

IANAS Energy Program

IANAS General Assembly

Punta Cana, Dominican Republic

July 16-18, 2013

Overview

- Inspired by 2007 IAC Report, *Lighting the way, Toward a sustainable energy future*
- Launched at IANAS Workshop on Energy, Buenos Aires, Argentina, Oct. 30-31, 2008
- Energy workshops: - Bogota, Colombia in 2010 and 2011
- La Paz, Bolivia, 2012
- Activities:
 - Country reports, presentations from experts, drafted summaries, recommendations and proposed plans in priority areas
- Future plans:
 - Energy Workshop, Irvine, California, September 3-6, 2013
 - Publish book, 2014, summarizing priorities and describing plans
 - Plans for 2014-2016: Implement actions set forth in the book

IANAS Energy Priorities

- Provide energy for unserved and underserved populations
- Expand the share of renewable energy
- Increase bioenergy while protecting food supplies and the environment
- Improve energy efficiency from sources to final end uses
- Capacity building: strategy to practice

Countries

- Argentina
- Bolivia
- Brazil
- Canada
- Caribbean Academy of Science (Jamaica)
- Chile*
- Colombia
- Cuba
- Dominican Republic*
- Ecuador
- Guatemala
- Honduras
- Mexico
- Nicaragua
- Panama
- Paraguay
- Peru
- United States of America
- Venezuela

* Announced plans to participate in future Energy Program activities

Energy for Unserved Populations

- Collaborative program with WfS Working Group
- Without electricity, 29 million in LAC countries
- Without modern cooking and heating, 65 million
- Million+ without electricity: Argentina, Bolivia, Brazil, Colombia, Ecuador, Guatemala, Haiti, Honduras, Nicaragua and Peru
- Recommendations:
 - Collaboration to replicate successful programs
 - Structured decision making (SDM) approach
 - Link to UN launched and World Bank's supported Sustainable Energy for All (SE4ALL) initiative

Renewable Energy

- Country reports: Mexico, Ecuador, Peru, others
- LAC: global leader, 52% of installed electrical capacity
- Sources:
 - Hydropower: dominant, balances intermittent sources, vulnerable to Climate Change, some human impact and environmental issues
 - Solar, wind, geothermal and ocean (bioenergy next slide)
- Next Steps:
 - Map renewable potentials to optimize projects location and size
 - Incorporate science advances in design of projects
 - Work with governments, financial institutions and the private sector to create a supporting environment for new projects*

* The Inter-American Development Bank's report, *Rethinking Our Energy Future; A White Paper on Renewable Energy*, prepared for the June 18, 2013, 3GFLAC forum in Bogota, is an excellent resource for the IANAS program on this priority.

Bioenergy Priority

- Bioenergy connects energy, social, environmental and economic priorities
- Brazil has led development of ethanol while respecting these priorities
- The LACAf project, supported by Energy Program, was recently approved
- The project is expanding to include a broader mix of biofuel sources.
- The priority also includes capturing energy from municipal wastes.

Energy Efficiency

- Energy efficiency is the largest and cheapest way to reduce GHG emissions—and the most complicated
- The road map uses advanced science and engineering to increase efficiency from sources to final end uses
 - Sources, pipelines, generation, transmission and distribution
 - Buildings, e.g. building codes, equipment, appliances, lighting
 - Industry, e.g. furnaces, processing, motors, controls
 - Transportation, e.g. vehicles, mass transit, infrastructure,
- Supporting issues
 - Improving the depth and comparability of energy use data
 - Transition to regional power grids and “smart grid” systems
 - Elimination of subsidies that distort cost-effective purchases

Capacity Building

“Create an increased focus on specifically energy-relevant awareness, education and training across all professional fields...”

- Lighting the way, Toward a sustainable energy future

- Energy capacity building spans research, education, science, engineering, physical and social sciences...
- Capacity building is supported by governments, universities, the private sector, financial institutions...
- Building capacity in the LAC struggles with a unique history, resources, uses, climate and geography
- The program’s goal is to provide a multi-country focus on the specific capacity needs of a sustainable future

Future Plans

- Workshop Sept. 3-6, Irvine, California
- Book on the Energy Program in 2014
 - Summary of the program's past work
 - Present program's goals for 2014-16
 - Focus on the role of science in sustainable energy
 - Describe IANAS plans in context of related work
 - Goal: Increase public awareness of IANAS's program
 - Goal: Secure partners and support for the program
- The activity in 2014-16 will designed to advance these activities