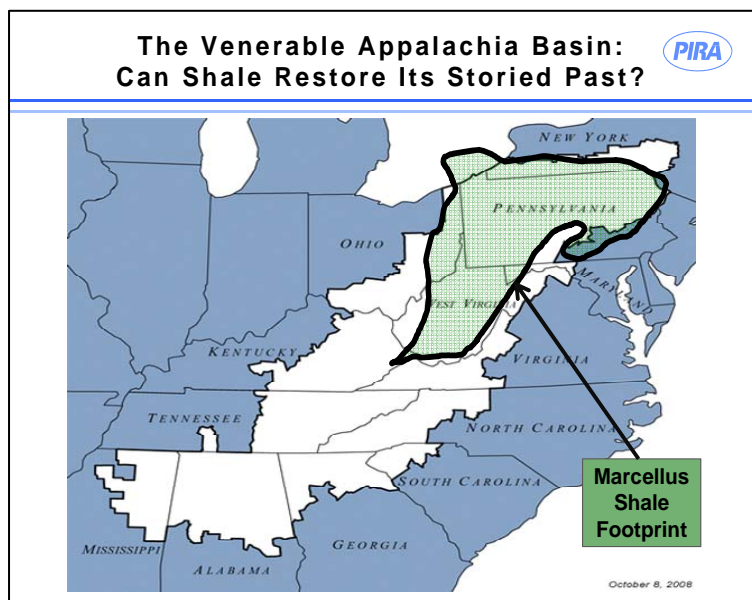


The Final Installment in a Series of Four Regional Studies

# Future East Coast Gas Supply: The Impact of Marcellus Shale On the North American Gas Market

The North American gas industry has been awed by the success of Barnett Shale and now numerous other shale plays as well. Meanwhile, increasingly favorable prospects for yet another shale play, Marcellus, have far more sweeping implications for North American gas supply than any other. The characteristic that sets Marcellus shale apart from all other supply-side changes can be summed up in one word: location. **As opposed to other North American gas resource plays, Marcellus and other nearby Appalachian shales (Huron and Utica) have the capability of transforming a major geographic market from a highly coveted demand center to an emerging and powerful source of incremental gas supply.** This transformation and its competitive implications for both sourcing gas within the region, as well as for the region’s current gas suppliers, are why the play should be viewed as the potential catalyst behind a radically altered North American gas market.

In these circumstances, PIRA's new multi-client study *Future East Coast Gas Supply: The Impact of Marcellus Shale on the North American Gas Market* could not be more timely. As the last installment of PIRA’s series of four regional North American gas supply studies, **the study is especially crucial for gas market participants in terms of gaining a vital and timely understanding of the changes that will be triggered by shale gas development in Appalachia.** *Future East Coast Gas Supply* — produced in collaboration with Lippman Consulting (LCI) — provides a solid understanding of fundamental dynamics that will be crucial for success among North American gas market participants.



Comprising a detailed written report (see table of contents on next page), comprehensive database, and a live workshop, the study analyzes the outlook for Appalachia gas production — with a special focus on Marcellus — through 2025 and the region’s infrastructure, gas marketing and basis pricing. It assesses the competition between other supply sources targeting the Northeast. As with any such battle, not all competitors will emerge victorious, and the study evaluates potential winners and losers, including the vulnerability of Northeast market suppliers such as the Gulf of Mexico, the Midcontinent, the Rockies, western Canada, and LNG importers.

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### Infrastructure Will Be Crucial

Capacity constraints throughout the Mid-Atlantic states and New England have been a chronic bottleneck of the U.S. natural gas pipeline system. In-place gathering and processing and interstate transportation facilities in Appalachia are already severely limited vis-à-vis the anticipated production upside. Despite the current credit crisis, introducing an Appalachian revival plan to the federal legislative agenda is plausible as the project's main beneficiaries conform to President Obama administration's three pillars of recovery: renewing the nation's infrastructure, job creation, and clean energy.

