Building Literacy in Energy Economics

Activity:	Smart Development Initiative
Location:	Africa
Problem:	Lack and/or insufficient capabilities of local educational institutions in Africa for effective energy sector governance
Solution:	Establishment and building capacity of a Local Educational Partner (LEP) to act as a resource to energy professionals and to inform the public via research, publications, workshops, seminars and outreach activities.
Duration:	September 20, 2003 – August 31, 2005
Implementer:	Center for Energy Economics, Bureau of Economic Geology, The University of Texas at Austin and local educational partner, RCEER, located in Ghana.

Background

In many countries, energy sector reform efforts fail for several fundamental reasons.

- Reforms can be focused on a particular segment of the energy industry, ignoring linkages across value chains for various fuels.
- Incumbent interests can obscure inefficiencies in state enterprises so that transparent competition fails to materialize.
- It can be very difficult for policy makers to replace social pricing policies with cost-reflective prices.
- Consumers usually are not aware of their choices in terms of both energy sources and technologies that deliver conventional energy, alternative forms of energy, or increased efficiency of energy production and use.
- Uninformed or, worse, misinformed reporting on energy sector developments by the media can complicate decision making and policy formulation.

A common element among all of these problems is the lack of access to relevant information by all stakeholders, sometimes due to lack of knowledge and expertise and sometimes due to uneven distribution of information among the stakeholders. The first step to overcoming these challenges lies in enhancing professional capacity in the energy sector and informing the citizenry. Widely disseminated information increases transparency and contributes to a transparent marketplace where consumers are aware of their choices and stakeholders (consumers, non-governmental organizations, energy companies, regulators and government entities) can monitor the behavior of each other. Greater transparency in turn leads to more efficient investment, operation, and consumption decisions to the benefit of the overall society.

Objective

Our initiative is designed to increase the capability of local educational and development institutions in developing and transition economies to address public education and participation, including transparency for effective energy market development.

Approach

The Center for Energy Economics (CEE) at the University of Texas at Austin provides a Local Educational Partner (LEP) with tailored training, focused on energy value chain economics and supporting commercial frameworks, tools and ongoing mentoring necessary for the LEP to develop its own community-based initiatives. These initiatives help develop the stabilizing "knowledge infrastructure" necessary to increase local community access to clean, commercial energy services. All program activities are based on local needs to ensure program appropriateness. The intended result is to multiply the number of informed citizens and professionals, which may include fostering a better understanding of energy industry issues among a larger number of people across many varied disciplines and occupations (including journalists, educators, private sector, government, and general public); and ongoing delivery of education and dissemination of information through a local source developed with our assistance.

Activities and Results

The LEP, Resource Center for Energy Economics and Regulation (RCEER), was established at the University of Ghana. Key energy industry organizations, such as the Public Utilities Regulatory Commission, the Ministry of Energy, and the Energy Commission are represented on RCEER's Advisory Board. Other organizations, including the Energy Foundation, Ghana Oil, Volta River Authority and Electricity Company of Ghana are among other entities that have attended RCEER meetings and expressed support otherwise.

Ghana depends heavily on hydropower, which caused problems during years of drought. With the completion of the WAGP, the amount of thermal generation will increase significantly, reducing dependence on hydro. RCEER is playing an instrumental roll in the development of a secondary natural gas market in Ghana. Natural gas is a clean fuel and bridges conventional hydrocarbon energy sources with alternatives as well as technologies and fuel sources to be developed in the future. Ghana will have access to large amounts of natural gas after the completion of the West Africa Gas Pipeline from Nigeria. It is important for energy professionals, potential customers and the public in Ghana to understand fundamentals of natural gas as a resource, principles of natural gas systems, its uses and regulation of the industry for this fuel to have a positive impact on the lives of many Ghanaians and help fuel the growth of the Ghanaian economy. RCEER produced a report on natural gas that provides background information on these issues, and started dissemination of the report contents through a public seminar.

CEE offers a two-week capacity building program, New Era in Oil, Gas & Power Value Creation, every May in Houston. The program focuses on creation of legal and regulatory frameworks for sustainable and commercial development of energy services. Six delegates from Ghana attended the New Era program in 2004 and 2005. These "trained trainers" have been involved in RCEER activities and have reached out to wider audiences in more structured settings, by participating in research and providing training courses. Moreover, some of the delegates were able to benefit from the program experience at their work places.

Since the late 1990s, the Government of Ghana has been restructuring the electricity market, with regulatory agencies such as PURC and EC playing increasingly important roles. Like in many developing countries, rural electrification has been a desirable, albeit difficult goal to achieve. RCEER's Guide to Electric Power in Ghana provides an easy-to-read reference to consumers, civic groups, media and sector professionals about rules of the changing market place, roles of agencies such as PURC and

EC, alternative technologies for power, environmental considerations and the like. About 70 people attended the seminar, at which the Guide was launched and distributed free of charge, representing almost 30 separate entities from government, business, academia and media.

In addition, RCEER initiated the development of an electronic database for the energy sector in Ghana with the help of EC and PURC. When completed, this database will be a resource for sector participants as well as researchers and the media. CEE and RCEER collaborated in developing a syllabus for an energy economics course to be offered at the University of Ghana. During RCEER outreach events, we observed an increasing interest from students on energy economics and regulation. This course will allow university graduates to enter the job market a little better informed and hence help energy industry stakeholders to meet their staffing needs. RCEER has also completed a study on socioeconomic impacts of petroleum deregulation in Ghana, commissioned by the Ministry of Energy of Ghana.

Development Impact

During its short term of existence, this initiative produced several short-term outcomes, including improved understanding of energy value chain economics and regulation fundamentals, increased knowledge of global energy trends, and enhanced work performance among the particular delegates of the New Era programs. We have also seen improving content quality in energy reporting as a result of the media coverage of RCEER events and publications and accessibility to RCEER researchers and advisors. In the long term, as the Center continues to build its capacity, it will continue to disseminate information on fundamentals of energy value chain economics and regulation which will contribute toward achieving an efficient and transparent energy sector in Ghana, where policy makers, regulators, energy service providers and consumers make informed and sustainable choices.

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