

Energy Policy Institute  
Energy, Policy, and Related Funding Opportunities  
June 17, 2011

**State Dept:** [Energy and Climate Partnership of the Americas \(ECPA\)](#)

Due: 7/1/11

Awards: Qty 5 @ \$5.5M total (\$500K-\$1M/ea)

Description: WHA-10-ECPA-060311-1: Proposals should outline program concepts and capacity to advance the Energy and Climate Partnership of the Americas (ECPA), which promotes cooperation on renewable energy, energy efficiency, cleaner fossil fuels, infrastructure, energy poverty, sustainable land use and forests, and adaptation issues in Canada, Latin America, and the Caribbean. The Bureau of Western Hemisphere Affairs objectives in supporting these efforts are to strengthen policy and regulatory frameworks in support of clean energy; accelerate the uptake and deployment of renewable and energy efficient technologies; promote regional cooperation and integration; fight energy poverty by increasing access to modern energy services; advance countries abilities to reduce emissions from deforestation and forest degradation; and promote resilience to the impacts of climate change on vulnerable countries.

**US DOE:** [Geothermal Technology Advancement for Rapid Development of Resources in the US](#)

Due: 7/15/11

Awards: Qty 3-7 per topic area @ \$70M total (up to \$5M/ea, depending on topic area)

Description: DE-FOA-0000522: This program is requesting proposals for work that improves the performance and reduces the cost of drilling, reservoir engineering, and characterization technologies to identify and develop sustainable reservoirs at lower costs. Applicants must provide cost analysis of their proposed technology using the Geothermal Electric Technologies Evaluation Model (GETEM). There are six topics in this FOA: 1) Advanced Exploratory Drilling Technologies, 2) Advanced Well Completion Technologies, 3) Zonal Isolation, 4) Observation Tools and Data Collection System for Reservoir Stimulation, 5) Geophysical Exploration Technologies, and 6) Geochemistry/Rock-Fluid Interactions.

**US DOE:** [Industrial Assessment Centers](#)

Due: 7/19 (LOI); 8/2 (Full Proposals)

Awards: Qty 20-30 @ \$6.25M/yr for 5 years total (\$200K-\$300K/yr to each Center)

Description: DE-FOA-0000490: This program will result in the selection of 20 to 30 universities as "Industrial Assessment Centers" (IACs) based on a competitive selection process. The IAC program is a major workforce development initiative aimed at creating the next generation energy engineers possessing a unique mixture of engineering and energy management expertise, combined with hands-on experience obtained by working directly with small and medium sized industrial and manufacturing facilities across the country. Each IAC will provide extensive training for undergraduate and graduate engineering students in industrial processes, energy assessment procedures, and energy management principles. Led by IAC-related faculty and staff, these IAC students will perform energy assessments for small and medium sized manufacturers in their geographic region, which will result in energy savings, waste reduction, and sustainability and productivity improvements for the manufacturers and real-world experience for the students. Applicant centers are encouraged to identify sources of

leverage, both financial and otherwise. They should explore innovative methods to maximize student training and experience, increase their technical knowledge, energy savvy, business sense, as well as their understanding of industrial supply chains, sustainability issues, and management systems.

**US DOE:** [Smart Grid Capable Electric Vehicle Supply Equipment \(EVSE\)](#)

Due: 7/18/11

Awards: Qty 6 @ \$12M total (up to \$3M ea)

Description: DE-FOA-0000554: The objective of this FOA is to develop and make available to the market in three years, smart-grid capable EVSE at half of the current costs of commercially available EVSE with comparable functionalities. The proposed EVSE development effort should target one of the two Areas of Interest identified below, corresponding with L2 smart grid-capable EVSE for residential use or for non-residential use, respectively. Area of Interest 1: L2 Smart Grid-Capable EVSE for Residential Use; Area of Interest 2: Level 2 Commercial Grade, Smart Grid-Capable EVSE for Non-Residential Use.