Meanwhile, prices on the East Coast will depend heavily on when and where capacity is added vis-à-vis the size and timing of new pipelines, new LNG terminal capacity — particularly offshore Boston and Eastern Canada — as well as future local production dynamics and regional demand. For those trying to get a grasp today on where prices are headed, a key question therefore is: How will infrastructure evolve to incorporate booming shale gas in addition to potentially greater LNG supply?

***Future East Coast Gas Supply* provides an in-depth infrastructure assessment focused on the timing and impact of specific pipeline projects, including Millennium; various proposals from Clarington (terminus of REX-East); the Algonquin East-to-West Project; and others. Proposed new LNG import projects and expansions are also evaluated individually. The study therefore gives subscribers insights into how these factors will affect future Henry Hub pricing and basis.**

**Prices and regional basis differentials are updated through 2025 for:**

- Gulf of Mexico (Henry Hub)
- Rockies (Opal and Cheyenne)
- Northeast (Transco Z6-NY & Algonquin Citygate)
- Midwest (Chicago)
- San Juan (El Paso non-Bondad)
- Appalachia (Dominion)
- Alberta (AECO)
- Permian (Waha)
- Southeast (Transco St. 85 & FGT Z3)
- California (SoCal)
- Midcontinent (PEPL TX-OK)
- Ontario (Dawn)

### Alternative Scenarios

The firmly entrenched doctrine during the first half of the decade centered on the “virtual certainty” of protracted gas supply scarcity given the growing maturity of the continent's natural gas resources and the expanding dependency on gas for power generation. Eventual importing of vast quantities of LNG appeared as a key part of the solution. Then along came shale gas. Instead of rapidly growing dependency on supply from expanded and brand-new LNG regasification terminals delivering gas from global suppliers, shale resources now seem capable of providing North American markets with an abundance of homegrown supply relative to the expected call on gas over the next decade and beyond.

**PIRA has recognized the importance of alternative scenarios surrounding its Reference Case, incorporating them in each of our three preceding *Changing Face* studies. The *East Coast Supply* study is no exception.** It incorporates alternative scenarios driving the region's gas balances in the 2020 and 2025 timeframes. More specifically, our two sensitivity cases assess the consequences of a more or less extreme displacement of existing supply sources within the Northeast. They are:

- **Extreme Displacement Scenario:** A mix of weaker-than-expected East Coast demand growth and stronger-than-expected growth of local supply, led by Appalachian shales, most aggressively displace the region's existing suppliers and would-be suppliers (e.g. Canadian exporters, plus Rockies, Gulf Coast and Greater Midcontinent producers).

- **Minimal Displacement Scenario:** A mix of stronger-than-expected East Coast demand growth and slower growth of local supply would provide existing and would-be external gas supplies, including LNG, a greater cushion from market displacement. Notably, environmental concerns and cost-escalation hinder local shale gas expansion while government policy initiatives stimulate the region's gas demand. These initiatives could include hard-line carbon taxation that places coal-fired electric generation at risk and transportation programs aimed at converting commercial fleet vehicles to CNG.

## Study Background and Methodology

As a result of growing gas-in-place estimates and recovery factors behind Appalachian shale resources, the region faces the prospect of access to abundant incremental indigenous gas supply. Between the upside for Appalachia shale production and its “home field” advantage tied to its proximity to Northeast consumers — North America's highest priced regional market — Appalachian gas will have the upper hand with respect to the future clash between competing gas supplies for market share within the region.

The timing of Appalachian shale growth will depend on a number of uncertain factors, running the gamut from wellhead to burnertip. Looking beyond the current dismal economic conditions and deteriorating short-term gas demand and prices, these factors — partially driven by economic stimuli aimed at infrastructure investments — will be pivotal to the region's development. **The study provides an exhaustive state-level analysis (PA, WV, and NY) of potential gas production, taking into account important would-be economic and regulatory roadblocks to gas recovery and takeaway capacity.**

For sure, the sirens surrounding the past heights of Northeast gas prices have triggered fixation by some on the region's gas market and thereby triggered a Northeast market gas-on-gas competitive battle, with the ranks being fortified accordingly. The Rockies has already planned an assault on the Middle Atlantic states via the bevy of proposed transportation projects tied to the Rockies Express (REX) pipeline. The tremendous success being realized with the Greater Midcontinent's shale gas plays has mandated that producers procure additional transportation options above and beyond the Southeast — via interconnects with practically all the major interstate pipelines that have long served the Northeast and Midwest. On top of heightened competition among these indigenous gas sources, all the existing LNG import terminals serving the Northeast have been expanded, and more projects are still being pursued.

