



PIRA's Global Crude Oil & Petroleum Products Retainer Service

PIRA's flagship service, the Global Oil Retainer Service keeps clients constantly updated on world crude and petroleum product markets through a series of "deliverables" that provide unsurpassed market intelligence and fundamental analysis of oil market developments, featuring supply/demand insight, price forecasts, online databases, and superior follow-up client servicing.

Components of the Global Oil Retainer Service:

Reports

The following are sent via email and available on PIRA Online:

World Oil Market Forecast

Published at the end of each month, the *World Oil Market Forecast* presents PIRA's short- and medium-term outlook for world crude and petroleum product markets. Price forecasts (12 to 18 months out) are provided for WTI and Brent crudes, as well as for petroleum products at USGC and NYH. A comprehensive overview of the underlying supply/demand fundamentals is also provided, along with any changes to PIRA's world oil balances, including OPEC crude production, non-OPEC oil supply, world stocks, and global demand.

Weekly DOE Analysis

Published every Wednesday, after the U.S. Department of Energy releases its *Weekly Petroleum Status Report*, this report provides PIRA's market perspective and analysis of the most recent U.S. crude oil and petroleum product supply, demand, and inventory data, as well as a forecast for the next week's data. The report is accompanied by statistics on the DOE's latest and year-earlier stock data.

Oil Market Slideshow

Monthly PowerPoint slideshow presenting extensive graphs, charts, and data on global oil markets.

Western Canadian Crude Price Forecast and PADD II Balances

This monthly report examines the factors affecting Canadian crude prices and provides a forecast price assessment of Canadian light and heavy crude prices (including WTS and Mars), WTI price, and light-heavy spreads.

European Oil Market Forecast

A monthly outlook of European crude and product markets, including supply/demand analysis and forecasts for Northwest Europe and Mediterranean crude and product prices.

PIRA ENERGY GROUP PIRA
August 31, 2007 GLOBAL OIL

World Oil Market Forecast

Summary

OPEC output restraint has substantially reduced the third quarter commercial inventory build in the three major OECD markets to a fraction of last year's increase. PIRA's balances point to substantial crude and product stock declines in the fourth quarter, which should support continuing crude oil price backwardation. Inventories fall despite weakening U.S. economic activity, a modest, perhaps unofficial, OPEC output increase and a new lower basis for winter heating demand. Any major hurricane related output losses would reduce inventories further. High levels of speculative net length pose a major downside risk to prices given credit tightening and the unsettled economic outlook. Product support will transition to middle distillates over the next two months.

Strong Oil Market Fundamentals Remain in Place

Continued OPEC output constraint has substantially reduced this year's third quarter inventory build. Last year in the third quarter commercial stocks in the three major OECD markets increased some 90 million barrels or 1 MMB/D. This year's third quarter will see just a nine million barrel or 0.1 MMB/D inventory increase in these three important markets. Commercial stocks, which began the third quarter just 6 million barrels below last year, will now end the quarter 86 million barrels or 3.6% lower.

Three-quarters of the year-on-year inventory deficit will be in products, which built half as much as they did in the third quarter 2006. Crude stocks, which drew 16 million barrels in last year's third quarter, decline 49 million barrels this year and account for the remaining 25% or 24 million barrels of the year-on-year deficit. These lower stocks have pushed crude and the key seasonal product, gasoline, into backwardation.

Tightness is likely to persist since PIRA's balances point to substantial crude and product stock declines in the fourth quarter. Commercial stocks in the three major OECD markets are forecast to decline 800 MMB/D, 450 MMB/D of which is expected to be in products and 350 MMB/D in crude. End-year crude stocks in the major markets fall to the lowest level since 2003, which is likely to cause crude oil prices to remain in significant backwardation. The expected product stock decline will support stronger middle distillate margins as gasoil/diesel stocks in

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PIRA Energy Group

2010 Retainer Client Services

Asia-Pacific Oil Market Forecast

A monthly outlook of Asian crude and product markets, including supply/demand analysis and forecasts for Dubai and Tapis crudes and Singapore products.

