

# Alternative Funding for Alternative Energy

*Forrest Blocker, Ph.D.  
Shauna Farr-Jones,  
Ph.D.  
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- Agencies and sources of funds
- Registration issues
- Administrative Section

The logo for BioE2E features the text "bioe2e" in a lowercase, serif font. The "bio" is in black, "e2" is in purple, and the final "e" is in black. There are three small purple dots above the "e2" and one above the final "e".The logo for QB3 features the text "qb3" in a large, blue, serif font. Below it, the text "ucb·ucsc·ucsf" is written in a smaller, blue, sans-serif font.

# Green and Clean Granting Agencies

ARPA-E



Action Item

# Search for Opportunities

Info	URL
Gov. grants search	<a href="http://grants.gov/applicants/find_grant_opportunities.jsp">http://grants.gov/applicants/find_grant_opportunities.jsp</a>
NIH grants awarded	<a href="http://crisp.cit.nih.gov">http://crisp.cit.nih.gov</a>
SBIR news & links	<a href="http://www.win-sbir.com">http://www.win-sbir.com</a>
Federal business	<a href="https://www.fbo.gov">https://www.fbo.gov</a>
Grant links & info	<a href="http://www.zyn.com">http://www.zyn.com</a>
Useful grant info	<a href="http://www.pharmstatus.com">http://www.pharmstatus.com</a>
Agency facts	<a href="http://www.aaas.org/spp/rd">http://www.aaas.org/spp/rd</a>
Grants	<a href="http://grants.net">http://grants.net</a>
Deadlines	<a href="http://sciencecareers.sciencemag.org/funding/deadline_watch">http://sciencecareers.sciencemag.org/funding/deadline_watch</a>

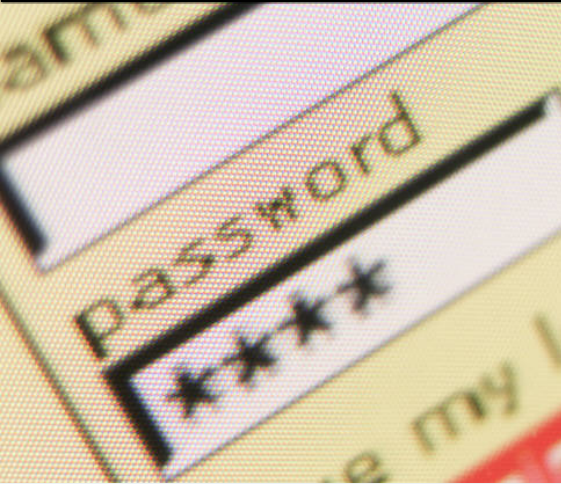


# SBIR Eligibility

- SBA Defined – not agency specific
- For-profit U.S. business firm
- 51% U.S. owned by individuals
- Located in the U.S.
- 500 or fewer employees, including affiliates
- [www.SBA.gov](http://www.SBA.gov)



# Get registered



*TEST ALL  
PASSWORDS  
AND ACCESS  
BEFORE THE  
DAY OF THE  
SUBMISSION*

- **Get a DUNS number**
  - <http://fedgov.dnb.com/webform/pages/CCRSearch.jsp>
- **Register with CCR.gov**
  - <http://www.ccr.gov>
  - CAGE code , MPIN, and ePOC username and password
- **Register with Grants.gov**
  - [http://grants.gov/applicants/get\\_registered.jsp](http://grants.gov/applicants/get_registered.jsp)
  - user name and password
- **Register with agency if appropriate:**
  - NSF - <https://www.fastlane.nsf.gov/n1/N1AddInst.html>
  - DOE - <http://e-center.doe.gov>
  - ARPA-E - <https://www.fedconnect.net/Fedconnect>
  - NIH - <https://commons.era.nih.gov/commons>



# NIH

- Energy Efficiency and Renewable Energy System Technology Research and Development
- SBIR
- Due Aug. 5 again on Dec. 5
- <http://grants.nih.gov/grants/guide/pa-files/PA-09-100.html>



# NIH - Examples of topics

- Alternative energy efficient separation techniques
  - membranes, adsorption, alternatives to distillation
- Bioenergy technologies
  - biomass conversion biorefinery innovation & integration, novel marine, plant, algal & microbial bioenergy sources, hydrogen production, & methods for distributed bioenergy production
- Metabolic engineering for production of co-products into biomass crops
- Innovative methods to improve cell culture technology
  - fermentation process development
- Genomics and proteomic characterization to understand efficiency of biofuel synthesis
- Carbohydrate research for improved production of biofuels
  - cellulosic ethanol
- Enzyme technology
- Recombinant DNA technology
- Metabolic engineering



