



AGENDA

**OVERVIEW OF CANADIAN
ELECTRICITY MARKETS
EXECUTIVE PEER EXCHANGE**

**TORONTO, ONTARIO &
CALGARY, ALBERTA
CANADA**

November 6 – 10, 2006

**Conducted by the
U.S. ENERGY ASSOCIATION
Under the
SOUTH ASIA REGIONAL INITIATIVE FOR ENERGY (SARI/ENERGY)
Funded by the
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT**

DRAFT AGENDA FOR EXECUTIVE PEER EXCHANGE

**Alberta, Canada & Toronto, Ontario
November 6 – 10, 2006**

GOAL: By assessing energy markets in Canada, South Asian energy executives will understand the positive impacts that transparent energy markets and cross border energy trade can have on attracting additional investments and meeting energy needs.

After learning in depth about the organization, operation and development impacts of the Alberta electricity market, the delegates will have the opportunity to identify potential actions and practices that might be applicable to the power sectors of their own South Asian countries.

PRIMARY OBJECTIVES:

- To learn techniques for managing energy markets
- To analyze power trading strategies, including other-the-counter (OTC)/SPOT, power pool and futures exchanges
- To analyze pricing mechanisms, including whole price index for peak power and short term OTC traded power
- To discuss open access tariff structures
- To learn the role regulatory agencies play in structuring and monitoring power exchanges

SUBOBJECTIVES:

- Learn about & obtain documentation on an additional electricity market, including: history, organizational structure, planning, standards, operations, tariffs, products, energy trading strategies, regulation and monitoring
- Learn about & obtain documentation on cross border power projects
- Learn about & obtain documentation on the regulator's role in domestic and international energy markets
- Learn about the development of Canadian energy policies

OUTCOMES:

- Knowledge & documentation on multinational and regional energy markets
- Knowledge & documentation on specific cross-border investment projects
- Participant's assessment of policies, procedures, organizational structures and practices potentially applicable to South Asia

USAID's South Asia Initiative for Energy (SARI/Energy) is an eight-country program that promotes regional energy security. Begun in 2000, the SARI/Energy program focuses on regional approaches to meet South Asia's energy security needs through increased trade, investment and access to clean energy. SARI/Energy countries include: Afghanistan, Pakistan, India, Nepal, Bhutan, Bangladesh, Sri Lanka and the Maldives.

Executive Peer Exchange Participants

Afghanistan

Eng Mir Mohammad Sediq
Deputy Minister
Ministry of Energy and Water
Tel: 70-5777-77
Email: mirsahib2003@yahoo.com

Bangladesh

Mr. Md. Delwar Hossain
Director (System Planning)
Bangladesh Power Development Board
Wapda Bhaban, Motijheel Commercial Area
Dhaka 1000, Bangladesh
Tel: 880-2-9560884
Fax: 880-2-955-2623
Email: delwar1953@yahoo.com

Mr. Md. Rafiqul Alam
General Manager (System Operation)
Power Grid Company of Bangladesh Ltd.
(PGCB)
Red Crecent Concord Tower
6th Floor, 17
Mohakhali, Dhaka - 1212
Tel: 880-2-7171105
Mobile: 0189-229833
Email: dgm-com@bttb.net.bd

India

Mr. Alok Kumar
Director (R & R)
Ministry of Power
Shram Shakthi Bhawan, Rafi Marg
New Delhi – 110 001
Tel: 91-11-23714000
Fax : 91-11-23714000
Email: alokkumar@nic.in

(India continued)

Mr. Guryog Singh
Deputy General Manager (Commercial)
NTPC Ltd.
Core -7
Scope Complex 7, Institutional Area
Lodi Road
New Delhi – 110 003
Tel: 91-11- 24366535
Fax: 91-11- 25848334
Mobile: 0 9868390194
Email: damani_in@yahoo.com or
guryogsingh@ntpc.co.in

Mr. K.S. Dhingra
Chief (Law)
Central Electricity Regulatory Commission
7th Floor, Core-3
Scope Complex, Lodi Road
New Delhi 110 003
Tel: 91-11- 24363174
Fax : 91-11- 24360010
Email: ks_dhingra@hotmail.com

Mr. P.K. Awasthi
Deputy Chief (Legal)
Central Electricity Regulatory Commission
Core -3, 5th Floor
Scope Complex
7, Institutional Area
Lodi Road
New Delhi – 110 003
Phone: 91-11- 24364895
Fax: 91-11 -24360010
Email: awasthi_prabhat@yahoo.com

Mr. U.K.Tyagi
Deputy General Manager (Commercial)
Powergrid Corporation of India Ltd.
Plot – 2 , Sector -29
Gurgaon – 122 001 (Haryana)
Tel: 91- 124 – 2571991
Fax: 91-124- 2571989
Email: umesh@powergridindia.com or
umeshk_tyagi@yahoo.co.in

(India cont.)