China Quarterly Oil Demand Monitor

Delivered to clients in March, June, September and December, this report comprehensively monitors key variables pertaining to Chinese oil demand. It includes major economic statistics, reported supply/demand data, and key physical demand drivers such as motor vehicle sales. Data slides and tables augment the text of each report.

India Quarterly Oil Demand Monitor

Delivered in February, May, August, and November, this report monitors key variables pertaining to India's oil demand and includes major economic statistics, reported supply/demand data and key physical demand drivers such as motor vehicle sales. Data slides and a data table augment the content of each report.

Japan Weekly Analysis - NEW

Distributed every Wednesday by email, the report features the latest information on major product demand, product stock draw, gasoil demand, kerosene demand, gasoline stocks and demand, crude runs and forecasts for the next week. Subscribers will have online access to the statistics and charts included with the analysis.

World Petroleum Product Demand Monitor

Monthly slide show tracking the latest global demand for light and heavy petroleum products. It covers historical data back to 2001, charting the demand for specific products, totaling demand for all major products, and comparing the demand for light and heavy petroleum products.

World Petroleum Product Yield Monitor

New quarterly slide show that monitors on a monthly basis over three-quarters of world crude oil runs and refinery product yields in 38 countries around the world. Year-on-year changes in crude runs and refinery yields (i.e. product output divided by crude run) for gasoline, naphtha, kerosene-jet, gasoil/diesel and heavy fuel oil are presented.

Current News and Analysis

These reports provide brief, timely assessments and market commentaries covering topics that are of near-term market relevance and can influence trading strategy. Such items may include reports on commercial developments, political events, supply disruptions, or macroeconomic developments affecting world and regional (e.g. U.S., Europe, Asia) oil markets.

PIRA Energy Group
September 5, 2007

PIRA
GLOBAL OIL

India Quarterly Oil Demand Monitor

Most All Is Well with Indian Oil Demand, Except Recent Vehicle Sales Data

The Economy: In recent months, key economic variables have trended positively for India, providing critical support for its energy demand. Indian GDP rose 9.3% Y/Y in 2Q07, accelerating slightly from 1Q07's 9.1%. 2Q07 Y/Y industrial production growth retreated from an extremely robust pace in 1Q07 (12.5%), but was still very healthy at 11.0%. Recent revisions of consensus economic forecasts have underscored the powerful nature of Indian expansion. Over the past four months, the industrial production forecast for 2008 has been upgraded from 8.2% to 9.0%, as recent observations have continued to surpass earlier expectations.

The major worry about the Indian economy earlier in the year was accelerating inflation from economic overheating. In this area, the situation has improved drastically in the last few months. Y/Y changes in the Wholesale Price Index decelerated to 4.4% in July from 6.0% in March. This compares starkly with the Chinese experience, where inflation has accelerated sharply in recent months.

Given a favorable combination of healthy growth and moderating inflation, Indian economic outlook appears promising. The Indian economy, however, relies heavily on the export of goods and services to developed economies, and in that regard, the recent turmoil in the global credit market has the potential to negatively impact India.

Consensus Outlook for Indian Industrial Production Went Through Aggressive Upgrading Recently

As Chinese Inflation Has Accelerated, Indian Inflation Has Decelerated

2Q07 Oil Demand Data: Against the positive economic backdrop, Indian oil demand has continued to expand strongly. During the second quarter, total product demand averaged 2,825 MB/D, up 158 MB/D from a year ago. 2Q07 marked the third consecutive quarter where Y/Y demand growth exceeded 100 MB/D. PIRA expects healthy demand growth to continue in the second half of the year, and forecasts a 125 MB/D demand gain for 2007 as a whole.

