

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**

RCN-SEES EXAMPLE #2 (continued):

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
cmaidlan@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

CBET/ENG

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

CBET/ENG

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???

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