**US DOE:** [SunShot: Rooftop Solar Challenge to Induce Market Transformation](#)

Due: 7/18 (LOI); 8/31 (Full Proposals)

Awards: Qty 25 @ \$12.5M total (\$250K-\$1M/ea, average anticipated award is \$500K)

Description: DE-FOA-0000549: This program (“The Challenge”) provides an opportunity for local government teams to partner with relevant stakeholders and make the changes necessary to improve market conditions for rooftop PV in major regions of the country. The Challenge focuses specifically on rooftop PV in the residential and commercial sectors, and emphasizes streamlined and standardized permitting and interconnection processes. Participants under the Challenge are intended to be regional or statewide teams of local governments, or large single jurisdictions, or Indian Tribes representing a minimum population of 500,000. Phase 1 action areas to address are 1) Permitting & Interconnection Processes, 2) Net Metering and Interconnection Standards, 3) Financing Options, and 4) Planning & Zoning. Minimum 10% cost share required (Phase 1).

**US DOE:** [Clean Cities Accepting Applications for Projects in National Parks](#)

Due: No Deadline is Given

Awards: No Award info available

Description: The U.S. Department of Energy's Clean Cities program and the U.S. Department of Interior's National Park Service are accepting project ideas for transportation-related projects using renewable and alternative fuels, electric drive and advanced vehicles, and fuel saving initiatives. Interested applicants may submit a one-page Project Idea Form. Proposers whose ideas are selected for further consideration will be asked to submit an in-depth project proposal. NPS units or Clean Cities coalitions may submit project ideas. Individual NPS units must work with one or more Clean Cities coalitions during the project-development process.

**US DOE:** [Plants Engineered to Replace Oil \(PETRO\)](#)

Due: 5/19/11 (Concept Papers); 7/18 (Full Proposals)

Awards: Qty 3-8 @ \$30M total (\$250K-\$15M/ea)

Description: DE-FOA-0000470: Technologies for low-cost production of advanced biofuels are limited by the small amount of available energy captured by photosynthesis and the

inefficient processes used to convert plant matter to fuel. PETRO aims to create plants that capture more energy from sunlight and convert that energy directly into fuels. ARPA-E seeks to fund technologies that optimize the biochemical processes of energy capture and conversion to develop robust, farm-ready crops that deliver more energy per acre with less processing prior to the pump. If successful, PETRO will create biofuels for half their current cost, finally making them cost-competitive with fuels from oil. Min cost share of 5% required.

**US DOE:** **Green Electricity Network Integration (GENI)**

Due: 5/19/11 (Concept Papers); 7/18 (Full Proposals)

Awards: Qty 7-14 @ \$30M total (\$250K-\$10M/ea)

Description: DE-FOA-0000473: Recent advances in computation, networking, and grid monitoring have shed light on potential ways to deliver electricity more efficiently and reliably. Today, however, approximately one out of every five electricity dollars is lost to power outages and 30 percent of the grid's hardware needs replacing. ARPA-E seeks to fund innovative control software and high-voltage hardware to reliably control the grid network, specifically: 1) cost-optimizing controls able to manage sporadically available sources, such as wind and solar, alongside coal and nuclear, and 2) resilient power flow control hardware – or the energy equivalent of an internet router – to enable automated, real-time control of grid components. Min cost share of 5% required.

**US DOE:** **Solar Agile Delivery of Electrical Power Technology (SOLAR ADEPT)**

Due: 5/19/11 (Concept Papers); 7/18 (Full Proposals)

Awards: Qty 2-5 @ \$10M total (\$250K-\$5M/ea)

Description: DE-FOA-0000474: SunShot leverages the unique strengths across DOE to reduce the total cost of utility-scale solar systems by 75 percent by 2017. If successful, this collaboration would deliver solar electricity at roughly 6 cents a kilowatt hour – a cost competitive with electricity from fossil fuels. This would enable solar electricity to scale without subsidies and make the U.S. globally competitive in solar technology. ARPA-E's portion of the collaboration is the Solar ADEPT program, which focuses on integrating advanced power electronics into solar panels and solar farms to extract and deliver energy more efficiently. Specifically, ARPA-E aims to invest in key advances in magnetics, semiconductor switches, and charge storage, which could reduce power conversion costs by up to 50 percent for utilities and 80 percent for homeowners. Min cost share of 5% required.

