2013 Request for Proposals:

Pilot Research Projects on Sustainable Smart Cities

Letters of Intent Due: Oct 15th, 2013
Invitation to Submit a Full Application: Oct 22nd, 2013
Applications Due: Dec 1st, 2013
Project Start Date: Feb 1st, 2014

SUMMARY OF PROGRAM REQUIREMENTS

Synopsis of Program:

More than half of the world’s population lives in urban areas. The challenges presented by urban development are immense. Cities are responsible for upwards of 75% of all energy used, 60% of all water consumed, and 80% of all greenhouse gases produced worldwide. In 2010, 83% of Americans lived in cities, and by 2050 the percentage will increase to 90%. Cities are the engines of growth in the U.S., but also at the core of major sustainability issues as their large populations and resource-intensive economic activity generate environmental pollution and consume scarce natural resources.

As the world’s population continues to urbanize, metropolitan areas will increasingly be the focal point of environmental protection, social justice, energy conservation, and greenhouse gas reduction policies. To face the challenges arising from urbanization, we need sustainable smart cities with significantly improved infrastructure that makes them environmentally friendly, increases their residents’ quality of life, and cuts costs all at the same time.

A sustainable urban area is characterized by the preservation of natural environment, use of renewable or highly efficient energy resources, healthy population with access to health services, and the presence of economic vitality, social equity, and engaged citizenry. Such sustainability can be achieved with an integrated approach that includes environmental management; linkages between community, ecology, and economy; and coordinated stakeholder interaction.

The goal of the UAB Sustainable Smart Cities Pilot Grant Program is to foster cross-disciplinary research, training, and outreach that integrate health, socio-economic impacts, and
infrastructure design for the purpose of developing innovative solutions for sustainable smart cities and communities.

Key Areas for Funding Consideration

1. Green Building and Infrastructure Design
2. Information and Smart Technology
3. Sustainable Urban Development
4. Clean Energy (Efficiency, Renewable, Alternative...)
5. Natural Resource and Carbon Management
6. Urban Health and Environmental Exposure

Program Officer(s):

Please note that the following information is current at the time of publishing. See program website (www.uab.edu/smartcities) for any updates to the points of contact.

• Fouad H. Fouad; 205-934-8430; ffouad@uab.edu

Award Information:

Anticipated Type of Award: 12 Month, UAB Internal Grant

Estimated Number of Awards: UAB SSC anticipates funding for 2 proposals. Pilot proposals are expected to range up to $20,000 for up to 1 year duration.

Anticipated Funding Amount: $40,000, pending availability of funds.

Additional match funds committed by the home school of the PI are encouraged and will be considered on the proposal evaluation.

Eligibility Information:

Faculty members at the levels of Instructor, Assistant Professor, Associate Professor, or Professor at the University of Alabama at Birmingham are eligible to apply. Applicants at the levels of Instructor or Assistant Professor are encouraged to have a senior faculty serving as a mentor. Collaborations between the academic schools are highly encouraged.

PI Limit: Because this program is meant to support pilot interdisciplinary research, a maximum of three investigators is recommended: the Lead Principal Investigator (PI) and two or more co-
Investigators (co-PIs). The appropriateness of the research team's disciplinary composition and expertise will be factors in the merit review of the proposals.

Limit on Number of Proposals per PI: 1; An individual may appear as Principal Investigator (PI), co-PI, Senior Personnel (or any similar designation), or elsewhere in the proposal budget in no more than one proposal submitted in response to this solicitation.

**Letters of Intent**

A submission of a letter of intent (LOI) is required prior to the submission of a full proposal. The Letter of intent (LOI) package will include the intent to submit a full proposal along with the following:

- PI's Name, Faculty Rank, and Institution
- Investigator(s), Faculty Rank(s) and UAB School Affiliation
- Preliminary Title of the Proposal
- Brief summary describing the work for the proposal

**Proposal Preparation and Submission Instructions:**

A. Proposal Preparation

Applications should include:
- Cover Page
- Project Summary/Abstract and Relevance (1 page)
- Project/Performance Sites
- Research Strategy (3 pages):
  a. Objectives
  b. Significance
  c. Innovation
  d. Approach
- Key Personnel
  a. Mentorship Plan – for Instructors and Assistant Professors only (limit to 1 page)
  b. Biographical Sketches (2-page)
- Other Significant Contributors
- Resources/Equipment
- Detailed Budget / Budget Justification (see Section B. below)
- References/Literature Cited

B. Budgetary Information
The following types of expenditures are allowable:

• Research supplies
• Domestic travel when necessary to carry out the proposed research
• Publication costs, including reprints
• Cost of computer time
• Special fees (Chemical analysis, photography, etc.)
• Stipends for graduate students/postdoctoral fellows if their role is to support the project
• Equipment costing less than $2,000
• Registration fees for scientific meetings
• Investigator salary

The following types of expenditures are **not** allowed:

• Secretarial/administrative personnel
• Tuition
• Foreign travel
• Honoraria and travel expenses for visiting lecturers
• Purchasing and binding of periodicals and books
• Office and laboratory furniture
• Office equipment and supplies
• Rental of office or laboratory space
• Recruiting and relocation expenses
• Dues and membership fees in scientific societies

C. Proposal Submission

Full Proposal Deadline:

Please submit applications electronically by **DUE DATE**, and as a single Adobe PDF file, to **sscrc@uab.edu**

Subject line should utilize the format: **2013 UAB SSC RFP: PI name, Proposal Title**.

Receipt of compliant proposal will be acknowledged.

**Proposal Review Information / Criteria:**

Applications will be evaluated on the scientific merit of the project, its relevance to the scope of the UAB SSC, and the applicant’s potential for future funding. It is expected that awarded projects will lead to NSF, NIH, or similar nationally competitive research program applications or other extramural funding.
A. Overall Impact.
Reviewers will provide an overall impact/priority score to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the six scored review criteria below:

• Significance. Does the proposal address an important issue? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or professional practice improve?

• Investigator(s). Are the PIs, collaborators, and mentors well suited to the project? Do they have appropriate experience and training? Does the proposed mentorship plan ensure accomplishment of the project aims?

• Innovation. Does the application challenge and seek to shift current research paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions?

• Approach. Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented?

• Future Funding. What is the likelihood that the pilot project will lead to a national competitive grant application, or other extramural funding? Identifying extramural grant funding opportunities (agency and program name) to continue the proposal after Pilot Grant has ended would be a major consideration.

• Interdisciplinary. Faculty collaborations from at least two UAB schools, is highly encouraged.

B. Review and Selection Process
Proposals submitted in response to this program solicitation will be reviewed by internal faculty. Panel Review.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a funding recommendation.
Award Administration Information:

A. Notification of the Award

Notification of the awards will be made to the selected PIs by a UAB SSC Program Officer. Proposals that are declined will be advised as promptly as possible by the Program Officer. Verbatim copies of reviews, not including the identity of the reviewer, will be provided upon request to the Principal Investigator.

B. Reporting Requirements

Failure to provide annual or final project reports will delay review and processing of any future funding increments as well as any pending proposals for that PI.