

Energy Policy Institute
Energy, Policy, and Related Funding Opportunities
April 14, 2011

- US DOE:** [Advanced Gasification: Improvements in existing Systems Availability, Novel CO₂ Utilization Systems, and Low Rank Coal IGCC Optimization](#)
- Due: 5/20/11
- Awards: Qty 3-10 @ \$13M total (est. \$1M for Topics 1 & 2; est. \$3M - \$8M for Topic 3)
- Description: DE-FOA-0000496: This program seeks R&D projects that will address key challenges to Integrated Gasification Combined Cycle (IGCC) commercialization with CCS related to: 1) the utilization of the carbon dioxide (CO₂) stream to reduce IGCC with CCS plant costs, 2) reduction of the cost of IGCC using low rank coals, and 3) the improvement of availability and costs for gasification plants. All three topic areas aim to produce results that reduce the Cost of Electricity (COE), while maintaining or improving plant efficiency. Requires min 20% cost share.
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- US DOE:** [Research and Development for Hydrogen Storage](#)
- Due: 4/29/11
- Awards: Qty 3-12 @ \$12M total (est \$2M-\$4M/ea)
- Description: DE-FOA-0000421: This program seeks applications to support applied R&D activities to enable the widespread commercialization of hydrogen and fuel cell technologies. The core of the Fuel Cell Technologies (FCT) Program consists of activities in applied research as well as technology development and demonstration. These activities will maintain the rapid pace of progress in fuel cells, expand the markets in which they can compete; enable the use of lower-cost hydrogen from diverse and environmentally beneficial sources; enable highly efficient, centralized production of hydrogen; reduce the cost of delivery; expand the markets for hydrogen-powered fuel cells in several applications; and improve hydrogen storage technologies.
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- US DOE:** [Transformational PV Science and Technology: Next Generation Photovoltaics II](#)
- Due: 6/23/11, Pre-Proposal due 5/9/11
- Awards: Qty 20-30 @ \$30M total (\$750K - \$1.5M/ea)
- Description: DE-FOA-0000387: This program seeks research into technologies that have the potential for much higher efficiency, lower cost, and/or more reliable performance than existing commercial and near-commercial photovoltaics and their expected incremental progress in future years. This early-stage applied research program is intended to demonstrate and prove new concepts in materials, processes, and device designs to feed into component development at the laboratory scale, with subsequent component integration, engineering scale-up, and eventual commercial production. Selected projects will have as a goal the proof-of-concept of novel materials, processes, or architectures as applied to a photovoltaic device.

US DOE: [Theoretical Research in Magnetic Fusion Energy Science](#)
Due: 5/26/11, LOI encouraged
Awards: Qty 17 @ \$3.3M total
Description: DE-FOA-0000480: This program seeks applications for theoretical research relevant to the U.S. program in magnetic fusion energy sciences. The specific areas of interest are 1) Magnetohydrodynamics; 2) Confinement and Transport; 3) Boundary Physics; 4) Plasma Heating, Non-inductive Current Drive, and Energy Particles; and 5) Atomic and Molecular Processes in Plasmas.

US DOE: [Solar Energy Grid Integration Systems – Advanced Concepts](#)
Due: 6/23/11, Pre-Proposal due 5/9/11
Awards: Qty 7 @ \$30M total (\$500K-\$2.5M/yr)
Description: DE-FOA-0000479: This program seeks projects that develop technologies in power electronics that reduce the overall photovoltaic (PV) system costs, allow high penetrations of solar technologies onto the grid (e.g. reactive power, energy storage, advanced functionalities), and enhance the performance, reliability, and safety of the PV system. In addition, projects will demonstrate the feasibility of these technologies in the field and will directly support the objectives of the SunShot Initiative, which has a goal to reduce the total costs (including installer margin) of solar energy systems by about 75 percent before the end of the decade and to make solar competitive with conventional fossil-fuel sourced generation. DOE has identified several major areas where significant cost reductions in power electronics can be made including: 1) economies of scale; 2) advanced components; 3) reliability; 4) smart grid integration and 5) understanding of system implications. There are two topics to which an application may be submitted under this FOA: 1) Smart-Grid Functionality; and 2) Using Power Electronics to Address Balance of System Costs. Cost share is required.

