

A Unique and Insightful Course For Gas Industry Professionals

The 12th, 13th & 14th NATURAL GAS DYNAMICS

SAVE US\$200!
If you register & pay
within "Early Bird"
dates or register
a 2nd person.
(See back page for details)

*Understand the Full Value Chain from Exploration
to Commercialization & Global Trends*

Bangkok, Thailand | 30 June – 1 July 2011 | The Landmark
Trinidad & Tobago | 25 – 26 July 2011 | Hotel to be confirmed
Cape Town, South Africa | 17 – 18 October 2011 | Townhouse Hotel & Conference Centre
Singapore | 27 – 28 October 2011 | Grand Park City Hall

COURSE DIRECTOR

Vivek Chandra

INTERNATIONAL ENERGY
EXECUTIVE & BEST SELLING
PENNWELL AUTHOR OF
"FUNDAMENTALS OF NATURAL
GAS: AN INTERNATIONAL
PERSPECTIVE"

Organised by:



THE CONFERENCE CONNECTION INC.
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LNG TIMES

upstream
The International Oil & Gas Newspaper



KEY DRIVERS & TRENDS TO BE COVERED

- *Natural Gas Components, Units, & Conversions*
- *Gas Formation, Reservoirs & Reserves*
- *Gas Exploration & Production*
- *Gas Processing & Transportation*
- *Shale Gas and Coal Seam Methane and their Impact on Global Markets*
- *The LNG Chain: Upstream, Liquefaction Plant, Shipping, and Regasification*
- *LNG Project Structures*
- *Gas Demand and Storage*
- *Gas Commercialization Options: Electricity Generation, Gas-To-Liquids, Residential Gas Markets, Petrochemicals & Transport Fuel*
- *Components of Pipeline Gas and LNG Sales Agreements*
- *Gas Pricing Drivers and Link Between Oil and Gas Prices*
- *Spot vs Long Term Contracts*
- *Current & Future Global Gas Trade (Pipeline & LNG)*
- *Challenges and Strategies for LNG/Gas Exporters and Importers*
- *Current and Future Role of Qatar, Australia, Russia and Other Key Players*
- *Global Short and Long Term Price Drivers*

REGISTER ON OUR WEBSITE AT WWW.CCONNECTION.ORG

NATURAL GAS DYNAMICS

HELD 10 TIMES SINCE APRIL 2008 IN DUBAI ♦ PERTH ♦ HOUSTON ♦ BANGKOK ♦ SINGAPORE

FULLY SOLD

ABOUT YOUR COURSE DIRECTOR



Vivek Chandra is currently working as a senior executive with an Australian energy company. He was previously working in the Middle East and his extensive 20+ years international gas experience includes ARCO International Oil & Gas Company, Schlumberger Overseas, and developing gas and other energy projects for UAE government entities, serving in a variety of technical, financial and commercial roles in the United States, South East Asia, Australia & Middle East. He has worked on LNG as well as gas pipeline export projects.

He has a Bachelor of Science degree in Geophysical Engineering from the Colorado School of Mines, a Masters of Science in Petroleum Energy Management and Policy from the University of Pennsylvania, and also has completed a graduate degree from the French Petroleum Institute in Petroleum Economics and Management.

Vivek Chandra is the author of *Fundamentals of Natural Gas*, a bestselling hardcover book published by Pennwell, publishers of Oil and Gas Journal and other leading industry books and manuals.

COURSE OBJECTIVES

This 2-day intensive course will give the delegates a solid understanding of the entire natural gas value chain, from its chemical composition, units, exploration and production through processing and transport, and analysis of its myriad uses from power generation, liquids production, transport fuel and petrochemicals.

COURSE METHODOLOGY

The course will include detailed and interactive discussions of natural gas production, demand and the increasing role of shale gas and Liquefied Natural Gas (LNG) in global markets. Participants will understand the components of gas sales agreements, including pricing drivers and formulas and challenges facing both producers and consumers. The course will also cover a discussion of global gas trade and both short and long term pricing trends. Delegates will be encouraged to contribute to discussions with their own experiences and questions. Videos and quizzes will also form part of discussions and provide delegates with the means to test their understanding of concepts learned.

