

Presidential Priorities

- Energy and climate
- Cyber-infrastructure
- Nanotechnology
- Convergence of biology and the physical sciences/engineering
- Innovation
- Crosscutting priorities
 - Increasing support for high-risk/high-return research
 - Tripling the number of GRFs
 - Increasing support for early investigators



FY 2010 NSF Initiatives

- Climate Change Science Program
- National Nanotechnology Initiative (NNI)
- Networking and Information Technology R&D

- Climate Research
- Cyber-enabled Discovery and Innovation (CDI)
- Science and Engineering Beyond Moore's Law (SEBML)



Other ENG Investments

- **Sustainability**
 - RE-ENERGYSE: REgaining our ENERGY Science and Engineering Edge, in collaboration with Dept. of Energy
- **Bioeconomy**
- **Innovation**



ENG Update

- AdCom business
- New ENG staff
- Budget and trends
- Priorities
- **Emerging areas**



OSTP Interest in ENG-related Areas

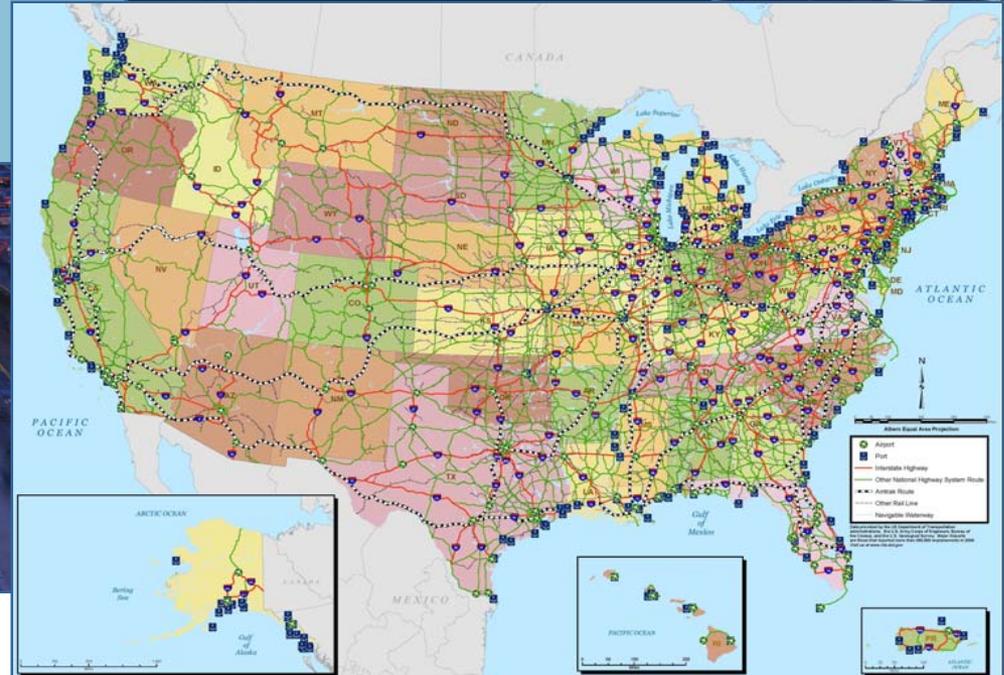
- Simulation Based Engineering and Science
- Nano – EHS
- Science and Engineering Beyond Moore's Law
- The Bio-Science-Engineering Interface
- **INNOVATION**



