

# Oil & Gas Valuation Subcommittee

-Status Report-

Royalty Policy Committee

Denver, CO

November 14, 2006

## Federal Gas Valuation: Rulemaking History

- ◆ Final Rule (53 FR 1230 -- January 15, 1988)
- ◆ Federal Gas Valuation Negotiated Rulemaking Committee -- June 2, 1994.
- ◆ Notice of Proposed Rulemaking (60 FR 56007 -- November 6, 1995)
- ◆ Notice Withdrawing Proposed Rulemaking (62 FR 19536 - April 22, 1997)
- ◆ Notice of Public Workshops to Discuss Specific Issues Regarding the Existing Rule (68 FR 17565 - April 10, 2003)
- ◆ Proposed Rule (69 FR 43944 - July 23, 2004)
- ◆ Final Rule - Federal Gas Valuation (70 FR 11869 - March 10, 2005, effective June 1, 2005)

# Gas Index Price Panel Discussion

April 26, 2005  
Houston, TX

## Panel Members:

Mary Williams, Manager, Federal Onshore Oil and Gas Compliance and Asset Management,  
Moderator, Minerals Management Service

Stephen J. Harvey, Deputy Director, Office of Market Oversight and Investigations, FERC

Robert M. Anderson, Executive Director, Committee of Chief Risk Officers

Larry Foster, Global Editorial Director, Power Platts

Ellen Beswick, Chief Editor and Publisher, Natural Gas Intelligence (NGI)

Chuck Vice, Chief Operating Officer, Intercontinental Exchange, Inc. (ICE)

Mark Stultz, Director, Public Affairs, Natural Gas Supply Association (NGSA)

Valdean Severson, Oil and Gas Bureau Chief, New Mexico Taxation and Revenue Department

David Darouse, Audit Manager, Plant Audits, Louisiana Department of Natural Resources

The intent of April 26 Panel Discussion was to bring together some of the leading experts in gas marketing to provide information that would be helpful in answering the following question:

“Do the published natural gas price indices in the United States now have sufficient liquidity, transparency, and accuracy to truly represent the value of natural gas commodities in today's marketplace?”

Footnote:

MMS neither endorses nor opposes the use of published natural gas price indices as a basis for natural gas valuation for Federal royalties.

# Headline News: As Profits Soar, Companies Pay U.S. Less for Gas Rights

- New York Times Article - Jan 24, 2006 -

"the Clinton administration pushed through tough new rules for valuing crude oil, which relied on comparing company reports with an index of spot market prices. But the Bush administration did not close any loopholes for valuing natural gas. Indeed, in March 2005, it expanded the list of deductions and decided against pegging gas valuations to the spot market. The industry-friendly stance was intentional."

Edmund Andrews

## MMS response to April 24 NYT Article:

"We have not relaxed our valuation rules, although we have clarified some requirements. Indeed, oil sales between affiliated companies (i.e., non-arm's-length transactions), for the first time, are valued using the NYMEX index price. This is a more transparent and objective way to value the product and avoid extensive conflicts over previous complex valuation approaches. We have asked our Royalty Policy Committee to study a similar approach for natural gas."

R. M. "Johnnie" Burton

## RPC Directive: Study Gas Index Prices

# Gas Index Price Panel Discussion

March 30, 2006

Denver, Co

## Panel Members:

Bob Ineson, Director, North American Natural Gas, CERA

Rusty Braziel, VP Marketing, Sales & Chief Technology Officer, Bentek Energy

Larry Foster, Global Editorial Director, Power Platts

Dexter Steis, Executive Publisher, Natural Gas Intelligence (NGI)

Bud Hum, Director, Natural Gas Markets, Intercontinental Exchange, Inc. (ICE)

Mark Stultz, Director, Public Affairs, Natural Gas Supply Association (NGSA)

Stephen J. Harvey, Deputy Director, Office of Market Oversight and Investigations, FERC