WHY YOU SHOULD ATTEND

Upon completion of the course, delegates will be able to

- **UNDERSTAND** the gas value chain and its growing share of the global energy mix
- **LEARN** how gas is formed, explored, produced, processed, transported and consumed, with examples from all over the world
- **COMPREHEND** the differences between confusing terminology and units such as LNG, NGL, LPG, CNG, MMbtu, therms, MTA, Joules and other jargon
- **CALCULATE** between gas units and energy equivalents, as well as gas consumption rates of power plants, liquid production plants, and other consumers of natural gas
- **GAIN** a clear understanding of the various gas transportation and processing options, including pipelines and LNG
- **DISSECT** a gas sales contract into its important components, including gas prices, indexing, delivery and receipt obligations and terms
- **FORECAST** trends in the global gas trade and know the key players, both present and future, who will drive the industry

STUDY AIDS

All delegates will receive:-

- A workbook with 400 color slides covering all course materials providing valuable reference materials covering all aspects of the gas industry
- A copy of Pennwell's bestselling book, "Fundamentals of Natural Gas" providing valuable future reference material.



WHO SHOULD ATTEND

- Oil & Gas Executives including Executive Directors, General Managers, LNG Managers, Regional/Branch Managers, Operation Managers, Business Development Managers, Commercial Managers, Project Managers, Technical Managers & Asset Managers
- Natural Gas & Energy Traders, Marketers, and Contract Negotiators
- Government Officials & Industry Regulators
- Finance Directors/Financial Controllers
- Business Analysts/Corporate Planners and Strategic Managers
- Business Support Managers and Management Assistants
- Power & Petrochemical Industry Executives/Thermal Power Executives/Energy Consultants
- Revenue Management Officers
- Lawyers and In-house Legal Counsel/Legal Advisers/Consultants/Legal & Contract Managers
- Engineers-Cost & Research/Laboratory Managers
- Banks and Financial Institution Executives including Associate Directors/ Corporate Finance Executives/Project Financiers and Economists

WHAT ATTENDEES HAVE SAID

- *It's not only the excellent course, but all attendees are experienced people. It made me have more knowledge about the gas business in the world – PTT Thailand*
- *It breaks down the industry into basic terms and easily ramps up to more complex aspects – King & Spalding LLP*
- *Comprehensive knowledge, willing to discuss past, current & future trends – BP Australia*
- *It is the one of the best experiences I've ever had. I have benefited a lot from the 2 days – Keppel Offshore & Marine Technology*
- *The instructor is very upbeat and up-to-date and the handouts very comprehensive – Dana Gas*
- *Succinct & informative, insight to recent trends" – ExxonMobil*
- *From the beginning to the end of the process - there is a bit of everything, good class size, very interactive" – Chevron*
- *Vivek is very knowledgeable, and gives opportunities for anyone to ask questions at any time" – Mitsubishi Corporation*
- *Updated global trends, fundamental introduction to the gas chain is very useful" – Ministry of Trade & Industry, Singapore*
- *Very clear overview of the LNG markets and developments in the world" – Tuas Power Generation*

JOIN THE FOLLOWING COMPANIES WHO HAVE ATTENDED MULTIPLE VENUES OF THE NATURAL GAS DYNAMICS COURSE

- BP – Perth 2008, Dubai 2008, Singapore 2009
- Chevron – Perth 2008, Singapore 2009 & Perth 2010
- Crescent Petroleum/Dana Gas – Dubai 2008 & Dubai 2009
- Dolphin Energy – Singapore 2009 & 2010
- Government of Timor Leste – Singapore, January & November 2009
- Keppel Offshore – Singapore 2009 & Houston 2010
- Mitsui Oil Exploration – Perth 2008 and Bangkok 2010
- Mitsubishi Corporation – Perth & Singapore 2010
- Petronas & Petronas Carigali – Perth 2008, Singapore – January, July & November 2009
- Pertamina Indonesia – Perth 2008, Singapore 2009, Bangkok & Singapore 2010
- PTT Thailand – Dubai 2008, Singapore 2009 & Bangkok 2010
- Santos – Perth & Singapore 2010
- Sembcorp Gas – Singapore 2009 & 2010

