



EUCI presents a seminar on:

MANAGING BID-TO-BILL WORKFLOW IN NEW SPP INTEGRATED MARKETPLACE

March 20-21, 2012 • Embassy Suites Norman • Norman, OK

TESTIMONIALS FROM PAST ATTENDEES

"Very knowledgeable instructors, excellent source of information."

– Market participant who attended seminar in Denver

"Very informational! Good balance between overview and details."

– Market participant who attended seminar in Cincinnati

"PCI instructors are very knowledgeable with much practical experience. Instructors answered our questions well."

– Market participant who attended seminar in Knoxville

"Very well-done course! Lots of good information packed in two days!"

– Market participant who attended seminar in San Antonio

"Very good material! Excellent insight!"

– Market participant who attended seminar in Houston

"The PCI instructors presented a very complex subject and made it very understandable and enjoyable for me and others. Great job!"

– Market participant who attended seminar in Houston



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

MANAGING BID-TO-BILL WORKFLOW IN NEW SPP INTEGRATED MARKETPLACE

March 20-21, 2012

OVERVIEW

Sponsored by EUCI, this two-day seminar provides an in-depth discussion on the bid-to-bill workflow for market participants in the new SPP Integrated Marketplace. The seminar uses a number of case studies to illustrate how you can maximize the value of your assets (generators, loads, ARR and TCRs, physical and financial contracts, virtual transactions) in the new SPP market. In the workshop, you will have an opportunity to use a market simulator to submit your energy and ancillary-service offers, test your bidding strategies, clear the market, compute settlement, and determine the bottom-line profit for your generation and load assets. The seminar covers the following "hot" issues:

- What are the main objectives of the SPP Integrated Marketplace?
- What are the key differences between the existing imbalance-energy market and the new SPP Integrated Marketplace?
- How should you best prepare your genco team (portfolio managers, traders, risk managers, back-office personnel, and plant managers) for the SPP Integrated Marketplace?
- How can you formulate unit offers to fully account for price and volumetric risks, operational constraints, production costs, and market mitigation rules?
- How should you formulate energy and ancillary-service offers to maximize total profits while meeting operational constraints and risk guidelines?
- What rules does SPP use to mitigate unit offers?
- How can you verify that the SPP day-ahead schedule is "optimal" for your units?
- What rules does SPP use to penalize units for uninstructed deviation?
- How well can you forecast costs, revenues, profits and losses, fuel consumption, and emissions for units that are scheduled by SPP?
- How much money are you leaving on the table if you decide to self-schedule selected resources? Or can you profit by self-scheduling?
- How does a lower availability affect revenues and profits for your portfolio?
- What rules does SPP use to compute RUC make-whole payments and charges?
- What are the key risk drivers in SPP? What is the best way to formulate hedging strategies for your assets?
- How should you structure your ARR and TCR portfolio to best hedge against congestion costs?
- In the long run, will your plants collect enough revenues from the energy, capacity, and ancillary-service markets to cover for their operating and capital costs?
- What are the key settlement charge types in the new SPP Integrated Marketplace?
- Why perform shadow settlement? Do you need to have your own shadow settlement software to check SPP 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 business-intelligence tools to provide feedback to traders on the effectiveness of their bidding strategies?
- How can you quantify P&L leakages?
- What IT infrastructure should you build to automate the bid-to-bill process?

WHO SHOULD ATTEND

- Portfolio managers and traders responsible for formulating and submitting energy and ancillary-service offers to SPP
- Back-office employees who need to gain a good understanding of the new settlement rules for the SPP Integrated Marketplace
- Power-plant managers who would like to understand the impact of LMPs on their plant profitability
- IT personnel who need to build the IT infrastructure to support the new bid-to-bill workflow for the SPP Integrated Marketplace
- Genco executives who need a good understanding of the potential impacts of the new SPP Integrated Marketplace on their genco profits and losses
- Employees of ISO/RTOs, attorneys, and regulators who need to understand market rules, congestion management philosophy, and mitigation guidelines that are proposed for the new SPP Integrated Marketplace

MANAGING BID-TO-BILL WORKFLOW IN NEW SPP INTEGRATED MARKETPLACE

March 20-21, 2012

PROGRAM AGENDA

TUESDAY, MARCH 20, 2012

Registration and Continental Breakfast: 8:00 – 8:30 a.m.

Workshop Timing: 8:30 a.m. – 5:00 p.m.

Group Luncheon: 12:00 – 1:00 p.m.