US DOE: [Foundational Program to Advance Cell Efficiency \(F-Pace\)](#)
Due: 6/23/11, Pre-Proposals due 5/9/11
Awards: Qty 19-21 @ \$39M total (\$1M - \$8M/ea)
Description: DE-FOA-0000492: This program seeks applied scientific research that provides the technical foundation for significant increases in solar photovoltaic (PV) cell efficiency, to enable commercial and near-commercial PV technologies to achieve \$1 per watt installed system cost targets by the end of the decade. Combined with the technical and funding resources from the National Science Foundation (NSF), this joint Funding Opportunity Announcement (FOA) for the “Foundational Program to Advance Cell Efficiency” (F-PACE) will identify and fund solar device physics and photovoltaic technology research and development that will improve PV cell performance and reduce module cost for grid-scale commercial applications. Projects funded under this FOA are intended to address identified cost and efficiency barriers through advances in the PV science knowledge base, improved materials and processes for PV cell components, and innovative approaches for closing the gap between production cell efficiency and laboratory cell efficiency, and between laboratory cell efficiency and the theoretical maximum. Three topic areas are: 1) Foundational Research on PV Sub-cell Materials and Processes; 2) Foundational PV Cell Research; and 3) Barrier Focus Teams.

US DOE: [Extreme Balance of System Hardware Cost Reductions \(BOS-X\)](#)
Due: 6/9/11, LOI due 5/9/11
Awards: Qty 21 @ \$56-64M total, \$20M total for FY 2011 (\$250K - \$5M/ea)
Description: DE-FOA-0000493: This program seeks research, development, and demonstration of new components and system designs or the development of new building code language to overcome scientific, technological, and engineering barriers to achieving safe, very low cost, and high reliability balance of system hardware. While this FOA is meant to mainly address hardware and labor costs and not “soft” costs, advancements in hardware that may result in lower soft costs (permitting, site preparation, etc.) are encouraged. Four topic areas are: 1) Transformational Building Integrated Photovoltaic (BIPV) Modules; 2) Roof and Ground Mount Innovations; 3) Transformational Photovoltaic System Designs; and 4) Development of New Wind Load Codes for PV Systems.

US DOE: [Advanced Hydropower Development](#)
Due: 6/6/11, LOI due 5/5/11
Awards:
Description: DE-FOA-0000486: This program seeks applications for the development, testing, validation, modeling, and interconnection of advanced conventional hydropower systems. This FOA seeks applications in the following Topic Areas: Topic Area 1: Sustainable Small Hydropower; Topic Area 2: Sustainable Pumped Storage Hydropower (PSH); Topic Area 3: Environmental Mitigation Technologies for Conventional Hydropower; and Topic Area 4: Advanced Conventional Hydropower System Testing at a Bureau of Reclamation Facility. Topic Area 4 is jointly funded by the Bureau of Reclamation and Department of Energy.

US DOE: [Scientific Discovery through Advanced Computing Institutes](#)
Due: 5/2/11
Awards: Qty 15 @ \$13M total (\$150K-\$1M/ea)
Description: DE-FOA-0000505: The Office of Advanced Scientific Computing Research (ASCR) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving grant applications to the Scientific Discovery through Advanced Computing (SciDAC) program for SciDAC Institutes. The development of SciDAC tools and resources by the Institutes, funded under this FOA, is intended for computational systems such as those existing and planned for at the Oak Ridge and Argonne Leadership Computing Facilities, the National Energy Research Scientific Computing Center, and similar world-class computing facilities over the next 5 years. Specific goals and objectives for the SciDAC Institutes are: Tools and resources for lowering the barriers to effectively use state-of-the-art computational systems; Mechanisms for taking on computational grand challenges across different science application areas; Mechanisms for incorporating and demonstrating the value of basic research results from Applied Mathematics and Computer Science; and Plans for building up and engaging our nations computational science research communities.

US DOE: GATE Vehicle Technology

Due: 4/18/11

Awards: Qty 5-8 @ \$5M total (up to \$1M/ea)

Description: DE-FOA-0000442: The National Energy Technology Laboratory (NETL) has issued a Funding Opportunity Announcement (FOA) entitled "Graduate Automotive Technology Education (GATE) Centers of Excellence," on behalf of the U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy Vehicle Technologies Program. Proposals will be accepted from U.S. Colleges and Universities and University-Affiliated Research Institutions with accredited graduate engineering programs. Funding from the solicitation will aid establishment and/or upgrading and expansion of "course study work and laboratory work to support a graduate engineering degree with a focus or certificate" in one of several automotive technology areas, including "Fuel Cells (hydrogen energy conversion)."

