



# FUNDAMENTALS OF THE PETROLEUM INDUSTRY

Presented by Energy Management Institute



*Examine the exciting world of the petroleum industry as taught by one of the premier experts from the oil industry. You'll get a comprehensive understanding of how this integrated industry works.*

## COURSE DATES & LOCATIONS

- February 1-2, 2017: Houston, TX
- March 8-9, 2017: Atlanta, GA
- April 20-21, 2017: Houston, TX
- May 17-18, 2017: Washington, DC
- June 28-29, 2017: Houston, TX

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DETAILS INSIDE



# FUNDAMENTALS OF THE PETROLEUM INDUSTRY

Presented by Energy Management Institute - [www.emi.org](http://www.emi.org)

Join EMI for this comprehensive course covering the entire petroleum complex, from crude production to the refinery down to the pump. You will understand the complexities of one of the world's most exciting and dynamic industries.

## What You Will Learn

Learn about: Crude Oil: Exploration to production; Refining: The process from basic distillation to complex hydro-cracking; Pipeline transportation and U.S. Spot markets; Trading in the intermediary markets and the critical role these components play in the downstream infrastructure; Wholesale rack markets and exchanges: We'll highlight everything from proprietary additives to exchange agreements between oil suppliers used to keep our nation supplied. Finally we'll dive into the retail landscape and examine the players, trends, margins, and the pricing components that make up a street price in any given market.

### Special focus on:

- Upstream crude fundamentals.
- Exploration and production trends transforming the industry.
- Refinery processing basics.
- Refined product flow from the refinery to the street.
- Critical price benchmarks.
- Basics of trading and risk management.
- Major U.S. energy policy.
- Valuation of refined products.
- Spot market; Wholesale rack market; Retail landscape.
- Deal strategy, structure and traditional and non-tradition purchasing.
- Key players.
- Fundamental pressure on price and supply.
- Technical pressures on price.
- Political pressure on price and supply.
- Downstream trends and current market outlook.
- Simple, complex, and very complex refinery configuration.
- Terminology.
- Pipeline transportation and U.S. spot markets
- Gas station and truck stop retail trends, brand value, margins, and pricing components
- Branded vs. unbranded pricing mechanics
- Alternative and renewable fuel trends.

## Who Should Attend

This course will benefit anyone seeking a top to bottom, fundamental education in the petroleum industry. Perfect for: Oil company management and staff, marketers, pipeline schedulers, interdepartmental transfers, finance management, administrative personnel, those considering entering the industry, and human resource personnel.

## COURSE DATES & LOCATIONS

- **February 1-2, 2017 - Houston, TX**  
Regus Conference Center  
9:00am - 4:30pm both days
- **March 8-9, 2017 - Atlanta, GA**  
Regus Atlanta Midtown  
9:00am - 4:30pm both days
- **April 20-21, 2017 - Houston, TX**  
Norris Conference Center  
9:00am - 4:30pm both days
- **May 17-18, 2017 - Washington, DC**  
Regus Conference Center  
9am - 4:30pm both days
- **June 28-29, 2017 - Houston, TX**  
Norris Conference Center  
8:00am - 4:30pm both days

See last page for venue addresses.

**REGISTER ONLINE**

## EMI CERTIFICATION CREDIT



This course earns 6 credits towards EMI Certification.

Not enrolled? Learn more about EMI's Certification Program and enroll today at [cert.emi.org](http://cert.emi.org)

## REGISTRATION FEES

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



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## Course Syllabus

### Session 1: Oil

The petroleum industry starts with crude oil. From its beginnings as lamp oil to its vital role in world economics today, this session covers it all. Follow oil from its formation through exploration, drilling, storage, and transportation. Discover how hydraulic fracturing is absolutely transforming the world energy landscape. Learn why not all oil is the same and who the real players are in this global game of supply and demand

### Session 2: An Industry in Transition

The North American petroleum industry is smack in the middle of the most transformational era it has seen since the 1973 Arab Oil Embargo. You've seen the headlines talking about everything from shale to fracking to the Keystone pipeline to a proliferation of crude oil trains. This session will dig behind the headlines to explain the huge transitional forces that are redefining not only an industry, but commerce on global scale.

### Session 3: Refining

Crude oil is of little use in its natural state. Refining unlocks the value stored in every barrel pumped from the ground. This detailed session walks you through the operation of a refinery, and the various processes used to extract a multitude of products. You'll see that crude yields not only the fuels needed to power our vehicles but many other products. Everything from carpet to crayons to the roads we drive on come from refineries.

### Session 4: Pipelines and Terminals

Pipelines are the arteries that keep petroleum flowing throughout North America. They are the major source of distribution moving fuel from the refinery to where it is needed. If there were no pipelines, highways would be clogged with tens of thousands more tanker trucks. You will learn about the location, operation, and importance of major pipelines to the industry. Further, we'll explore storage terminals along the pipeline system that feed local markets. We'll show you why inventory at these locations is critical to the supply and demand economics that affect your buying price.

