



EUCI Presents a Course on:

# IN-DEPTH INTRODUCTION TO ELECTRICITY MARKETS

December 8 - 9, 2008 • Grand Hyatt Manchester • San Diego, California

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

Assistant Analyst, American Electric Power

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

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."**

U.S. Department of Energy

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

Planning Engineer III, Louisville Gas and Electric Company

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

Asset Manager, DTE Energy Services

# IN-DEPTH INTRODUCTION TO ELECTRICITY MARKETS

December 8 - 9, 2008

## OVERVIEW

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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

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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, 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

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- 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

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## PROGRAM AGENDA

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### MONDAY, DECEMBER 8, 2008

- 8:00 – 8:30 a.m. Registration and Continental Breakfast**
- 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
- 12:00 – 1:00 p.m. Group Luncheon**
- 1:00 – 4:00 p.m. Electricity Markets 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)**

### About EUCI

EUCI is a leading provider of conferences, seminars, workshops and courses designed exclusively for the energy industry. We seek to create a forum for professional communication and exchange knowledge and ideas among energy industry professionals and others interested in the industry.

Join the thousands of others who have attended our events since 1987 and see why they keep coming back.

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### TUESDAY, DECEMBER 9, 2008

- 7:30 – 8:00 a.m. Continental Breakfast**
- 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 U.S. 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
- 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
- 12:00 – 1:00 p.m. Group Luncheon**  
Update on CAISO Electricity Markets
- Laura Manz, VP of Market and Infrastructure Development, CAISO*
- 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**

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## INSTRUCTOR

**Frank Felder**, is an expert on the economics and reliability of restructured electric power systems. He consults to 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 Assistant Research Professor 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 <http://www.independentelectricityconsultants.com>

**Laura Manz**, Vice President, Market and Infrastructure Development Division, CAISO

Laura Manz has an intimate knowledge of power system planning, engineering, and market development & operations, which has earned her a place of distinction within the electricity industry. Prior to joining CAISO, Manz was Director of FERC and CAISO Regulatory Affairs for SDG&E. She has been at the forefront of California's progress toward planning for a stronger grid through transmission investment and has worked towards leveling the playing field for renewable and demand response resources, while helping deploy new reliability standards. Manz began her electricity career in the early 1980s at Public Service Enterprise Group (PSEG), based in Newark, New Jersey. Her areas of responsibility over the years covered transmission planning, market design, regional integration, retail restructuring, maintenance standards, power purchasing, emergency response, and power plant and system operations.

## CPE CREDITS



EUCl is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be addressed to the National Registry of CPE Sponsors, 150 Fourth Avenue North, Suite 700, Nashville, TN, 37219-2417. Web site: [www.nasba.org](http://www.nasba.org).

### CPE CREDITS

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

**Course CPE Credits:** 15.5

There is no prerequisite for this conference.

**Program Level:** Intermediate

**Delivery Method:** Group-Live

**Advanced Preparation:** None

register today! call (201) 871-0474

## PROCEEDINGS

The proceedings of the seminar will be published and one copy will be distributed to each registrant at the course.

## COURSE LOCATION

A room block has been reserved at the Grand Hyatt Manchester, One Market Place, San Diego, CA 92101, for the nights of December 7-9, 2008. Room rates are \$189, plus applicable tax. Call 619-232-1234 or 800-233-1234 for reservations and mention the EUCI Conference to get the group rate. Make your reservations prior to November 14, 2008. There are a limited number of rooms available at the conference rate.

**Please make your reservations early.**

## REGISTRATION INFORMATION

### REMEMBER, EVERY 4TH REGISTRANT IS FREE

For instant registration, call (201) 871-0474 or fax the Registration Form to (253) 663-7224.

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 November 7, 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.

### MAIL DIRECTLY TO:

The Power Marketing Association (PMA)  
P.O. Box 2303  
Falls Church, VA 22042

**FAX TO:** (253) 663-7224  
**PHONE:** (201) 871-0474

## PLEASE REGISTER THE FOLLOWING

- In-Depth Introduction to Electricity Markets, December 8 - 9, 2008, \$1395  
**Early Bird Before November 26, 2008, \$1195**

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

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Name \_\_\_\_\_ Title \_\_\_\_\_

Name Preferred for Badge \_\_\_\_\_ E-Mail \_\_\_\_\_

Company \_\_\_\_\_ Telephone \_\_\_\_\_

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### ENERGIZE WEEKLY

When you sign up to "Energize Weekly" you will receive a new conference presentation each week via email on a relevant industry topic. The presentations are selected from a massive library of over 1000 current presentations that EUCI has gathered during its 21 years organizing conferences.

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Or enclosed is a check for \$ \_\_\_\_\_ to cover \_\_\_\_\_ persons.

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