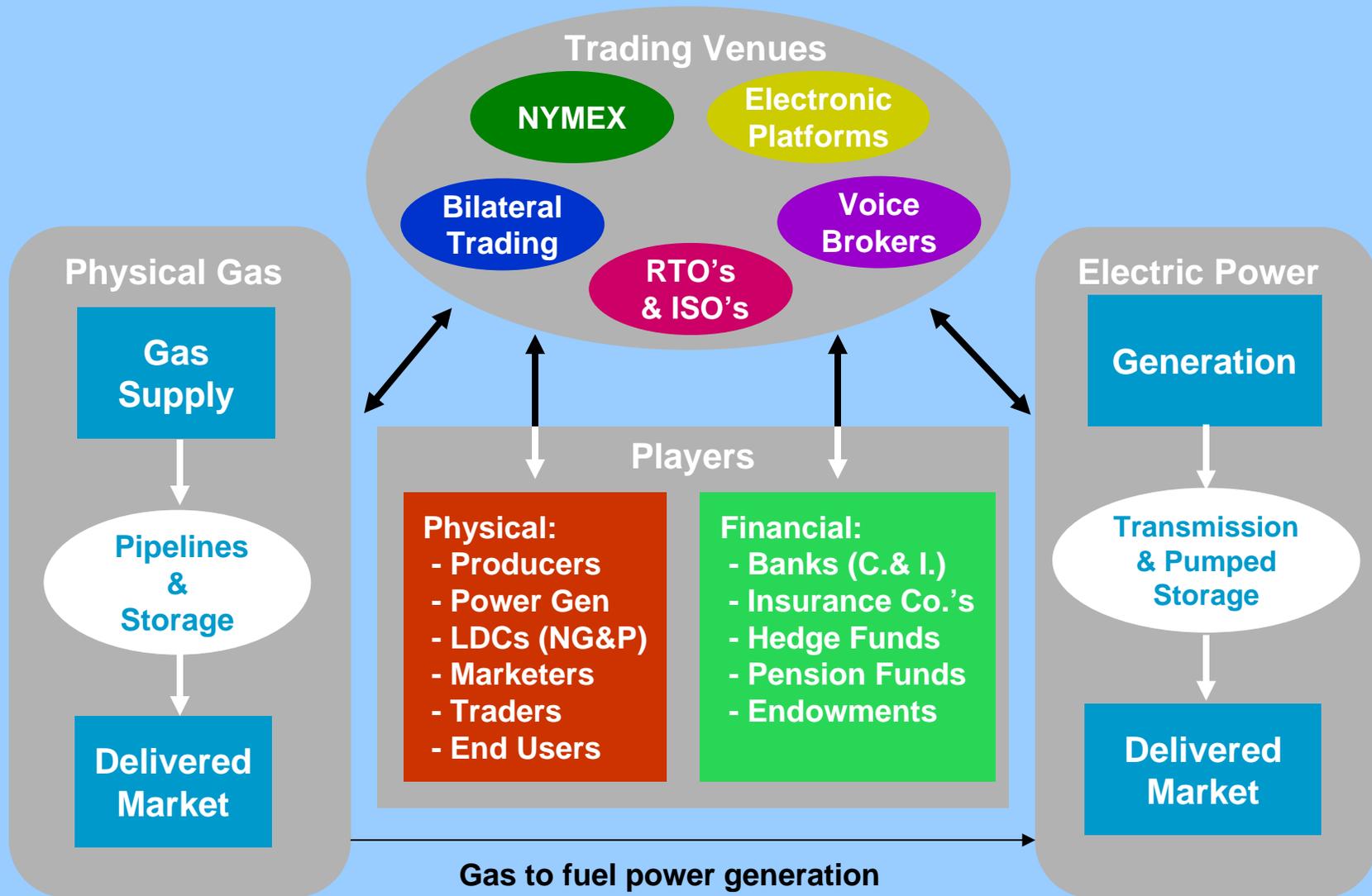
Greg Smith, RIK Program Director, MMS

The intent of March 30 Panel Discussion was to bring together some of the leading experts in gas market fundamentals and gas marketing practices to provide information that would be helpful in answering the following questions:

Indices: *What is the difference between monthly (bidweek) “baseload” index prices and daily “incremental” or “swing” index prices and how are they used in actual transactions? How is information such as midpoint and range of indices calculated and how does the information relate to actual transactions? What is the relationship between paper (e.g., NYMEX) and the physical market? What are the implications and meaning of premia and discounts to index prices within sales transactions?*

Differentials: *What factors attribute to differentials between pricing point locations? In areas with numerous price locations, what factors drive the use of all or some of these as most indicative of value? When pricing points have low transaction volumes or a low number of consummated deals, what assurances do market participants have that published assessments accurately reflect market value?*