As has been common of late, gasoil and "other" products (comprised of naphtha, LPGs, asphalt, among others) accounted for a large share (80%) of 2Q07 Y/Y demand growth. These fuels are most closely associated with the industrial sector, and the strength in Indian energy-intensive manufacturing.

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U.S. Refinery Turnaround Schedules

Available twice a year, a confidential survey of the U.S. refining industry to review turnaround plans that are presented by-PADD for anticipated crude and upgrading unit downtime. Issued in late summer and before year-end. Each report provides results looking ahead for a minimum of six months.

Oil Bulletins

Short, timely reports of immediate importance that relate to breaking oil market developments or fundamental changes in PIRA's market outlook.

OPEC Logs

Updates on developments from OPEC meetings (often by PIRA consultants attending them) and an analysis of their effect on world oil prices.

Global Oil Special Reports

More in-depth analytical views of new developments and medium-term trends in the global oil market. Special Reports include regular economic recaps, an annual North Sea production forecast (detailed in the PIRA Online section below), and coverage of political events that may affect the oil market.

Global Political Risk Alerts

Sent "as events dictate," Alerts are insightful assessments of regional or global political events with the potential to alter short- and long-term market prices or trends.

Weekly Country Risk Scorecard

One-page update that tracks political developments in major producing and consuming countries and assesses the price impact (bullish, neutral, bearish).

Global Political Risk Strategy Papers and Special Reports

In-depth analysis of emerging political, regulatory and investment trends that will alter the investment climate as well as the future outlook for supply and demand. GPRS Strategy Papers have been notably ahead of the curve in identifying such emerging trends as Chinese overseas investment patterns, royalty regime changes, and U.S. Congressional policy direction.

Global Political Risk Stability Index

Annual report that measures economic, political and social risks in 35 key countries.

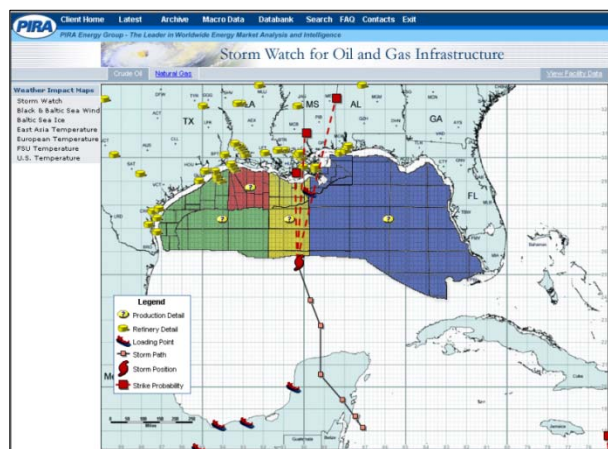
Macroeconomic Data – provides regularly updated macro data on the U.S. economy (in total and by region) as well as Canadian, Mexican, European, Japanese, and world economies. Also includes:

- ▶ *Financial Stress Monitor* - a weekly report that summarizes what is happening in the financial markets, comprising a written summary page, along with charts that cover key stock market equity indices, interest rates and credit spreads, U.S. dollar exchange rates, commodity prices, commercial paper issuance, loan issuance by commercial banks, and credit developments by the Federal Reserve.
- ▶ *Global Equity Market Performance* – a weekly report tracking the performance of equity markets in countries and regions around the world.