US DOE: Applications of Nuclear Science and Technology Initiative

Due: 4/25/11

Awards: \$3.5M total

Description: DE-FOA-0000450: The Office of Nuclear Physics (NP), Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving applications for initiatives in Applications of Nuclear Science and Technology, aimed at nuclear science research and development being conducted to achieve Nuclear Physics mission goals and that are also relevant to applications important to the Nation. The knowledge, data, techniques, and methods of nuclear science are utilized in a broad portfolio of applications, including energy, nuclear medicine, commerce, medical physics, space exploration, finance, geology, environmental sciences, and national security.

US DOE: New and Renewal-Supplemental Applications

Due: 9/30/11

Awards: \$800M total

Description: DE-FOA-0000411 & DE-FOA-0000412: The Office of Science of the Department of Energy hereby announces its continuing interest in receiving grant applications for support of work in the following program areas: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, and Workforce Development for Teachers and Scientists.

US DOE: Research, Development and Training in Isotope Production

Due: 4/18/11

Awards: Qty 2 @ \$3M total (\$500K-\$1.5M/ea)

Description: DE-FOA-0000448: The Office of Nuclear Physics (NP), Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving applications for research and development on alternative methods to produce and separate stable and radioactive isotopes needed for a wide variety of research and applications. The proposed research and development should provide new and innovative technologies, or improvements to existing technologies, to foster the enhanced production of isotopes that will benefit research and applications in medicine, homeland security, the physical sciences, biological and geological sciences, and industry. Applications proposing novel and effective ways to enhance education and training of personnel with

expertise to improve and develop new methods in the production, processing, purification, and distribution of stable and radioactive isotopes are invited.

USDA: Agriculture and Food Research Initiative: Foundation Program

Due: 6/8/11

Awards: \$78M total (up to \$500K/ea)

Description: AFRI Foundation: The AFRI Foundational Program is offered to support research grants in the six AFRI priority areas to continue building a foundation of knowledge critical for solving current and future societal challenges. The six priority areas are: Plant Health and Production and Plant Products; Animal Health and Production and Animal Products; Food Safety, Nutrition, and Health; Renewable Energy, Natural Resources, and Environment; Agriculture Systems and Technology; and Agriculture Economics and Rural Communities. Single-function Research Projects and Food and Agricultural Science Enhancement (FASE) Grants are expected to address one of the Program Area Priorities (see Foundational Program RFA for details).

NOTE: Separate 2011 AFRI Climate Change & 2011 AFRI Sustainable Bioenergy coming soon!

USDA: New Era Rural Technology Competitive Grants Program

Due: 4/15/11

Awards: \$875K total (\$10K-\$300K/ea)

Description: USDA-NIFA-RTP-003380: The New Era Rural Technology Competitive Grants Program will make grants available to community colleges or advanced technological centers, located in a rural areas, for technology development, applied research, and training necessary to produce graduates capable of strengthening the Nation's technical, scientific and professional workforce in the fields of bioenergy, pulp and paper manufacturing, and agriculture-based renewable energy resources.

EPA: Environmental Education Regional Grants

Due: 5/2/11

Awards: Qty 20 @ \$1.943M total (\$15K-\$100K/ea)

Description: EPA-EE-11-02: Under this solicitation EPA is seeking grant proposals from eligible applicants to support environmental education projects that promote environmental stewardship and help develop knowledgeable and responsible students, teachers, and citizens. This grant program provides financial support for projects that design, demonstrate, and/or disseminate environmental education practices, methods, or techniques as described in this notice. Cost share of 25% required.

EPA: FY 2012 SBIR Pre-Solicitation Notice

Due: 5/3/11

Awards: Qty 25-30 @ \$2.8M total (up to \$80K/ea)

Description: SOL-NC-11-00012: Eligibility limited to small biz. The Small Business Innovative Research (SBIR) is a phased process of soliciting proposals and awarding contracts for research or research and development (R&D) to meet stated agency needs or missions. During Phase I contractors shall conduct feasibility-related experimental research or R&D efforts on the following agency topics: A) Drinking Water; B) Wastewater, Stormwater, and Water Reuse; C) Innovation in Manufacturing; D) Green Building; E) Waste Monitoring; F) Greenhouse Gases and Other Climate Forcers; G) Air Pollution

Monitoring and Control; H) Sustainable Utilization of Biomass; or I) Homeland Security. Upon successful completion of an EPA SBIR Phase I contract, the Phase I contractors will receive the Phase II solicitation and may submit proposals for competitive evaluation. Funding for Phase II shall be based upon the results of Phase I, the quality and soundness of the Phase II workplan, and the commercial potential of Phase II technology.

