

## **UGANDA ENERGY GOVERNANCE AND CAPACITY INITIATIVE NEEDS ASSESSMENT AND ASSISTANCE PROPOSAL**

U.S. Department of State Coordinator for International Energy Affairs (CIEA) David Goldwyn led a U.S. interagency assessment team to Uganda on February 22-26, 2010. The U.S. delegation conducted a needs assessment for the Energy Governance and Capacity Initiative (EGCI), which is a Department of State-led effort to provide a range of capacity-building technical support to the governments and institutions of selected countries that are expected to become oil and gas producing countries during the next decade.

In addition to meeting with President Museveni, delegation members met with the ministers of Foreign Affairs, Finance and Energy; officials from the Bank of Uganda; and representatives from civil society and a non-governmental organization (WILD) that is engaged on environmental issues in the Lake Albert region. The U.S. team held an in-depth technical meeting at the Petroleum Exploration and Production Department (PEPD) and toured PEPD's geological and geophysical facilities. The delegation also met with oil industry representatives and traveled to Lake Albert to assess oil infrastructure in Block 2.

This visit provided valuable insight into ways in which the Government of Uganda (GOU) could bolster its institutional capacities in order to strengthen oil and gas sector governance and to ensure sound revenue management.

### **EGCI Needs Assessment**

Although Uganda is likely five years away from receiving substantial oil revenues, the GOU would benefit at present from augmented exposure to best practices in hydrocarbons development, particularly as it relates to the valuation of oil and gas resources, project economics and finance, and the complexity and range of issues related to cross-border pipeline projects. Bolstering the GOU's technical skills and practical experience in oil resource management, improving information flow within and between relevant ministries, and strengthening core financial management capabilities of key institutions would be beneficial to maximizing value and economic growth and stability.

### Technical Capacity Needs

PEPD retains the GOU's technical competency on oil resource management. PEPD has modern GIS and geophysical software and workstations, core facilities and geochemical analysis capability. The organization's professional staff has formal education in geology, geophysics and related fields, but could benefit from practical real-world experience in manipulating and analyzing data and models. With a staff of 100 persons, half of whom are professional, the organization likely will need a significant ramp up in manpower, particularly with respect to bringing in the diversity of skill sets needed to manage complex upstream, midstream and downstream oil and gas projects.

As Uganda's focus shifts from oil exploration to development and production, the Ministry of Energy and Mineral Development (MEMD) and the National Environment Management Authority (NEMA) will need increased technical skills and capabilities to assess and handle a broad range of matters that will impact directly and indirectly on sector management, especially related to the environmental, security and local impacts of oil and gas projects.

### Revenue Management and Governance Needs

As the Ministry of Finance will be the primary GOU entity tasked with managing future oil revenue flows, strengthening its core functions and capabilities would be advisable. Key areas may include developing up-to-date chart of accounts, information technology systems and open and efficient budget processes. This effort could require substantial investment and would be best undertaken through broader donor support, rather than through targeted EGCI assistance.

There is an immediate need for oil and gas audit capabilities at the URA, which is on track to form its oil and gas unit by the end of March 2010. It also is likely that the Bank of Uganda would benefit from technical assistance in oil revenue management, although this a longer-term issue that will be linked to macroeconomic and monetary policy development.

Creation of the institutional structures and financial management systems to manage efficiently oil revenue receipts will be required before oil production begins. The Ministry of Finance, URA, and Bank of Uganda will need to undertake a logical sequencing of preparations to reinforce their functional capacities, especially as related to tax administration and auditing capability.

### **Near-Term EGCI Assistance for Uganda (2010-2011)**

EGCI assistance would be designed to complement other sector reform efforts that are underway and crafted to provide value-added benefits tailored to address specific capacity shortfalls. Depending on the GOU's interests as well as scheduling constraints at respective U.S. departments and agencies, a range of EGCI assistance may be possible during 2010 and 2011. All EGCI assistance for Uganda, however, would target three specific core objectives:

Objective 1: Help the GOU formulate an energy diplomacy strategy to advance its objectives through managing its relations with neighboring countries on issues such as joint resource identification and pipeline infrastructure development.

Objective 2: Strengthen the GOU's institutional capacity through advanced training in geology, geophysics and environmental risk mitigation specific to the oil industry, with the ultimate goal of leveling the playing field between the government and international oil companies.