# Complex Energy Market Structure



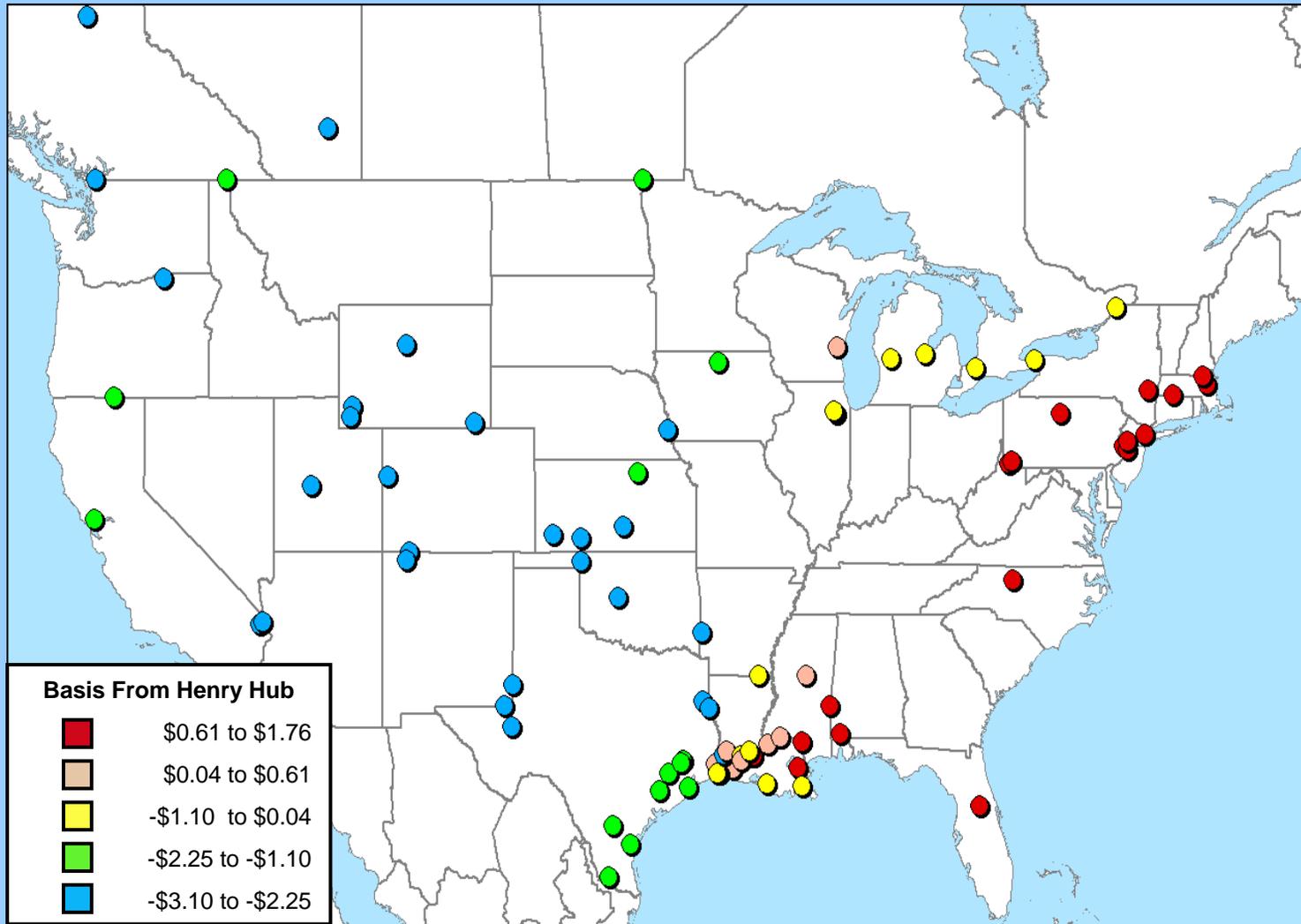
# An Integrated Continental Market



**CERA**<sup>®</sup>  
An IHS Company

Source: Platt's POWERMap

# Complex Geography



Source:  
Platts

# *BENTEK Laws of Pipeline Flow*

---

- ❖ **Changes in basis\* drive changes in pipeline gas flows**
- ❖ **Pipeline capacity utilization drives changes in basis\***

\* Basis = Regional Price

## *Corollaries*

- ❖ **Capacity constraints between supply and market points limit the price response between the points**
- ❖ **New capacity between supply and market points decreases the basis between those points**
- ❖ **At a moment in time, the price at a given location reflects the average of all market alternatives available to gas**



