Workshop on Natural Gas Industry

by the Resource Center for Energy Economics and Regulation (RCEER)
September 13, 2006
at the Energy Commission Building
Accra

Guest Presenters
Dr. Michelle Michot Foss, Center for Energy Economics, University of Texas
Dr. Gürcan Gülen, Center for Energy Economics, University of Texas

9:30-12:00 (with break)

Overview of physical infrastructure across the natural gas value chain

- The natural gas supply chain and the formation of value
  - From the supplier perspective
  - From the customer/consumer perspective
- Key considerations for the natural gas value chain
  - Features of natural gas that impact use and development
    - Energy, materials, environmental benefits
    - Resource development
    - Infrastructure requirements
    - Balancing supply and demand
    - Price formation relative to supply chain cost structure
- Key value chain components
  - Exploration and production
  - Gathering & processing
  - Transportation via larger diameter long-distance pipelines through high pressure compression
    - Metering
    - Supervisory Control and Data Acquisition (SCADA)
    - Material and cost overview
  - Local distribution via smaller diameter pipeline network through low pressure compression
    - Metering
    - Material and cost overview
  - Storage
    - Underground geological
    - Liquefied natural gas

Natural Gas Value Chain Investment Considerations – Case Studies

- Uses & customers (electric power, industrial, transportation, other)
- Service types (firm, interruptible, other)
- Pipeline cost structures (material, ROW, labor, other)
- Regulatory issues (access, tariffs, payment discipline, disputes, etc.)
- Transmission pipeline and LDC development

12:00-13:30

Lunch

13:30-16:30 (with break)

Considerations for Ghana

- Economics of LDC business in Tema and Takoradi
  - A discounted cash flow model
  - Cost assumptions
  - Revenue assumptions
  - Economic tariff under the assumptions
- Building the natural gas infrastructure
  - Transmission versus distribution
  - Public versus private investment / ownership / exclusivity period
  - Cost recovery (tariffs)
  - Awarding distribution franchises
- Competitiveness of natural gas
  - Industrial uses
  - Power generation
- Opportunities for new uses of natural gas
  - Transportation sector