Overview on SPP Integrated Marketplace

- Objectives of SPP Integrated Marketplace
- Potential benefits of SPP Integrated Marketplace
- Key differences in market rules between the current energy-imbalance market and the new SPP Integrated Marketplace
- Reviewing day-ahead and real-time bidding workflow for SPP market participants
- Understanding SPP objectives for DA market
- Why does SPP run RUC?
- How does the two-step settlement work?
- Why use virtual bids and offers?
- Using TCR and ARR contracts to hedge against congestion costs
- Bid-to-bill timeline and challenges
- Differences in market rules between SPP Integrated Marketplace and other nodal markets (MISO, PJM, ISO-NE, NYISO, ERCOT, and CAISO)

Uses of Nodal Locational Marginal Prices in Bidding and Settlement

- Using full network model to compute nodal locational marginal prices
- How are LMPs computed?
- Understanding three components of LMPs: energy, loss, and congestion
- Understanding impacts of flowgates on congestion
- Can LMPs be negative?
- Day-ahead settlement calculations
- Explaining LMP signatures
- Can you forecast LMPs?

Formulating Bidding Strategies for Generating Units

- Understanding three-part energy offers for generators
- Should units be offered as must-run or economic in day-ahead market?
- Examples illustrating day-ahead and real-time settlement for generators
- Market principles behind make-whole payments and charges
- Computing day-ahead make-whole payments for generators
- Who will pay DA and RUC make-whole charges?

Understanding Settlement Rules for SPP Integrated Marketplace

- Key differences in settlement rules between current energy-imbalance market and new SPP Integrated Marketplace
- Understanding settlement statements and charge codes for SPP Integrated Marketplace
- Settlement calendar for SPP Integrated Marketplace
- Reviewing settlement workflow
- Business objectives for settlement group
- Why perform shadow settlement?
- Key functions of shadow settlement software
- What data do we need to validate settlement under SPP Integrated Marketplace?
- Downloading settlement statements and invoices from SPP server
- What are the most common causes for settlement disputes?
- Managing settlement disputes

IACET



EUCI has been approved as an

Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102. In obtaining this approval, EUCI has demonstrated that it complies with the ANSI/IACET Standards, which are widely recognized as standards of good practice internationally.

As a result of its Authorized Provider membership status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standards.

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

Requirements for Successful Completion of Program

Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

Instructional Methods

PowerPoint presentations, classroom discussions, and question-and-answer sessions will be used in this course.

MANAGING BID-TO-BILL WORKFLOW IN NEW SPP INTEGRATED MARKETPLACE

March 20-21, 2012

PROGRAM AGENDA

WEDNESDAY, MARCH 21, 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.

Strategies for Bidding Operating Reserves

- Why do we need operating reserves?
- Typical market prices for operating reserves
- Formulating operating-reserve offers
- Understanding lost opportunity costs
- Understanding operating-reserve deployment costs and probabilities
- Benefits for co-optimizing energy and operating reserves
- Why does SPP use co-optimization to clear energy and operating reserves?
- Does co-optimization minimize SPP energy and operating-reserve costs?
- Does co-optimization maximize revenues and profits for market participants?
- Does co-optimization produce correct price signals for energy and operating reserves?
- How does SPP allocate operating-reserve charges?
- Understanding causes for price reversal
- Case studies to illustrate co-optimization
- Computing revenues and costs for providing operating reserves
- How do operating-reserve requirements affect unit dispatch and LMPs?
- Are operating-reserve marginal prices influenced by congestion?
- Validating DA market results

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 SPP portfolio
- Key factors influencing profits and losses
- Computing P&L gains and leakages for generators
- 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 indexes

Bidding Strategies for Loads, Bilateral Transactions, and Virtual Transactions

- Reviewing demand-bidding strategies
- Examples illustrating DA & RT settlement for loads
- Computing operating-reserve charges for LSEs
- Understanding physical and financial transactions
- Bidding strategies for virtual transactions

Using ARR and TCR Contracts to Hedge Against Congestion Costs

- Key factors causing congestion in SPP
- How do you procure ARR and TCR contracts to hedge against congestion in SPP?
- Evaluating benefits of ARR and TCR Contracts
- Sample settlement calculations for ARR and TCR contracts

Running PCI Market Simulator to Evaluate Bidding Strategies

- Formulating day-ahead energy and operating-reserve offers
- Impacts of self-scheduling on profits
- Forecasting LMPs and operating-reserve prices
- Running case studies to illustrate impacts of various bidding strategies on portfolio profit and loss
- Market simulation