---

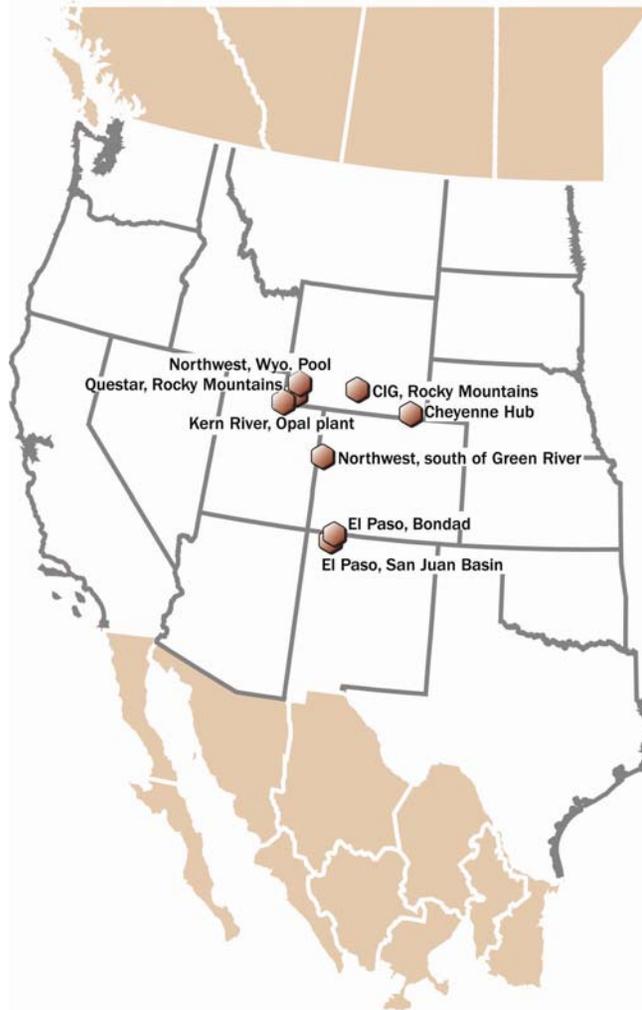
*What factors attribute to differentials between pricing point locations?*

---

- ◆ Supply/Demand
- ◆ Weather (forecasts)
- ◆ Rig Counts/Reserve Replacements
- ◆ Transportation Constraints/Available Capacity
- ◆ Freeze Offs/Hurricane Shut-ins
- ◆ Storage Withdrawals/Refills

