



Call for Proposals
Abundant, Clean, and Cost-Effective Energy Systems for Sustainability
(ACCESS)

Deadline: November 1, 2011

McDonnell Academy Global Energy and Environment Partnership
(MAGEEP)
www.mageep.wustl.edu

Over the past few years MAGEEP has been able to support several successful collaborative projects with our McDonnell Academy Partner Universities. Many of the projects that were initially supported by seed funding, have led to creation of programs supported by external funds. At the last MAGEEP Symposium held at Washington University in St. Louis in October 2010, ACCESS has been identified as a new thematic area for research and action for the McDonnell Academy Partner Universities.

We are announcing a new round of funding to pursue “seed projects” related to the thematic areas of ACCESS (see mageep.wustl.edu for details). These funds are to promote international collaborative activities with faculty and students at partner institutions of the McDonnell Academy (<http://mcdonnell.wustl.edu>). While any MAGEEP University can be a partner, a key focus will be on collaborative projects with two partner institutions in India: Tata Institute of Social Sciences (TISS) and the Indian Institute of Technology, Bombay (IITB). The three institutions: WUSTL, IITB, and TISS are making available a total sum of \$ 1.5 Million toward these projects. Washington University will support projects totaling up to \$ 500,000 to promote the ACCESS agenda.

This call is for proposals from tenured and tenure-track faculty at Washington University in St. Louis in the broadly defined interest areas related to ACCESS. We are seeking imaginative and innovative proposals under the following general guidelines.

ACCESS Proposal Guidelines

All Proposals Must:

1. Include concrete information about the involvement of faculty and students from at least one McDonnell Academy partner institution in addition to Washington University faculty. Transdisciplinary focus is a particular emphasis in this round of ACCESS projects. For contact persons at each partner institution, consult <http://www.mageep.wustl.edu/Board.aspx>. In particular, consult the list of faculty by topical area at the Partner Universities.
2. Demonstrate how the project would be sustained and go beyond activities carried out after seed funding. A key objective is to work with partners and attract external funding to sustain research efforts. If you have prior MAGEEP funding, please list additional funding, and publications that have resulted from that project.
3. Identify products to be presented at the December 2012 Symposium in Mumbai (see <http://mageep.wustl.edu/Symposium2012>). These may be in the form of reports of findings, joint peer reviewed papers, conference presentations, joint proposals for extended funding, and so forth.
4. Identify at least one Washington University and partner University faculty member and/or students who will attend the Symposium in Mumbai and present an extended abstract as a progress report. In addition, faculty PIs and their students are strongly encouraged to attend the MAGEEP/ICARES

monthly colloquium at Washington University throughout the year (first Wednesday of the month, 4 pm, Brauer Hall, Room 12).

5. Be completed within to two years from the start date of November 15, 2011.

Additional Preference Will Be Given to Proposals that:

1. Are fundamentally interdisciplinary, involving representatives of more than one discipline or department/school at Washington University (e.g., engineers working with economists and policy analysts in a joint project to address a problem in energy or environment; or a social work faculty member working with science/engineering faculty to address topical areas of interest of ACCESS)
2. Involve representatives of two or more institutional partners of the McDonnell Academy. Multiple partner collaborations are consistent with the Academy's goal of promoting effective multilateral global efforts in the study of energy and environmental issues.
3. Show evidence of shared funding from one or more partner institutions. TISS and IIT B will be providing seed funding for their own faculty members. Leveraging other McDonnell Academy partner Universities to participate and provide matching funds for ACCESS is encouraged
4. Include students as well as faculty in the funded activities

Proposals may be in the range of \$ 5,000 to \$100,000 (maximum). Proposals requesting larger sums of monies should involve multiple faculty from WUSTL and partner Universities. A total of \$ 500,000 will be awarded to Washington University faculty.

Proposals should address basic categories of funded activity that grew out of the discussions at the 2010 McDonnell Academy International Symposium on Global Energy Future. Combinations of these categories are encouraged. The categories identified during the 2010 Symposium are outlined in the ACCESS summary document (below), and on the MAGEEP website.

We encourage the inclusion of doctoral students in these projects. A project could budget for Washington University doctoral student travel to partner universities (to spend up to 6 months at a partner institution). Hosting partner university doctoral students at WUSTL laboratories is also encouraged and may be included in the budget. Short visits by partner university faculty to WUSTL to interact with faculty and student groups are also encouraged (funding can be included in proposal budget). Obtaining matching funds by partner university participants is strongly encouraged.

