

# INTERMEDIATE ENERGY TRADING, HEDGING, PORTFOLIO & RISK MANAGEMENT

**May 5 – 6, 2020**  
**Renaissance Orlando Hotel-Airport**  
**Orlando, FL**

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## OVERVIEW

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This course is geared toward those who want to build on a base-line knowledge of energy markets transacting, power trading and hedging. It will cover market dynamics and the difference between transacting in traditional bilateral markets, OTC and exchange energy markets as well as wholesale electricity (ISO) markets. The contents will examine the different market players and their motives, as well as the difference between hedging and speculation. The course will also address various instruments and the implications of credit and collateral on prudent decision-making.

The content explains the various tools used to control the associated risks. It also details how these contracts work, how and when they should be used, and how they are priced. Case examples and problem-solving illustrations optimized for power and natural gas trading are used throughout the course to enhance the understanding of the material. Finally, it will identify and illustrate best practices associated with the sound measurement of uncertainty and building solid risk metrics for portfolio management and risk management through optimal hedging and solid hedging program design.

## LEARNING OUTCOMES

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- Review portfolio management in traditional utility/balancing area, OTC, Exchange and ISO-based market transactions
- Assess market distinctions and price driver dynamics
- Discuss relationships between power market trading and hedging
- Examine market, credit and counterparty risk management best practices
- Evaluate energy trading compliance programs and their application in the current regulatory environment
- Demonstrate meaningful uncertainty framework for developing utility and power portfolio hedging programs
- Describe and illustrate simulation analysis and risk metrics for utilities and power trading organizations
- Build, design, develop and implement a hedge program

# AGENDA

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TUESDAY, MAY 5, 2020

**12:30 – 1:00 pm**

**Registration**

**1:00 – 1:15 pm**

**Overview and Introductions**

**1:15 – 4:45 pm**

**Program**

**Portfolio Management in Traditional Utility/BA, OTC, Exchange and ISO-based Market Transactions**

- Market vs contracted cost
- Dispatch to load vs dispatch to price
- OTC vs Exchange transaction
- Purchases and sales positions vs distinct load and generation positions
- Integrated utility value vs portfolio component value

**Markets and Price Driver Dynamics**

- Spot and forward prices for gas and power
- Forward curves for gas and power markets
- Fundamental drivers – Weather and load as key drivers for gas and power price behavior
- Heat rates and impact on dispatch stack and electricity prices
- Renewable generation and the impact on electricity prices
- Key sources of volume risk in power markets
- Case study – weather, load, gas and power price relationships

**4:45 pm**

**Program Adjournment for Day**

WEDNESDAY, MAY 6, 2020

**7:45 – 8:15 am**

**Continental Breakfast**

**8:15 – 11:45 am**

**Program**

**Energy Markets Advanced Trading & Hedging**

- Physical forward contracts
- Swaps and basis swaps
  - o OTC markets
  - o Collateral agreements
- Case study — hedging with futures vs swaps
- Congestion hedge instruments
- Comparative analysis of use of instruments in hedging strategies
- Recognizing market players and their objectives
  - o Price taker
  - o Asset optimizer
  - o Proprietary trader
- Hedging vs speculation
- Forward price curves, volatility and correlation

# AGENDA

WEDNESDAY, MAY 6, 2020 (CONTINUED)

## Energy Markets Advanced Trading & Hedging (continued)

- Overview of standard instruments
  - o Futures contracts
  - o Swaps contracts
  - o Options
    - Calls, puts and collars
    - Options as insurance
    - Are options a cost or an investment?
    - Why most utilities should have options as part of their hedging program
  - o Case study — best instruments for different portfolios

## Market and Counterparty Risk Management

- Market risk measurement and reporting
- Distinction and applications of
  - o Mark-to-Market (MtM)
  - o Value at Risk (VaR)
  - o Cost at Risk (CaR)
  - o Rates at Risk (RaR)
  - o Gross Margin at Risk (GMaR)
- Sensitivity analysis and stress tests
- Position management for portfolios with assets, physical contracts and financial instruments
- Counterparty risk management and internal rating systems
- Current and potential counterparty exposures

## Energy Trading Compliance Programs

- Execution best practices for regulatory risk management and compliance in energy physical and financial trading
- Identifying potential regulatory risk 'red flags'
- Components of a best practices compliance program
- Proactive compliance monitoring techniques
- Review of PwC energy trading compliance program assessment of TransAlta
- Review of FERC enforcement division's "Energy Trading Compliance and Market Manipulation Law" white paper
- A practical framework for analysis of market manipulation
- Case study — FERC enforcement case against BP for alleged market manipulation
- Effective exception reporting and intervention
- Energy trading compliance case studies
- Creating practical approaches to a better compliance program

11:45 am – 1:00 pm

**Group Luncheon**

1:00 – 4:45 pm

**Program**

## Meaningful Uncertainty Framework to Develop Utility Hedging Programs

- How to produce realistic weather, load, gas and price scenarios
- Creating a portfolio view of physical and financial exposures
- Integrating price and volume risk modeling in a coherent framework
- Modeling expected costs and revenues
- How to assess and visualize market and weather risk factors on cash flows