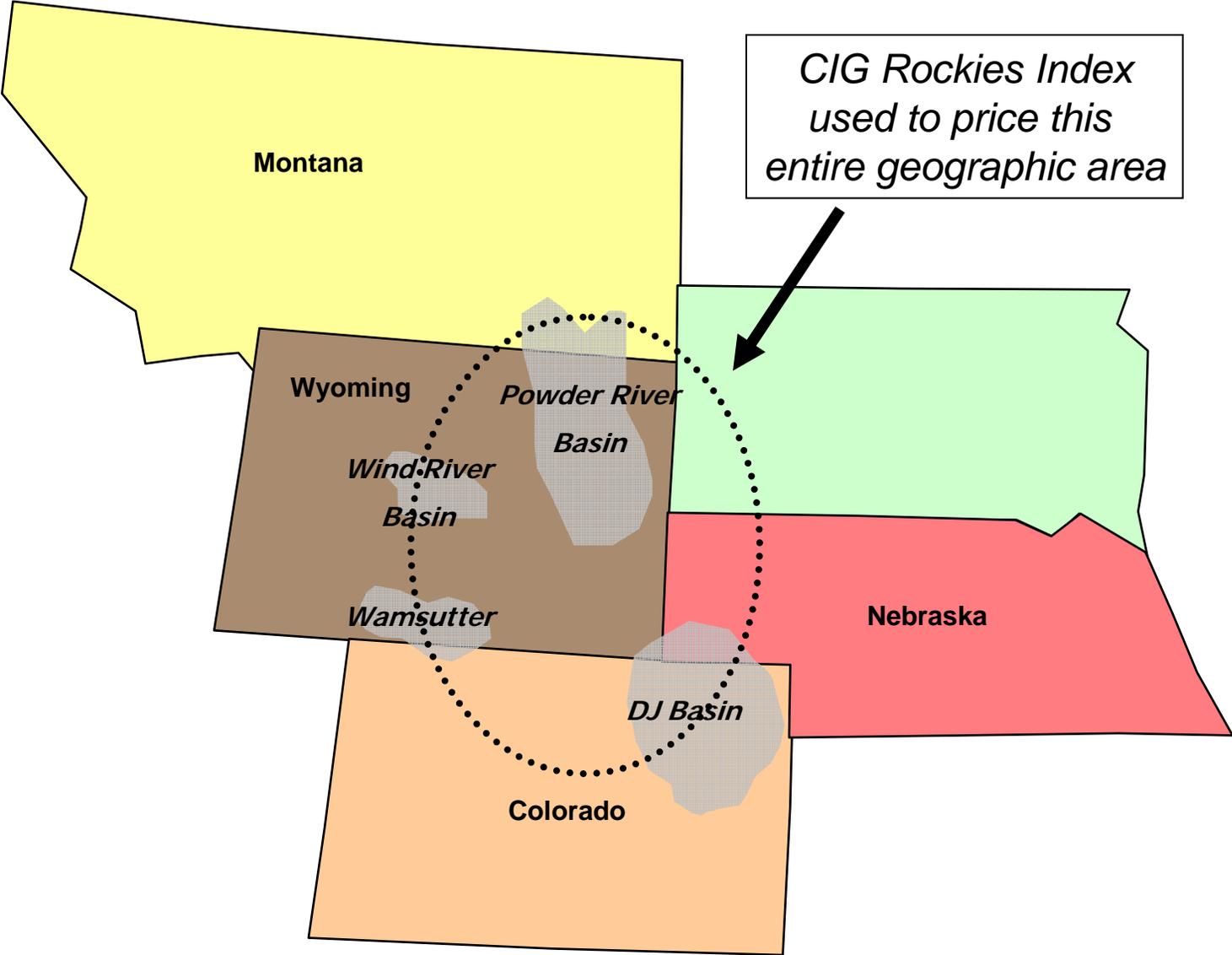
And the Arbitrage Opportunity that may exist....