EPA: **Extreme Event Impacts on Air Quality and Water Quality with a Changing Global Climate**

Due: 4/18/11

Awards: Qty 6 regular and 4 early career @ \$6M total (up to \$750K/ea)

Description: EPA-G2011-STAR-D1 and EPA-G2011-STAR-D2 (early career): This program seeks applications proposing the development of assessments, tools and techniques, and demonstration of innovative technologies for providing information and capacity to adequately prepare for climate-induced changes in extreme events in the context of air and water quality management. A goal is to seek a better understanding of the hazards (extreme events) and to establish ways for climate scientists, impact assessment modelers, air and water quality managers, and other stakeholders to co-produce information necessary to form sound policy in relation to extreme events and their impact on air and water quality under a changing climate. Should respond to 2 or more:

- 1) What tools or techniques are available, or can be developed, and can be demonstrated to identify changes across historical data records of extreme events that impact air or water quality? Can these tools or techniques demonstrate the linkages between observed events, past trends in events, and future predicted climate change induced extreme events that impact air or water quality?
- 2) Can we identify the likelihood of multiple extreme events occurring together in a given region that impact air or water quality? What might be the likely impacts of these (multiple) events on regional to local scale air and water quality?
- 3) How can air quality and water quality models be enhanced to capture the changes in various kinds of extreme events, likely in different regions of the country over the next several decades that impact air or water quality?
- 4) What tools or techniques can provide local and regional scale information on extreme events to policy makers and planners who are developing sustainable systems to be in place over the next several decades that affect air and water quality?

NSF: **Biotechnology, Biochemical, and Biomass Engineering**

Due: 9/15/11

Awards: Recent awards range from \$76K-\$1.565M

Description: PD-11-1491: The **Biotechnology, Biochemical, and Biomass Engineering** (BBBE) program supports fundamental engineering research that advances the understanding of cellular and biomolecular processes (*in vivo*, *in vitro*, and/or *ex vivo*) and eventually leads to the development of enabling technology and/or applications in support of the biopharmaceutical, biotechnology, and bioenergy industries, or with applications in health or the environment. Quantitative assessments of bioprocesses are considered

vital to successful research projects in the BBBE program. Fundamental to many research projects in this area is the understanding of how biomolecules and cells interact in their environment, and how those molecular level interactions lead to changes in structure, function, phenotype, and/or behavior. The program encourages proposals that address emerging research areas and technologies that effectively integrate knowledge and practices from different disciplines, and effectively incorporate ongoing research into educational activities.

NSF: **Biomaterials**

Due: 10/31/11

Awards: Recent awards range from \$3K-\$555K

Description: PD-06-7623: The Biomaterials Program supports fundamental research at the intersection of the physical, chemical, and biological sciences. Proposals focused on the preparation, characterization, structure-property relationships, and applications of biomaterials are encouraged. Emphasis is on novel design of biomaterials, including bioderived, bioinspired, biomimetic and biocompatible materials, discovery of new phenomena, and the combination of experiment with theory and/or simulation. General areas of interest include, but are not restricted to, self- and directed molecular assemblies, surfaces and interfaces, membranes and vesicles, gels and networks, carriers and drug delivery systems, smart and self-healing systems, tissue culture scaffolds, mineralization, hybrids and composites, multi-functional biomaterials such as photonic and electronic biomaterials, biomaterials for energy harvesting, conversion and storage, and biomaterials for sensors and actuators.

NSF: **Catalysis and Biocatalysis**

Due: 9/15/11

Awards: Recent awards range from \$5K-\$406K

Description: PD-11-1401: Due to the ubiquitous presence of catalysis in the many aspects of goods and services impacting our lives, the **Catalysis and Biocatalysis** program has many potential directions for funding support. Programs in this area encompass a blend of fundamental and innovative applied research drivers. All programs are hypothesis-driven, and the experimental programs aimed at resolving the issues frequently combine a variety of approaches. Chemical engineering and chemistry are intertwined. Proposals which receive funding in this Program may include catalysts and studies for Alternative Energy Systems, such as Electro- and Photocatalysis. This approach applies equally to classical *inorganic* or *carbon catalysts* as well as to *enzymatic* or *biocatalysts*. Specialized *materials synthesis* procedures may be necessary to provide active catalysts in any of the studies. Electrocatalysis and Photocatalysis studies frequently require fabrication of devices or systems which have engineering significance or even commercial potential, as the entire system needs evaluation for storage devices, fuel cells and solar energy interconversion studies. National needs suggest heightened interest be given to proposals relating to processes and catalysts for conversions of biomass to fuels and chemicals, for development of alternative energy sources and for transition to green or environmentally benign products and processes.