Objective 3: Augment the GOU's financial management, planning and revenue governance skills as they relate to the oil and gas sector, with the aim of maximizing the value of the country's oil resource development.

Although workshops and seminars may be designed to address narrow aspects of oil and gas sector development and revenue management, participation by a broad range of GOU entities (*e.g.*, MEMD, PEPD, NEMA, Ministry of Finance, URA, Bank of Uganda and regional and local government officials) would be strongly encouraged, as doing so would strengthen the GOU's overall knowledge base related to oil and gas sector issues.

**Long-Term EGCI Assistance for Uganda (2012- )**

Although the successful implementation of EGCI assistance during 2010 and 2011 will impact directly on the desire for and scope of the longer-term EGCI program, it is likely that future efforts would be best focused on infrastructure finance and oil revenue management.

This work would include increased engagement with the Ministry of Finance and Bank of Uganda in order to develop specific oil and gas revenue management mechanisms. For example, the establishment of funds will be needed for depositing oil revenues. Adverse macroeconomic and monetary policy ramifications also will need to be dealt with through strengthened budget systems.

By 2012, the placement of one or more full-time specialist advisers in the Central Bank and Ministry of Finance would be beneficial, so as to help with capital budgeting and other finance mechanisms, including the creation of effective public-private partnerships to promote infrastructure development.

The U.S. Embassy in Kampala will play a greater and integral role in managing long-term EGCI assistance. USAID could leverage its existing and planned Uganda programs, including those related to environment and agriculture, to address issues directly and indirectly related to oil and gas sector development in the country. Environmental stewardship, land titling and eminent domain-related legal issues are a subset of challenges that potentially could be addressed in part through existing and planned programs, if funding was made available. Property rights have been recognized by experts as necessary for poverty reduction and agricultural prosperity.

**POSSIBLE EGCI TECHNICAL ASSISTANCE (2010-2011)**  
**(Ranked by Priority for Each Objective)**

**Objective 1: Help the GOU Formulate an Energy Diplomacy Strategy**

Transnational Oil and Gas Pipeline Projects Roundtable (2010)

This one-day event would provide GOU officials, including from the Ministry of Foreign Affairs, with an introduction to the wide range of challenges involved in successfully undertaking and completing pipeline projects involving more than one country. This event would use the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, Chad-Cameroon oil pipeline and Yadana (Burma-Thailand) gas pipeline as case studies. Host government and intergovernmental agreements, pipeline project finance mechanisms, pipeline economics and operations, environmental impact assessment requirements, social risk mitigation concerns, and pipeline security issues would be covered.

USGS Oil and Gas Resource Assessment of the Uganda-DRC Border (2010-2011)

This assessment would require the full support of both the GOU and the Government of the Democratic Republic of the Congo (DRC). This basin-wide assessment would provide an independent, unbiased estimate of the undiscovered petroleum resources on both sides of the Lake Albert and Lake Edward regions using industry standardized methodology. Such an assessment would be valuable in identifying and resolving impending cross-border issues such as trans-boundary oil field developments, unitization requirements and export options.

Targeted Legal Assistance (2010)

The Department of Commerce's CLDP, or USAID's legal specialists, could provide desktop reviews of existing or proposed laws in order to ensure their optimization and harmonization with other legislation. CLDP's attorneys also may be able to provide assistance in drafting new laws or regulations in order to strengthen the business environment needed to support Uganda's upstream and downstream oil and gas industry.

**Objective 2: Strengthen the GOU's Institutional Capacity Through Advanced Training**

Workshop on the U.S. Experience in Managing the Oil & Gas Sector (2010)

This workshop would provide a comprehensive four-day overview of the responsibilities and activities of the Minerals Management Service in the United States. This course would include a detailed discussion of how issues relevant to Uganda's oil sector are handled in the United States. Topics would include: tendering; geologic and economic modeling; reviewing, authorizing, and inspecting exploration and production infrastructure; pipeline management; and environmental review and compliance.

Environmental Compliance and Social Impact Workshop for Affected Communities (2011)

This workshop could include GOU entities, regional and local government officials, industry, and the responsible environmental NGO community. It would cover the environmental impacts (*e.g.*, waste water disposal, paraffin handling, oil spill prevention and response) from oil and gas production operations and how the United States mitigates these environmental risks, including in offshore areas. This workshop would be designed to inform a wide range of participants about the

facts and realities of oil sector development and the effective risk mitigation measures that can be taken to ensure safe operations and protection of the environment.

