EUCI presents a seminar on:

MAXIMIZING VALUE OF GENCO ASSETS IN PJM MARKET

June 25-26, 2012 • Hyatt Regency Columbus • Columbus, OH

TESTIMONIALS FROM PAST ATTENDEES

“Very knowledgeable instructors, excellent source of information.”
Market participant who attended seminar in Baltimore

“PCI instructors are very knowledgeable with much practical experience. Instructors answered our questions well.”
Market participant who attended seminar in Washington, D.C.

“All speakers were very knowledgeable and successful in sharing this knowledge.”
Market participant who attended seminar in Baltimore

“Very informational! Good balance between overview and details.”
Market participant who attended seminar in Cincinnati

“PCI instructors did a great job with getting the audience involved.”
Market participant who attended seminar in Baltimore

EUCI is authorized by IACET to offer 1.3 CEUs for this seminar.

This seminar has been approved for 16.0 CPEs.
OVERVIEW

Sponsored by EUCI, this two-day seminar uses a number of simple case studies to illustrate how you can formulate bidding strategies to maximize the value of your genco assets (generators, loads, FTRs and ARRs, bilateral contracts, virtual transactions) in the PJM market. The seminar covers the following “hot” issues:

- How can you formulate bidding strategies for your units to maximize the expected profits from the PJM market?
- How can you formulate bidding strategies for your generating assets to fully account for price and volumetric risks, operational constraints, and production costs?
- What method can you use to accurately forecast day-ahead LMPs?
- How much money are you leaving on the table if you decide to self-schedule selected units? Or can you profit by self-scheduling?
- How does lower availability affect revenues and profits for your portfolio?
- How can you quantify P&L leakages?
- How can you verify that the PJM day-ahead schedule is “optimal” for your fleet of generators?
- Can you validate prices that are published by PJM?
- What rules does PJM use to compute make-whole payments for your units?
- How can you manage real-time dispatch to avoid penalties due to real-time operating-reserve charges?
- Can you use virtual transactions for hedging or speculative purposes?
- How can you convince your management and PUC that virtual transactions can be used to hedge against potential unit outages, load-forecast uncertainties, and wind-forecast uncertainties?
- What tools do you need to evaluate strategies for virtual transactions?
- How should you formulate your ancillary-service offers?
- How should you structure your ARR and FTR portfolio to hedge against PJM congestion costs?
- What are the key risk drivers in the PJM market? What is the best way to formulate hedging strategies for your assets?
- What are the key settlement charge types in the PJM Market?
- Why perform shadow settlement? Do you need to have your own shadow settlement software to validate the PJM invoices?
- What are the main data sources for shadow settlement?
- What are the main causes for settlement disputes? What is the best way for managing settlement disputes?
- How can you use settlement results to provide feedback to traders on the effectiveness of their bidding strategies?
- How does the capacity market work in PJM?
- Do your plants collect enough revenues from the PJM energy, capacity, and ancillary-services markets to cover for their operating and capital costs?
- What IT infrastructure should you build to automate your bid-to-bill process?
WHO SHOULD ATTEND

- Portfolio managers and traders responsible for formulating and submitting unit offers and demand bids in PJM
- Back-office employees who need to gain a good understanding of the settlement rules for the PJM market
- Power plant managers who would like to understand the impact of LMPs and two-step settlement on their plant profitability
- Genco executives who need a good understanding of the PJM market to maximize market benefits for their fleet of generators
- Employees of Independent System Operators, attorneys, and regulators who need to understand PJM market rules, congestion management philosophy, and mitigation guidelines

PROGRAM AGENDA
MONDAY, JUNE 25, 2012

Registration and Continental Breakfast: 8:00 – 8:30 a.m.
Seminar Timing: 8:30 a.m. – 5:00 p.m.
Group Luncheon: 12:00 – 1:00 p.m.

