



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
**SCIENCE**

# Overview of the DOE Office of Science Graduate Fellowship Program (DOE SCGF)

Nuclear Science Advisory Committee Meeting (NSAC)  
July 30, 2010



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*Office of Workforce Development For Teachers & Scientists (WDTS)  
Office of Science, U.S. Department of Energy*

**DOE SCGF**



## Science and Technical Workforce

*Educator Programs*

### Graduate Programs

- Graduate Research Awards
  - DOE SCGF
  - Lindau Meeting with Nobel Laureates

### Undergraduate Programs

- Undergraduate Research Internships
  - SULI: Science Undergraduate Laboratory Internship
  - PST: Pre-Service Teachers
  - FaST: Faculty and Student Teams
  - CCI : Community College Institute of Science and Technology

### High School & Middle School Programs

- NSB: National Science Bowl

DOE SCGF

- FaST: Faculty and Student Teams
- DOE ACTS : DOE Academies  
Creating Teacher Scientists
- Einstein Fellowship: Albert Einstein Distinguished Educator Fellowship

SC Program Offices (ASCR, BER, FES) have had graduate fellowships; SC leadership in 2008 decided a coordinated and prestigious SC graduate fellowship program was needed for all six research offices.

## DOE SCGF Purpose:

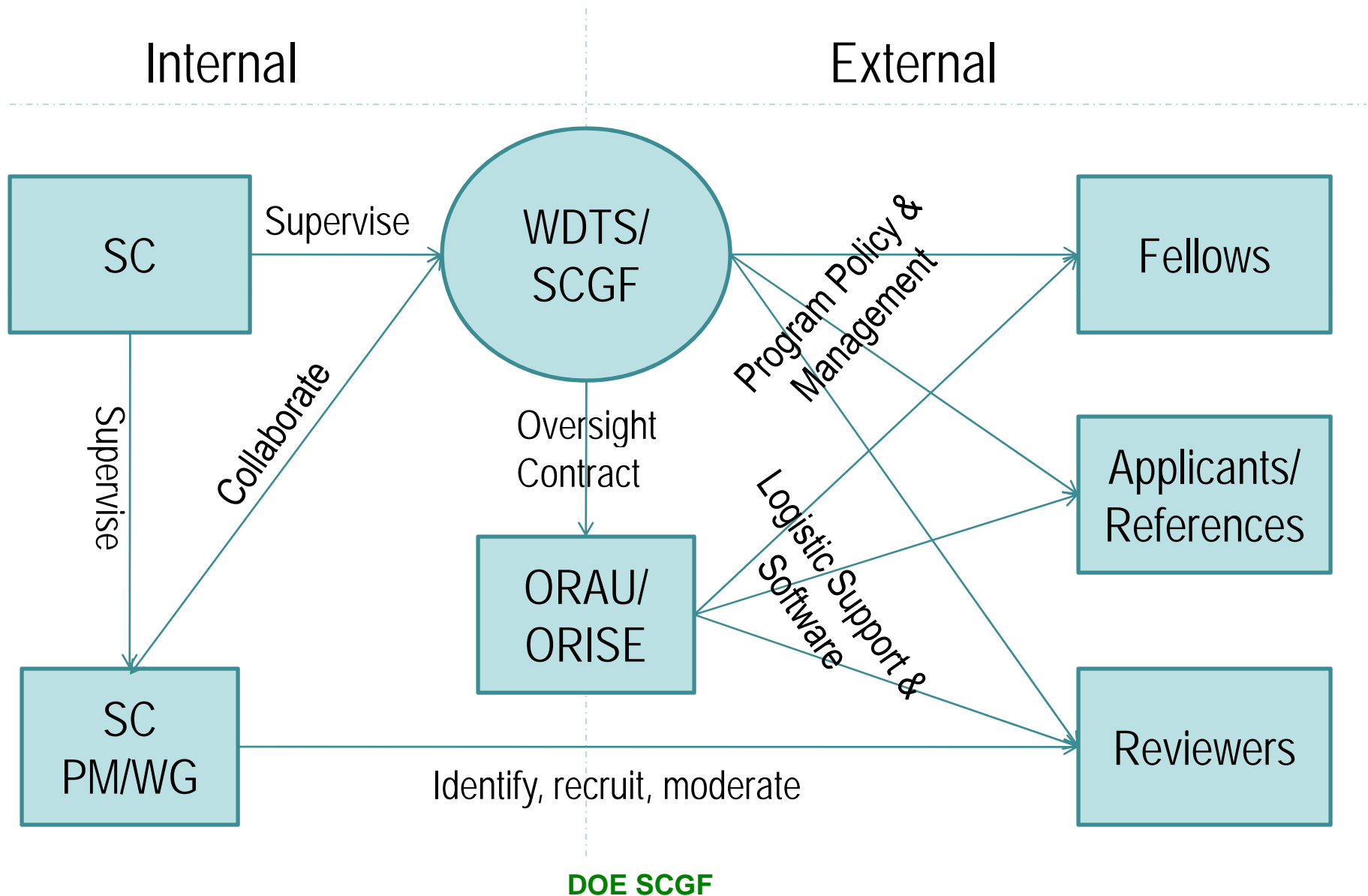
- Support outstanding students pursuing advanced degrees in basic research in areas of physics, biology, chemistry, mathematics, engineering, computational sciences, and environmental sciences relevant to the Office of Science and DOE mission, and
- Encourage the development of the next generation of scientific and technical workforce in the U.S. in order to stay at the forefront of science and innovation.