# DoD

- Next one due June 17, multiple deadlines each year
- Army, Navy, DARPA etc.
- SBIR contract
  - P1 \$100K P2 \$750K
- Highly specific areas
- [www.acq.osd.mil/osbp/sbir/solicitations](http://www.acq.osd.mil/osbp/sbir/solicitations)



# DoD – Examples of topics

A09-116	Man Portable Desalination System
A09-058	ZnO alloy based LEDs and laser diodes
09-086	Refillable Liquid Fuel Cartridges for Portable Methanol Fuel Cell Systems
N092-107	Power Harvesting Systems for Use with In-water Instrumentation
SB092-017	Advanced Solar Energy Collection & Storage



# EPA

- Annual SBIR contract solicitation with a closing date in May
- Other (non-SBIR) solicitations
- [www.epa.gov/epahome/grants.htm](http://www.epa.gov/epahome/grants.htm)
- [www.epa.gov/ogd/grants/how\\_to\\_apply.htm](http://www.epa.gov/ogd/grants/how_to_apply.htm)



# EPA – Examples of topics

- Green Building Materials and Systems
- Innovation in Manufacturing
- Nanotechnology
- Drinking Water and Water Monitoring
- Biofuels



# NSF

- SBIR once a year in June
- Online submission FastLane **OR** grants.gov
- [www.fastlane.nsf.gov/fastlane.jsp](http://www.fastlane.nsf.gov/fastlane.jsp)



# NSF – Examples of topics

- NSF Broad Area Topics are:
  - Biotech and Chemical Technologies (BC)
  - Education Applications (EA)
  - Information and Communication Technologies (IC)
  - Nanotechnology, Advanced Materials and Manufacturing (NM)



# NSF Solicitation

- **Biotechnology, Biochemical, and Biomass Engineering (PD 09-149)**
- research that advances the fundamental knowledge base of cellular and biomolecular processes
- Due Sept 15<sup>th</sup>
- Up to \$120K
- [www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501024](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501024)



# NSF Solicitation

- Biomaterials (PD-06-7623.)
- Multi-functional biomaterials such as photonic, electronic, energy harvesting, conversion and storage, sensors and actuators
- Due Oct. 31
- [www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=13699](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13699).



# State of California

Budget?



# State of California – Programs

- Energy Innovations Small Grant Program
- <http://www.energy.ca.gov/research/innovations/index.html>
- Topics include renewables generation
- Small, up to \$95,000
- Deadlines vary with topics



# State of California - Programs

- UC Discovery
- Collaboration with UC academic
- Pays overhead
- [www.ucdiscoverygrant.org](http://www.ucdiscoverygrant.org)
- Next deadline, June 22
- Twice yearly



# ARPA-E

- <http://arpa-e.energy.gov>
- Cover letter, concept paper, submission
  - Concept paper due date moved to TODAY (June 10)
- \$500K-\$20M
- Mission Areas:
  - Reductions in imported energy
  - Reductions in energy-related emissions, including greenhouse gases
  - Improvement in energy efficiency of any economic sector
  - Technological lead for US in advanced energy technologies



# USDA

- [http://www.usda.gov/wps/portal/?navid=USDA\\_ARRA](http://www.usda.gov/wps/portal/?navid=USDA_ARRA)
- \$28B including research for ARRA
- Some opportunities are for businesses – RFA dependent – look for CSREES for example
- Topics include:
  - Developing water and waste facilities
  - Nanoscale Science and Engineering for Agriculture and Food Systems
  - Emerging and New Plant & Animal Diseases



# Others Federal Sources

- The National Renewable Energy Laboratory
  - RAT-9-99013
  - development of prototype photovoltaic
  - LOI in support of DOE
  - 6 to 10 subcontracts, up to \$3M each
  - [http://www.nrel.gov/business\\_opportunities/solicitations\\_rfps.html](http://www.nrel.gov/business_opportunities/solicitations_rfps.html)
- Air Force Research Laboratory
  - BAA-0901-TYN-LGCB-Det1Action
  - bioreactor that utilizes a municipal waste stream of degradable organic waste
  - Anticipated total program funding is \$5.832M



# Resources

- Policy updates
  - <http://www.recovery.gov>
- Industry news
  - <http://www.biofuelsdigest.com>
  - <http://www.greentechmedia.com>
- Legislation
  - Waxman-Markey bill
  - American Clean Energy and Security Act
  - [http://energycommerce.house.gov/index.php?option=com\\_content&task=view&id=1560](http://energycommerce.house.gov/index.php?option=com_content&task=view&id=1560)



# Tips for writing a successful grant

*There is no grantsmanship that will turn a bad idea into a good one, but there are many ways to **disguise** a good one...*

- William Raub,  
former deputy  
director, NIH

- Make your proposal
  - competitive
  - persuasive
  - easy to understand
  - interesting
- Anticipate questions & criticisms
  - present answers and alternatives

