



# FUNDAMENTALS OF POWER TRADING

Presented by Energy Management Institute



*Join our leading industry experts and understand the key factors that drive success in power markets.*

## COURSE DATES & LOCATIONS

- March 23-24, 2017: Houston, TX
- April 26-27, 2017: Boston, MA
- June 14-15, 2017: Houston, TX

**REGISTER TODAY!**

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DETAILS INSIDE

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## What You Will Learn

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Our leading industry expert will provide comprehensive hands on instruction, lecture and real-life examples that bring to life the entire power market complex. Our curriculum sets a new standard in higher learning as we delve deeply into the power markets with highly relevant content for today and tomorrow's energy industry.

This course provides basic to mid-level participants with comprehensive training on power trading. Beginners will learn the essentials while more advanced learners will learn many finer points. EMI delivers highly focused insight into the key factors that drive success in power markets.

### **Topics covered include:**

- Why are the power markets the most volatile of all markets?
- What fundamental factors drive the power markets?
- What role does weather play in determining prices?
- What role do fuel prices play in determining prices?
- What are Locational Marginal Prices and why should I care?
- What is the difference between real time, day ahead and forward power prices?
- What trading tools are used in the power markets, and where can participants find liquidity?
- How are power trading books analyzed, and how do risk management best practices apply?
- What is the status of power market de-regulation and where is it headed?
- How do ancillary services, emissions and renewable mandates affect the power markets?

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## Who Should Attend

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Power and fuel purchasers, analysts, traders, trade support staff, finance and auditing personnel. Entry-level to intermediate professionals from: merchant generators, banks, utilities, power marketers, retail providers, back office, hedgers, marketers, end-users, and government agencies.

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## CPE Credits

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### **This course earns 6 CPE credits.**

Energy Management Institute 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.learningmarket.org](http://www.learningmarket.org).

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8:30am - 4pm both days
- **April 26-27, 2017 - Boston, MA**  
8:30am - 4pm both days
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8:30am - 4pm both days

*See last page for venue addresses.*

**REGISTER ONLINE**

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## EMI CERTIFICATION CREDIT

This course earns 6 credits towards EMI Certification.



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## REGISTRATION FEES

1st delegate: \$1,995  
2nd delegate: \$1,795  
3rd delegate: \$1,600

## Course Syllabus

### DAY ONE: FUNDAMENTALS

#### Session 1: Overview

We will begin our day with a broad discussion of the state of the North American markets with particular attention to the various catastrophes that have befallen the sector. This will include a discussion of the fallout from Enron and other bankruptcies, the California debacle, and the August 2003 East Coast blackout.

#### Session 2: Power Industry

We will further our discussion by exploring basic industry facts and terminology. How is power delivered to our home or business? What is a peak day? Capacity? Reserves? Load? What is “reliability” and why is it so important? How is reliability ensured?

#### Session 3: Regulatory Framework

We will continue with a thorough examination of the regulatory framework of the power markets. This will include FERC Orders 888, 889, 2000, and Standardized Market Design (SMD), progress of de-regulation, ISOs and RTOs and the role of the NERC Regional Reliability Councils.

#### Session 4: Comparative RTO markets

By FERC mandate, competitive markets are the future for power. We will deepen our understanding of the power markets by thoroughly examining the LMP markets where values are resolved. How do day ahead and real time differ? What are Financial Transmission Rights? How do the regions differ in their implementation of FERC mandates? How are ancillary services handled? How does FERC ensure that the markets are competitive? What plans does FERC have for the future?

#### Session 5: Market Fundamentals

Then, we will explore the fundamental factors drive price and volatility in the power markets. How do the laws of economics and physics apply to the power sector?

- Supply: Capacity mix. Fuel costs. Coal. Natural Gas. Fuel Oil. What is a ‘supply stack’? Heat rate? Implied heat rate?
- Demand: Growth. Weather. Elasticity. How has DSM helped?
- Volatility. Why are the power markets so volatile?



*Course Syllabus*  
**DAY TWO: THE MARKETS**

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Session 1: Market Participants and Motivations

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Understanding the roles and motivations of power market participants is important to understanding market action. Who participates in the power markets and why? How do their motivations influence their strategies and behavior?

- Hedgers: Utilities, Merchants, Retail, and Power Marketers.
- Traders: Banks. Funds.

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Session 2: Forward Markets

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In recent years, the Intercontinental Exchange (ICE) has challenged the CME NYMEX in energy trading. We will compare and contrast the two exchanges and their contractual offerings in power. What are futures, forwards, swaps and options? How do related energy markets influence power? What is financial versus physical settlement? Cleared versus bilateral? What regional differences are important?

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Session 3: Mechanics

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We will extend our discussion of the markets with a focus on the mechanics and vocabulary of trading.

- Forwards, futures and swaps
- Margins
- Backwardation. Contango. Inverse. Bid/Ask.
- Spreads: Temporal. Locational. Spark. Strips.
- Execution Brokers

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Session 4: A Glimpse Into the Future

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Options are a key derivative contract by which we trade and manage volatility. We will deepen our understanding of the markets by examining the mechanics, vocabulary and principles of options trading.

- Volatility
- Greeks
- Monthly exercise
- Daily Exercise

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Session 5: Position Management

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How do we aggregate the elements of our position coherently into a 'value at risk' measure? What is liquidity, why is it important, and where can we find it? Can dynamic hedging be used effectively?