## Support Level:

- ARRA funding (\$12.5M) provided a jumpstart for the program.
  - 80 fellowships (all 3 years, \$50,500/Fellowship plus annual meeting coverage)
- WDTS FY10 budget (\$5M) provides continuity.
  - 70 fellowships (1st year of 3 years, \$50,500/Fellowship plus annual meeting coverage)
- WDTS FY11 budget request (\$15M)



# DOE SCGF Program Development & Management





# Fellowship Benefits

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The DOE SCGF is a three-year award, totaling \$50,500 per year

- \$35,000 annual living stipend
- \$10,500 towards tuition and fees
- \$5,000 annual research stipend for research supplies, travel to conferences, and travel to DOE user facilities, text books, journal subscription, computer/peripheral for graduate education.

## Annual DOE SCGF Research Conference

Each year WDTS will hold a summer research conference at one of the DOE national laboratories.

- Provide an opportunity for fellows of the DOE SCGF program to share their research with other fellows
- Invited researchers from universities and the DOE laboratories to present their leading research development sponsored by Office of Science research programs
- Include guest lectures, tours of the host laboratory, professional development seminars, and workshops on how to access the DOE user facilities and collaborate with national laboratory researchers.
- Serve as an orientation for new fellows.

August 8-10, 2010, Argonne National Laboratory, Invitation-Only



# Eligibility and Application (FY 2010)

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## Eligibility

- U.S. citizen
- An undergraduate senior or first or second year MS and Ph.D. student at the time of applying
- Pursuing an advanced degree (research-based thesis/dissertation) in areas of basic research important to the Office of Science and DOE missions (ASCR, BER, BES, FES, HEP, NP)
- Not supported:
  - joint BS/MS degree programs, DVM, MBA, MD, joint MD/PhD, JD, or joint JD/PhD degree programs.

## Application

- Application: education history, graduation education plan, honors/awards, publications, two essays (personal statement, proposed plan of research)
- Transcripts
- Three letters of recommendation



# Merit Review Criteria (FY 2010)

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## 1. Academic Performance

- a. Do the courses taken by the applicant, the applicant's course grades, publications and/or awards reflect excellent academic performance?
- b. Does the applicant have research experience or other relevant experiences that demonstrate the applicant is well prepared for graduate research?
- c. Has the applicant demonstrated the ability to work effectively in a team and independently?