If that were not enough, the battle for Northeast market supremacy among these competitors will not be a zero-sum game. Instead, Appalachian gas supply appears destined to increase by enough to turn neighboring regions into Appalachian gas recipients as well as steadily reducing the region's call on supply from external sources. Indeed, some regions — the Southeast in particular — appear poised to feel the impact of the pending “crossfire” between those vying to expand, or simply sustain, market penetration in the Northeast. **The study handicaps the gas-on-gas competition between outside suppliers for access to an increasingly constrained Northeast gas market; understanding who the winners will be holds tremendous ramifications for gas market participants across North America.**

## A Radically Altered Gas Market Landscape

Marcellus shale has the potential for enough gas recovery to radically change the North American market landscape for many generations to come. To illustrate, implied Marcellus production would be ~75 TCF if only ~5% of gas-in-place were recovered over a hypothetical 20-year period. Given new infrastructure and likely further improvements on recovery technologies, this production cycle theoretically could be situated between 2015 and 2035. Allowing for steadily escalating gas output, *average* annual Marcellus shale gross production would be on the order of 3.8 TCF (~10 BCF/D) under this scenario.

At even more conservative rates of recovery, the indicated range of annual Marcellus production would still reach 5-6 BCF/D in the 2020 decade. PIRA estimates that total Appalachian gas production averaged 2.2 BCF/D in 2008, of which Marcellus shale contributed a fractional ~0.1 BCF/D. Given the upside potential for the region's other shale plays, non-Marcellus gas produced in Appalachia is highly unlikely to fall below 1.5 BCF/D in 2020-30, causing the region's overall gas output to reach 6-8 BCF/D.

Northeastern U.S. gas consumption is heavily centered in New York, New Jersey, and Pennsylvania. In recent years, gas demand there has ranged between 6 and 7 BCF/D (~8 BCF/D in the heating season and ~5 BCF/D in the injection season). If Appalachian gas production expands as anticipated and this region's gas demand grows modestly (demand has stagnated during this decade), as our preliminary analysis suggests, the region's call on outside sources of supply would decline sharply during the next decade. In the process, Appalachian gas production would become a significant source of gas supply outside the Northeast region itself with far reaching strategic implications stretching across the entire continent.

### **Spolia Opima<sup>1</sup>: Can Marcellus Deliver Again?**

Marcellus along with other nearby shales, like Huron and Utica, appear capable of renewing the storied past of the venerable Appalachian Basin, which lays claim to North America's original petroleum industry roots. Spanning across multiple states, Marcellus shale is touted by some as the ultimate potential source of indigenous gas supply for the Northeast, with various gas-in-place estimates stretching into the vicinity of 1,500 TCF.

The development of this vast resource base will depend heavily on costs, including the "cost" of regulations: Water issues, mineral rights, and permitting requirements have the potential to seriously hinder the pace of development, even in the case of favorable economics. We can expect development to vary significantly among the states that lie within the massive shale footprint, especially those like New York, for example, without substantial gas production and thus lacking experience.

Timing issues dictated by the regulatory environment can determine which states will enjoy the first-mover advantage — an advantage that could be reinforced by those states' exposure to the nationwide economic stimulus packages enacted by the federal government. The bottom-up approach that the oil and gas industry will have to take to train its workforce and the ripple effects of these efforts present great opportunities for sustained employment growth and, with it, sizeable tax revenue. Moreover, given the gas price "depression" currently unfolding, early movers could sustain an advantage for years to come.