Other Companies Who Have Attended Over The Years

ANZ Bank • Ashoka Venture Partners • Asia Pacific Exploration • Baker Botts • BASF • BAPCO • BP Migas • CH Mutiara Petroleum • CLP Power • CR Intrinsic Investors • Carigalli Hess Operating Co. • Curtin University • DLA Piper • Department of Mines & Geology • Eaglewood Energy • EGAS • Brunei Energy Division • Energy Policy Research Foundation • ExxonMobil • Geo Chem • Itochu • King & Spalding • Kuwait Petroleum Corporation • Kelly & Co. • Lavan Legal • Lime Rock Partners • Margham Dubai • Melrose Resources • Ministry of Trade & Industry • Mobil Cepu Ltd • Nexus Energy • Nippon Oil Exploration • North West Shelf Shipping Services Co • Otto Energy • PTT Exploration & Production Public Co. • Pearl Energy • Qatargas • Saudi Aramco • Sembcorp Gas • Senoko Power • Shell International Gas & Power • Shell Eastern Petroleum • Total E & P • TUV • Tuas Power Generation • Universiti Teknologi Petronas • UOP Processes International Inc • and others



CERTIFICATE OF ATTENDANCE

All participants who successfully complete the full 2-day course, will be given a Certificate of Attendance.

COURSE OUTLINE

DAY ONE

THE BASICS

- I. **INTRODUCTION**
 - *What is natural gas?*
 - *Natural gas vs oil*
- II. **CHEMISTRY OF NATURAL GAS**
 - *Components of natural gas:*
 - *Methane*
 - *Ethane, Propane, Butane, Condensate and other components*
 - *Terminology: NGL, LNG, LPG, CNG, Rich Gas, Sour Gas, etc*
- III. **NATURAL GAS UNITS**
 - *Converting gas volume units*
 - *Calorific values of gas components and products*
 - *Calculating energy equivalents*
- IV. **GAS FORMATION & RESERVOIRS**
 - *Gas formation*
 - *Reservoir rock characteristics*
 - *Reservoir structure*
 - *Types of gas traps and gas fields*
 - *Producing gas liquids on surface*
- V. **GAS RESERVES**
 - *Classifications*
 - *Global distribution of reserves*
 - *Gas reserves versus oil reserves*
- VI. **GAS EXPLORATION & PRODUCTION**
 - *Principles of geology & geophysics*
 - *Use of seismic and well logging in gas exploration*
 - *Drilling cycle*
 - *Sub-sea production systems*
- VII. **UNCONVENTIONAL GAS**
 - *Coal seam methane*
 - *Economics of Coal Seam Methane conversion to LNG*
 - *Shale gas – Current impact on global prices and global supply potential*
 - *Impact of unconventional gas to global gas supply*
- VIII. **PROCESSING & TRANSPORTATION**
 - *Gas processing plants*
 - *The gas chain*
 - *Gas pipelines*
 - *LNG vs pipeline economics*
- IX. **THE LNG CHAIN**
 - *Upstream and midstream*
 - *Liquefaction plants*
 - *LNG Shipping*
 - *Regasification terminals*
 - *Chain economics*

