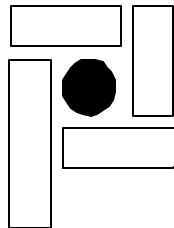

New Economics of North American Ethylene Production – What's Up With Natural Gas?

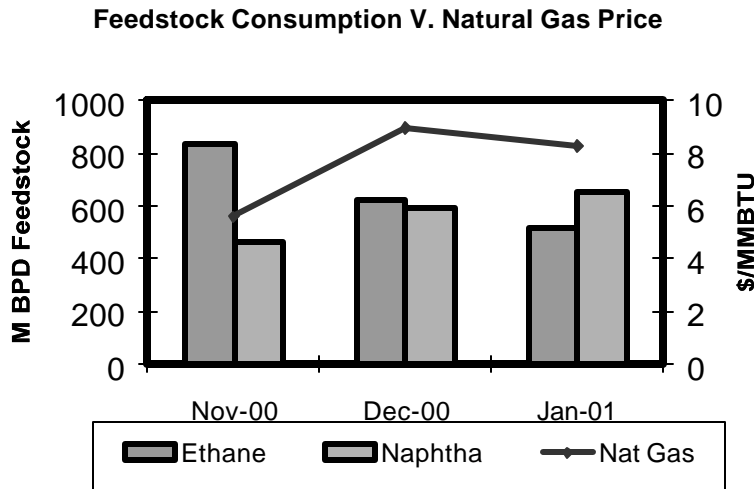
February 2001

Special Topic
Subscription Study



THE PACE CONSULTANTS INC.

Over the past few months, the petrochemical industry has seen some events that have definitely been outside the business-as-usual mode. The impact on North American ethylene producers—particularly those whose feedstock slate is closely tied to natural gas—has been dramatic, as the chart below illustrates:



Clearly, the change in feedstock costs for ethane crackers has been dramatic—but how long will it last? Our clients are voicing their concerns that this time the price rise may not be temporary, and feed-stock suppliers and consumers alike want to know how it will affect their businesses and wallets.

In this special report, *New Economics of North American Ethylene Production – What’s Up With Gas?* we provide an update on the current dynamics of the North American natural gas business, and how these changes will impact feedstock availability for ethylene.

Contents

Natural Gas Supply

This section of the report provides a view of the **fundamentals of the natural gas** industry in North America and how events of the past few years have resulted in what one analyst has called the “Perfect Economic Storm” for U.S. energy consumers. Included in this section are:

- “From By-Product to Fuel of the Future”—how gas became the fuel of choice for the power generation industry and implications for future gas demand in this market
- Production Economics—“Finding Costs on Wall Street vs. Doing it the Hard Way”
- Near Term Outlook – gas production is forecast to increase around 5% in 2001. Where is it? When will it show up? How long will it last?

One of the critical driving forces in natural gas demand is **electric power generation**. Encouraged by low natural gas prices, environmental issues, and lower capital costs, over 83% of the independent power projects on the horizon plan to use gas as the primary fuel. We examine the effect of this trend on gas demand and provide our current assessment on how many of these projects will actually be built and the potential impact on gas demand.

Natural Gas Demand

Gas Processing Capability & Economics

In 1995 the discovery of numerous large oil fields in the deepwater Gulf of Mexico was forecast to yield a major increase in **feedstock production**, to the point where major investments in ethylene capacity were forecast. In January 2001, many of the Louisiana gas plants were exploring turndown limits. In the section “What Happened to the Flood?” we examine sensitivity of feedstock producers to natural gas prices and the amount of feedstock most likely to be impacted by gas price spikes.

One of the critical issues for light feedstock consumers is whether the value of gas has permanently decoupled from oil, and the potential **impact on the U.S. ethane-based ethylene producer** vs. naphtha steam crackers. We examine the relationships between natural gas and oil prices, and provide an assessment of whether the disconnect with historical pricing relationships will continue. We also bravely step forward and identify our candidates for the location of the next new ethylene cracker (outside of Asia and Saudi Arabia), based on the combination of factors we believe are critical for commercial success in the future.

What Happens Now?

This special topic is designed to provide timely insights into recent events and a near-term analysis of the **impact on gas processors and ethylene producers**. Pace, as the owner and publisher of the **Hodson Report**, has deep insights into the petrochemical industry. Our monthly surveys provide us with a real-time snapshot of how price changes impact margins and feedstock consumption in the basic petrochemical industry. Our expertise in the natural gas, gas processing, and petrochemical feedstock industries gives us business level knowledge of the realities that drive decisions in these markets.

We believe this information will save you money and time as you plan your response to the challenges facing the industry today. The anticipated release date is mid-March, but we will only be able to meet this aggressive deadline if interested subscribers respond promptly. To subscribe, E-mail us at inquiries@paceconsultants.com or complete the enclosed subscription form and fax it to us at: (832) 351-7887.

ABOUT PACE

Pace has served the petroleum, petrochemical, chemical, and natural gas industries since 1957 with supply/demand and pricing forecasts of energy and chemical products. Our approach to forecasting is based on extensive real world industry experience and contacts, supplemented by the use of sophisticated computer models. This combination permits simultaneous consideration of the many economic and technical factors and the impact of government regulations that influence product costs, supply imbalances, and market pricing. The result is an overall outlook where all the pertinent factors are presented on a consistent basis.

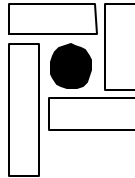
FOR INQUIRIES, PLEASE CONTACT:

ANNE KELLER
SENIOR CONSULTANT

832-351-7846

KARL D. BARTHOLOMEW, P.E.
PRESIDENT

832-351-7814



THE PACE CONSULTANTS INC.
Member Jacobs Engineering Group Inc.

5995 Rogerdale Road
Houston, Texas 77072

832-351-7800 Phone
832-351-7887 Fax