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In sum, the East Coast study examines the driving forces behind the potential for unconventional gas supply deliverability in the Eastern markets, growth and changes in demand (particularly gas-fired power generation), together with issues such as Marcellus shale gas production, LNG terminal development, pipeline assets, infrastructure investments, and regional gas prices. **This examination will help study subscribers make more informed decisions related to the future financial performance of East Coast regional gas assets, including trading and marketing activities, basis management, firm capacity commitments, acquisitions, expansions, gas processing and electric power projects.**

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<sup>1</sup> The term *spolia opima* — or "rich spoils/trophies" — refers to the armor, arms, and other effects that an ancient Roman general had stripped from an opposing commander slain hand-to-hand combat. Only three instances have been recognized by the Romans over their entire history, but two were legendary or at least semi-legendary, leaving Marcus Claudius Marcellus as the only figure ever to have accomplished this feat by killing Viridomarus, king of the Gaesatae (a Celtic warband).

## **ABOUT THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY SERIES**

In order to comprehensively address the rapidly evolving dynamics of North American natural gas supply, PIRA and LCI have undertaken a four-part, multi-client study series. **THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY** combines the intensive use of LCI's basin-by-basin gas database and pipeline loading models with PIRA's price-forecasting expertise to create the optimal research tool for industry participants. The regional installments are:

1. **“Ready for Prime Time: Future Rockies Supply and Western Basis” (released September 2006)** assesses the impact of expanding local production, together with new LNG imports on western U.S. infrastructure and regional pricing. The study accurately predicted that the start-up of REX would be at least a full year too late to avoid serious pipeline congestion as well as foreseeing the need for additional export capacity soon after the startup of REX.
2. **“The Outlook for Gulf of Mexico Supply and Pricing — Barnett Shale vs. LNG: A New Rivalry Reshaping the Gulf Coast Gas Market” (released October 2007)** provides a comprehensive assessment of expanding unconventional gas production from Barnett Shale, other shale plays, and tight sands formations. The study also addresses the impacts of LNG imports and new pipeline infrastructures on the region's gas marketing and pricing.
3. **“Dawning of a New Era: The Outlook for Western Canadian Supply and Exports” (released August 2008)** scrutinizes the region's future gas production tradeoffs between declining supply from conventional wells and expanding supply from non-conventional resources, the potential development of supply from Mackenzie Delta and the North Slope of Alaska — two major wildcards that would have a profound impact on western North American gas balances — and structurally rising domestic gas demand.
4. **“Future East Coast Gas Supply: The Impact of Marcellus Shale on the North American Gas Market” (released August 2009)** completes PIRA's North American region-by-region analysis. The study will forecast prospects for the emerging unconventional gas production plays in Appalachia while also assessing how the region's gas demand and LNG imports will determine gas values at key eastern pricing points. Changes to the region's gas transportation infrastructure will be discussed in detail.

### **Each of the four studies includes:**

- An in-depth outlook of factors driving that region's future gas supply and demand.
- Analysis of the related impacts on the region's gas infrastructure and pricing, including seasonality.
- Regional Reference Case projections, as well as alternative scenarios testing the sensitivity of those projections to alternative assumptions.
- A workshop, comprehensive written report with data CD, and online database.

## WHO WILL BENEFIT FROM THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY

The stakes are high when it comes to making decisions regarding future North American gas balances and basis pricing. Inevitably, market participants will end up on either side of multi-million-dollar gains or losses. **THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY** helps market participants keep ahead of the competition through a better understanding of the future interplay between regional gas balances, related infrastructure issues, and regional gas pricing. Those market participants should include:

- **Gas Producers** know the importance of maintaining an in-depth knowledge and sensitivity to prospective regional shifts in North American gas supply in the process of developing E&P strategies with emphasis on maximizing returns on assets. The studies will help producers identify and evaluate the risks of future pipeline-capacity constraints and their impact on regional pricing.
- **LNG Suppliers and Marketers** need to keep ahead of regional supply/demand dynamics involving potential transportation constraints and thus affecting marketing strategies to maximize exporter netbacks. The studies also will assess the strengths and weaknesses of competing LNG projects.
- **Pipeline Companies** that anticipate constraints and surpluses in pipeline corridors will have a strategic advantage when valuating assets, targeting potential acquisitions and planning expansions. The studies help clarify the competitive challenges and opportunities facing those pipelines.
- **Gas Distribution Companies** face difficult choices regarding the purchase of new supplies and/or the renewal of existing supply arrangements. The studies will assist them to conclude optimal terms under which supply can be contracted given the dynamics of regional competitive forces.
- **Gas and Power Marketers** need timely insights into how changes in regional gas supply and costs will impact the value of portfolios as well as marketing strategies and trading desk risks.
- **Electric Generators and Other Gas End-Users** constantly must consider how changing regional gas supply dynamics will influence pipeline service choices, transportation and siting options. The studies will make end-users better equipped to adapt to supply shifts, rather than respond to crises, and help new project developers make more effective evaluations of fuel supply options and project viability.
- **Financial Institutions** must make sound evaluations of how changing market conditions will affect the economics and financing of new drilling, gathering and pipeline ventures.

## DATA SOURCES

Gas supply and demand data for “The Changing Face of Gas Supply” come from U.S. federal and state agencies, as well as agencies in Canada and Mexico. Transportation data generally comes from LCI’s Database Service, and gas production models reflect data developed by LCI.

### ABOUT PIRA ENERGY GROUP

PIRA Energy Group, founded in 1976, is an international energy consulting firm, offering Retainer Client Services and customized consulting on international oil, natural gas (and LNG), coal, biofuels and electricity markets and on related environmental issues. Currently, more than 500 companies worldwide subscribe to PIRA Client Services, including international and national integrated oil and gas companies, independent producers, refiners, marketers, oil and gas pipelines, electric and gas utilities, industrials, trading companies, financial institutions and government agencies.

### PIRA's North American Natural Gas Group

**Gregory J. Shuttlesworth (Executive Director)** oversees PIRA's research covering all aspects of North American natural gas fundamentals. His work is aimed at providing PIRA clients with timely analysis of how fast-breaking events will impact gas supply and demand, inter-fuel competition, and the outlook for gas prices. His professional career centered on global petroleum and related energy economics before starting PIRA's North American Natural Gas Group. He held the positions of Senior Analyst at the petroleum-consulting firm of W.J. Levy Associates and Energy Economist at the Chase Manhattan Bank. Greg holds B.A. from Johns Hopkins University, an M.B.A from Fairleigh Dickinson University and completed post-Masters studies in economics at NYU.

**Richard M. Redash (Managing Director)** has over 15 years of energy industry experience. His responsibilities center on fundamentals analysis and leads PIRA's regional market coverage and basis analysis. Rich came to PIRA in 1999 from Prudential Securities, where he was Vice President of Energy Futures Research and responsible for fundamental research of the NYMEX energy complex. Previously, he was an analyst within the Research Department of NYMEX with responsibilities centered on North American gas markets, as well as crude oil and petroleum products. Prior to NYMEX, he was a gas market analyst at Con Ed of New York. He is a summa cum laude graduate from Pace University with a Bachelors of Business Administration and holds an MBA with distinction from New York University.

**Harvey L. Harmon (Senior Director)** has over 25 years of energy industry experience. Before joining PIRA, he worked at the U.S. DOE as Director of Natural Gas Import/Export Activities and Senior LNG Policy Advisor. He joined the Global LNG unit of El Paso in 2001 and was responsible for competitor and market analysis until 2003. Previously while at Tennessee Gas Pipeline and El Paso, he spearheaded numerous studies of demand, pipeline capacity and transportation issues with emphasis on competition at citygate markets. Harvey holds a M.S. in ocean engineering from the University of Wisconsin and an M.B.A from the University of Texas.