Mr. Sanjay Munjal
Assistant General Manager
AGM- Meter Management Group
North Delhi Power Ltd.
Corporate Office – Hudson Lines
Kingsway Camp
New Delhi 110009
Tel: 91-11- 66116295
Mobile: 91- 9818100637
Fax: 91-11- 27468042 (Managing Director's
office)
Email: sanjay.munjal@ndplonline.com

Mr. Rahul Banerjee
Assistant Vice President
Energy Product Development
National Commodity & Derivatives
Exchange, India
Email: rahul.banerjee@ncdex.com

Mr. Vivek Oberoi
Manager
Energy Product Development
National Commodity & Derivatives
Exchange Ltd.
NCDEX, Exchange Plaza,
Bandra Kurla Complex
Mumbai – 400050
Tel: 91-22-6640-6623
Fax: 91-22-6640-6899
Via Email: Vivek.Oberoi@ncdex.com

Pakistan

Mr. Maqbool A. Khawaja
CEO
Hyderabad Electric Supply Corporation
Old State Bank Building
HESCO Regional Office
Thandi Sarak
Hyderabad Sind
Tel: 022-9200003
Fax: 022-9200009

(Pakistan cont.)

Mr. Aftab Sarwar
Chief of Policy, Implementation Cell
Ministry of Water and Power
Second Floor, 'A' Block
Pakistan Secretariat
Islamabad, Pakistan
Tel: 051-2264579
Fax: 051-9206389

Sri Lanka

Mr. B. Nihal Wickramasuriya
Reform Manager and Additional General
Manager
Ceylon Electricity Board
P.O. Box 540, Chittampalam A. Gardinar
Mawatha
Colombo-2, Sri Lanka
Tel: 94 112-543157
Fax: 94-112-382488
Email: agmr4@ceb.lk

Mr. T.D. Handagama
Deputy General Manager/System Control
Ceylon Electricity Board
Tel: 94 112 685105
Email: dgmsyc@ceb.lk

USEA

Mr. John Hammond
Program Manager
U.S. Energy Association
1300 Pennsylvania Avenue, NW
Suite 550, Mailbox 142
Washington, DC 20004-3022
Tel: 202-312-1230
Fax: 202-682-1682
Email: jhammond@usea.org

Mr. Sridhar Samudrala
Deputy Program Manager
U.S. Energy Association
1300 Pennsylvania Avenue, NW
Suite 550, Mailbox 142
Washington, DC 20004-3022
Tel: 202-312-1230
Fax: 202-682-1682
Email: ssamudrala@usea.org

Ms. Sarah Blanford
Senior Program Coordinator
South Asia Regional Energy Partnership
Program
U.S. Energy Association
1300 Pennsylvania Avenue, NW
Suite 550, Mailbox 142
Washington, DC 20004-3022
Tel: 202-312-1230
Fax: 202-682-1682
Email: sblanford@usea.org

USAID

Mr. Sarbinder Singh
Deputy Program Manager – SARI/Energy
U.S. Agency for International Development

November 4 – 5, 2006

Delegates arrive in Toronto, Ontario

Lodging:

Metropolitan Hotel Toronto
108 Chestnut Street
Toronto, ON M5G 1R3
Tel: 416-597-6332
Fax: 416-977-9513

Transportation:

123 Limos
Attn: Jim (905-428-0950;
info@123limo.ca)
Monday: Chris
(Mobile: 416-476-8686)

DAY 1: Monday, November 6, 2006 – Toronto, Ontario

07:20 **Check-out of hotel**

07:45 **Depart hotel for IESO**

08:45 **Arrive at IESO**

Meeting with the Ontario Independent Electricity System Operator (IESO)

Location: Clarkson System Control Center

Contact: Sandy Kelly, Communications Services Officer (416.506.2822; sandy.kelly@ieso.ca)

Speakers: Mike Isber, Market Relations Consultant; Stewart Gilmore, Market Entry & Analysis, Market & System Operations

09:00 **Welcoming Coffee & Tea**

09:15 **Welcoming**

Mr. John Hammond, Program Manager, USEA

Mr. Sarbinder Singh, Deputy Program Manager, USAID

9:30 **Overview of the Ontario Electricity Market & the IESO**

- Organization, governance and enabling policies of participants
- System supply, demand and transmission constraints
- Operational guidelines