Simulation Based Engineering and Science



Complex Engineered Systems

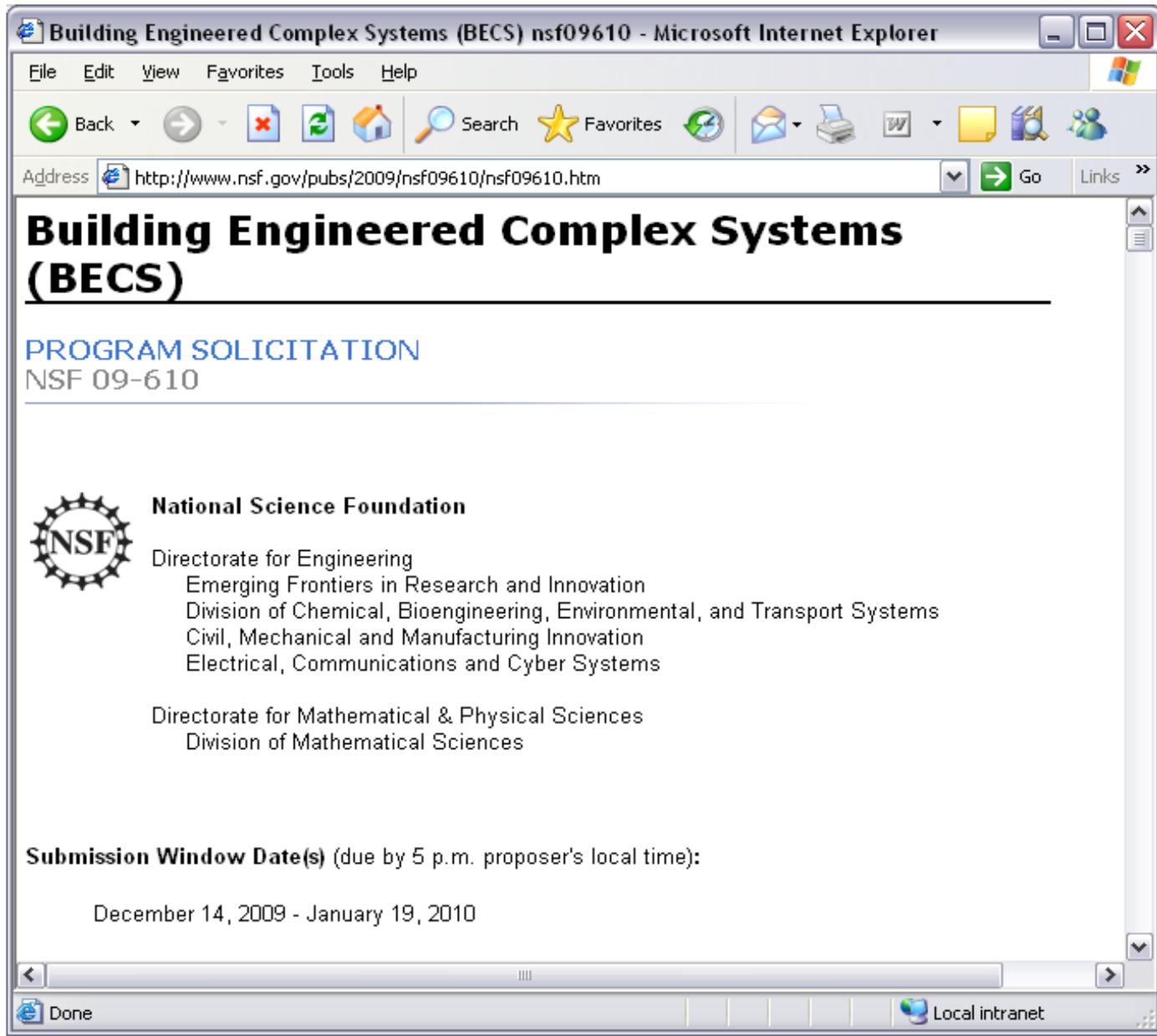


Building Engineered Complex Systems:

- **The key question that the research supported by this solicitation should aim to answer is "How can we take advantage of the fundamental theories of complex systems to design resilient engineered complex systems?"**



NSF's BECS Solicitation



Building Engineered Complex Systems (BECS) nsf09610 - Microsoft Internet Explorer

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Address <http://www.nsf.gov/pubs/2009/nsf09610/nsf09610.htm> Go Links

Building Engineered Complex Systems (BECS)

PROGRAM SOLICITATION

NSF 09-610



National Science Foundation

Directorate for Engineering
Emerging Frontiers in Research and Innovation
Division of Chemical, Bioengineering, Environmental, and Transport Systems
Civil, Mechanical and Manufacturing Innovation
Electrical, Communications and Cyber Systems

Directorate for Mathematical & Physical Sciences
Division of Mathematical Sciences

Submission Window Date(s) (due by 5 p.m. proposer's local time):

December 14, 2009 - January 19, 2010

Done Local intranet



Nano - EHS

- Proposed Funding for Nano-EHS increases at a rate far greater than rate of increase for NNI
- \$35M in 2005 to \$88M in 2010 request (federal agency-wide)
- At NSF, FY2010 request:
 - \$425M for NNI
 - \$30M for Nano-EHS



Science and Engineering Beyond Moore's Law

- New Materials
- Photonics, nano and microelectronics
- Quantum-Information Science



