

# INTRODUCTION TO THE LIQUEFIED NATURAL GAS INDUSTRY

*Infrastructure, Regulation and Markets*

**December 4-5, 2017**

**Houston Marriott West Loop by the Galleria  
Houston, TX**



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by IACET to offer  
1.0 CEUs for the  
course

# OVERVIEW

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This 1.5-day course will present an overview of Liquefied Natural Gas (LNG) so that attendees get a comprehensive understanding of the supply chain, types of infrastructure, costs, siting and safety regulations, and LNG markets. The instructor will also discuss how an LNG plant operates (import, storage, and vaporization) and types of vessels use to transport LNG. Attendees will have a better understanding of relationship between U.S. shale gas and LNG and the latter's role as a fuel for the 21st century.

Attendees will also learn about inland and offshore LNG import and export terminals, and LNG peak shaving plants used to mitigate temporary natural gas supply and price risks. The course will address the roles played by the Department of Energy, FERC and USCG in siting and safely operating U.S. LNG projects. Attendees will learn about LNG pricing mechanisms, sales purchase agreements, how LNG is priced for domestic use, and natural gas and LNG futures contracts used to hedge risk.

# LEARNING OUTCOMES

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- Describe the basic LNG Fundamentals
- Discuss the Traditional LNG Supply Chain
- Evaluate LNG Transportation
- Assess LNG Receiving Terminals
- Discuss the Offshore LNG Supply Chain
- Review LNG Environmental Aspects
- Evaluate LNG Project Costs
- Analyze LNG Contracts and Project Development
- Discuss LNG Trade Markets
- Review Examples and Mechanisms of U.S. LNG Exports
- Discuss Purchasing Strategies of LNG for Use in the U.S.

# WHO SHOULD ATTEND

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- Those new to the LNG industry
- Experienced employees who need a refresher
- Prospective Natural Gas and LNG Buyers
- Electric Power Professionals
- Investors and Attorneys
- Managers and Commodity Analysts
- State and Federal Regulators of LNG
- Engineering and Environmental Consultants

# AGENDA

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MONDAY, DECEMBER 4, 2017

**8:00 – 8:30 am                      Registration and Continental Breakfast**

**8:30 am – 5:00 pm                Course Timing**

**12:00 – 1:00 pm                 Group Luncheon**

**LNG Fundamentals**

- LNG Characteristics
- Units and Conversion Factors

**Traditional LNG Supply Chain**

- LNG Production Plant
- Feed Gas Conditioning
- NGL Recovery
- Liquefaction
- Liquefaction Plant Types
- LNG Train Size
- LNG Loading

**LNG Transportation**

- By Ship
- By Truck
- By Rail

**LNG Receiving Terminals**

- Onshore LNG Terminals
- Offshore LNG Terminals
- LNG Storage
- Vaporizers

**Offshore LNG Supply Chain**

- Floating Production Storage Offloading and Offloading (FPSO) and Floating LNG
- Offshore LNG Regasification
- Floating Storage & Regasification Units (FSRU)

**LNG Environmental Aspects**

- Pros and Cons
- Public Health and Climate Change
- CO<sub>2</sub> Emissions
- FERC & USCG NEPA Environmental Reviews

# AGENDA

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TUESDAY, DECEMBER 5, 2017

**8:00 – 8:30 am**            **Continental Breakfast**

**8:30 am – 12:30 pm**    **Course Timing**

**LNG Project Costs**

- Cost Allocation of LNG Project
- Liquefaction Plant Costs
- Buyers and Sellers in the LNG Supply Chain

**LNG Contracts and Project Development**

- Integrated LNG Supply Chain
- Less Integrated LNG Supply Chains
- Project Finance
- Project Management
- Pre-Front End Engineering and Design (FEED)
- EPC Contracts

**LNG Trade and Markets**

- Global LNG Market Growth
- LNG Import and Export Markets
- Global LNG Mega Projects and Players
- New Players and Players

**U.S. LNG Exports**

- Key U.S. LNG Stakeholders
- LNG Pricing Mechanisms
- Examples of LNG Pricing Mechanisms

**Purchasing LNG for Use in the U.S.**

- Key Suppliers
- Typical Contracts
- Pricing Mechanisms
- Retail LNG Prices vs Other Fuels

# INSTRUCTOR

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## Tom Russo

**Principal, Russo on Energy LLC**

Tom Russo is an Energy and Environmental expert with unique regulatory skills in siting energy infrastructure, markets and physical/cybersecurity.

Prior to founding Russo on Energy LLC in May 2015, Mr. Russo worked for over 30 years as a Manager and Sr. Energy Industry Analyst at the Federal Energy Regulatory Commission (FERC). During that time he amassed experience in hydropower licensing, NEPA environmental impact assessment of energy projects, business process reengineering, and natural gas and crude oil market oversight. Mr. Russo thoroughly understands the Natural Gas Act, Natural Gas Policy Act, Federal Power Act and Energy Policy Act as they apply to natural gas and hydroelectric projects. He also assisted FERC's new Energy Infrastructure Security Office with understanding physical and cybersecurity threats and vulnerabilities to natural gas, oil and gas-fired power projects and physical natural gas and related futures and swaps.

In FERC's Office of Enforcement, he managed and led efforts on the development and implementation of FERC Order 704 and FERC's Form 552 Annual Natural Gas Transaction Report program from 2008 to 2015. He also has helped numerous energy companies address FERC compliance issues in the natural gas, LNG, and hydropower area, as well as natural gas market participants in achieving compliance with transactional issues related to natural gas indices and index formation.

Mr. Russo is a native of Brooklyn, New York. He earned a credential as a Certified Information Systems Security Professional (CISSP) in 2010. He also graduated with a MBA in Finance from the George Washington University and a MS in Biology from the University of Alabama.

## REQUIREMENTS FOR SUCCESSFUL COMPLETION OF PROGRAM

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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

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This course will use slide presentation, group discussions, as well as active participation. Attendees will have sample opportunities to actively participate in review questions/answers sessions, group breakout sessions, and simulations/demonstrations offered as part of this course.

## PROCEEDINGS

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

## EVENT LOCATION

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A room block has been reserved at the Houston Marriott West Loop by the Galleria, 1750 West Loop S West Loop South, Houston, TX 77027 for the nights of December 3-4, 2017. Room rate is \$99 plus applicable tax. Call **1-713-960-0111** for reservations and mention the EUCL event to get the group rate. The cutoff date to receive the group rate is November 3, 2017 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

## IACET CREDITS

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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 1.0 CEUs for the course.**

## REGISTER 3, SEND THE 4TH FREE

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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.

**REGISTRATION**  
*to register [CLICK HERE](#) or*

**Call: 201 871 0474**  
**fax: 253 663 7224**  
**email: [register@pmaconference.com](mailto:register@pmaconference.com)**  
**web: <http://pmaconference.com/>**  
**Mail: POB 2303 Falls Church Va 22042**

Please make checks payable to: "PMA"

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## PLEASE REGISTER

### INTRODUCTION TO THE LIQUEFIED NATURAL GAS INDUSTRY: INFRASTRUCTURE, REGULATION AND MARKETS COURSE

December 4-5, 2017: US \$1395,  
 Early bird on or before November 17, 2017: US \$1195

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

Print Name Job Title

Company

What name do you prefer on your name badge?

Address

City State/Province Zip/Postal Code Country

Phone Email

List any dietary or accessibility needs here

### CREDIT CARD INFORMATION

Name on Card Billing Address

Account Number Billing City Billing State

Exp. Date Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx) Billing Zip Code/Postal Code

**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 November 3, 2017 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 at (201) 871-0474.