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Session 6: Emissions and Renewables

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No discussion of the power sector would be complete without a discussion of pollution mitigation. Topics for discussion will include: NOX, SOX, mercury, carbon trading, green credits, clean coal, nuclear, wind energy and other renewables.





### *Learn From the Experts that Experts Trust*

EMI experts are frequent editorial contributors to petroleum magazines & are trusted by today's leading news sources.

Our experts have been featured in:

Futures Magazine • The Wall Street Journal • USA Today • The New York Times • The Washington Post • Journal of Commerce • CNN • NBC • CBS • ABC • Bloomberg • Reuters

**EMI's leading industry experts** have an average of over 30 years of knowledge and experience in:

**Energy • Commodity trading • Risk management  
• Education • Consulting • Financial services**

Plus many years of managing marketing, international trading, manufacturing, consulting, start-up operations and project finance operations of well-known companies; integrated major oil companies as well as international trading companies.

EMI's industry experts have also provided risk and value management analysis, advice, information, and services to a variety of companies in the electric power industry. Clients have included power marketers, integrated utilities, retail power providers, hedge funds, and power plants.

**Highlights of our instructors' experience** include: • Developing a suite of models for a variety of power markets that quantify value and risk • Managing spark spread portfolios for hedge funds in the power markets • Operating in futures trading pits as a market observer in the power markets • Developing working papers for investigations and performing compliance audits in the power industry • Helping Texaco initiate its first use of futures exchanges as an integral part of hedging/trading strategy • Chief Operating Officer of Triwell Marketing and refining • Director of OPIS, Oil Price Information Service, a management-consulting and educational services group that solely focused on the downstream energy industry • Member of Board of Directors of Longview Refinery • Member of the New York Mercantile Exchange Petroleum Advisory Board • Expert witness for a hearing before the subcommittee on surface transportation for the Commerce, Science, and Transportation Committee of the US Senate • Supplied expert testimony to a US Senate sub-committee hearing on diesel petroleum product pricing • Supplied testimony to the Federal Highway Administration regarding fuel tax evasion • Expert witness in a MTBE litigation against the major oil companies • Publishers of The Daily Hedger, BTU's Daily Gas Wire and BTU's Daily Power Report, which advise thousands of petroleum professionals daily.

Our instructors are frequent expert speakers for numerous petroleum industry events and trade associations including: • DOE DESC World Energy Conference • OPIS Fleet Fueling • CME NYMEX • Fuel Management University • NATSO • ATA • AAA • Dairy Distribution • eyeforEnergy eCommerce • OPIS Supply Summit • CIOMA • American Society of Mechanical Engineers • American Society of Lubricating Engineers • Ambrust Aviation • NACHA.

Over the years EMI has developed a series of intensive courses covering all aspects of Energy from production all the way to managing the impact price and volatility on the margin of end-users, resellers, traders, marketers, shippers, retailers and refiners. Our instructors have had the privilege to instruct thousands of professionals representing all aspects of the energy industry, including every major oil company (i.e. Exxon Mobil, BP, Shell, Equilon, Motiva) major power utilities (i.e. Sempra, Edison Mission, Berkley, Toronto Hydro, Dominion, Conectiv) small marketers (i.e. Sprague, Getty, Southern Counties, Western Petroleum) trucking fleets from 50 to 10,000 (i.e. UPS, U.S. Postal Service, Yellow, Pepsi, Werner), gasoline-powered fleets hyper-markets (i.e. The Pantry, Wawa, BJs Wholesale) and many fortune 500 energy consumers.

## REGISTER ONLINE

### Registration Fees:

1st Attendee: \$1,995 for full program

2nd Attendee: \$1,795

3rd Attendee: \$1,600

## 1 CHOOSE YOUR COURSE DATE/LOCATION

**March 23-24, 2017**  
**Norris Conference Center**  
Houston/City Centre I/  
10 Katy Freeway Area  
803 Town & Country Blvd.  
Houston, TX 77024  
PH: 713.590.0950

**April 26-27, 2017**  
**Regus Business Center**  
225 Franklin Street  
26th floor  
Boston, MA 02110  
PH: 617.217.2000

**June 14-15, 2017**  
**Regus Conference Center**  
800 Town and Country Blvd.  
Suite 300  
Houston, TX 77024  
PH: 832.431.3000

Hotel recommendations for select course locations available online at [www.energyinstitution.org/hotels](http://www.energyinstitution.org/hotels)

## 2 ENTER ENROLLMENT DETAILS

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_

## 3 MAKE PAYMENT CHOICE

Please make checks payable to: "PMA"

Please invoice my company (payment must be received prior to course date)

Pay by credit card (circle one):    Mastercard    Visa    American Express

Card Number: \_\_\_\_\_ Expiration Date:    /    /

Card Holder Name: \_\_\_\_\_

Card Holder Signature: \_\_\_\_\_

## 4 SUBMIT REGISTRATION FORM

EMAIL:    Send form to [register@pmaconference.com](mailto:register@pmaconference.com).

TEL:    Call PMA Conference Management at 201.871.0474

FAX:    253.663.7224

POST:    PMA Conference Management  
POB 2303  
Falls Church, VA 22042

### REFUND/CANCELLATION POLICY

Attendees may reschedule for a different date or course with no penalty. Attendees may substitute a colleague in place of themselves as long as prior notice is given to EMI.

Course fees are 100% refundable up to 14 days prior to course date, 80% refundable up to 5 days prior to course date and 50% refundable up to 2 days prior to course date. Cancellations are non-refundable thereafter.