



SARI / Energy

South Asia Regional Initiative for Energy (SARI/Energy)

ELECTRICITY MARKET DEVELOPMENT PROGRAMME (EMDP – GEMTT II)

August 12– 14, 2008
Dhaka Sheraton, Dhaka, Bangladesh

AGENDA

KNOWLEDGE PARTNER



ORGANIZED BY



Tuesday, August 12, 2008

SETTING THE STAGE

8:30 – 9:00 : Registration

MARKET STRUCTURE DESIGN

09:00 - 09:05 : **Welcome Address & Introduction** – A.K.D. Sher Md. Khan/USAID - Dhaka

09:05 - 09:15 **Keynote Address** – Denise Rollins/ Mission Director/USAID Dhaka

09:15 - 09:25 **Inaugural Address** - Ministry Official / Govt. of Bangladesh

09:25 - 09:30 **Introduction to SARI/Energy Program** - Michael Ellis/Chief of Party PA Consulting

10:00 – 10:30 : **Workshop Overview:**

- I. Participant Introductions
- II. Module Overview
- III. Instructors

10:30 – 11:15 :
I. Objectives of Electricity Markets
a) Economic efficiency
b) Economic development
c) Reliability
d) Environmental objectives

11:15 – 11:45 :
II. Privatization of Assets
a) What is privatization
b) Objectives of privatization
c) Issues and complexities
d) Examples of countries that privatized their electric power system

11:45 -11:50 : **GROUP PICTURE**

11:50 -12:00 : Coffee Break

12:00- 12:30 :
III. Preconditions for Electricity Markets
a) Size of power system and sufficient number of generation units
b) Understanding of electricity fundamentals
c) Understanding of markets

- 12:30– 13:00 : IV. Overview of Electricity Market Design Elements
- a) Competitive procurement
 - b) Open access/bilateral wholesale market
 - c) Centralized wholesale market
 - i. Centralized unit commitment vs. no centralized unit commitment
 - ii. Nodal vs. zonal prices
 - d) Retail Market

13:00 -14:00 : LUNCH

- 14:00– 15:30 : V. Key Issues that Electricity Markets Need to Address
- a) System operation and reliability
 - b) Congestion
 - c) Transmission expansion
 - d) Demand response
 - e) Market power
 - f) Environmental issues

VI. Examples of Electricity Markets

VII. Lessons Learned to Date from Electricity Markets

15:30 – 15:45

Coffee Break

15:45 – 17:00

Role of the Regulator in a Competitive Electricity Market:

Characteristics of autonomous regulatory commissions

- I. Role of State vs. federal regulators
- II. Status of Retail and Wholesale Competition in the U.S.
- III. Key Issues: Unbundling, Third Party Access, Market Monitoring
- IV. Role of Regional Organizations of Regulators

Wednesday August 13, 2008

ELECTRICITY MARKETS FUTURE TRENDS & CHALLENGES

- 9:00 – 11:00 : **Role of System Operators**
- I. Real Time Market and System Operations
 - a) Real Time Dispatch
 - b) Managing Constraints and Out of Merit Order Dispatch
 - II. System Emergency Procedures
- 11:00 - 11:15 : Coffee Break
- 11:15 - 1:00 : **Role of System Operators (contd...)**
- 01:00 – 02:00 : Lunch
- 02:00– 03:30 : **Role of Market Operators**
- I. Day Ahead Market
 - a) Defining Market Bids and Offers
 - b) Day Ahead Clearing Process
 - c) Commitment of Generators
 - d) Reliability Analysis
 - e) Timeline of Day Ahead Market
 - f) LMP and FTR's
- 03:30- 03:45 : Coffee Break
- 03.45 - 05.00 : **Transmission Planning**
- I. Reliability Assurance Agreement
 - II. Transmission Owners Agreement
 - III. Operating Agreement

Thursday, August 14, 2008

Spot Markets/Balancing Markets/Trading

- 09:00 : I. Real Time Market – How it works
- a) Dispatch priority
- 09:45 II. Balancing Market
a) Real Time vs. Day Ahead Position
b) Financial Impacts
c) Ancillary Services
- III. Market Surveillance
a) Need for Market Monitoring
b) Market Monitoring Plan
c) Data and Activities Analyzed by the Market Monitoring Unit
- 09:45 : I. Characteristics of electricity Markets Related to Power Procurement
- a) Volatile electricity prices
10:30 b) Emission allowances
c) Type of electricity market
- II. Types of Power Procurement
a) Power contracts
i. Fixed output
ii. Unit contract (with and without contingencies)
iii. System contract
iv. Fixed vs. variable pricing
v. Forward for future contracts
b) Fuel price risk
c) Congestion risk
d) Spot Market
i. Day-ahead
ii. Real-time
e) Trading and risk management
i. Forecasting/forward curve
ii. Risk management and instruments
iii. Insurance
Trading desks
- 10:30 : Coffee Break
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- 10:45
10:45 : I. Economic Characteristics of Contracts
- 1:00 a) Long-lived assets

- b) Sunk
 - c) Value is uncertain
 - d) Contracts by definition bind parties to act in ways that they would prefer not to
- II. Objects of Well-written Contracts
- a) Align risk and reward
 - b) Clarity
 - c) Tailored to meet needs of parties
- III. Elements of a Typical Power Contract
- IV. Contracting Do's and Don'ts

1:00 – : Lunch

02:00

02:00– : **Ancillary Services & Operational Planning**

03:30

- I. Ancillary Services
- a. Listing and description of ancillary services
 - i. Operating reserves (ten-minute spinning, ten-minute non-spinning, and thirty-minute reserves)
 - ii. Automatic generation control/frequency control
 - iii. Blackstart service
 - iv. Others
 - b. Purpose of ancillary services
 - c. Procurement of ancillary services (market-based vs. regulated)
- II. Unit Commitment and Real-time Dispatch
- a) Unit Commitment (Security Constrained Unit Commitment)
 - i. Description and examples
 - ii. Reasons
 - iii. How it forms the basis for the day-ahead market
 - b) Real-time dispatch
 - i. Descriptions and examples
 - ii. Reasons
 - iii. How it forms the basis for the real-time market
 - c) How the day-ahead and real-time markets work together
 - d) Issues that arise between economics and reliability
- III. Generation maintenance scheduling

03:30 : Coffee Break

-03:45

03:45: **Ancillary Services & Operational Planning (Contd...)**

17:00

Closing Session & Graduation

