



NATURAL GAS FUNDAMENTALS

Presented by Energy Management Institute



Gain a thorough understanding of the entire Natural Gas industry, from well head to burner tip, in this intensive, one-day program.

COURSE DATES & LOCATIONS

■ March 7, 2017: Houston, TX

REGISTER TODAY!

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DETAILS INSIDE



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What You Will Learn

This intensive one-day course describes the industry from the four major functions:

1. Origins and destinations of Natural Gas.
2. Exploration through distribution.
3. Buying, selling, marketing.
4. Transportation.

This course intertwines the relationships of:

1. Market macro & micro fundamentals.
2. Purchasing and selling methodology.
3. Producing and marketing.
4. Understanding of the various market relationships that impact the everyday aspects of the business.

You'll examine topics such as:

- Physical properties of Natural Gas.
- Where Natural Gas is found.
- How Natural Gas is measured.
- Where have we been and where are we going: The history and future of Natural Gas in North America.
- The major consumers of Natural Gas: From home use to manufacturing.
- Exploration: The role of geologists and technology.
- Drilling: Onshore and offshore.
- Production, treatment, compression, and processing.
- Gathering, storage, and transmission.
- Transportation: Construction, safety, operations.
- Overview of Natural Gas marketing processes.
- Distribution: How Natural Gas gets to the burner tip.
- Gas Industry Standards Board.
- The "Players" who make the industry work: Suppliers - Marketers - Brokers - Local Distribution Companies - Industrial and Commercial end users.
- Natural Gas futures and OTC derivatives.
- Transportation and how it works.
- Storage usefulness and seasonal peaking and balancing needs.
- Market Centers (Hubs): Services provided.

Who Should Attend

This course will benefit anyone seeking a top to bottom, fundamental education in natural gas industry. Perfect for those new to the industry: Wholesale power &/or natural gas marketing companies, utilities, generation, supply & distribution personnel, traders, end-users, commercial companies, cogeneration, industrial companies & government agencies. Great for new hires, interdepartmental transfers, finance management, administrative personnel, & human resource personnel.

COURSE DATES & LOCATIONS

■ **March 7, 2017 - Houston, TX**
Regus Conference Center
8:30am - 4:30pm

See last page for venue addresses.

REGISTER ONLINE

EMI CERTIFICATION CREDIT



This course earns 3 credits towards EMI Certification.

Not enrolled? Learn more about EMI's Certification Program and enroll today at cert.emi.org

REGISTRATION FEES

1st delegate: \$1,195
2nd delegate: \$995
3rd delegate: \$800



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Course Syllabus

Session 1: Overview Of Macro And Micro World Nat Gas Market Fundamentals.

What is impacting Natural Gas margins today macro supply & demand micro supply & demand, processing problems, weather and El Nino already in place. This session will in fact discuss them all with emphasis on what to watch, when and how to identify which factors impact price and supply and risk management programs.

Session 2: Let's Go Back In Time And A Bit Upstream.

Where did Nat Gas come from? What is the history of Nat Gas? Let's review the composition, sources and measurement. You will not only learn where it comes from but why it is the environmental fuel of choice.

Session 3: Where Do All the Players Fit Into The Natural Gas Infrastructure?

We continuously hear about Exploration – Producing – Processing – Supply & Distribution – Marketing – Transportation & Trading when describing the Nat Gas industry and the integrated energy companies. You will learn what this flow means, how it has evolved over the last 30 years and where the optimum entry and operating points are for each of the participants.

Session 4: Transportation - Time To Move The Nat Gas To The Market.

The existing interstate pipeline network consists of over 200,000 miles of pipeline. About 80 to 90 pipeline systems make up the network with about 50 classified as major by FERC. How does this all work? Let's review the infrastructure issues and the operational trends. In addition let's spend some time understanding the economics of these movements by:

- Building a transportation arbitrage matrix, which includes the cost of transportation applied to the value of product in various US locations.
- Show how to get setup with the pipelines.
- Put all of the pieces together to optimize the supply and distribution network.

Session 5: Gas Storage Methods And Economics.

Storage of Nat Gas is an integral part of the overall supply system. Nat Gas is generally stored in salt caverns during the summer to early fall months for ultimate use during the heating season. The shape of the forward price curve largely determines the optimal storage and inventory strategy in a given market. A company needs to employ different strategies in contango and backwardated markets if it is to maximize profits. We will go through a basic economic model for making the storage decision.

Session 6: A Walk Down Correlation Row.

Not only does it make good business sense to make sure CME NYMEX instruments correlate to the risk you are hedging in addition FASB 133 requires it. This session will present examples of the relationships of various CME NYMEX instruments and real life physical risks. Correlations of CME NYMEX versus spot markets, wholesale (hubs) markets, retail markets in a variety of places around the US will be presented for various timeframes.

Session 7: Executing & Implementing And Model Approach Evaluation of the Hedging Strategies.

This session brings it all together. This session will provide you with many examples of hedges to manage outright price risk, absolute price and margin risk, and inventory management. In addition, we will include an in-depth examination of Locational Natural Gas Basis Swaps”

Session 8: CME NYMEX NG – Mock Trading Session.

CPE CREDITS



This course earns 8 CPE credits.

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Web site: www.learningmarket.org.



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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.



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REGISTER ONLINE

Registration Fees:

1st Attendee: \$1,195 for full program

2nd Attendee: \$900

3rd Attendee: \$800

1 CHOOSE YOUR COURSE DATE/LOCATION

- March 7, 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

2 ENTER ENROLLMENT DETAILS

First Name: _____ Last Name: _____

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email Address: _____

3 MAKE PAYMENT CHOICE

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.

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.