Bio-Science-Engineering Interface

- Continuing and new collaborations with NIH, DOE
- Potential Collaborations with USDA
- Broad range of potential areas of focus
 - Synthetic Biology
 - Biorenewable Chemicals
 - Biosustainability

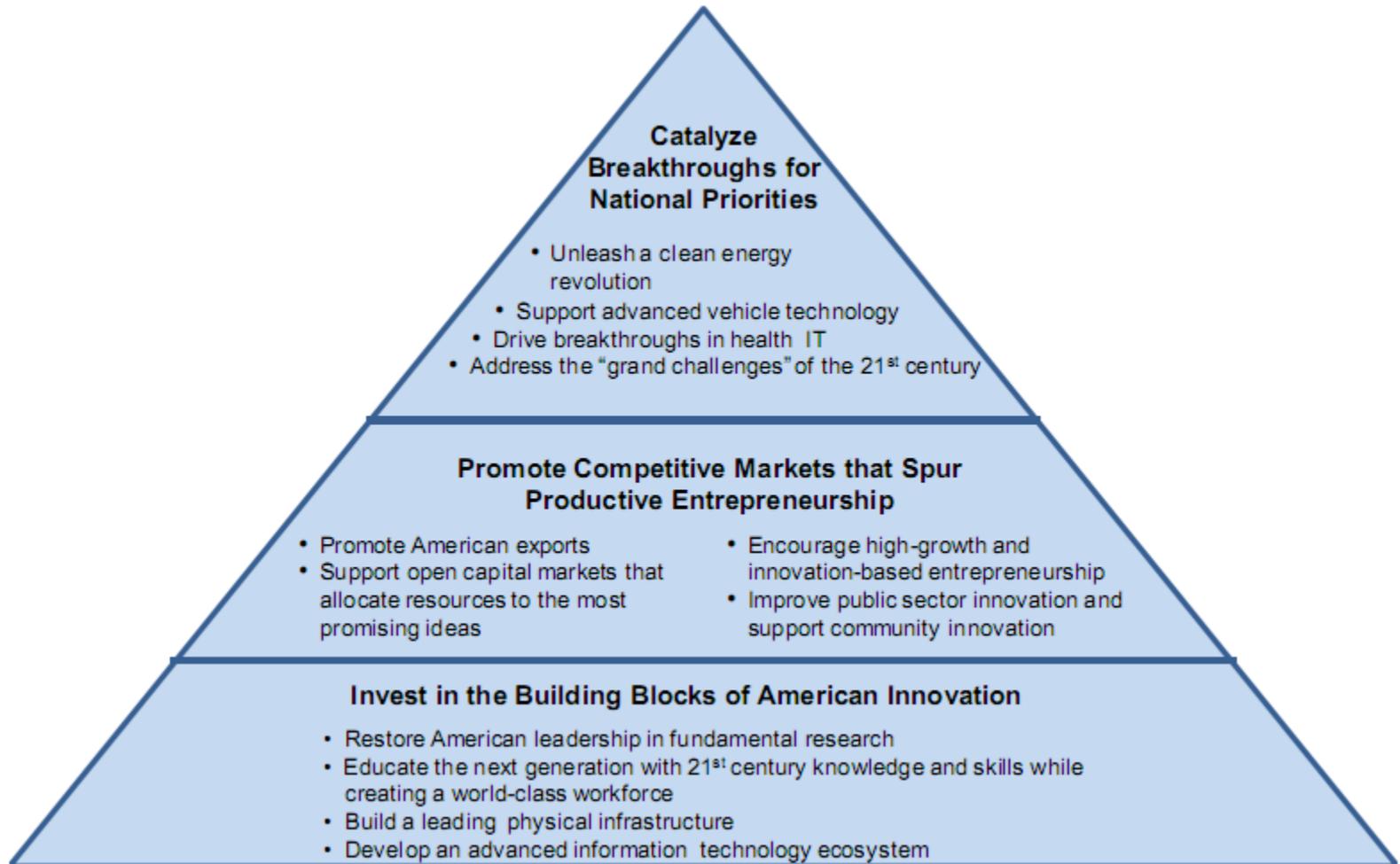


Innovation

- Innovation and Information Policy
 - Susan Crawford, National Economic Council
- Regional Innovation Clusters
 - Ginger Lew, National Economic Council
- In both cases, involvement of DOC, DOE, DOEd, DOL, NSF, OSTP, USDA



Innovation for Growth



Emerging Area - Innovation

- Current contributions to Innovation
- Industry-Inspired Research
- Innovation Fellowships