PIRA Online (continued)

Some of the additional reports and data available on PIRA Online include:

- **DOE Weekly Data Portal** – the portal provides historical and current data sets conveniently bundled into reports, tables, and charts for immediate access and ready reference. The portal is divided into five sections: Crude and Product Balances, Six-Year Comparison Reports, Standard Reports, Weekly Charts, and Data Query Analyzer.
- **Miscellaneous Oil Data and Charts** – statistics on U.S. and world (regional) petroleum markets, including supply/demand balances, stocks, and refining data.
- **NYMEX Weekly Review** – follows the week-ending prices for the major NYMEX-cleared energy commodities, including futures, options and spreads for contracts ranging from the prompt month to five years out.
- **Refining Margins Charting Tool** – Using major marker crude oil grades and refined product prices, PIRA calculates regional refining margins using proprietary equations that give the user a better understanding of the profitability of a generic refinery in a given location. Covers major global refining centers (U.S., Europe and Asia).
- Slideshow presenting **latest available air traffic data** for the total system and international air travel for the U.S. and Europe.
- **Weekly Currency Comparison Charts** – Comprises four charts: two that show the relationship of five key currencies versus the dollar, and two that demonstrate the "real oil buying power of foreign currencies." These latter two charts indicate the degree to which currency exchange rate movements affect the cost of oil and, thus, oil demand.
- **Storm Watch** – an illustration of the latest storm-tracking information from the National Hurricane Center for storms that threaten production facilities in the Gulf of Mexico.
- **Weather-impact maps** illustrating wind and ice conditions in the Baltic and Black seas.
- **Temperature maps** for U.S., Europe, the former Soviet Union, and East Asia.



Strategic Briefings

These connect PIRA's senior oil consultants and clients to privately discuss PIRA's latest thinking on short-, medium-, and long-term oil markets. Conducted at a client's office, PIRA's office or via WebEx, these briefings are designed to address each client's specific issues, by assessing how the markets impact their business and examining topics of special interest as requested.



Phone/E-Mail Access to PIRA's Global Oil Group

Clients can obtain timely analytical support by communicating directly with PIRA analysts, getting their latest thinking and insight on short-term crude oil and petroleum product markets or to gather additional market information or data.

Periodic conference calls with country experts are also included. Recent conference calls included:

- Nigeria Election Preview
- The Impact of U.S. Election on Iraq and Iran Policy
- Crisis in the Middle East
- Bolivia and the Energy Nationalization

Seminars

Annual Retainer Client Seminar

Held every October in New York, the Seminar presents PIRA's medium- and long-term view of oil, natural gas, coal, and electricity markets. Seminar attendees receive a detailed, 500+ page book on world energy forecasts by region and energy source through 2020, as well as presentation slides. The Seminar also examines the major structural changes expected in various world energy markets. The event is an opportunity for clients and PIRA's staff to engage in dialogue on energy markets, as well as an ideal time for industry colleagues to connect with one another.

Retainer Client Seminar in London

Specifically organized for PIRA clients with headquarters in Europe, the Middle East, and Asia-Pacific, the London Seminar, held every June, addresses global oil (with a focus on the non-North American regions) as well as European natural gas and electricity markets.

Discounts on Other Retainer Services, Multi-Client Studies and Training Seminars

Clients get significant discounts when adding other retainers (e.g. North American Natural Gas, North American Electric Power, European Natural Gas, European Electricity, and Scenario Planning) to their service package. They also receive discounts on PIRA's highly valuable multi-client studies and PIRA University training seminars.

Fees

Please contact PIRA for pricing information. Existing clients to other PIRA retainer services can add the Global Oil Retainer Service under discounted terms, which are determined by the scope of their current retainer license.



Global Oil Retainer Service Group:

Dr. Gary N. Ross (Chief Executive Officer of PIRA & Managing Director of the Global Oil Group) has guided PIRA's growth since its founding while also serving as the Managing Director of the Oil Group, where he is responsible for short- and long-term oil market forecasts. Dr. Ross is a frequent speaker at industry seminars and conferences in the U.S. and abroad, covering a broad range of energy topics, and is a regular commentator on CNBC, CNN, and PBS. Dr. Ross has a PhD in economics from the City University of New York.