**US DOE:** **High Energy Advanced Thermal Storage (HEATS)**

Due: 5/19/11 (Concept Papers); 7/18 (Full Proposals)

Awards: Qty 10-20 @ \$30M total (\$250K-\$10M/ea)

Description: DE-FOA-0000471: More than 90% of energy technologies involve the transport and conversion of thermal energy. Therefore, advancements in thermal energy storage – both hot and cold – would dramatically improve performance for a variety of critical energy applications. ARPA-E seeks to develop revolutionary cost-effective thermal energy storage technologies in three focus areas: 1) high temperature storage systems to deliver solar electricity more efficiently around the clock and allow nuclear and fossil baseload resources the flexibility to meet peak demand, 2) fuel produced from the sun's heat, and 3) HVAC systems that use thermal storage to dramatically improve the driving range of electric vehicles. Min cost share of 5% required.

**US DOE: Rare Earth Alternatives in Critical Technologies for Energy (REACT)**

Due: 5/19/11 (Concept Papers); 7/18 (Full Proposal)

Awards: Qty 11-16 @ \$30M total (\$250K-\$10M/ea)

Description: DE-FOA-0000472: Rare earths are naturally-occurring minerals with unique magnetic properties that are used in many emerging energy technologies. As demand for these technologies continues to increase, rare earths are rapidly becoming more expensive due to limited global supply – prices of many have increased 300–700% in the past year. Rising rare earth prices have already escalated costs for some energy technologies and may jeopardize the widespread adoption of many critical energy solutions by U.S. manufacturers. ARPA-E seeks to fund early-stage technology alternatives that reduce or eliminate the dependence on rare earth materials by developing substitutes in two key areas: electric vehicle motors and wind generators. Min cost share of 5% required.

**US DOE: SunShot Initiative: Reducing Market Barriers and Non-Hardware Balance of System Costs**

Due: 5/20/11 (LOI); 6/23/11 (Full Proposal)

Awards: Qty 3-10 @ \$15M total (\$750K-\$8M/ea)

Description: DE-FOA-0000520: This FOA seeks to reduce key market barriers and achieve PV BOS cost reductions consistent with the SunShot goal. This FOA is comprised of three Topic Areas that support the Market Transformation mission of the SETP, which is to establish a national market for PV at the residential, commercial and utility scales through reductions in costs and improvements in business processes and market conditions. Topic Area 1 covers Codes, Standards and Processes; Topic Area 2 covers Software Design Tools and Databases; and Topic Area 3 covers Regulatory and Utility Solutions.

**US DOE/USDA: Biomass Research and Development Initiative (BRDI)**

Due: 5/31/11 (Pre-App); 10/04/11 (Invited Full App)

Awards: Qty 6-8 @ \$30M total (\$3M-\$7M/ea, average in 2010 was \$5.8M/ea)

Description: DE-FOA-0000510: BRDI seeks projects that integrate all three legislatively mandated technical areas: (A) Feedstocks development, (B) Biofuels and biobased products development, and (C) Biofuels and biobased products development analysis. The intent of requiring integration is to encourage a collaborative problem-solving approach to all studies funded under BRDI, to facilitate formation of consortia, identify and address knowledge gaps, and accelerate the application of science and engineering for the production of sustainable biofuels, bioenergy, and biobased products. USDA is also specifically seeking projects that are farm and industrial demonstration(s) and analysis of using biodiesel to improve commercial grain and cellulosic ethanol production systems. DOE anticipates funding one to two awards and USDA/National Institute of Food and Agriculture (NIFA) anticipates funding five to six awards. Minimum cost share of 20% (R&D) and 50% (Demonstrations) required.

**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: 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:** **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.

**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!

**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: Jan 15, 2012 – Feb 17, 2012  
Awards: Recent awards around \$400K  
Description: PD-12-7644: 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 Energy
- Advanced Batteries for Transportation

**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.

**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.