10:45 **Coffee & Tea Break**

11:00 **Overview of the IESO (continued)**

- Energy trading system
- Congestion management procedures
- IT/System software
- Power Pricing: Bidding/auction procedures and documentation
- Market technology/software
- Contract documentation and settlement system
- Transmission system pricing and open access requirements, transaction costs

11:30 **Adjourn**

11:45 **Lunch**

Meeting with the Toronto Hydro-Electric System Limited

Location: 14 Carlton Street

Contact: Bob King (416-542-2611; bking@torontohydro.com; Diane F. 416-542-2890)

Speakers: Bob King, Chief Operating Officer, Joe Bailey, Senior Vice-President Asset Management & Pankaj Sardana, Vice President of Risk Management and Treasury

13:00 **Arrive at Toronto Hydro-Electric System Ltd.**

13:30 **Overview of the Toronto Hydro-Electric System Ltd.**

Speaker: Bob King, Chief Operating Officer

- Organization structure

- Responsibilities
- History
 - Development & challenges of the Ontario electricity market in the past decade
 - Merging of distribution system
- Current challenges

14:30 Operations within the Market

Speaker: Pankaj Sardana, Vice President of Risk Management and Treasury

- How Hydro Electric trades power
- Operations with supplier

15:15 Adjourn meeting

15:30 Departure from meeting for airport

16:45 Arrival to Calgary International Airport

18:30 Departure flight to Calgary – Air Canada 153

Note: Dinner is not served on flight.

20:50 Arrival into Calgary

Lodging:

Hyatt Regency Calgary
 800 Centre St. S.E.
 Calgary, Alberta
 T2G 5P6 Canada
 Tel: 403-717-1234
 Fax: 403-537-4444

Transportation:

Blue Sky Limos
 Attn: Jim (403-225-0000; info@blueskylimos.com; fax: 780.431.0288)

DAY 2: Tuesday, November 7, 2006 – Calgary, Alberta

10:00 Meet in lobby & depart to DOE

Meeting with Alberta Department of Energy

Location: Alberta Energy, #300, 801 - 6 Avenue, Boardroom # 315, Calgary, AB

Contact: Ms. Barb Arnau (403-297-4799)

Speaker: Ms. Anne Denman, Associate Executive Director, Electricity Division, Alberta Energy

10:30 Welcoming Coffee & Tea

10:35 Welcoming

Mr. John Hammond, Program Manager, USEA

10:45 Overview of the Alberta Electricity Market

Ms. Anne Denman, Associate Executive Director, Electricity Division, Alberta Energy

12:00 Lunch

Meeting with the Alberta Electric System Operator (AESO)

Location: 2500, 330 5th Ave. SW Calgary

Contact: Kimberly Langille (kimberly.langille@aeso.ca, (403) 539-2588)

Speaker: Mr. Darren McCrank, Senior System Engineer, Operations & Reliability

13:30 Overview of the Alberta Electric System Operator & Operations of the Alberta Interconnected Electric System (AIES)

- Organization, governance and enabling policies of participants
- System supply, demand and transmission constraints
- Operational guidelines
- Transmission Advisory Committee

14:00 Overview of AESO System Coordination Centre (SCC)

- Congestion management procedures
- IT/System software
- Contract documentation and settlement system
- Transmission system pricing and open access requirements, transaction costs

14:30 Coffee & Tea Break

14:45 Detailed Overview of AESO Energy Trading System (ETS)

- Functions of ETS
- Overview of real-time wholesale electricity market
- Power Pricing: Bidding/auction procedures and documentation
- Market technology/software

17:00 Close of Day Two

18:15 Meet bus for transport to restaurant

18:30 USEA and Government of Alberta Hosted Reception & Dinner

Venue: Maurya. #100, 1204 Kensington Road (Kensington)

Tel. (403) 270-3133; Fax: (403) 270-3501.

Official Welcome on behalf of the Government of Alberta

Mr. Shiraz Shariff, Member of the Legislative Assembly (Calgary – McCall)

DAY 3: Wednesday, November 8, 2006 – Calgary, Alberta

08:30 Meet in lobby & depart for DOE

Meeting with the Market Surveillance Administrator (MSA)

Location: Department of Energy (Suite 300, 801 - 6 Ave. SW (Amec Place), Room 315;

Contact at DOE Adele (403-297-8955)

Speakers: Wayne Silk, COO & Mike Nozdryn-Plotnicki, Manager, Market Monitoring

09:00 Continental Breakfast

- 09:30 Overview of MSA**
- History
 - Organization structure
 - Role/collaboration with AESO, Department of Energy and other parties
 - Outreach
- 10:30 Coffee & Tea Break**
- 10:45 Market monitoring methods**
- Role/collaboration with AESO, Department of Energy and other parties
 - Outreach
- 12:00 Lunch**

