



CHE-DMR-DMS Solar Energy Initiative

Institute for Mathematics
and Its Applications

November 1, 2008



Solar Energy Initiative

Purpose

- Support investigation of novel methods for solar energy harvesting and conversion with potential efficiency substantially beyond that of current technology
- Catalyze transformative breakthroughs in fundamental, first-principles solar energy research by groups working at the frontiers of
 - Chemistry **and**
 - Materials Research **and**
 - Mathematical Sciences (Mathematics and Statistics)

Solar Energy Initiative

Fiscal Year 2009

Award Information

- Competition funding: **\$5 M**
- Estimated number of awards: **3 to 10**
- Expected typical award size:
\$500,000 per year

Solar Energy Initiative

Project Requirements

- Research groups **must** include three or more co-Principal Investigators:
 - one in **Chemistry**
 - another in **Materials Research**
 - another in **Mathematical Sciences (Math / Statistics)**
- Proposals to be submitted by universities or colleges
- A person may appear on at most one SOLAR (pre-)proposal per year

Two-Stage Review Process

I. Preliminary Proposals

- Three pages
 - description of the proposed research problem and how the team will address it
 - research plan and any key preliminary results
 - role and relevant expertise of each investigator
 - collaborative approach to be used; expected synergies among the three disciplines
 - broader impacts
- Preliminary proposals due December 16, 2008
- Notification “encouraged” or “discouraged” by January 20, 2009

Two-Stage Review Process

I. Preliminary Proposals (cont'd.)

- Internal review by NSF program directors
- Internal review criteria
 - Potential for transformative breakthrough
 - Extent of group synergy; credibility of plans for collaborative work closely involving **all three** disciplines

Solar Energy Initiative

Two-Stage Review Process

II. Full Proposals

- Standard Grant Proposal Guide style
- Project Description to include
 - Justification for why a group effort is necessary
 - Management plan
 - How each researcher will contribute
 - Estimate of time committed by senior personnel
 - For investigators with other supported research, how time and effort is allocated among supported projects
- Proposals due March 9, 2009
- Award notifications in July 2009

Solar Energy Initiative

Two-Stage Review Process

II. Full Proposals (cont'd.)

- Panel (& mail) review by disciplinary experts
- Review criteria
 - Intellectual merit
 - Broader impacts
 - Potential of transformative scientific breakthrough for efficient harvesting, conversion, or storage of solar energy
 - Likely effectiveness of proposed collaborative research group structure

Solar Energy Initiative

Program Solicitation

NSF 08-598

- <http://www.nsf.gov>
- Search for **“Solar Energy Initiative”**



CHE-DMR-DMS Solar Energy Initiative

Questions ?