Overview of PJM Market
- Key features of LMP markets (PJM, MISO, ISO-NE, NYISO, CAISO, ERCOT, and SPP)
- Reviewing day-ahead workflow for PJM market participants
- Understanding SCUC objectives
- PJM market instruments
- Reviewing real-time workflow for PJM market participants
- Two-step settlement calculations
- Quantifying P&L leakages
- Understanding congestion costs
- How to use FTRs and ARRs to hedge against PJM congestion costs?
- Bid-to-bill timeline and challenges

Uses of Locational Marginal Prices in Bidding and Settlement
- Why use locational marginal prices?
- Understanding three components of LMPs: energy, loss, and congestion
- How are LMPs computed?
- Interpreting shadow prices of constrained flowgates
- Understanding congestion rent
- Using ARR and FTR contracts to hedge against congestion costs
- Where does PJM get the fund to pay FTR contracts?
- Can LMPs be negative?
- Understanding shift factors
- Day-ahead settlement calculations
- How well can you forecast day-ahead LMPs?

CPE

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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.

CPE – 16.0
There is no prerequisite for this seminar.

Program Level: Intermediate
Delivery Method: Group-Live

Advanced Preparation: None
PROGRAM AGENDA

MONDAY, JUNE 25, 2012 (CONTINUED)

Formulating Bidding Strategies for Generating Units
- Understanding three-part energy offers for generators
- Difference between cost-based, price-based, and parameter-limited offers
- Market principles behind operating-reserve make-whole payments and charges
- Computing day-ahead operating-reserve make-whole payments for generators
- Who will pay DA and RT operating-reserve charges?
- Examples illustrating day-ahead and real-time settlement for generators
- Forecasting revenues, costs, and P&L
- Pros and cons of self-scheduling
- What are the main risk drivers in the PJM market?

Using Profit and Loss Metrics to Provide Feedback to Traders
- Using settlement results to compute DA and DART profits and losses (P&L) for your PJM portfolio (generators, loads, trades, virtuals, and FTRs)
- Key factors influencing profits and losses
- Computing P&L gains and leakages
- Using profit and loss metrics to provide feedback to traders on effectiveness of day-ahead and real-time bidding strategies
- Using settlement results to provide feedback to plant managers on plant performance
- Using settlement results to build key performance metrics
- Settlement forensics – where front and back offices meet

Strategies for Bidding Ancillary Services
- Ancillary-services (A/S) products offered by PJM
- Formulating A/S offers
- Quantifying lost-opportunity costs
- Understanding A/S deployment costs and probabilities
- PJM regulation and contingency-reserve markets
- How does PJM compute marginal prices for ancillary services?
- Sample settlement calculations for ancillary-service products
- Can we validate A/S prices?
- Understanding causes for price reversal
- Computing revenues and costs for providing ancillary services
- How does PJM allocate A/S charges?

TUESDAY, JUNE 26, 2012

Continental Breakfast: 8:00 – 8:30 a.m.
Workshop Timing: 8:30 a.m. – 4:30 p.m.
Group Luncheon: 12:00 – 1:00 p.m.

Running Shadow Settlement to Validate PJM Invoices
- Business objectives for settlement group
- Settlement workflow in PJM market
- Why perform shadow settlement?
- Key functions of shadow settlement software
- Mapping data sources to support shadow settlement
- Downloading settlement data from PJM MSRS
- What are the main causes for settlement disputes?
- What are the most common causes for settlement disputes?
- Managing settlement disputes

Register today! Call 303-770-8800 or visit www.euci.com
PROGRAM AGENDA

TUESDAY, JUNE 26, 2012 (CONTINUED)

Bidding Strategies for Loads and Transactions
- Reviewing demand-bidding strategies
- Examples illustrating DA and RT settlement for loads
- Understanding settlement implications of internal and external bilateral transactions
- Using virtual transactions for hedging or speculative purposes
- Evaluating bidding strategies for virtual transactions

