PAMS for a while, most of our recipient institutions and some of our applicant institutions already have at least one and sometimes several Administrative SROs.**
- **If your institution does not have an Admin SRO yet, our help desk can advise you on the best way to get one.**  
**[sc.pams-helpdesk@science.doe.gov](mailto:sc.pams-helpdesk@science.doe.gov)**



## What can our awardees submit?

- 1. Progress Reports**
- 2. Renewal Proposal Products**
- 3. Award Modification Requests**
- 4. Proposal Withdrawals**



# 1. Annual Progress Reports: Research Performance Progress Report

- **Progress reports are collected in PAMS for all grants, cooperative agreements, and interagency agreements.**
- **We use the federal-wide standard Research Performance Progress Report or RPPR.**
  - <http://www.nsf.gov/bfa/dias/policy/rppr/>



## 1. Annual Progress Reports in PAMS (continued)

- **Progress Reports are due 90 days before the end of each budget period.**
- **Thirty days prior to the progress report due date, PAMS creates a task for the PI and sends to the PI an email request for a progress report.**
- **The PI completes the task in PAMS to submit the report.**
- **The program manager may approve, request changes, or disapprove the report.**
- **If a revised budget is required for the next budget period, the program manager requests it when approving the progress report.**
- **Reminders are sent on the report due date and 30 days after the report due date.**
- **If a progress report has been submitted into PAMS previously for an award, future progress report tasks will prepopulate from the previous report where possible.**



## 2. Renewal Proposal Products: This language has been added to all FOAs.

As of February 1, 2015, the Principal Investigator for any application submitted for a renewal (an addition of a project period) of an existing award will be required to submit a Renewal Proposal Products section through the Office of Science's PAMS website at <https://pamspublic.science.energy.gov>. The Principal Investigator must enter into PAMS each product created during the course of the previous project period. Types of products include publications, intellectual property, technologies or techniques, and other products such as databases or software. As soon as the renewal application is assigned to a program manager, the Principal Investigator will receive an automated email from PAMS (<[PAMS.Autoreply@science.doe.gov](mailto:PAMS.Autoreply@science.doe.gov)>) instructing him or her to navigate to the PAMS Task tab to complete and submit the Renewal Proposal Products. The submitted product list will be sent for merit review along with the Renewal Proposal. The Renewal Proposal will not be considered complete and cannot be sent for review until the product list has been submitted.



## 2. Renewal Proposal Products (continued)

- **Renewal Proposal Products are required for renewal proposals assigned to the program manager after Feb 1, 2015.**
  - They are not currently required for DOE national laboratory renewal proposals or for SBIR/STTR awards.
- **As soon as any renewal proposal is assigned to a program manager by the DOE Office of Science, PAMS creates a task for the PI and sends to the PI an email request for Renewal Proposal Products. The task is due in five days.**
  - The submitted product list will be sent for merit review along with the Renewal Proposal. The Renewal Proposal is not considered complete until the product list has been submitted.
- **The PI completes the task in PAMS to submit the products.**
- **The PM does not approve or disapprove the Renewal Proposal Products. They are part of the proposal and are accepted as submitted.**
- **If the PI does not submit the Renewal Proposal Products within five days, PAMS sends a reminder to the PI on the due date.**



## 2. Renewal Proposal Products (continued)

- **The proposal cannot be sent for review until the Renewal Proposal Products are submitted by the PI.**
- **In steady state, the PI will be updating the Renewal Proposal Products list, which will prepopulate from the progress reports submitted into PAMS.**
- **NOTE: SBIR/STTR will not use the Renewal Proposal Products functionality.**



### 3. Award Modification Requests

- **Three types of Award Modification Requests can be submitted by an awardee to DOE Office of Science through PAMS.**
  - No Cost Extension
  - Change Principal Investigator
  - Principal Investigator Transfer to a New Institution
- **Recall that the privilege for submitting award mod requests goes to the Award SRO and the Admin SROs at the institution.**
- **Requests are made from a new section of external PAMS called the Award Folder.**
- **The award program manager can concur or not concur on the request.**
- **Program manager concurrence is necessary for the request to move forward, but the Chicago contracting staff are the only ones who can formally modify an award.**



### 3. Award Modification Requests: No Cost Extension

- **The SRO/BO/AO enters the following information into PAMS:**
  - Proposed end date
  - Amount of funding still unspent
  - Justification no longer than 8,000 characters in a rich text box
- **The SRO/BO/AO submits the request to DOE Office of Science using PAMS.**
- **If the program manager concurs, the Germantown program staff members initiate the paperwork requesting a modification of the award by the Chicago procurement staff.**



### 3. Award Modification Requests: Change PI

- **The new/proposed PI must be a registered PAMS user linked to the award institution. If he or she is not, the SRO can use a PAMS function to invite him or her to create a PAMS account.**
- **The SRO/BO/AO enters the following information into PAMS:**
  - Selection of the new PI from registered users at the institution
  - Justification no longer than 8,000 characters in a rich text box
  - Information on how to handle the current PI (remove from award or leave on award but change role to Other)
  - Attached resume or CV of the new PI
- **The SRO/BO/AO submits the request to DOE Office of Science using PAMS.**
- **If the program manager concurs, the PI will be changed in PAMS but will not immediately change in Chicago. The Germantown program staff members will take steps to get the PI changed in Chicago the next time the award is modified.**