DAY TWO

GAS USAGE, AGREEMENTS & TRADE

- X. **GAS STORAGE & SWING**
 - *Gas demand cycles*
 - *Types and cost of gas storage*
- XI. **GAS USAGE: ELECTRICITY GENERATION**
 - *Comparative cost of power generation*
 - *Gas fired power generation*
 - *Calculation of gas consumption*
- XII. **GAS USAGE: GAS-TO-LIQUIDS**
 - *GTL process*
 - *Case Study: Oryx GTL plant in Qatar*
 - *Quality of GTL fuels*
 - *Gas feedstock required for GTL*
 - *GTL vs LNG full chain economics*
- XIII. **GAS USAGE: RESIDENTIAL GAS, PETROCHEMICALS & TRANSPORT FUELS**
 - *Residential gas network*
 - *Gas as an important feedstock –*
 - *Chemicals*
 - *Fertilizers*
 - *CNG & LPG as transport fuel*
 - *Energy density of fuels*
- XIV. **GAS SALES AGREEMENTS & GAS PRICE DRIVERS**
 - *Components of LNG and pipeline gas sales agreements*
 - *Duration of sales contracts – spot versus long term*
 - *Take-or-pay obligations*
 - *Gas pricing terms, indexation and historical trends*
 - *Relationship between oil & gas prices*
- XV. **GLOBAL GAS TRADE**
 - *Gas demand trends*
 - *Gas & LNG price trends*
 - *Energy mix in select countries*
 - *Growth in LNG and pipeline trade*
 - *LNG balance between Atlantic and Pacific Basin*
 - *Coal seam methane to LNG projects*
 - *Impact of spot LNG trade to global markets*
 - *Review of key LNG exporters*
 - *Review of key LNG importers*
 - *Role of LNG aggregators & emerging exporters and importers*

Registration on Day 1 is at 8.00am. Sessions start promptly at 9.00am and end at approximately 5.30pm on each day. Lunch will be served between 12.30pm and 2.00pm with mid-morning and mid-afternoon refreshments.

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CHECK REGISTRATION PAGE FOR TEAM & EARLY BIRD DISCOUNTS!

5 EASY WAYS TO REGISTER



The Conference Connection Inc.
PO Box 1736 Raffles City Post Office, Singapore 911758
Conference Connection Pte Ltd (ROC No. 199405166R)
135 Middle Road, #05-01 Bylands Building, Singapore 188975



Singapore (65) 6338-0064



info@cconnection.org



Singapore (65) 6338-4090



www.cconnection.org

DATES & VENUE:

BANGKOK, THAILAND

30 June – 1 July 2011
The Landmark Bangkok
138 Sukhumvit Road Bangkok 10110 Thailand
Tel: 662-2540404 Fax: 662-2524221

TRINIDAD & TOBAGO

25 – 26 July 2011
Hotel to be confirmed

CAPE TOWN, SOUTH AFRICA

17 – 18 October 2011
Townhouse Hotel & Conference Centre
60 Corporation Street Cape Town 8001
PO Box 5053, Cape Town 8000, South Africa
Tel: 27-21-4657050 Fax: 27-21-4658918

SINGAPORE

27 – 28 October 2011
Grand Park City Hall
10 Coleman Street, Singapore 179809
Tel: 65-63363456 Fax: 65-63331574

REGISTRATION FEES:

Registration fees will include attendance at all sessions, daily luncheon and coffee breaks and one set of course documentation. *Travel and accommodation costs are not included.*

Full Fee: US\$2195 per person

Team Fee: US\$1995 per person for the second and subsequent delegate from the same company and billing address. To qualify for team fee, registrations have to be received at the same time.

Early Bird Fee: US\$1995 per person

Bangkok Payment date: **25 May 2011**
Trinidad & Tobago Payment date: **13 June 2011**
Cape Town Payment date: **5 September 2011**
Singapore Payment date: **15 September 2011**

(All discounts are mutually exclusive and on a per person basis)

VISA APPLICATION & PROCEDURES:

Visa application procedure for delegates will be sent with the hotel reservation form.

PAYMENTS:

- All payments must be made in US Dollars by Inter-Bank Transfers within 14 days of receipt of invoice (Bank details will be provided upon receipt of registration).
- Please quote event name, invoice number and delegate name for bank transfers. Please instruct your bank to remit the full amount, nett of bank charges.