Using ARR and FTR Contracts to Hedge Against Congestion Costs
- Key factors causing congestion in PJM
- How do you procure ARR and FTR contracts to hedge against congestion in PJM?
- Evaluating benefits of ARR and FTR contracts
- Sample settlement calculations for ARR and FTR contracts

Understanding PJM Capacity Market
- Overview on reliability pricing model (RPM)
- Understanding RPM demand and supply
- Computing resource adequacy ICAP requirements
- Computing capacity value for generating resource
- How are RPM auctions conducted?
- Reviewing RPM prices
- Performing RPM settlement calculations

Use PCI Market Simulator to Perform Bid-to-Bill Studies
- Formulating day-ahead energy offers
- Impacts of self-scheduling on profits
- Running case studies to illustrate impacts of using various bidding strategies on portfolio profit and loss
- Case studies illustrating PJM bid-to-bill workflow

Market Mitigation
- Objectives and focus of market monitoring
- Definition of market power
- PJM rules for market monitoring and mitigation
- Definition of physical and economic withholding
- Mitigation penalties

Roundtable Discussion
INSTRUCTORS

Khai Le, Vice President, PCI
Over the past 35 years, Khai Le has conducted 500+ seminars on market-based operations, shadow settlement, RTO operations, bidding strategies, and portfolio optimization for utilities and RTOs worldwide. He is currently working with market participants in PJM, MISO, ERCOT, CAISO, and SPP to deploy the PCI Generation Supply Management System (PCI GenManager, PCI GenTrader, and PCI GenPortal) to formulate and evaluate bidding strategies. Khai authored more than 100 technical papers on unit commitment, hydrothermal coordination, emission dispatch, optimization methods, post analysis and short-term planning. Five of his papers received prize awards. Khai received his B.S. from Harvey Mudd College and his M.S. from Carnegie Mellon University. He is a Fellow of the IEEE and a registered professional engineer in Pennsylvania.

Tony Dellacluyse, Director, PCI
Tony Dellacluyse is a well-recognized authority on PJM settlement, settlement disputes, and market rules. Tony has more than 22 years of experience with market settlement, trading, operational planning, and plant management. He received both his B.A. and MBA from St. Ambrose University.

Gerardo Villena, Principal Engineer, PCI
Gerardo has extensive experience with the PJM market. Gerardo is working with PJM market participants to automate their bidding workflow with PJM. Gerardo received his M.S. degree from the University of Oklahoma.

Paul Davis, Director, PCI
Paul Davis has more than 10 years of experience in portfolio management, unit commitment, production costing, risk evaluation, and bidding strategies. Paul is currently leading the development of PCI P&L Analyzer, which combines operations and settlement results to provide feedback to traders on the effectiveness of their bidding strategies. Paul graduated magna cum laude from Auburn University in 1991 with a degree in mechanical engineering.
The proceedings of the course will be published, and one copy will be distributed to each registrant at the course.

A room block has been reserved at the Hyatt Regency Columbus, 350 N. High Street, Columbus, OH 43215, for the nights of June 24-25, 2012. Room rates are $139, plus applicable tax. Call 614-463-1234 for reservations and mention the EUCI course to get the group rate. Make your reservations prior to May 31, 2012. There are a limited number of rooms available at the group rate. Please make your reservations early.

Please register the following:

☐ Maximizing Value of Genco Assets in PJM Market
  June 25-26, 2012: US $1495
  Early bird on or before June 15, 2012: US $1295

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.) ________________________________________________________________

Name ____________________________________________ Job Title ____________________________________________

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☐ Check here if you have any dietary or accessibility needs. We will contact you for more details.

PAYMENT METHOD

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

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EUCI’s Energize Weekly e-mail newsletter compiles and reports on the latest news and trends in the energy industry. Newsletter recipients also receive a different, complimentary conference presentation every week on a relevant industry topic. The presentations are selected from a massive library of more than 1,000 current presentations that EUCI has gathered during its 25 years organizing conferences.

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