NSF: **Communications, Circuits, and Sensing-Systems**

Due: 9/7/11

Awards: Recent awards range from \$5K-\$412K

Description: PD-11-7564: The Communications, Circuits, and Sensing-Systems (**CCSS**) program is intended to spur visionary systems-oriented activities in collaborative, multidisciplinary, and integrative research. CCSS supports systems research in hardware, signal processing techniques, and architectures to enable the next generation of cyber systems (CPS) that leverage computation, communication, and algorithms integrated with physical domains. CCSS offers new challenges at all levels of systems integration to address future societal needs. CCSS supports innovative research and integrated educational activities in micro- and nano-systems, communications systems, and cyber systems. The goal is to design, develop, and implement new complex and hybrid systems at all scales, including nano, micro, and macro, that lead to innovative engineering principles and solutions for a variety of application domains including, but not limited to, healthcare, medicine, environmental monitoring, communications, disaster mitigation, homeland security, transportation, manufacturing, energy, and smart buildings.

NSF: **Decision, Risk and Management Sciences (DRMS)**

Due: 8/18/11

Awards: Recent awards range from \$4K-\$450K

Description: PD-98-1321: This program supports scientific research directed at increasing the understanding and effectiveness of decision making by individuals, groups, organizations, and society. Disciplinary and interdisciplinary research, doctoral dissertation research, and workshops are funded in the areas of judgment and decision making; decision analysis and decision aids; risk analysis, perception, and communication; societal and public policy decision making; management science and organizational design.

NSF: **Dynamics of Coupled Natural & Human Systems (CNH)**

Due: 11/15/11

Awards: Qty 15-18 @ \$17M total (approx \$150K-\$1.5M/ea)

Description: PD-10-612: The Dynamics of Coupled Natural and Human Systems (CNH) Program supports basic research and related activities that enhance fundamental understanding of the complex interactions within and among natural and human systems. CNH focuses on the complex interactions among human and natural systems at diverse spatial, temporal, and organizational scales. CNH seeks to advance basic knowledge about the system **dynamics** -- the processes through which systems function and interact with other systems. CNH-supported projects must examine relevant **natural AND human systems**. Proposals cannot focus solely or largely on either human systems or on natural systems. Projects also must examine the full range of **coupled** interactions and feedbacks among relevant systems.

NSF: **Economics**

Due: 8/18/11

Awards: Recent awards range from \$5K-\$608K

Description: PD-98-1320: This program supports research designed to improve the understanding of the processes and institutions of the U.S. economy and of the world system of which it is a part. This program also strengthens both empirical and theoretical economic analysis

as well as the methods for rigorous research on economic behavior. It supports research in almost every area of economics, including econometrics, economic history, environmental economics, finance, industrial organization, international economics, labor economics, macroeconomics, mathematical economics, and public finance. The program places a high priority on interdisciplinary research. Investigators are encouraged to submit proposals of joint interest to the Economics Program and other NSF programs and NSF initiative areas.

NSF: [Energy for Sustainability](#)

Due: 9/15/11

Awards: Recent awards around \$400K

Description: PD-11-7644: This program supports fundamental research and education that will enable innovative processes for the sustainable production of electricity and transportation fuels. Processes for sustainable energy production must be environmentally benign, reduce greenhouse gas production, and utilize renewable or bio-based resources that are abundant in the United States. The most abundant and sustainable source of renewable energy is the sun. The Energy for Sustainability program emphasizes two themes which harness solar energy to make fuels and electrical power: biofuels, & bioenergy, and photovoltaic solar energy. In addition, this program also supports research in wind and wave energy, sustainable energy technology assessment, and fuel cells. Current interest areas in these sustainable energy technologies are:

- Biomass Conversion, Biofuels & Bioenergy
- Photovoltaic Solar Energy
- Wind and Wave Energy
- Energy Technology Assessment
- Fuel Cells

NSF: [Energy, Power and Adaptive Systems \(EPAS\)](#)

Due: 10/7/11

Awards: Recent awards range from \$10K-\$425K

Description: PD-10-1518: The Energy, Power, and Adaptive Systems (**EPAS**) program invests in the design and analysis of intelligent and adaptive engineering networks, including sensing, imaging, controls, and computational technologies for a variety of application domains. EPAS places emphasis on electric power networks and grids, including generation, transmission and integration of renewable, sustainable and distributed energy systems; high power electronics and drives; and understanding of associated regulatory and economic structures. Topics of interest include alternate energy sources, the Smart Grid, and interdependencies of critical infrastructure in power and communications. The program also places emphasis on energy scavenging and alternative energy technologies, including solar cells, ocean waves, wind, and low-head hydro. In addition, the program supports innovative test beds, and laboratory and curriculum development to integrate research and education. EPAS invests in adaptive dynamic programming, brain-like networked architectures performing real-time learning, neuromorphic engineering, telerobotics, and systems theory. The program supports distributed control of multi-agent systems with embedded computation for sensor and adaptive networks.