Dr. Mark A. Schwartz (President of PIRA & Managing Director of the Scenario Planning Group) oversees PIRA's Scenario Planning Service (SPS). Dr. Schwartz was formerly Chief Economist of ExxonMobil Corporation where he was responsible for developing the company's long-range economic and energy outlook. Dr. Schwartz designed and managed the implementation of the energy modeling system and database that allowed ExxonMobil to develop its base-case global energy outlook, as well as alternative cases to capture the impact of changes in price, economic growth, environmental policy and other critical assumptions. He holds a PhD in economics from the University of Pennsylvania.

David A. Zinamon (Managing Director) specializes in refinery operations and products, NGLs, alternative fuels, biofuels and environmental matters, particularly as they affect petroleum product markets. Among other activities he is responsible for PIRA's World Refinery Database, contributes to the weekly DOE reports and monitors refinery turnaround plans. Dave also authors PIRA's monthly NGL market report. He joined PIRA in 1984 after seven years of international energy consulting experience with Chem Systems. This followed nine years of manufacturing, marketing and planning positions with Celanese Chemical, GAF Corp., and Airco. Dave has a BE (ChE) from City College of New York and an MBA from Rutgers University.

Richard Joswick (Managing Director) develops PIRA's outlook for crude and products pricing, refinery margins, and inter-regional supply balances. He authored the recently completed multi-client study, *Bottom of the Barrel: The Future for Residual Fuel Oil*. He joined PIRA in 2004 after a 20-year stint with ExxonMobil in supply logistics, planning, refining, and research. Rick has MS and BS degrees from Rutgers University in chemical engineering.

Doug Bulger (Managing Director, Project Consulting) joined PIRA in 2005 after most recently being Manager of Supply & Trading for Shell Canada, and previously Manager of Refinery Supply for Deutsche Shell AG. In these positions, he led crude and products supply, supply strategy and optimization, marine, logistics, and risk management teams. During his 29 years at Shell, he was also an advisor in Corporate Strategies, undertaking studies in strategy development, competitive positioning, acquisition, and corporate restructuring. Doug holds a BSc (Eng) from McGill University and an MBA from the University of Calgary.



F.W.A. (Bill) Fuller (Senior Director) has over 35 years of energy forecasting and analytical experience. During his 30-year tenure with Exxon International, Bill attained the position of Advisor to Exxon's Industry Group, providing briefings to supply management, and analyzing and forecasting oil market trends. In sales and marketing, Bill negotiated oil prices on sales to Exxon affiliates, established posted prices in the Caribbean and Asia, oversaw tanker operations, and assessed and negotiated freight rates. Bill holds a BS in chemical engineering from Cornell University.

Dr. Gary Eisen (Senior Director) has over 20 years of economic forecasting experience and is responsible for PIRA's short-term petroleum product demand forecasting. Previously, he was Manager of Economic Research for Louis Dreyfus Energy. He has also worked for British Petroleum, the Bank of Canada and WR Grace. Gary has a PhD in economics from the New School of Social Research and is a Chartered Financial Analyst.

Michelle Patron (Senior Director) oversees PIRA's Global Political Risk consulting. Prior to joining PIRA in 2004, Michelle was a Fellow at the Council on Foreign Relations and conducted energy research at Deutsche Bank. She spent five years as an international policy advisor at the U.S. DOE under the Clinton and Bush administrations. During that time, she advised the U.S. Energy Secretary and other senior U.S. officials on relations with major energy-producing and -consuming countries. In 2001, she served as Energy Attaché at the U.S. Embassy in Beijing. Prior to the DOE, she worked at the International Energy Agency, the White House, UNICEF and the Center for International Environmental Law. Michelle holds a BA from Columbia University and an MA from Johns Hopkins School of Advanced International Studies.

Alan Struth (Director) has over 20 years of energy industry experience focusing on financial and industry market analysis, economics, policy analysis, forecasting and planning. He is a member of the International Association of Energy Economists and National Association for Business Economics and is a board member and Vice President of the National Literacy Project. Alan holds a Bachelor of Arts degree in economics from Rice University and a Master of Science degree in energy management and policy analysis from the University of Pennsylvania.