LOGISTICS OF SUBMISSION

- 1) The proposal project description should not exceed five pages (standard 8.5 x 11; approximately 2500 words). This should address the items outlined above.
- 2) If funding was received from a previous MAGEEP or ICARES or CCCU proposal, please include an additional report, not to exceed 2 pages, of accomplishments from that funding. Specifically, identify efforts made to sustain those collaborative activities & any external funding that resulted.
- 3) Curriculum Vitae of all participating faculty (WUSTL and partner university faculty CVs should be appended). The CVs should not exceed two pages each. If names of participating doctoral students are known, they should be identified. The CVs do not count toward the 5 page limit in 1).
- 4) Budgets should include an itemized list of monies to be spent along with a justification. The following elements should be included: Travel expenses for at least one faculty member to attend the December 9 to 12, 2012 Symposium in Mumbai.
- 5) Funds cannot be used for faculty salaries, overhead, or tuition for students.

PROPOSAL DEADLINE:

November 1, 2011

(sent electronically to Prof. James V. Wertsch: jwertsch@wustl.edu with copy to mcdonnell@wustl.edu)

NOTIFICATION OF SELECTED PROPOSALS:

November 15, 2011

Coordinating and Proposal Review Committee:

Pratim Biswas, School of Engineering and Applied Sciences, Director, MAGEEP, WUSTL

Gautam Yadama, Brown School of Social Work, WUSTL

Virendra Sethi, Head, Center for Environmental Sciences, IIT B

A.K. Suresh, Dean of Faculty, IIT B

T. Jayaraman, Dean, School of Habitat Studies, TISS

Subodh Wagle, Professor, School of Habitat Studies, TISS

James V. Wertsch, Director, McDonnell International Scholars Academy, WUSTL

For more information, contact James V. Wertsch (jwertsch@wustl.edu)

A Brief Summary of
ACCESS
Abundant, Clean, and Cost-Effective Energy Systems for Sustainability

Problem The inability to access reliable, affordable, and clean fuels constitutes energy insecurity. Energy insecurity framed as limited choice on the part of the poor to sufficient, affordable, and clean fuels is deprivation. Energy deprivation traps people in a cycle of unproductive livelihoods, adverse health outcomes, particularly in women and children, and negative environment and climate effects. The United Nations and the International Energy Agency estimate that 3 billion worldwide are energy insecure, of which 1.5 billion people do not have access to electricity. A pattern of reinforcing adverse outcomes from energy deprivation repeats across generations of urban and rural poor, and has significant implications for other critical resources such as water and environmental sustainability. The use of traditional fuels also limits the number of productive hours in a day for adults and children alike. Absence of reliable lighting in the evening hours adversely affects children's education and eventually their trajectory out of poverty. Only by scaling up the availability of affordable and sustainable energy services do we have a chance of achieving Millennium Development Goals (MDGs), as energy services have a multiplier effect on health, education, safe water, sanitation, and on the overall productivity of a population. In the absence of affordable and sustainable energy services, the UN estimates another 1.4 billion people will be left without modern energy. Populations, whose only source of energy is firewood, crop residue and animal dung for cooking and heating, spend up to eight hours a day collecting needed fuel. When such time and resources are dedicated to collecting basic unprocessed fuel, it is time away from other economically productive opportunities. Traditional fuels produce numerous pollutants, particulate matter, volatile organic compounds, nitrogen oxides, sulfur dioxide, hydrogen sulfide, all of which are detrimental to the environment and the health of individuals.

A new energy frontier, inclusive of the poor, demands cross-disciplinary efforts that address technological and non-technological constraints to widespread use of clean energy systems. Only then, we will positively influence human and environmental conditions. This is the singular challenge that ACCESS initiative will tackle through multidisciplinary, multi-scale, and multi-university efforts.

Mission ACCESS Initiative will foster trans-disciplinary collaborations in research and intervention to overcome energy insecurity and deprivation of rural populations and achieve sustained positive human and environmental conditions. Our mission is to identify and elaborate on the core drivers of energy insecurity and deprivation among the rural populations; to bring clean energy technologies to the poor that directly address significant drivers of energy insecurity and deprivation and ensure sustained use of new energy technologies. ACCESS initiative will work toward a policy and technology infrastructure that enables access to clean energy that is sustainable for people and the environment.

Substantive Areas The collaborative ACCESS consortium will pursue transdisciplinary collaborations in the following areas:

- a) Envisioning energy access, development goals, public policy approaches, and distributive justice;
- b) Toward clean energy technologies; the fundamental science of clean energy technologies, clinical trials to test the use and impact of existing technologies, a systems science of social and cultural drivers of clean technology use;
- c) Energy and Environment nexus with particular emphasis on Water and Energy Nexus; focus will be on competing demands for water and implications for energy production and design of sustainable governance and policies.

McDonnell Academy university partners will pursue specific projects that resonate with these substantive areas. We will gather in Mumbai, India between December 9 to 12, 2012 to reflect, debate, and leverage new knowledge to design effective programmatic and policy interventions to accomplish ACCESS mission and the substantive areas outlined above.