EPAS provides additional emphasis on emerging areas, such as quantum systems engineering, quantum and molecular modeling and simulation of devices and systems.

NSF: **Engineering Design & Innovation**

Due: 10/1/11

Awards: Recent awards range from \$6K-\$450K

Description: PD-11-1464: The program focus is on gaining an understanding of the basic processes and phenomena underlying a holistic, life-cycle view of design where the total system life-cycle context recognizes the need for advanced understanding of the identification and definition of preferences, analysis of alternatives, effective accommodation of uncertainty in decision-making, and the relationship between data and knowledge in a digitally-supported process. The program funds advances in basic design theory, tools, and software to implement design theory and new design methods that span multiple domains, such as design for the environment and for manufacturability.

NSF: **Environmental Engineering**

Due: 9/15/11

Awards: Recent awards range from \$6K-\$440K

Description: PD-10-1440: The goal of this program is to encourage transformative research which applies scientific principles to minimize solid, liquid, and gaseous discharges into land, inland and coastal waters, and air that result from human activity, and to evaluate adverse impacts of these discharges on human health and environmental quality. Major areas of interest and activity in the program include: 1) Water and Wastewater Treatment; 2) Emerging Contaminants; 3) Water Resources Management; 4) Soil Remediation and Landfills; and 5) Air Quality.

NSF: **Environmental Sustainability**

Due: 9/15/11

Awards: Recent awards range from \$10K-\$407K

Description: PD-11-7643: This program supports engineering research that seeks to balance society's need to provide ecological protection and maintain stable economic conditions. There are four principal general research areas which are supported, but others can be proposed: Industrial Ecology, Green Engineering, Ecological Engineering, and Earth Systems Engineering.

NSF: **Infrastructure Management and Extreme Events**

Due: 10/1/11

Awards: Recent awards range from \$3K-\$810K

Description: PD-10-1638: This program focuses on the impact of large-scale hazards on civil infrastructure and society and on related issues of preparedness, response, mitigation, and recovery. The program supports research to integrate multiple issues from engineering, social, behavioral, political, and economic sciences. It supports fundamental research on the interdependence of civil infrastructure and society, development of sustainable infrastructures, and civil infrastructure vulnerability and risk reduction.

NSF: **Innovation and Organizational Sciences (IOS)**

Due: 9/3/11

Awards: Recent awards range from \$36K-\$1M

Description: PD-07-5376: This program supports scientific research that advances our understanding of organizational phenomena, including innovation and innovation management, as well as other aspects of organizational effectiveness, competitiveness, dynamics, change or evolution. Levels of analysis may include (but are not limited to) individuals, groups, organizations, cross-organizational phenomena and/or institutional arrangements. Intellectual perspectives may involve (but are not limited to) organization theory, strategy, organizational behavior, social or industrial psychology, technology and innovation management, organizational sociology, entrepreneurship, organizational economics, communication sciences, information sciences, public administration, or decision and management sciences. Research methods may span a broad variety of qualitative and quantitative methods, including (but not limited to) archival analyses, surveys, simulation studies, experiments, comparative case studies, and network analyses. Research may involve industrial, educational, service, government, not-for-profits, voluntary organizations or interorganizational arrangements. IOS-funded research must be grounded in theory and generalizable. It must advance our scientific understanding of innovation and organizations. Scientific inquiries that are relevant to real problems and organizations in generalizable ways are encouraged.

NSF: **Law and Social Sciences**

Due: 8/15/11

Awards: Recent awards range from \$6K-\$350K

Description: PD-98-1372: This program supports social scientific studies of law and law-like systems of rules, institutions, processes, and behaviors. These can include, but are not limited to, research designed to enhance the scientific understanding of the impact of law; human behavior and interactions as these relate to law; the dynamics of legal decision making; and the nature, sources, and consequences of variations and changes in legal institutions. The primary consideration is that the research shows promise of advancing a scientific understanding of law and legal process. Within this framework, the Program has an "open window" for diverse theoretical perspectives, methods and contexts for study. For example, research on social control, crime causation, violence, victimization, legal and social change, patterns of discretion, procedural justice, compliance and deterrence, and regulatory enforcement are among the many areas that have recently received program support. The program continues to solicit proposals that take account of the growing interdependence and interconnections of the world. Thus proposals are welcome that advance fundamental knowledge about legal interactions, processes, relations, and diffusions that extend beyond any single nation as well as about how local and national legal institutions, systems, and cultures affect or are affected by transnational or international phenomena.