## 2. Scientific and/or Technical Merit of Proposed Plan of Research

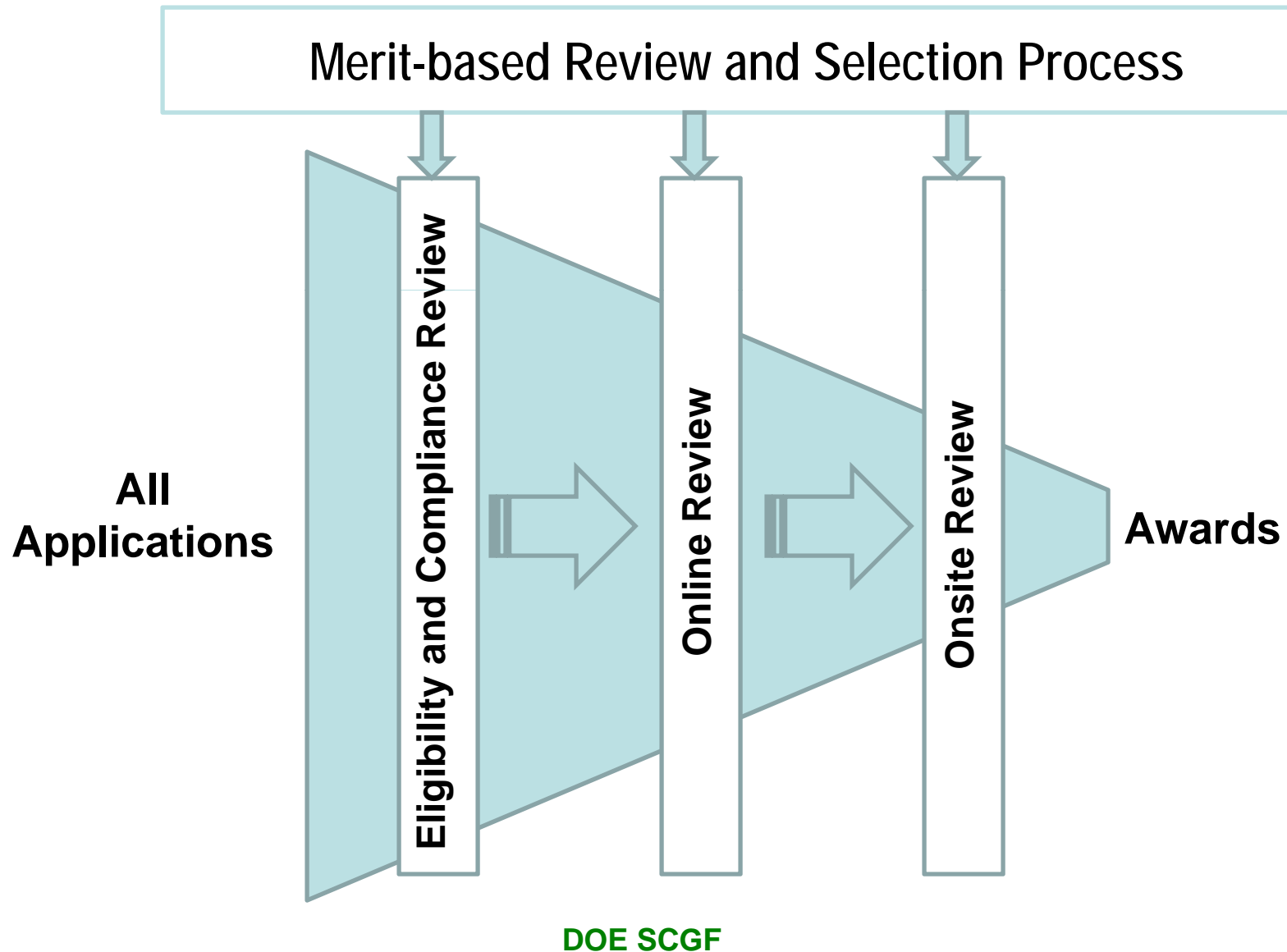
- a. Is the proposed research novel or have the potential to make meaningful contributions to the forefront of the field?
- b. Is the proposed method or approach appropriate?
- c. Does the proposed plan demonstrate a strong understanding of scientific and technical challenges in the proposed area of research?
- d. Is the proposed plan of research sufficiently relevant to the [Office of Science mission areas](#)?

## 3. Scientific and Technical Contributions Outside of the Classroom

- a. Has the applicant participated in activities that benefited the applicant's scientific professional community?
- b. Has the applicant demonstrated leadership in activities or projects related to the applicant's scientific professional community?
- c. Are the applicant's career goals and objectives well aligned with the broader goals of the Office of Science and Department of Energy?



# Review and Selection (FY 2010)







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# DOE SCGF Working Group

(Thank You!)

SC Offices	FY 2010 Competition	FY 2011 Competition
Basic Energy Sciences	Dr. Larry Rahn	Dr. Larry Rahn
Basic Energy Sciences	Dr. P. Thiyagarajan	Dr. Mike Markowitz
Basic Energy Sciences	Dr. Eliane Lessner	
Fusion Energy Sciences	Dr. Darlene Markevich	
Fusion Energy Sciences	Dr. Samuel Barish	
Fusion Energy Sciences	Dr. Nirmol Podder	Dr. Nirmol Podder
Nuclear Physics	Dr. Eugene Henry	Dr. Eugene Henry
Nuclear Physics	Dr. Lino Miceli	Dr. Lino Miceli
Advanced Scientific Computing Research	Dr. Karen Pao	Dr. Karen Pao
Advanced Scientific Computing Research	Dr. Richard Carlson	
Biological and Environmental Research	Dr. Noelle Metting	Dr. Prem Srivastava
Biological and Environmental Research	Dr. Todd Anderson	Dr. Rickey Petty
High Energy Physics	Dr. John Boger	
High Energy Physics	Dr. John Kogut	Dr. John Kogut
Workforce Development for Teachers and Scientist	Sue Ellen Walbridge	Dr. Ping Ge
Deputy Director for Science Programs	Dr. Julie Carruthers	Dr. Julie Carruthers

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## Timeline

Major Activity	Key Dates for FY 2010 Competition	<u>Estimated</u> Key Dates for FY 2011 Competition (Public announcement pending)
Program Announced, Accepting applications	September 20, 2009	August , 2010
Applications Due	November 30, 2010 (~3,300 received)	October, 2010
Online Review	Jan. 22-Feb. 21, 2010	December, 2010 – January, 2011
Onsite Review Panels	Mid-March, 2010	March, 2011
Notification	March 31, 2010	March or April , 2011



# Updates in FY 2011

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- COV in May 2010
  - As a part of WDTS office COV
  - Subcommittee of Basic Energy Science Advisory Committee (BESAC)
  
- Improvement for FY 2011
  - Lessons learned in FY 2010
  - Application improvement
  - Review improvement



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Thank you!

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

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