REGISTRATION CONDITIONS:

- All registrations must be on the prescribed form or in writing and will be on a confirmed basis unless otherwise notified in writing. All paid registrations will receive written notification.
- The organizers reserve the right not to accept prior and on-site registrations without payment. Delegates whose payments are not received before the event are required to furnish proof of payment on-site. Staff at the event will request a credit card guarantee without proof of payment.
- The organizers reserve the right to impose conditions of entry for walk-in delegates.

CANCELLATION AND SUBSTITUTION POLICY:

- Cancellations notified in writing, received and acknowledged before the **1st cut off date**, will be levied an administrative fee of 5% for paid cancellations and 10% for unpaid cancellations.
- Paid and unpaid cancellations notified between the **1st – 2nd cut off date**, will be charged 50% of the invoiced fee and given one set of course materials (post-event).

Venue	1st Cancellation Cut Off Date (Paid Registrations – 5% of fee & Unpaid Registrations – 10% of fee)	2nd Cancellation Cut Off Date (50% Refund plus Workbook)
Bangkok	9 June 2011	16 June 2011
Trinidad & Tobago	4 July 2011	11 July 2011
South Africa	26 September 2011	3 October 2011
Singapore	6 October 2011	13 October 2011

- No refunds whatsoever will be given after the **2nd cut off date** but delegates can be substituted if the organizers receive prior notification (please note that 2 weeks notice of substitution is required for visa application/cancellation as the case may be).
- For registrations invoiced and unpaid but subsequently cancelled after the **2nd cut off date**, 50% of the invoiced fee will be charged and one set of course materials will be provided (post-event).

DISCLAIMER: The organizers will not accept liability for non-approval of visas, individual transport delays and transport disruption, and in such circumstances, our normal cancellation rules will apply. Where matters beyond the reasonable control of the organizers impair or prevent the organizers from being able to perform their obligation under this event, the client releases the organizers from any liability, incidental or consequential, to such matters.

REGISTRATION FORM

Please print in block letters and return to:

The Conference Connection Inc, PO Box 1736 Raffles City Post Office
Singapore 911758 or NGD Secretariat at 135 Middle Road #05-01
Bylands Building, Singapore 188975. Tel: (65) 6338-0064
Fax: (65) 6338-4090 Email: info@cconnection.org
Website URL: www.cconnection.org (ROC No. 199405166R)

THIS CONTAINS YOUR UNIQUE REGISTRATION REFERENCE
PLEASE DO NOT REMOVE MAILING LABEL

Please Tick (✓) Accordingly

1. Registration Fees

- Full Fee:** US\$2195 per person
- Team Fee:** US\$1995 per person for 2nd and subsequent delegate from same company & billing address
- Early Bird Fee:** US\$1995 per person
Bangkok Payment date: 25 May 2011
Trinidad & Tobago Payment date: 13 June 2011
Cape Town Payment date: 5 September 2011
Singapore Payment date: 15 September 2011

2. Payment

- I am sending payment by telegraphic transfer/bank draft.
- I will need an original invoice

3. Accommodation

- Please send me a hotel/visa form

4. Mailing List

- Please include me in your mailing list for future events

The 12th, 13th & 14th

NATURAL GAS DYNAMICS

ALL REGISTRATIONS MUST BE ACCOMPANIED BY PAYMENT

YES! Please register me for **Natural Gas Dynamics** Course:

- BANGKOK, 30 June – 1 July 2011
- TRINIDAD & TOBAGO, 25 – 26 July 2011
- SOUTH AFRICA, 17 – 18 October 2011
- SINGAPORE, 27 – 28 October 2011

CC3179/3194/3195/ CA297/11 A B C D E

First Name (Mr, Dr, Ms) _____

Surname _____

Company _____

Job Title _____

Nationality _____

Address _____

Country _____ Postal/Zip Code _____

Tel _____ Fax _____

Email _____

Name of Approving Manager (Mr, Dr, Ms) _____

Main Business Activity _____

(For more than one delegate, please photocopy the registration form)