### 3. Award Modification Requests: PI Transfer to a New Institution

- **The SRO/BO/AO uses this functionality if the PI of the award is transferring to another institution and they wish to request from DOE Office of Science the transfer of funds from the current institution to the new institution (e.g., deobligation is necessary from the current institution).**
- **The SRO/BO/AO enters the following information in PAMS:**
  - Downloads from PAMS an SF-425 form, fills it out, and uploads it back to PAMS
  - Detailed description of the request no longer than 8,000 characters in a rich text box
- **The SRO/BO/AO submits the request to DOE Office of Science using PAMS.**
- **If the program manager concurs, the Germantown program staff members initiate the paperwork requesting a modification of the award by the Chicago procurement staff.**



## 4. Withdrawing a Proposal

- **An external user must be registered to the proposal as an SRO/AO/BO to withdraw it.**
  - [http://science.energy.gov/~media/grants/pdf/pams/01\\_Access\\_Proposal.pdf](http://science.energy.gov/~media/grants/pdf/pams/01_Access_Proposal.pdf)
  - Alternately, the Admin SRO/BO/AO can give out proposal privileges.
- **Withdrawal is effective immediately.**
- **A proposal can be withdrawn by the institution if it has not yet been sent for review.**
- **If it has been sent for review, withdrawal can only be done by contacting the DOE Office of Science outside of PAMS.**



# Access to content in the award folder is controlled by privileges.

The screenshot displays the PAMS interface for an award folder. The header includes the U.S. Department of Energy logo and the Office of Science. The main navigation bar contains 'Tasks', 'Proposals', 'Awards', and 'Institutions'. The 'Awards' section is active, showing a breadcrumb trail: 'Home » Awards » Browse » General'. A sidebar on the left lists 'ALL FUNCTIONS' with sub-sections: 'General', 'Award Overview' (including 'Award Home', 'Modification History', and 'Products'), 'Submissions' (including 'Modification Requests'), and 'Users' (including 'View List').

The main content area is titled 'Award Folder' and provides general information about the award. A specific award is highlighted: 'DE-SC0012555: Systems Biology Towards a Continuous Platform for Biofuels Production' with an 'Award Status: Active'. Key details include:

- Institution:** Massachusetts Institute of Technology, Cambridge, MA
- DUNS:** 001425594
- PM:** Graber, Joseph
- Most Recent Award Date:** 08/21/2014
- Number of Support Years:** 1
- PI:** Thompson, Janelle
- Current Budget Period:** 09/01/2014 - 08/31/2015
- Current Project Period:** 09/01/2014 - 08/31/2017
- Amount Awarded this Budget Period:** \$499,592.00

Below the award details, there is a 'Resources' section with a 'View' button and links for 'Last Assistance Agreement' and 'Program Contact Info'. A status bar indicates 'NUMBER OF PENDING TASKS: 0'.

The 'Useful Links' section is divided into three columns:

- Preaward:**
  - View Proposal(s)
- Post Award:**
  - View Existing Award Modification Requests
  - Create New Award Modification Request
  - View Products List
- Award Users:**
  - Approve Award Access Requests
  - Manage Award Access
  - Request Additional Award Access

The footer contains links for 'Acceptable Use Policy', 'Viewers And Players', 'Contact Us', and 'PAMS External User Guide'. It also displays 'Product: PAMS | Platform #: 2.37.0 | Build #: 1.5.0 | Environment: Training' and 'Last Login: 01/19/15 5:09:00 PM ET'. A system tray at the bottom right shows icons for search, refresh, and other utilities.

# How can an institution change its default submission privileges? Award Peer Access

- **Recall that these folks are given the default privileges (access):**
  - The PI controls Progress Reports
  - SRO/BO/AO controls Award Modification Requests
  - For SBIR/STTR, SRO/BO/AO controls all of these
- **It is possible to share the access with others, to give out privileges on an award.**
- **What are the privileges?**
  - For Progress Reports
    - View, Edit, Submit, Administer
      - These privileges can be given to others by the PI (default)
      - Requests for these privileges can be approved by PI (default)
      - Note: For SBIR/STTR, these privileges are controlled by the SRO/BO/AO rather than the PI
  - For Award Modification Requests
    - View, Create, Edit, Submit, Delete, and Administer
      - These privileges can be given to others by the SRO/BO/AO (default)
      - Requests for these privileges can be approved by SRO/BO/AO (default)
  - For the Award Level
    - View Only
      - This can be given to others by the PI or SRO/BO/AO (default)
      - Requests for this can be approved by the PI or SRO/BO/AO (default)



# Award Peer Access (continued)

- **People can request access to parts of the award folder and actions on an award.**
  - If the request pertains to progress reports, the PI approves/disapproves.
    - Exception for progress reports is SBIR/STTR, where the SRO/BO/AO does this.
  - If the request pertains to award mod requests, the SRO/BO/AO approves/disapproves.
  - If the request is for view access to the award folder, either the PI or SRO/BO/AO approves.
- **People can be granted (without a request) access to parts of the award folder and actions on an award.**
  - The PI can grant progress report access.
    - Exception for progress reports is SBIR/STTR, where the SRO/BO/AO does this.
  - The SRO/BO/AO can grant award mod request access.
  - The PI or the SRO/BO/AO can grant view access to the award folder.
- **PAMS has a set of emails that it sends from people within an institution to people within that institution. An institution can manage its own access, and DOE Office of Science program and contracting staff do need to get involved. The PAMS help desk is available to answer questions, though.**
- **When this iteration goes live, the Admin SROs will be given access to**
  - All active awards
  - Any awards that have expired within the past six months (these will be marked inactive)

