



EUCI Presents a Course on:

In-Depth Introduction to Electricity Markets

June 23 – 24, 2008



**Hilton Alexandria Mark Center
Alexandria, VA**



A Leading
Provider of
Continuing
Education

In-Depth Introduction to Electricity Markets

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OVERVIEW

This in-depth introductory course is designed for those with a limited knowledge of the electric power system and restructured markets. It provides an overview of the industry focusing on the linkages between power system engineering, markets, regulatory policy, and business strategies. Specific examples and actual market data are used to illustrate basic principles and ideas. This seminar uses several approaches to elicit participation from attendees, including group exercises and an electricity market simulation in which participants bid a portfolio of generation resources over the course of the seminar under various market rules and conditions. Participants will have plenty of opportunities to ask questions and discuss issues of special interest to them. Extensive and comprehensive course notes are provided to each attendee.

WHAT ATTENDEES WILL LEARN

This intensive two-day course will provide participants with a solid understanding of the basic engineering and economic terms, issues, and methods of analysis necessary to be successful in electricity markets. Attendees will learn the following:

- The basic components, design, and operation of electric power systems
- Types of generation units and price-responsive load
- The fundamentals of various electricity markets, including locational marginal pricing (LMP), bilateral, day-ahead, real-time, capacity, and ancillary services markets and how these markets are designed to be consistent with the engineering fundamentals of electric power systems
- The impetus for restructuring the electric power system and introducing competition and the status of restructuring in different regions of the United States
- The major industry players and the strategies that they are pursuing
- The fundamentals of risk management as applied to electricity products
- Critical issues confronting the industry such as market power and reliability and likely future directions
- Successful bidding, asset development, and ISO/RTO regulatory strategies

WHO SHOULD ATTEND THIS COURSE

- Employees new to the industry or with limited industry experience
- Attorneys and regulatory personnel new to the industry
- Accounting, IT personnel, and support personnel that need a better understanding of their firm's competitive environment
- Marketing and customer service representatives
- New employees of independent system operators
- New energy market participants
- Power generator owners/developers
- Gas and electric marketers and brokers
- Energy service companies
- Energy purchasing agents

PREREQUISITES

There are no prerequisites for this course.

TESTIMONIALS ABOUT THIS CONFERENCE FROM PAST ATTENDEES

"I would make this course mandatory for all new employees. The course is an extremely informative and instructive introduction."

–R.P., Assistant Analyst, **American Electric Power**

"An excellent course. Clearly one of the best I have attended. Frank is great!"

–E.B., Counsel, **Ontario Power Authority**

"This course provided a highly informative picture of how the nation's electricity generation and delivery system actually works, without requiring an advanced level of prior knowledge."

–J.P., **US Department of Energy**

"This seminar provided an excellent introduction to the engineering, financial, and market aspects of the electric utility industry."

–P.P., Planning Engineer III, **Louisville Gas and Electric Company**

"Course is exactly as advertised - an in-depth introduction full of substance."

–J.R., Asset Manager, **DTE Energy Services**

PROGRAM AGENDA

MONDAY, JUNE 23, 2008

Registration and Continental Breakfast: 8:00 – 8:30 a.m.
Seminar Timing: 8:30 a.m. – 5:00 p.m.

8:30 – 9:00 a.m.

Introductions, Logistics, and Course Overview

9:00 a.m. – 12:00 p.m.

Design and Operation of Electric Power Systems

- Generation, transmission, and distribution
- Types of supply and demand resources, costs, and capabilities
- Load duration curves, system load factors, and customer classes
- Economic (merit order) dispatch and unit commitment
- Reliability planning, operations, and ancillary services
- Transmission congestion and loop flows
- Electricity market simulation
- Power system blackouts

Group Luncheon 12:00 – 1:00 p.m.

1:00 – 4:00 p.m.

Electricity Market Fundamentals

- Review of microeconomics: supply and demand, spot versus bilateral markets, auction theory
- Description and mechanics of day-ahead and real-time electricity markets
- Locational marginal pricing (LMP) and financial transmission rights (FTRs)
- Capacity markets: functions, design, and operation
- Emission markets and their implications
- Ancillary services markets: operating reserves, automatic generation control, and other necessary services
- Market power analysis and mitigation policies
- Electricity market simulation

4:00 – 5:00 p.m.

Group Exercise and Discussion (Design of a Bulk Power System)

10:00 a.m. – 12:00 p.m.

Recent FERC Initiatives and Likely Future Industry Directions

- Energy and ancillary service markets
- Resource adequacy
- Transmission planning and expansion
- Obtaining market-based rates and FERC's market power screens
- Reliability policy after the August 14, 2003 blackout

Group Luncheon 12:00 – 1:00 p.m.