**Ekrem A. Esmen (Associate Director)** is PIRA's leading analyst for unconventional gas resources. On both supply and demand side of the ledger, he closely follows cutting-edge technologies and evaluates their potential impacts. His analysis on the demand side covers a wide range from the viability of natural gas use in transportation to the dynamics of mandatory fundamental changes in space lighting. Prior to PIRA, he was a visiting engineer at the Massachusetts Institute of Technology, where he also completed his graduate studies in mechanical engineering.

**Jane Hsu (Senior Analyst)** was a Systems Analyst for Strand Management Solutions prior to PIRA. At PIRA she focuses on North American natural gas fundamentals and is responsible for maintaining and updating PIRA's detailed North American supply/demand balances as well as numerous analytical models that represent the backbone of PIRA's near-term and longer-term forecasts. Jane has a BS degree in computer science from Columbia University.

**Tai Liu (Senior Analyst)** shares responsibility for PIRA's weekly gas storage forecasts, as well as short-term forecasts of Mexico gas supply & demand, and of the Canadian gas market. He contributes regularly to the North American Gas Group's weekly/monthly reports as well as development and management of production and demand models. Before joining PIRA in 2007, Tai worked at the natural gas hedging desk at Consolidated Edison of New York and was responsible for conducting fundamental research and analysis on the natural gas market. Prior to Con Edison, Tai worked at NYAM, a commodities options trading firm, where he executed trades and managed option positions for traders. Tai holds a BS degree from New York University, where he majored in finance and accounting.

**Nina Fahy (Analyst)** shares responsibility for PIRA's weekly gas storage forecast as well as short-term analysis of domestic production, the influence of changing macro-economic trends on gas demand, and short-term demand models. Prior to joining PIRA in 2009, Nina designed and implemented research studies of the global investment management industry including competitive benchmarking and market trends analysis at Greenwich Associates. Nina is a summa cum laude graduate from Tufts University with a BA degree in political science and Russian and East European studies. She also holds a MS in political science from the Massachusetts Institute of Technology. She is a member of Phi Beta Kappa and a CFA Level II candidate.

### ABOUT LIPPMAN CONSULTING

Started in 1996, LCI has become the nation's largest consulting firm specializing in, and the premier provider of, natural gas supply statistics. It provides monthly gas production data for all of North America with details by specific basin and by field as well as by type, conventional and CBM. LCI also provides monthly gas flow data for over 50 pipelines, encompassing all major North American gas transmission systems. In addition to having the largest gas supply database in the industry, LCI has two forecast models: one for domestic natural gas production and the other for gas transmission operations. LCI services a large client base, from governmental agencies to producers, pipelines and marketers. For more information on LCI, call (915) 838-1619 or email [LCI@LippmanConsulting.com](mailto:LCI@LippmanConsulting.com).

**George Lippman (President)** is a nationally recognized gas supply expert with over 35 years of experience. He has extensive knowledge of the nation's interstate pipeline system and has worked with the various major national gas flow models. Prior to establishing LCI, Mr. Lippman worked in various capacities for the El Paso Natural Gas Co. He is a participating member of various committees dealing with national gas supply issues throughout North America. He has served as the Chairman, Rocky Mountain section of the American Gas Association's Committee on Natural Gas reserves, and is currently serving on the Potential Gas Committee. He has worked with the Gas Research Institute (GRI), the Canadian Energy Research Institute (CERI) and the California Energy Commission (CEC). Mr. Lippman holds a BS degree from the University of Arizona School of Engineering.

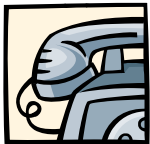
**LCI's engineering staff includes John Uxer and Jeff Peace**, who are Registered Professional Engineers in Texas and New Mexico, respectively. Both hold BS degrees and MS degrees in engineering from New Mexico State. Collectively, they have over 50 years of experience in reservoir and gas storage analyses and drilling as well as in production and pipeline operations, particularly in the western U.S. Both have served on the Potential Gas Committee (PGC) and Pipeline Research Committee (PRC) and on AGA committees. They have made numerous presentations on natural gas issues to audiences across the U.S.