### Session 5: Price Setting

How do oil companies set the price for the fuel they sell? It sometimes appears that prices indiscriminately move up and down without cause. How does a jump in the price of oil almost immediately effect pump prices when it takes days or weeks for the oil to get refined? What are the trends? How much volatility will there be in the future? What is benchmarking and cost-plus? This session looks at all the behind-the-scenes variables that factor into the market price of fuels.

### Session 6: A Closer Look at Gasoline and Diesel

We put fuel in our vehicles almost without thinking. Advertisements talk about the benefits of premium fuels but are they worth the extra money? Terms like octane and cetane are referenced in contracts and displayed on pumps, but what do they mean? Why do different parts of the country use different types of fuel and why does gasoline get more expensive during the summer? All of these points will be distilled into a better understanding of the fuels we use every day.

### Session 7: Retailing

Fuel is sold at well over 100,000 locations including traditional service stations, truck stops, and convenience stores. Today, that list includes a growing number of grocery stores and hyper marketers like Sam's Club, BJ's, and Costco. What are the factors driving the retail end of the industry? We'll explore the outlook of major oil companies as it pertains to retailing and the trends in the industry. Most importantly we will explore the cost structure of fuel at the retail level as we dissect the most visible part of the petroleum industry.

*Continued on next page...*

## CPE CREDITS



### This course earns 12 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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## *Course Syllabus (continued)*

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### Session 8: Traditional Purchasing Methodology

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How do companies buy fuel? Do gas stations buy from only one supplier? Refined product transactions take place at all levels of the energy infrastructure – NYMEX, spot, wholesale, and retail. These are the same levels of the market discussed in our price setting session. Understand the complete market environment and how companies manage the price they pay for fuel using a portfolio of purchase contracts, techniques, and methodologies.

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### Session 9: Energy Policy and Alternative Fuels

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With the stroke of a pen, Congress can move the industry in new directions. We have seen it happen many times before through legislation like the Energy Independence and Security Act and the Energy Policy Act. This legislation gave us the controversial Renewable Fuel Standard and RIN market to manage compliance. This session takes a look at current policy before diving into a review of the accepted alternative and renewable fuels. Are we still on a path toward cellulosic ethanol and biodiesel or will compressed and liquefied natural gas vehicles claim the spot light? This session will provide the answers.

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### Session 10: Understanding the Futures Market

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Energy commodities are traded every day on the regulated New York Mercantile Exchange division of the CME. This critical paper market reaches around the world to establish market values for energy products and set expectations for things to come. Learn the important facts about why this exchange market exists, how it functions, and why it is vital to understand its impact on your business. You'll learn the basic mechanics of the futures market and the resulting forward curve. Further, you'll understand how this trading impacts decisions on a grand scale from building infrastructure to reshaping global business partners.

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### Session 11: Using NYMEX Futures and Options

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Armed with an understanding of what the NYMEX is, we'll look at how companies use the exchange to manage their business. Many have heard of Fixed Price Programs, Ceilings, Caps, and Collars. This session will explain the mechanics behind those programs and the futures and options instruments used to make them a reality. Who uses these programs? Learn the difference between companies considered hedgers and those that are speculators. We'll look at specific examples of companies who use these instruments

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### Session 12: Energy Market Overview

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After two days of digging deep we will conclude the course by moving back to a macro view of the industry. What is impacting petroleum prices and margins today – OPEC, worldwide supply & demand, micro supply & demand, refinery problems, specifications changes? What is happening in Europe, the Middle East, Canada, and the U.S. that could impact the flow of oil? Now that you understand how the industry works, this session will examine up-to-the-minute fundamental, technical, and geo-political factors moving the market.



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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: \$1,995 for full program

2nd Attendee: \$1,795

3rd Attendee: \$1,600

## 1 CHOOSE YOUR COURSE DATE/LOCATION

**March 8-9, 2017**  
**Regus Atlanta Midtown**  
Promenade II  
1230 Peachtree Street North East  
19th Floor  
Atlanta, GA 30309  
PH: 404.942.3400

**April 20-21, 2017**  
**Norris Conference Center**  
Houston/City Centre I/  
10 Katy Freeway Area  
803 Town & Country Blvd.  
Houston, TX 77024  
PH: 713.590.0950

**May 17-18, 2017**  
**Regus Conference Center**  
International Square  
1875 I Street, NW  
5th Floor  
Washington, DC 20006  
PH: 202.429.2000

**June 28-29, 2017**  
**Norris Conference Center**  
Houston/City Centre I/  
10 Katy Freeway Area  
803 Town & Country Blvd.  
Houston, TX 77024  
PH: 713.590.0950

**February 1-2, 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 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.