NSF: **Political Science**

Due: 8/15/11

Awards: Recent awards range from \$4K-\$403K

Description: PD-98-1371: This program supports scientific research that advances knowledge and understanding of citizenship, government, and politics. Research proposals are expected to be theoretically motivated, conceptually precise, methodologically rigorous, and

empirically oriented. Substantive areas include, but are not limited to, American government and politics, comparative government and politics, international relations, political behavior, political economy, and political institutions. In recent years, program awards have supported research projects on bargaining processes; campaigns and elections, electoral choice, and electoral systems; citizen support in emerging and established democracies; democratization, political change, and regime transitions; domestic and international conflict; international political economy; party activism; political psychology and political tolerance.

NSF: Research Coordination Networks (RCN) - Science, Engineering and Education for Sustainability

Due: 5/24/11

Awards: Qty 7 @ \$7.5M-\$17.5M total (up to \$750K)

Description: PD-11-531: The goal of the RCN program is to advance a field or create new directions in research or education. The Science, Engineering and Education for Sustainability track focuses on interdisciplinary topics that will advance sustainability science, engineering and education as an integrative approach to the challenges of adapting to environmental, social and cultural changes associated with growth and development of human populations, and attaining a sustainable energy future.

NSF: Science and Technology Centers: Integrative Partnerships

Due: 5/30/11

Awards: Qty 6 @ \$30M total (\$1.5M-\$5M/ea)

Description: PD-11-522: The Science and Technology Centers (STC): Integrative Partnerships program supports innovative, potentially transformative, complex research and education projects that require large-scale, long-term awards. STCs conduct world-class research through partnerships among academic institutions, national laboratories, industrial organizations, and/or other public/private entities, and via international collaborations, as appropriate...Centers must undertake activities that facilitate knowledge transfer, i.e., the exchange of scientific and technical information with the objective of disseminating and utilizing knowledge broadly in multiple sectors. Preliminary proposals and invited full proposals may be submitted by U.S. academic institutions that have research and degree-granting education programs in any area of research supported by NSF.

NSF: Science, Technology and Society (STS)

Due: 8/1/11

Awards: Qty 40 @ \$9M total

Description: PD-08-553: STS considers proposals that examine historical, philosophical, and sociological questions that arise in connection with science, engineering, and technology, and their respective interactions with society. STS has four components: 1) Ethics and Values in Science, Engineering and Technology (EVS); 2) History and Philosophy of Science, Engineering and Technology (HPS); 3) Social Studies of Science, Engineering and Technology (SSS); and 4) Studies of Policy, Science, Engineering and Technology (SPS).

NSF: **Social-Computational Systems (SoCS)**
Due: 11/11/11
Awards: Qty 15-20 @ \$10M total (up to \$750K/ea)
Description: PD-10-600: This program seeks to reveal new understanding about the properties that systems of people and computers together possess, and to develop theoretical and practical understandings of the purposeful design of systems to facilitate *socially intelligent computing*. By better characterizing, understanding, and eventually designing for desired behaviors arising from computationally mediated groups of people at all scales, new forms of knowledge creation, new models of computation, new forms of culture, and new types of interaction will result. Further, the investigation of such systems and their emergent behaviors and desired properties will inform the design of future systems. The SoCS program will support research in socially intelligent computing arising from human-computer partnerships that range in scale from a single person and computer to an Internet-scale array of machines and people. The program seeks to create new knowledge about the capabilities these partnerships can demonstrate - new affordances and new emergent behaviors, as well as unanticipated consequences and fundamental limits. The program furthermore seeks to build models informed by disciplines ranging from computational complexity theory to behavioral sciences that will enable a scientific understanding of fundamental limits for such systems. The program seeks to foster new ideas that support even greater capabilities for socially intelligent computing, such as the design and development of systems reflecting explicit knowledge about people's cognitive and social abilities, new models of collective, social, and participatory computing, and new algorithms that leverage the specific abilities of massive numbers of human participants.

NSF: **Sociology**
Due: 8/15/11
Awards: Recent awards range from \$3K-\$1.5M
Description: PD-98-1331: This program supports basic research on all forms of human social organization -- societies, institutions, groups and demography -- and processes of individual and institutional change. The Program encourages theoretically focused empirical investigations aimed at improving the explanation of fundamental social processes. Included is research on organizations and organizational behavior, population dynamics, social movements, social groups, labor force participation, stratification and mobility, family, social networks, socialization, gender roles, and the sociology of science and technology.