## WHAT DO STUDY SUBSCRIBERS RECEIVE?

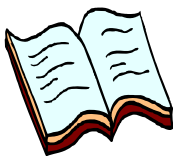
For each regional study purchased, subscribers will obtain these valuable services (in order):



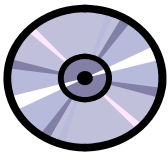
**WORKSHOP.** PIRA/LCI will host a workshop to discuss the preliminary findings of each regional analysis. During and after each workshop, subscribers are encouraged to make suggestions concerning the content and findings. Three (3) participants from each Client organization will be invited to the workshop. Clients ordering the study after the workshop would receive a CD-ROM version of the presentation material.



**ONLINE PRESENTATION.** Prior to the release of the final report, PIRA will host an online conference call (via WebEx) to discuss the final conclusions and findings of each regional study, including production forecasts and associated impacts on pipeline transportation and capacity, LNG demand, and regional flows and basis.



**REPORT.** Clients receive 3 copies of the final report, which will spell out the findings of the regional market analysis, recap the workshop's content, and discuss key uncertainties that impact the major findings. The reports link the regional forecasts and alternative cases to PIRA's overall North American gas market Reference Case.



**DATABASE.** Clients receive 3 copies of a CD that will provide historical and forecast region-specific supply/demand and basis point pricing data through 2025. Where appropriate, gas production will be analyzed and forecast down to individual field levels along with volume flows on specific pipelines. All data are accessible on Excel spreadsheets.

THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY Schedule		
Regional Study	Workshop	Final Report
Rockies Supply and Western Basis	May 9-10, 2006	September 2006
Gulf of Mexico Supply and Pricing	Jan. 16-17, 2007	October 2007
Western Canadian Supply and Exports	May 7-8, 2008	August 2008
East Coast Supply and Pricing	May 19-20, 2009	August 2009

## FEES AND OPTIONS

- “Future East Coast Gas Supply” — as well as any other study in the series — **can be purchased on its own or in any combination of regions.**
- **Existing PIRA and LCI retainer clients** receive a reduced price on all packages.
- **Fees for purchasing multiple regions are discounted** for all subscribers.
- Purchasing the study **before the early-bird deadline provides a further discount.**

**For detailed service pricing see the Acceptance Form on the following page.**



## ACCEPTANCE FORM

(Company Name) \_\_\_\_\_ wishes to subscribe to the multi-client study THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY for the following region(s):

East Coast     Western Canada (Aug. '08)     Gulf of Mexico (Oct. '07)     Rockies (Sep. '06)

We understand and agree that the fees are as follows:

	PIRA/LCI Client*	Early Bird*	Non-Client*	Early Bird*
<b>One Study</b>	\$19,500	\$17,550	\$25,000	\$22,500
<b>Two Studies</b>	\$37,500	Custom	\$48,000	Custom
<b>Three Studies</b>	\$53,500	Custom	\$68,000	Custom
<b>Four Studies</b>	\$66,000	Custom	\$85,000	Custom

\* **The early-bird deadline for the East Coast regional study is May 18, 2009.** This option is not available to companies purchasing only the Western Canada, Rocky Mountains and/or Gulf of Mexico study. Contact PIRA for a custom quote involving a hybrid of early-bird and non-early-bird.

New York City-based companies, please add 8.375% sales tax; Long Island-based companies, add 8.625% sales tax; all other New York State companies, add the county-appropriate sales tax.

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PLEASE MAIL OR FAX TO: **PIRA Energy Group**  
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**Note:** THE CHANGING FACE OF NORTH AMERICAN GAS SUPPLY will contain no confidential technical information, to the best knowledge of PIRA. However, except for information that is or becomes available to the public in printed publication, or is already in the possession of subscriber or developed independently by subscriber, or is received by subscriber in good faith from a third party, any information in the study is for the sole and confidential use of the subscriber. Subscribers agree to use reasonable efforts to protect the confidential nature of the information supplied to them as part of this study.