Infraline-Mercados EMI Energy School Workshop

POWER MARKETS IN INDIA

October 29-31, 2009, Hotel JW Marriott, Mumbai

AGENDA

October 29, 2009
(Day 1 - Programme)

S.No.	Particulars	Timings	Faculty
1.	**Introduction to the Workshop and Power Markets**	9:15 AM – 10:00 AM	Anish De (CEO, Mercados EMI)

2.	**Introduction to Indian Electricity Markets**
	• Latest developments
	• Organisation of the Indian electricity markets
	• Electricity Exchanges in India
	  o IEX
	  o PXIL
	  o NPX
	• Trading products in place and likely to emerge - Spots, Short Term, Medium Term and Long term, Bilateral and exchange based - intra-day, Day Ahead and Term Ahead
	• Players in the trading markets - generators banks, brokers, traders, end users, producers:
	  o Roles and methods of operations
	  o Trading revenues and profitability
	  o Costs
		10:00 AM - 11:00 AM	Rajesh Mediratta
			(VP – BD, IEX)

Tea/Coffee Break: 11:00 AM - 11:15 AM			
3.	**Factors that will affect trading markets** • Regulations governing trading, traders and Exchanges • Generation: Technologies, players, regulations, current issues • Transmission: players, regulation, current issues and congestion management • Distribution: players, regulation, distributed and embedded generation • Interfacing Renewables with Competitive Electricity Markets • Suppliers, key players, consolidation, current issues • Role of interconnections and cross border trading	11:15 AM - 1:00 PM	Anish De (CEO, Mercados EMI)
Lunch: 1:00 PM - 2:00PM			

S.No.	Particulars	Timings	Faculty

4.	**Prices in electricity markets**
	• Introduction to Day and Term Ahead Markets
	• Understanding Electricity Prices
	  o Implication of non-storability of the commodity for prices
	  o Price formation mechanisms in deficit and surplus conditions
	  o Impact of price caps. Inter-se influence of markets
	  o Seasonality
	  o Volatility, spikes
	  o Mean reversion
	  o Price drivers: supply and demand, weather and others
	• Dependence of Day Ahead Market Prices on Unscheduled Interchange rates (imbalance settlement mechanism in real time markets)
	Price forecasting in Day / Term Ahead Electricity Markets
	• Introduction to time-series techniques for forecasting.
	• Use of Neural Network and Optimization techniques for price forecasting
		2:00 PM - 3:30 PM	Anish De (CEO, Mercados EMI)
			Dr S. Soman (IIT Mumbai)
			Puneet Chitkara (Principal, Mercados EMI)
			Vibhuti Garg
			(Senior Consultant, Mercados EMI)

Tea/Coffee Break: 3:30 PM - 3:45 PM			
5.	**Price forecasting using fundamental models** • Stochastic Dual Dynamic Programme (SDDP) **Transmission Pricing** • Point of connection charge in the context of Indian Markets	3:45 PM - 6:00 PM	Puneet Chitkara (Principal, Mercados EMI)

October 30, 2009
(Day 2 - Programme)

S.No.	Particulars	Timings	Faculty
1.	**Electricity Markets: Physical and Financial Trading** • Spot and forward trading of electricity • Understanding the generation stack • Operating decisions of a power plant • Efficiency curves and heat rates • Forward curves for electricity and CO_2 • Impact of renewable targets on market structure • Dynamics in the above product markets	9.30 AM - 11.00 AM	Roberto D'Addario (Partner, Mercados EMI)

Tea/Coffee Break: 11:00 AM - 11:15 AM			
2.	**Group Discussion:** • Latest developments and future outlook.	11:15 AM -1:00 PM	
Lunch: 1:00 PM - 2:00 PM			

S.No.	Particulars	Timings	Faculty
3.	**Trading Strategies and Portfolio Optimization** • Market models • How to develop a bidding strategy for the power pool • Treatment of Hourly Bids, Block Bids - standard and linked • How the portfolio can be managed • Practical examples from the perspective of a trader, distribution company, supply company and from that of a generator	2:00 PM - 3.30 PM	Puneet Chitkara (Principal, Mercados EMI) Vibhuti Garg (Senior Consultant, Mercados EMI)
Tea/Coffee Break: 3:30 PM - 3:45 PM			
4.	**Simulation exercise:** Spot Market: Producing a sample bid on the spot market for a generator	3:45 PM - 5:30 PM	

October 31, 2009
(Day 3 - Programme)

S.No.	Particulars	Timings	Faculty
1.	**Derivatives** • What are derivatives • Case Studies: Enron, Société Générale and Amaranth • Derivatives: good or bad?	9:30 AM - 11:00 AM	Roberto D'Addario (Partner, Mercados EMI) Anish De (CEO, Mercados EMI)
Tea/Coffee Break - 11:00 AM - 11:15 AM			
2.	**Hedging and Trading from a Utilities Perspective** • How to manage risk and trade along the value chain • Customers increasingly expect flexibility • Trading at utilities level • Relationship trading-retail-marketing • Trading products	11:15 AM - 1:00 PM	Anish De (CEO, Mercados EMI)
Lunch: 1:00 PM - 2:00 PM			
3.	**Simulation of a Power Exchange offering multiple products** Simulation of a Power Exchange offering multiple products: Various delegates will be required to perform the roles of generators / traders / exchange members / distribution companies and managers of the PX to understand the behavioral aspects in offering / bidding, strategic play and hence the outcomes – in terms of prices and volumes of various products traded on the exchange.	2:00 PM - 4:30 PM	Satyajit Ganguly (Head Operations, PXIL)
4.	**Conclusion**	4:30 PM - 5:00 PM	Mercados EMI
5.	**Vote of Thanks**	5:00 PM - 5:15 PM	Roberto D'Addario (Partner, Mercados EMI)