# Western US price reporting locations

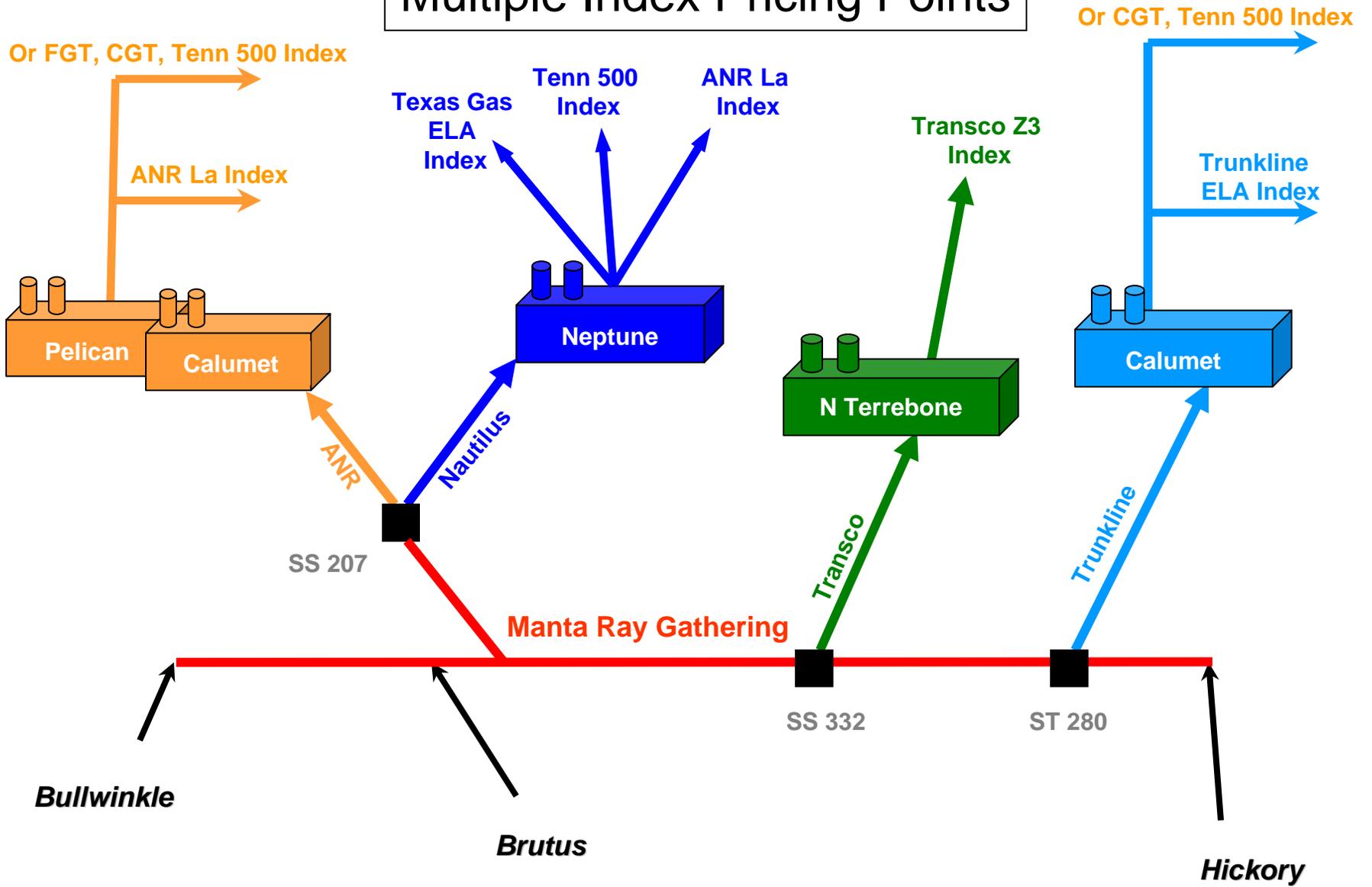


*platts*

# Single Index Covers Large Area



# Multiple Index Pricing Points



# Price Transparency Conference (Gas Daily Oct 13, 2006)

- A proposal that FERC mandate reporting of fixed-price gas trades drew strong objections from producers, industrial consumers and index publishers that warned such a move could reduce trading volumes and result in less reliable data.
- FERC questions gas buyers and sellers about what they should do, if anything, to increase the volume of reported transactions to create a fuller picture of the physical and financial natural gas market.
- American Gas Association proposed to require fixed-price reporting for all participants. AGA does not consider that voluntary reporting goes far enough in ensuring greater market confidence today.
- American Public Gas Association advocated mandatory price reporting, preferably to a central data repository.
- Industrial Energy Consumers of America stated in their view that the current indices system is not working sufficiently and it is questionable that it delivers trustworthy information.
- Platts and Natural Gas Intelligence opposed mandatory reporting, saying the costs outweighed the benefits.
- Process Gas Consumers Group said that mandatory reporting would reduce the liquidity in the market.
- Platts and Natural Gas Intelligence suggested that FERC might look at incentives for companies to participate.

# Just when you thought it was safe to rely on index prices...

- ◆ Page 16 of the November 3, 2006 Inside FERC Gas Market Report has an article headline: Texas royalty owners seek investigation into Ship Channel trading practices.
- ◆ The royalty owners have asked the State's attorney general to investigate trading practices that contributed to lower gas prices in the Houston Ship Channel market area.
- ◆ Several traders have alleged that a major Texas pipeline company, Energy Transfer Company, sold physical gas at below market value, in order to benefit from a large position in the financial basis swap market.
- ◆ ETC claims the practices were in compliance with all applicable laws but Texas royalty owners say that the State of Texas, individual royalty owners, natural gas producers, and the school children of Texas have all been damaged as the result of the action of ETC.

# Subcommittee Consensus Ballot (11/06/06)

<u>Subject</u>	<u>Vote</u>	<u>Comments</u>
Transparency	Yes	FERC Code of Conduct is working.
Liquidity	Yes	Gas markets are effective.
Accuracy	Split	Less than full disclosure.
Applicability	Split	Apply only to gas not sold AL? Index Zone or Index tied to flow? FOM Index or Daily Average? Midpoint or high end of range? How to apply premiums/discounts? Transportation & processing deducts?

# Go Forward Activities

- Outreach Meeting With MRM Team Assigned to Implement Asset Management Business Plan (11/13/06)
- Regional Gas Marketing Presentations to State and Tribal Representatives (4Q07)
- Issue Gas Index Price Final Report (RPC Spring 2007)
- Review Natural Gas Liquids Valuation (2H07)

Questions?