#### Geophysical Training Classes (2011)

One or more of the following four USGS courses on processing and interpretation possibly could be conducted in Uganda, depending on the PEPD's interest and needs. USGS could provide data sets, or use data sets provided by PEPD. Students are expected to have degrees in geophysics and experience using computer workstations.

- A one- to two-week course in basic processing using free, Linux-based software available from the Colorado School of Mines. Class participants would use their own laptops to boot directly to Linux and run the seismic data software. This course usually is given for countries that have no seismic data processing capabilities whatsoever.
- A one-week course using Landmark's seismic data processing package ProMAX. USGS would be able to provide sample data sets and process lines from the "raw" field stage through migrated stacks. The course would require that PEPD already owns Landmark's ProMAX software suite.
- A one- to two-week class on interpreting seismic data using Landmark's Openworks, a Linux-based seismic data interpretation package. This package is also used widely in the industry and somewhat at major academic institutions. The course would require that PEPD already owns this Landmark module.
- A one- to two-week class on interpreting seismic data using Kingdom Suite from Seismic Micro Technology (SMT). This package is used increasingly by industry because of its lower cost as compared to Landmark's Openworks. The course would require that PEPD already owns this Kingdom Suite module.

#### Limited-Term Internships & On-The-Job Training in the United States (2011)

This assistance would provide an opportunity for up to two PEPD geologists/geophysicists to work side-by-side with MMS officials who have responsibility for the U.S. Gulf of Mexico region. PEPD staff would learn how MMS performs geologic and economic modeling of oil and gas resources.

#### Water Quality Analysis and Monitoring (2011)

USGS could provide a one-week course in water quality analysis to appropriately degreed personnel. A two- to three-day course in field water quality monitoring techniques could also be offered.

#### Oil and Gas Resource Assessment Training (2011)

This one-week course would provide instruction on how USGS undertakes geologically-based resource assessments of petroleum basins. It would differ from American Association of Petroleum Geology (AAPG) courses, which frequently focus only on smaller field and play assessments. This USGS training would provide the skill sets needed for PEPD to conduct its own assessments of the country's oil and gas resources using a methodology practiced by USGS.

#### Drilling Core Sample Workshop (2011)

This two-day USGS course could provide PEPD with a better understanding of standardized methods for collecting, archiving and maintaining core samples.

### **Objective 3: Augment the GOU's Financial Management, Planning and Revenue Governance Skills**

#### Uganda Revenue Authority Support (2010-2011)

The Department of Treasury's OTA is in a position to send a two-person team to Kampala to work with the URA on an intermittent basis during the next 18 months. Pending the conclusion of a more in-depth assessment (which could occur immediately) as well as development of a Terms of Reference (TOR) and work plan, the OTA team could help to draft policy and procedures as well as to train and mentor the URA's oil and gas unit in the conduct of audits.

#### Oil Revenue Management Seminar (2011)

The Department of Treasury's OTA, together with MMS oil and gas revenue specialists, possibly could conduct a two-week seminar covering the political economy of oil. It would include topics such as revenue sharing, avoiding the Dutch disease and the creation of revenue management systems, with a focus on accurate forecasting as well as oil management funds. The seminar also would provide a focus on international standards, IMF best practices for revenue management and the Extractive Industries Transparency Initiative. It would be conducted in partnership with the IMF and designed primarily for the Ministry of Finance and the Bank of Uganda.

#### Petroleum Economics Course at the Center for Energy Economics at University of Texas (2011)

A special one- to two-week course could be formulated for GOU officials from the Ministry of Finance, Ministry of Energy and Mineral Development and the Bank of Uganda. This course would provide opportunity for GOU officials to understand better the significant monetary and fiscal impacts of sudden inflows of oil and gas revenues into a national treasury, along with an understanding of project economics and how the sector functions. It could be done in conjunction with the Offshore Technology Conference in Houston, with support by the U.S. Department of Commerce's Foreign Commercial Service.

#### In-Country Advisors for the Ministry of Finance and Bank of Uganda (2012)

Advisors from the U.S. Department of Treasury and USAID likely would be of help with capital budgeting and the creation of other finance mechanisms. This activity would be envisioned to occur in 2012.