INTRODUCTION

For over 30 years Refining Process Services has been offering technical seminars to meet the training needs of personnel from the worldwide petroleum refining industry. This three day program, entitled "Refinery Economics and Margin Improvement," is designed to provide participants with a comprehensive understanding of the key economic factors that drive petroleum refining profits in today’s volatile energy markets.

PROGRAM

The program begins with a detailed discussion of crude oil and products, including commercial transactions, which may have a large impact on refinery economics. The presentation then moves into the refinery to explore the effects of crude oil type on refining yields and to examine the interactions between crude oil selection and refinery complexity. The following sessions provide an understanding of how refining configuration and product markets affect refining margins.

Areas in which refinery margins can be improved are examined, beginning with refinery reliability. LP tools and techniques involved in short term planning are covered as are opportunities to improve margins by optimizing refinery unit operations. Cost reduction issues such as energy conservation and reducing refinery losses are explored. The program wraps up with a session on long term trends in the petroleum industry.

The sessions will be presented by Mr. Larry Cleverger, a refining industry consultant. He is an experienced professional who has an extensive background in refining technology and in the petroleum refining industry's economics.

This program combines a survey course, designed for anyone interested in the economics of the petroleum refining industry, with a more in-depth look at opportunities to improve refinery profit margins. It is ideal for refinery planning personnel, refinery engineers, product marketers, and those in refinery coordination groups. Personnel from LP modeling companies, financial and insurance firms, service and consulting companies, catalyst suppliers, and government agencies will also find the program very useful and informative.

PROGRAM OUTLINE

1. Crude Oil and Products
   • Crude Oil Supply and Demand Overview
   • What are the Major Petroleum Products?
   • Product Supply and Demand Overview
2. Commercial Transactions
   • How is Crude Oil Bought or Sold?
   • What Influences the Laid-in Cost of Crude Oil?
   • How are Petroleum Products Bought or Sold?
   • Futures Markets
   • Trading and Hedging Scenarios
3. Simplified Refinery Configurations
   • Topping / Reforming
   • Cracking
   • Coking
4. How Refinery Configuration Affects Profitability
   • Effect of Refinery Configuration on Margins
     + Topping / Reforming
     + Cracking
     + Coking
5. Interaction of Product Markets and Refinery Profitability
   • Niche Markets
   • Impact of Product Specifications
6. Improving Unit / Refinery Reliability
   • Cost of Unscheduled Unit Outages
   • Reduction in Costs of Scheduled Shutdowns
   • Reduction in Maintenance Costs While Improving Reliability
7. Short Term Refinery Planning
   • Refinery Simulation and LP Tools
   • Best Practices Refinery Planning Processes and Tools
   • Crude Oil Evaluations
   • Variance Analysis
8. Optimizing Refinery Unit Operations
   • Objectives of an Optimization Program
   • Use of Simulation Models
   • Potential Areas of Optimization in Key Refinery Units
9. Energy Conservation and Oil Loss
   • Understanding Energy in a Refinery
   • Costing Energy and Marginal Mechanisms
   • Developing an Energy Management Program
   • Understanding Oil Loss
   • What is the Cost of Oil Loss?
   • How to Reduce Losses
   • Interaction Between Energy and Oil Loss
10. Long Term Investment Horizon Planning
    • Comparison to Short Term Planning
    • Tools
    • Scenario Development and Competitive Analysis
11. Trends in Long Term Refinery Profitability
    • Historical Margin Trends
    • Future State Conditions
    • Reference Sites and Texts
12. Open Forum
**PROGRAM SPEAKER**

Larry Clevenger is an Associate Principal Consultant with KBC Advanced Technologies, Inc. in Houston, Texas. He has over 40 years of refining industry experience, including management positions in five refineries and consulting experience in seventy-five refineries. Previously, Larry was Executive Vice President of KBC Advanced Technologies, Inc., responsible for all consultancy operations worldwide. Before joining KBC in 1992, he held numerous executive and management positions with Exxon Company USA, Transworld Oil, Indian Refining and Marketing, MG Refining and Marketing, and Tristar Energy. He holds a B.S. degree in Civil Engineering from the University of Texas.

