Funding Opportunities
at NSF
for Proposals on Sustainable Product Systems and Supply Chains

Bruce Hamilton
NSF/ENG Program Director
Environmental Sustainability
Selected Menu of NSF Funding Opportunities for Sustainable Product Systems and Supply Chains

- New SEES Opportunities Relevant to Workshop
  - RCN
  - SRN
  - SEP
  - PIRE (all SEES)
  - SEES Post-docs

- G8 Material Efficiency DCL
- CBET/ENG Environmental Sustainability Program
- CBET/ENG Process and Reaction Eng’g Program
- CMMI/ENG SES and MES Programs
- ENG IDR Opportunity
- IGERT Solicitation
Web Info on All the Listed NSF Funding Opportunities

www.nsf.gov
New SEES Funding Opportunities

- SEES = Science, Engineering and Education for Sustainability
- SEES is a new NSF-wide investment area
- A number of new SEES calls-for-proposals are being posted (new “solicitations”)
- Workshop-relevant SEES solicitations include RCN, SRN, SEP, PIRE, and SEES Post-docs
New SEES Solicitations

- **RCN** = Research Coordination Networks (~$750K each for RCN-SEES track)
- **SRN** = Sustainability Research Networks (~$12 million each)
- **SEP** = Sustainable Energy Pathways (~$2 million each)
- **PIRE** = Partnerships for International Research and Education (typically ~$4 million each)
- **SEES Post-docs** (~$450K each)
RCN-SEES Track

- **Program Scope**: supports coordination of sustainability research, not research itself
- **Next Deadline**: Feb. 3, 2012
- **Grant Size**: up to a total $750K for 4 to 5 years
- **Contact**: Bruce Hamilton
  bhamilto@nsf.gov
RCN-SEES EXAMPLE #1

1140000

“RCN-SEES: Sustainable Manufacturing”

PI: Yinlun Huang (Wayne State U.)

• $722K over 5 years
• Numerous university and industry partners
RCN-SEES EXAMPLE #1 (continued):

Sustainable Manufacturing

Grant Activities

• Conduct a comprehensive review of frontier research and technological development for sustainable manufacturing; identify research gaps and needs
• Formulate a research roadmap for sustainable manufacturing
• Coordinate partner research through sharing knowledge, resources, software, and results
• Establish additional partnerships with universities and industry
• Conduct stakeholder education and outreach
RCN-SEES EXAMPLE #2

1140190

“RCN SEES: Sustainable Energy Systems”

PI: Tom Seager (ASU)

• $750K over 5 years
• Partners: other universities, EPA, USACE
Sustainable Energy Systems

Coordinate Activities Through Groups Focused on:

• Innovations in energy technologies
• Sustainability implications of alternative energy technologies at full scale
• Energy and human development
RCN-SEES EXAMPLE #3

1140152

“RCN SEES: Pan American Biofuels Sustainability”

PI: David Shonnard (Michigan Technol. U.)

• ~$750K over 4 years
• Numerous partners in North America, Central America, and South America
SRN: Sustainability Research Networks

- **Program Scope:** supports research (while RCN does not support research)
- **Deadline:** December 1, 2011
- **Award Size:** up to a total $12 million over 4 to 5 years
- **Contact:** Bruce Hamilton
  
bhamilto@nsf.gov
SEP: Sustainable Energy Pathways

- **Program Scope**: supports research on sustainable energy pathways (think LCA)
- **Deadline**: to be posted by the end of September 2011
- **Grant Size**: up to $2 million over 4 years
- **Contact**: Ram Gupta
  ragupta@nsf.gov
PIRE: Partnerships for International Research and Education

- **Program Scope**: now 100% sustainability (this is a change from earlier PIRE rounds)
- **Must have overseas partners**
- **Next Deadline**: October 19, 2011
- **Award Size**: typically $4 million (but can be more) over 5 years
- **Contact**: Carleen Maitland
cmaitlan@nsf.gov
SEES Post-docs

• **Program Scope**: special post-doc solicitation, 100% SEES
• **Deadline**: December 5, 2011
• **Award Size**: up to a total of ~$450K each for up to 4 years
• **Contact**: Sue Kemnitzer
  
  skemnitz@nsf.gov
G8 Material Efficiency DCL

- **DCL** = Dear Colleague Letter
- **G8** = Eight developed nations (US, UK, Canada…)
- **Program Scope**: Call for research proposals involving at least one US institution partnered with institutions in at least two other G8 nations
- **Deadline**: September 30, 2011
- **Award Size**: up to a total of ~$450K for US partner for up to 3 years for each grant
- **Contact**: Bruce Hamilton
  bhamilto@nsf.gov
Environmental Sustainability Program

- **Program Scope**: takes sustainability proposals that are driven by engineering principles
- **Proposal Types**: unsolicited and CAREER
- **Next Deadline** (unsolicited): Feb. 17, 2012
- **Grant Size** (unsolicited): up to a total $300K for up to 3 years
- **Program Director**: Bruce Hamilton
  bhamilto@nsf.gov
Process & Reaction Eng’g Program

- **Program Scope**: takes sustainability proposals that are driven by process and reaction engineering principles
- **Proposal Types**: unsolicited and CAREER
- **Next Deadline** (unsolicited): Sept. 15, 2011
- **Grant Size** (unsolicited): up to a total $300K for up to 3 years
- **Program Director**: Maria Burka
  mburka@nsf.gov
CMMI/ENG
Service Enterprise Systems (SES) & Manufacturing Enterprise Systems (MES) Programs

• **Program Scopes**: accept proposals on sustainable supply chains, among others
• **Proposal Types**: unsolicited and CAREER
• **Next Deadline** (unsolicited): February 15
• **Grant Size** (unsolicited): up to a total of about $300K for up to 3 years
• **Program Director**: Russell Barton
  rbarton@nsf.gov
ENG Interdisciplinary Research (IDR) Opportunity

- **Program Scope**: all engineering and beyond
- **Proposal Type**: unsolicited
- **Next Deadline**: Feb. 15 (CMMI); Feb. 17 (CBET)
- **Grant Size**: typically $600K, perhaps as large as $1 million over 3 years
- **Special Requirements**: involvement of two divisions (e.g., CMMI & CBET); PI must be in an engineering department
- **Program Director**: Bruce Hamilton or others
  bhamilto@nsf.gov
Integrative Graduate Education and Research Traineeship Program (IGERT)

- **Program Scope**: NSF wide, focused on graduate student education and research in any STEM area
- **Proposal Type**: solicited
- **Next Deadline**: May 1, 2012
- **Grant Size**: typically $3 million over 5 years
- **Special Feature**: almost all funds are for support of graduate students
- **Program Director**: Carol Stoel
cstoel@nsf.gov
Funding Opportunities at NSF

QUESTIONS???

Bruce Hamilton
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