Joseph T. (Joe) Pezzino (Director) joined PIRA in 2001 after 30 years with Mobil in refining, supply and distribution and refinery optimization. He has led refinery process tech services, economics, and planning. Joe has worked on Europe crude operations and Asia product distribution and economics. Joe has an MBA and BS in chemical engineering from SUNY at Buffalo.

Peter Jaquette (Director) is the coordinator of the *Planning for Tomorrow* multi-client study, working closely with PIRA's Global Oil, Refining, Biofuels and Freight groups. He is responsible for expanding the coverage of the Scenario Planning Service to include key refined products and coal prices for alternative cases. Peter joined PIRA in 2007 with more than 25 years of experience in corporate strategic planning and economic consulting, including 14 years with ARCO and nine years with Weyerhaeuser, where he was involved in evaluating cellulosic ethanol and other energy projects. Peter has a B.A. in economics from Swarthmore College and an M.A. in economics from Stanford University.



Fábio Brandão (Director) joined PIRA as a specialist in international crude oil and product markets. Prior to PIRA, Fábio was an internal consultant for Petrobras for 31 years, actively contributing to a wide range of activities, from price forecasting of crude oil and products to investment and supply planning and strategic planning. Fábio holds a BA in physics from the Catholic University of Rio de Janeiro.

Gary Greenstein (Director) is a consultant in the Global Oil Group, working on downstream issues. He was with ExxonMobil for 38 years, primarily in refinery planning, design and industry analysis. In his last role, he was responsible for ExxonMobil's long-range global refining outlook. Gary holds a BChE from CCNY, an MS in chemical engineering from NJIT, and an MBA in finance from Fairleigh Dickinson.

Clayton Vernon (Director) is responsible for PIRA's global energy demand model. Clayton came to PIRA from Bank of America, where he was in charge of Fundamentals Analysis for its Commodities Trading group. Prior to joining B of A, he was Director of Fundamentals Analysis for Enron in Houston. Clayton has an M.S. in econometrics from the University of Texas and a B.S. in mathematical physics from Rice University.

Dr. Naing Oo (Associate Director) focuses on energy demand, supply and trade in Asia. Naing is also involved in quantitative and econometric analysis for forecasting oil demand and prices. He holds a PhD in economics from the City University of New York.

Su Hyung Ryu (Associate Director) forecasts demand and works on energy models, oil price forecasts, and project and management consulting. She has participated in benchmarking and competitive analysis projects, PIRA's multi-client study, *Crude Oil Pricing in North American Markets*, and special report, *Measuring Price Risk in the PIRA Forecast*. Su holds an MS in business computer IS from Baruch College, City University of New York.

Nobuo Tarui (Senior Analyst) has 10 years of experience in energy and economic issues and is responsible for tracking and analyzing economic data for energy market implications. Prior to assuming his current position, he worked for the Dai-Ichi Kangyo Bank Research Institute as a U.S. macroeconomist and at UBS Energy as a U.S. natural gas market analyst. Nobuo holds a B.A. and an M.A. in economics from NYU.

Lila Noury (Senior Analyst) is responsible for analyzing political and economic issues in key energy-producing and -consuming countries. Prior to joining PIRA, she analyzed Iran's oil and gas sector for a leading consulting firm in Iran. She also worked with Grameen Bank, a micro-finance institution in Bangladesh, evaluating and researching alternative-energy programs. Lila has an M.A. from Columbia University in international energy management and policy.

Yolanta K. Zawada (Senior Analyst) focuses on the U.S. and West European NGL markets, international fuel quality and ethylene cracker capacity, and turnarounds. Prior to joining PIRA in 2000, she worked at Potent and Partners on multi-client studies "Naphtha Prognosis" and "Condensate in World Commerce." She holds an MBA in international business and marketing from Pace University.