**ACCOMMODATIONS / FACILITIES**

The program will be presented at the Hyatt Regency North Houston in Houston, Texas. The hotel is located off Beltway 8 (North Loop) at the Imperial Valley Road Exit, and is a 15-minute drive from the Houston Intercontinental Airport. A block of rooms at special rates has been reserved at the hotel for program participants. Room reservations should be made on our website at [www.petroleumrefining.com](http://www.petroleumrefining.com) by clicking on “Seminar Registration,” and selecting the program you will be attending. You may also contact the hotel Group Reservations Desk at (281) 249-1234. Please indicate at the time you make your room reservations that you will be attending this Refining Process Services function. We suggest that you make room reservations as soon as possible but no later than October 10, 2016, to get the room rate and assure your accommodations. Room reservations can be made after this date, but availability and room rate cannot be guaranteed. Hotel information is available on our website at [www.petroleumrefining.com](http://www.petroleumrefining.com).

Program sessions will begin at 8:00 AM in a meeting room at the hotel. Sessions will be completed at 5:00 PM. A deluxe Continental Breakfast will be available at 7:15 AM each day of the program. The Continental Breakfasts, beverage breaks, and lunches are included in the fee.

**IN-HOUSE PRESENTATIONS**

Refining Process Services offers this course program for in-house presentations. You can have your employees attend the program at your location, saving time, and eliminating hotel and travel expenses incurred when your personnel attend public courses. Please contact Mr. Robert Campagna at 412-826-5440 for more information.

**REGISTRATION INFORMATION**

The Early Registration Fee of US$1,995.00 is payable in U.S. funds via your company’s check drawn on a U.S. bank, an international money order, bank wire transfer, or credit card. To be invoiced or to pay by credit card, you must register online at [www.petroleumrefining.com](http://www.petroleumrefining.com). If the registration fee is received after September 28, 2016, the Regular Rate Fee of US$2,195.00 is due, so please register early. Fee includes all program materials, Continental Breakfasts, lunches, and beverage breaks. Lodging is not included and should be handled directly with the hotel. **Note:** Hotel information is available on our website at [www.petroleumrefining.com](http://www.petroleumrefining.com). Program sessions will begin at 8:00 AM in a meeting room at the hotel. Sessions will be completed at 5:00 PM. A deluxe Continental Breakfast will be available at 7:15 AM each day of the program. The Continental Breakfasts, beverage breaks, and lunches are included in the fee.

**ENROLLMENT WILL BE LIMITED.** However, registrations will be accepted through October 17, 2016, if space is still available.

Confirations will be sent to all applicants upon receipt of registration fee. All registrations received after the enrollment is filled will be returned with a full refund. Confirmed registrations canceled within 21 days prior to the start of the program will be subject to a US$200.00 cancellation fee. Those who cancel their registrations within 10 days of the start of the program are subject to the entire fee. There are no refunds for No Shows. Notification of cancellation must be made by email to seminars@petroleumrefining.com or by fax to 412-826-5441.

**Please forward your mailing and e-mail addresses if you wish to be in our contact data base.**

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**REFINING PROCESS SERVICES, Inc., Suite One, 1708 Pittsburgh Street, Cheswick, PA 15024 USA**

**REFINERY ECONOMICS AND MARGIN IMPROVEMENT**

**HYATT REGENCY NORTH HOUSTON / HOUSTON, TEXAS USA / OCTOBER 26, 27, 28, 2016**

**Name:**

**Company/Division:**

**Title/Position:**

**Company Mailing Address:**

**City:**

**Postal Code:**

**Province/State:**

**Country:**

**Business Phone:**

**FAX:**

**E-MAIL ADDRESS:**

**Signature:**

**Date:**