Markets and Market Monitoring

Joseph E. Bowring, Market Monitor, PJM Interconnection

1:00 – 3:00 p.m.

Industry Players, Bidding, Investment and ISO Strategies, and Risk Management

- Types of players: generators, traders, brokers, energy service companies, merchant transmission, incumbent transmission, public power, and customers
- Key industry players
- Successful bidding strategies
- Thinking through the investment cycle for new assets
- Effective RTO/ISO regulatory strategies and lessons learned
- Energy price forecasting (technical and fundamental)
- Managing energy volatility with futures, options, and physical assets
- Credit issues

3:00 – 4:00 p.m.

Wrap up, final questions, and completing seminar evaluation form

INSTRUCTOR

Mr. Frank Felder, PhD, is an expert on the economics and reliability of restructured electric power systems. He consults with a wide range of clients in the industry, advising them on market design, market power, electricity price forecasting, and risk management. He has testified before the Federal Energy Regulatory Commission and several state public utility commissions. As part of his consulting practice, Frank has conducted numerous seminars and lectures, and has widespread experience explaining complex – and sometimes arcane – material in an intuitive, humorous, and accessible manner. Frank is also Director at the Bloustein School of Planning and Public Policy, Rutgers University where he conducts research in electricity markets with the Center for Energy, Economic & Environmental Policy. He holds a PhD in Technology, Management, and Policy from the Massachusetts Institute of Technology, where his research focused on the economics and reliability of restructured electric power systems.

Visit online at www.independent-consultants.com.

Joseph E. Bowring is the **Market Monitor** for **PJM**, where he is responsible for all aspects of market monitoring. He received his Ph.D. and MA degrees in Economics from the University of Massachusetts. Prior to joining PJM, he worked as an independent consulting economist, with an emphasis on restructuring issues in the electric and gas industries. He worked as the Chief Economist for the New Jersey Department of the Public Advocate's Division of Rate Counsel, as an economist with the New Jersey Board of Public Utilities and as an economist at the U.S. Department of Energy, Energy Information Administration. He taught economics as a member of the faculty at Villanova University and at Bucknell University. He is the principal author of the annual MMU State of the Market Report and regularly files reports on market issues with the Federal Energy Regulatory Commission.

TUESDAY, JUNE 24, 2008

Continental Breakfast 7:30 – 8:00 a.m.

Seminar Timing: 8:00 a.m. – 4:00 p.m.

8:00 – 8:30 a.m.

Review of previous day; opportunities for questions and discussion on previous day's material

8:30 – 10:00 a.m.

The History and Future of Restructured Electricity Markets in the US

- Description of regulated electric power systems
- Public policy rationale for restructuring the US electric power industry
- Status of restructuring and experience to date including existing ISOs throughout the US
- Major issues facing the industry: market power, transmission expansion, standard market design, price-responsive load
- Electricity market simulation



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CPE CREDITS

Upon successful completion of this event / program participants interested in receiving CPE credits will receive a certificate of completion.

Conference Program Level: Intermediate
 Delivery Method: Group-Live
 Advanced Preparation: None
 Conference CPE Credits: 15.5

COURSE LOCATION

A room block has been reserved at the Hilton Alexandria Mark Center, 5000 Seminary Road, Alexandria, VA 22311 for the nights of June 22-24, 2008. Room rates are \$189 for single/double occupancy. Call 703-845-1010 for reservations and mention the EUCI course to get the group rate. Make your reservations prior to June 9, 2008. There are a limited number of rooms available at the course rate. Please make your reservations early.

REMEMBER, EVERY 4TH REGISTRANT IS FREE!

REGISTRATION INFORMATION

For instant registration, call (201) 871-0474
 Form to (201) 767-1928

Register 3, Send 4th Free!!

Any organization wishing to send multiple attendees to these conferences may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

All cancellations received on or before May 23, 2008 will be subject to a \$195 processing fee. Written cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI conference or publication. This credit will be good for six months. In case of conference cancellation, Electric Utility Consultants' liability is limited to refund of the conference registration fee only. For more information regarding administrative policies such as complaint and refunds, please contact our offices at (201) 871-0474

EUCI reserves the right to alter this program without prior notice.

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FAX TO:

(201) 767-1928

PHONE:

(201) 871-0474

PLEASE REGISTER THE FOLLOWING

- In-Depth Introduction to Electricity Markets, June 23-24, 2008: \$1395
Early Bird Before June 13, 2008: \$1195

How did you hear about this event? (Direct email, Colleague, Speaker(s), etc.)

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