Roundtable Discussion

MANAGING BID-TO-BILL WORKFLOW IN NEW SPP INTEGRATED MARKETPLACE

March 20-21, 2012

INSTRUCTORS

Khai Le, Vice President, PCI

Over the past 35 years, Khai Le has conducted more than 500 seminars on market-based operations, RTO operations, bidding strategies, portfolio optimization, and shadow settlement for utilities and RTOs worldwide. He is currently working with market participants in SPP, MISO, PJM, CAISO, and ERCOT to deploy the PCI Generation Supply Management System (PCI GenManager, PCI GenTrader and PCI GenPortal) to automate their bid-to-bill workflow. Khai authored more than 100 technical papers on unit commitment, hydrothermal coordination, emission dispatch, optimization of ancillary services, 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 Delacluyse, Director, PCI

Tony Delacluyse is a well-recognized authority on SPP settlement and market rules. Tony has more than 27 years of experience with nuclear power plant operations, origination, deregulated retail, and ISO settlements. Since joining PCI in 2005, he has designed back-office solutions for MISO, SPP, ERCOT, CAISO and PJM markets. Tony actively participates in the SPP market meetings and works with SPP market participants on planning and strategies for the new Integrated Marketplace. He received both his B.A. and MBA from St. Ambrose University.

Jason Hebert, Vice President, PCI

Jason Hebert is now working closely with many SPP market participants to prepare for the new Integrated Marketplace. Jason Hebert has been in the energy industry for almost 20 years. Jason received his bachelor's degree from Washington University. He is licensed as a Systems Operator in both SPP and ERCOT.

Bart Tsala, Senior Manager, PCI

Bart has a deep understanding of the SPP Integrated Marketplace. Bart has been working with the SPP staff in Little Rock over the past two years to help with the design and implementation of the Integrated Marketplace. Bart wrote the market simulator, which is used in this course to co-optimize energy and operating reserves and evaluate bidding strategies for convergence bids. Bart Tsala received his B.S. in power systems at the Institut Supérieur Industriel de Bruxelles and his M.S. in electrical engineering and Ph.D. from the University of Oklahoma.

PROCEEDINGS

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

EVENT LOCATION

The course will be held at the Embassy Suites Norman – Hotel & Conference Center, 2501 Conference Drive, Norman, OK 73069. Rooms are available at the hotel for \$109 per night, plus applicable tax. Call 405-364-8040 for reservations, and mention PCI to get the group rate.

REGISTRATION INFORMATION

REMEMBER: EVERY FOURTH REGISTRANT IS FREE

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

Register Three; Send Fourth Free!

Any organization wishing to send multiple attendees to this course may send one FREE for every three delegates registered. Please note that all registrations must be made at the same time to qualify.

All cancellations received on or before February 17, 2012, 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 event or publication. This credit will be good for six months. In case of event cancellation, Electric Utility Consultants' liability is limited to refund of the event registration fee only. For more information regarding administrative policies such as complaints and refunds, please contact our offices at (201) 871-0474.

FIVE EASY WAYS TO REGISTER

One: CALL
(201) 871-0474

Two: FAX
(253) 663-7224

Three: E-MAIL
register@pmaconference.com

Four: MAIL
PMA
P.O. Box 2303
Falls Church, VA 22042

Five: WEB SITE
www.pmaconference.com

PLEASE REGISTER THE FOLLOWING

- Managing Bid-to-Bill Workflow in New SPP Integrated Marketplace
March 20-21, 2012: US \$1495
Early bird on or before March 9, 2012: US \$1295

ENERGIZE WEEKLY

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.

- Sign me up for *Energize Weekly*.

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

Name _____ Job Title _____

Name Preferred for Badge _____ E-mail _____

Company _____ Telephone _____

Address _____ City _____ State _____ ZIP _____

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

PAYMENT METHOD

Please make checks payable to "PMA"

Please charge my credit card: Visa MC AMEX Security Code _____

Visa and MC cards have a 3-digit code on the signature panel on the back of the card, following the account number. American Express cards have a 4-digit code on the front of the card, above the card number.

Name on Card _____ Signature _____

Account Number _____ Exp. Date _____

Card Holder Phone Number _____

Billing Address _____ Billing ZIP Code _____

OR Enclosed is a check for \$ _____ to cover _____ registrations.