Energy & Environment Collaborations: Focus on ACCESS

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What is ACCESS

ACCESS Consortium will focus attention on 3 billion that are now energy poor.

ACCESS Consortium will focus on ensuring that existing and new clean energy technologies are available to this population at a low cost.

In doing so, ACCESS Consortium will also ensure sustainable development.
Facts on the ground

• Poverty & Biomass: implicates 3 billion people around the world

• Biomass: fuelwood, charcoal, agricultural residue, animal dung

• Total Primary Energy Supply from Solid Biomass (wood, Agricultural residues) 200 Million Tonnes Oil Equivalent

• Biomass accounts for 75% of total final energy use

• India - share of biomass energy in total energy (44%)
ACCESS

- Abundant
- Clean
- Cost-Effective
- Energy Systems
- Sustainable
Why ACCESS is Important

• Good science, policy, and social science will focus on Abundant solid biomass for the poor in the short run

• Abundant clean alternative technologies that the poor are able to shift to in the medium to long run

• Twin strategies to shift the poor to sustainable and clean energy trajectories
Question

- How can biomass-burning technology (stoves - commercial and household) incorporate the needs and realities of poor households in India and still yield a reduction in harmful emissions?
Answer:

- Is in understanding End User Dynamics
- To understand the social, economic, and technological dimensions of adopting emission reducing technologies among rural households
- To design and replicate emissions reducing and energy efficient stove technologies for the poor
Do the same for clean alternatives:

- Understand End User Dynamics
- How does Solar PV electrification affect the energy poor?
- What are the cost and market barriers to Solar PV?
- How do we involve key stakeholders?
Technology and Society

- Exogenous (social, cultural, policy, and regulatory) drivers of shift to better energy technologies
- Reductions in harmful emissions must be achieved while meeting the needs of rural households
Technology and Society

Technical Factors

Social, Economic, Gender & Livelihood Factors
Architecture of the Problem

- Social, Economic, and Cultural Drivers
  - Landownership
  - Forest Cover
  - Gender Dimensions
  - Cost
  - Livestock

- Technological Drivers
  - Size
  - Types of fuel
  - Cost

- Public Policy Drivers
  - State investment in certain models
  - Subsidies

- Market Strategies
  - Pricing new technologies for the poor
  - Social Entrepreneurial innovation around clean energy
Transdisciplinarity to realize ACCESS

- What are the high leverage policy interventions that will bring Solar PV and other clean technologies to the energy poor?

- What type of systematic science, social science, and policy analysis is required to get cleaner combustion in the short and medium term and Solar PV in the long term to the poor?

- Deep transdisciplinarity is necessary
Aligning with Global Alliance for Clean Cookstoves

- $50.82 million over the next five years (broken down by agency)
- Department of Energy (DOE) - $10 million
- Department of State/U.S. Agency for International Aid and Development (USAID) - $9.02 million
- National Institutes of Health (NIH) -$24.7 million over five years to support ongoing research
- Centers for Disease Control (CDC) - $1 million
- Environmental Protection Agency (EPA) - $6 million
Our Challenge

Reconcile

− The Engineering & Technological Concerns
− Social, Economic, and Cultural Concerns
− Market Concerns

To Realize

− Gains in number of people shifting to clean energy to realize gains in local environment, health, and productivity of the poor in India and elsewhere
**Immediate Challenge**

- Build sustained partnerships to make **ACCESS** a success
- Partner with key stakeholders: US and India Governmental Agencies that are working in this direction
- Partner with corporations to get clean technologies accessible, affordable, and working for the energy poor
- All of this will enable transdisciplinary research, policy and program interventions
ACCESS Leverages MAGEEP

3 Billion End Users of Clean Energy
For Better Health and Environment

Academy Partnerships in Science & Engineering

Academy Partnerships in alternative, clean energy technologies

Academy Partnerships in cleaner extant technologies

Academy Partnerships in Social Science and Policy Studies