# AGENDA

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WEDNESDAY, MAY 6, 2020 (CONTINUED)

## **Simulation Analysis and Risk Metrics for Utilities**

- Risk metrics and simulation
- Introduction to distributions
- Best practices in management of weather, load and price risk for utilities
- Volumetric risk and hedging
  - Supply and demand risk
- The cost of ignoring volume uncertainty in hedge programs
  - Lessons learned from utility hedging debacles
- Designing optimal hedge programs for the entire energy portfolio
  - Retail load
  - Unit characteristics
  - Forced outages

## **In-Depth Hedge Program Design and Implementation**

- Hedging tactics vs. hedging strategy
- A roadmap to implementing an effective hedging strategy
- Understanding and quantifying risk profile and appetite
- Case Study — understanding the revenue-at-risk of different wind projects
- Defining hedge strategy objectives, linkage to performance objectives
- Building hedge strategy alternatives — different types of hedge decisions
  - Programmatic (dollar cost averaging) hedges
  - Defensive (risk limits) hedges
  - Contingent hedges (managing foregone opportunities)
- Hedge strategy design and scenario analysis
- Case Study — an iterative approach to evaluating the effectiveness of a hedge strategy
- Implementing a hedge strategy
  - Tactical planning
  - Ongoing monitoring and reporting
  - Case study — the execution of a hedge strategy under different market conditions

4:45 pm

**Program Adjournment**

# INSTRUCTORS



## Scott Wrigglesworth

**Director of Analytics and Strategy, Ascend Analytics**

Scott Wrigglesworth is Director of Analytics and Strategy with Ascend Analytics. Before joining the company, he spent 17 years with Dayton Power and Light and the AES Corporation. There he focused on practical solutions in energy analytics, actionable reporting, margin modeling and portfolio optimization. In that role, Mr. Wrigglesworth provided analytic expertise for portfolio optimization, planning, and risk management activities. These activities included merchant generation optimization, fuel procurement, wholesale hedging, retail energy, load auctions, rate case preparation, asset valuation, and commercial budget development. Mr. Wrigglesworth teaches a course in Energy Markets at the University of Dayton from where he also earned his MBA. He holds a BA in Global Economics and International Business from Cedarville University.

## Michael Ballow

**Director of Analytics and Strategy, Ascend Analytics**



Michael Ballow is Director of Analytics and Strategy with Ascend Analytics. He has 37 years of diversified risk management experience in energy, financial, and commodity markets, and 22 years of direct portfolio risk management in electric and gas utilities, including wholesale electric and gas, and retail gas and electric marketing. Before he recently joined Ascend Analytics staff, Mr. Ballow worked in concert for 12 years as a user of its products and services while at Dayton Power and Light (DP&L), where he served as Director of Portfolio Analytics and Risk Analytics. Prior to joining DP&L, he was Vice President of Portfolio Management at Cinergy where he managed the utility's portfolio in Ohio, Kentucky, and Indiana. He previously was in senior risk management roles at the Tennessee Valley Authority and Public Service of New Mexico. Prior to his experience in the energy sector, Mr Ballow was in fixed income brokerage, asset management, and interest rate hedging.

## INSTRUCTIONAL METHODS

This program will use PowerPoint presentations, case studies and group discussions.

## REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day and be in attendance for a minimum of four hours to be eligible for any continuing education credit.

## IACET CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

**EUCI is authorized by IACET to offer 1.1 CEUs for this course**

## CPE CREDITS



EUCI 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 submitted to the National Registry of CPE Sponsors through its website: [www.learningmarket.org](http://www.learningmarket.org).

Upon successful completion of this event, program participants interested in receiving CPE credits will receive a certificate of completion. **EUCI is authorized by CPE to offer 12.0 credits.**

There is no prerequisite for this course. **Program Level 1:** Beginner and Intermediate, **Delivery Method:** Group-Live, **Advanced Preparation:** None

## EVENT LOCATION

A room block has been reserved at the **Renaissance Orlando Hotel-Airport**, 5445 Forbes Pl, Orlando, FL 32812, for the nights of MAY 3-5, 2020. Room rates are \$165 plus applicable tax. Call **1-407-240-1000** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is March 10, 2020 but as there are a limited number of rooms available at this rate, the room block may close sooner. **Please make your reservations early.**

## REGISTER 3, SEND THE 4TH FREE

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

To Register Click Here, or

**Mail Directly To:**

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PO Box 2303  
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## PLEASE SELECT

- BUNDLE PRICE: ENERGY TRANSACTION & TRADING FUNDAMENTALS AND INTERMEDIATE ENERGY TRADING, HEDGING, PORTFOLIO & RISK MANAGEMENT COURSES**  
MAY 4-6, 2020: US \$2595  
Early bird on or before April 17, 2020: US \$2395
- INTERMEDIATE ENERGY TRADING, HEDGING, PORTFOLIO & RISK MANAGEMENT COURSE ONLY**  
MAY 5-6, 2020: US \$1495  
Early bird on or before April 17, 2020: US \$1295

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

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### CREDIT CARD INFORMATION

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

### Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before April 3, 2020 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's 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. EUCI reserves the right to alter this program without prior notice.