Meeting with the TransAlta

Contact: Thomas Rainwater, Executive Vice President (403-267-7110, tom_rainwater@transalta.com); Linda Meyer (Linda_meyer@transalta.com)
 Location: Station "M", 110 – 12 Avenue SW, Calgary, AB
 Speaker: Thomas Rainwater, Executive Vice President

- 13:30 Overview of TransAlta**
- History
 - Organizational structure
 - Energy system forecasting, planning and investment decision making
 - Financing strategies for required investment
 - Key problems experienced and solutions: complexity, market power, system gaming, bidding and prices, system unexpected impacts, and integration of demand-side resources
 - Transmission system pricing and open access requirements, transaction costs
- 15:00 Coffee & Tea Break**
- 15:45 Overview of TransAlta (continued)**
- 16:30 Adjourn**
- 19:00 USEA Hosted Dinner (Informal)**

DAY 4: Thursday, November 9, 2006 – Calgary, Alberta

- 08:30 Meet in lobby & depart for NEB**

Meeting with the National Energy Board

Contact: Bob Modray, Technical Specialist, Economics and Energy Analysis (bmodray@neb-one.gc.ca; 403-299-3157) & Claudine Dutil-Berry, Team Leader Electricity, Commodities Business Unit (cdutilberry@neb-one.gc.ca; 403-299-3900)
 Location: 444 Seventh Avenue SW, Calgary, Alberta, T2P 0X8

- 09:00 Welcoming Coffee & Tea**

- 09:10 Overview of NEB**
- History
 - Organization structure
 - Overview of power sector regulation in Canada

NEB responsibilities

- NEB responsibilities
 - Construction and operation of pipelines and power lines
 - Traffic, tolls and tariffs
 - Export and import of energy
 - Frontier oil and gas
 - Northern Pipeline Agency
 - Energy studies and advisory function
- Other responsibilities
- Cooperation with other agencies

NEB Functions

- Hearings/petitions, Alternate Dispute Resolution
- Non-compliance and Enforcement
- Service Monitoring and Enforcement Department (certification, service quality, standards of performance, compliance)
- Overview of energy efficiency programs

09:45 Governance – Domestic vs. International

10:15 Coffee & Tea Break

10:30 Overview of Trading Practices & Issues

11:00 Adjourn

Meeting with Direct Energy Ltd.

Location: 111 5th Avenue, SW, East Tower, Suite 1000 (10th Floor)

Contact: Linda Van Sprang (403-290-6735; Linda.vansprang@directenergy.com)

Speakers: Chris Thrall, Vice President of Energy Management Canada

Tony Zaramba, VP Power Supply and Energy Origination

Michael Law, Senior Director of Power Supply

14:00 Overview of Direct Energy Ltd.

Role of the Retailer

Power Trading in Alberta & Ontario

14:30 Q&A

15:00 Coffee & Tea Break

15:15 Tour of the Trading Floor

16:00 Close of Day Four

19:00 USEA Hosted Dinner (*Informal*)

DAY 5: Friday, November 10, 2006 – Calgary, Alberta

Meeting with the Balancing Pool

Location: Hyatt Regency Calgary – Room: Neilson 1

Contact: Grace Hrischuk, Sn. Admin. Coord. (403-539-5350, grace.hrischuk@balancingpool.ca)

Speakers: Gary Reynolds, President & CEO and Doug Heath, Vice-President Operations

08:30 Continental Breakfast

09:05 Overview of the Balancing Pool

- History
- Organization structure
- Role/collaboration with AESO, Department of Energy and other parties

10:30 Coffee & Tea Break

10:45 Managing Power Purchase Arrangements (PPAs)

- Managing financial accounts arising from transition to a competitive generation market
- Meeting obligations and responsibilities association with sold and unsold PPAs

11:45 Overview of the Market Achievement Plan

12:30 Lunch

Meeting with the Alberta Energy and Utilities Board (EUB)

Contact: Mika Madunicky, Advisor, EUB Communications (mika.madunicky@gov.ab.ca; 403-297-8172)

Location: Hyatt Regency Calgary

14:00 Overview of EUB

- History
- Organization structure
- EUB responsibilities
- Other responsibilities
- Cooperation with other agencies

15:30 Coffee & Tea Break

15:45 Overview of energy efficiency programs

16:15 Q&A

16:30 Group Meeting and Discussion – Assessment of peer exchange and discussion of procedures and practices applicable to South Asia

Moderator: Mr. Sridhar Samudrala, Deputy Program Manager, USEA

17:30 Close of Day Five and Executive Peer Exchange

Saturday, November 11 – Delegates depart for home