EDA: **Global Climate Change Mitigation Incentive Fund Program**
Due: 6/10/11
Awards:
Description: EDA10142010EDAP: This program provides support for projects that foster economic competitiveness while enhancing environmental quality. Support is provided for a variety of sustainability focused projects, including renewable energy end-products, the greening of existing manufacturing functions or processes, and the creation of certified green facilities. Priority will be given to projects that create jobs through and increase private capital investment in initiatives to limit the nation's dependence on fossil fuels, enhance energy efficiency, curb greenhouse gas emissions, and protect natural systems.

EDA: [i6 Green \(clean tech/innovation acceleration, economy, jobs, environment\)](#)
Due: 5/26/11; LOI due 5/2/11
Awards: Qty 6 @ \$6M total (up to \$1M/ea), plus supplemental awards
Description: I6GREENEDA031011: i6 Green is a multi-agency competition that focuses on the nexus between economic development and environmental quality, spotlighting the best ideas that contribute to a vibrant, innovative clean economy. EDA solicits competitive applications to encourage and reward innovative, ground-breaking ideas that accelerate technology commercialization and new venture formation across the United States. i6 Green will reward communities that utilize Proof of Concept Centers to accelerate technology-led economic development in pursuit of a clean economy. Applicants must address a persistent problem or an unaddressed opportunity with a sense of urgency and demonstrate how an i6 Green Proof of Concept Center will remove existing road blocks and spark sustainable economic opportunities in the applicant's region. Applicants will be expected to incorporate a credible plan to access additional resources and demonstrate how the proposed effort will be sustained by a well-qualified team and partners. Eligibility is relatively broad including most levels of government, higher education institutions and non-profits.

ERDC: [Broad Agency Announcement](#)
Due: 1/31/12
Awards: Up to 10 awards anticipated.
Description: W912HZ-11-BAA-02: ERDC seeks research for Energy Technology Assessments of Army Installations; Innovative Energy Efficiency and Energy Security Initiatives; Fuel Cell Technology Advancements; Industrial Process Optimization; Innovative Electrical Power Architecture for Energy Surety; and much more. ERDC supports conferences and symposia in special areas of science that bring experts together to discuss recent research or educational findings or to expose other researchers or advanced graduate students to new research and educational techniques.

Surdna: [Sustainable Environments \(Climate Change, Green Economy, Transportation & SmartGrowth\)](#)
Due: Anytime
Awards: Recent awards (Qty 26 in 2010 in Climate Change, Green Economy, & Trans/Smart Growth) range from \$40K-\$450K
Description: The Surdna Foundation seeks to foster just and sustainable communities throughout the United States. The Foundation's Sustainable Environments work is grounded in an understanding of the interplay between the environment, the economy, and social equity. Through this category, grants are provided to nonprofit organizations in three key priority areas that aim to transform how Americans work, consume, and move:

- 1) Stabilizing Climate Change at the Local, State and National Level. We focus on programs that will reduce greenhouse gas emissions and create economically competitive, sustainable, and equitable communities by a) mobilizing new constituencies to make the case that climate change is more than an environmental issue and to promote policies and individual actions to address it; b) advancing state, regional, and city policy and leadership to create and implement comprehensive plans that address climate change; and c) accelerating energy

efficient solutions to conserve energy, reduce emissions and spur economic development and job creation.

- 2) Spurring the Transition to a Green Economy. The Surdna Foundation is interested in shifting investments toward the new energy economy and demonstrating the benefits, including job creation, economic development and greater social equity by a) creating good, green jobs by scaling up efforts to retrofit our nation's residential and commercial buildings; b) growing green industry and revitalizing our manufacturing sector through policies and investments that drive the production of wind turbines, solar panels, and transit systems; and c) fostering green jobs policies and training to create pathways out of poverty. This includes improving access to good jobs.
- 3) Transportation Systems and Encouraging Smart Growth. Over time, we seek to alter the prevailing land use and transportation systems in the U.S. through federal, state, and local policies that encourage smart growth, twenty-first century transportation systems, and sustainable, equitable communities. Areas of focus include a) reducing automobile dependency through federal, state, and regional policies, which foster infrastructure investments that improve transportation networks, increase mobility and accessibility, and reduce vehicle miles traveled and greenhouse gas emissions; b) supporting state and city leaders in the development and implementation of innovative solutions and the transfer of best practices that create environmental, economic, and social benefits; and c) strengthening public involvement and accountability to ensure equitable transportation and planning practices.