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Battle for Henry Hub

Natural Gas Oversupply - Ominous Implications for Henry Hub Pricing



Figure 1 - The Battle

- An onslaught of surplus natural gas supply is bearing down on the Henry Hub, moving in from the Marcellus/Utica in the east and from western crude oil associated gas production in TX, NM, OK and ND
- More than 60 natural gas pipeline projects will reverse the continent's gas flows relieving some capacity constraints while creating others
- Northeast gas will battle for market share, with the epicenter of that conflict located in Louisiana
- Demand from gas fired power generation, industrial gas use and LNG exports will eventually absorb the incremental supply, but not for a few years
- The oversupply scenario is similar to the battle between Rockies versus shale gas in the 2008-10 timeframe when producer breakeven prices were in the \$4.00/MMbtu range
- A key difference in the market dynamics of 2014-16 is a much lower level of breakeven prices for dry, wet and associated gas, closer to \$2.00-\$2.50/MMbtu;
- Consequently, the overall level of U.S. natural gas prices will be under even greater pressure until new demand balances the market

The natural gas market in North America is undergoing its most radical realignment in flow patterns since the inception of Gulf-to-Northeast long-line transmission systems just after World War II. In effect, the entire gas market is being upended, with scores of new pipeline projects being developed to reverse the continent's gas flows. The goal of these projects is to move surplus supply to anticipated demand growth on the Gulf Coast in the form of gas fired power generation, new industrial plants, and of course, most of the U.S.'s impending LNG exports. That onslaught of gas supply is aimed directly at the Henry Hub, price reference point for essentially all natural gas in North America. This is not the first time in recent memory that the Henry Hub has been inundated with natural gas surpluses.

In 2008-10, the newly completed Rockies Express pipeline into Ohio displaced gas from Louisiana and Texas with cheap and abundant Rockies gas. At the same time, pipelines from the growing Haynesville and Fayetteville shale plays elbowed their way into the Southeast/Gulf market. The convergence of those surpluses crushed the Henry Hub price, with significant ramifications for the gas market across North America, and, by obliterating the need for LNG imports, ultimately, global natural gas markets.

Now history is repeating itself. Those same market dynamics are headed toward the Southeast/Gulf beginning in 2015-16. But this time there is an important difference in the economic profile of those surplus supplies. In that earlier battle for market share, the opponents (Rockies gas versus Southeast gas) were armed with breakeven prices in the \$4 to \$5/MMbtu range. Most of the gas was dry, and producers had yet to implement the significant productivity improvements in drilling and completion technologies seen over the past five years.

Today the opponents are Northeast gas versus gas from Texas, New Mexico, Oklahoma and North Dakota and the productivity arms race has changed the battle plan. Many producers in Northeast Pennsylvania can profitably produce gas at prices below \$2.50/MMbtu. Wet gas producers in Southwest Pennsylvania, West Virginia and Ohio can make money well below \$2.00/MMbtu by selling higher value NGLs, even at today's lower NGL prices. Those supplies will be duking it out with producers of associated gas from the Permian, the Anadarko and the Eagle Ford, who are making most of their money on the sale of crude oil and condensate, meaning that they are essentially immune to the impact of low natural gas prices – down to a breakeven price of zero!

The implications are both stark and unambiguous. Natural gas surpluses will be battling it out for market share in and around the Henry Hub, armed with economics far more powerful than those earlier skirmishes in 2008-10. Can a \$4.00/MMbtu Henry Hub forward curve survive combat at this level? From the vantage point of late 2014, it seems unlikely. Only demand could provide a reprieve and that looks dicey, at least in the medium term. The infrastructure development required for significant demand growth is years away and must navigate a minefield of permits, local logistics, complex offtake agreements and the ever-present risk of construction delays.

The battle for the Henry Hub is coming. The battle lines have been drawn. The troops are being massed at the borders. To help navigate the upcoming melee, RBN Energy and BTU Analytics have joined together to provide a detailed analysis of the market developments leading up to the battle, an assessment of the risks that are emerging from these dynamics, and recommendations for those involved in the markets for natural gas in North America. This report, "Battle for Henry Hub" is organized into five sections:

- **Section I – The Thesis** is an overview of basic concepts addressed in the report: (1) natural gas production growth is accelerating, (2) new pipeline projects are being developed to move this gas to market – with by far the most volume moving to the Gulf Coast; (3) in the medium term there will not be enough demand growth to absorb all of the increasing supply; (4) the oversupply scenario is similar to market developments in the 2008-10 timeframe when a combination of Rockies gas competing with new shale plays drove natural gas prices down to the \$4.00/MMbtu range; (5) but a key difference in the market dynamics of 2014-16 is a much lower level of breakeven prices for dry, wet and associated gas; (6) consequently, the overall level of U.S. natural gas prices will be under even greater pressure until incremental demand, mostly along the Gulf Coast region, rebalances the market; (7) until then, natural gas prices will be buffeted by oversupply, huge flow shifts as new pipeline projects start up, and sudden leaps in demand as LNG export terminals, industrial facilities, and power plants come online.

- **Section II – Production** explores the outlook for U.S natural gas production volumes and current production economics (rates of return and break-even prices). Production forecasts are segmented by major geographic sector, including Northeast, Rockies, Bakken, West, Oklahoma, Texas/Permian, and other regions. Producer economics are segmented by major play, based on various pricing scenarios.
- **Section III – Flow/Capacity** examines current natural gas flow and capacity developments and demand projections, which sheds light on the magnitude of changes in flow patterns and where capacity constraints are likely to develop. This section catalogues all major pipeline projects that are expected to increase Northeast U.S. take-away capacity and describes the impact of that capacity on flows into the Southeast/Gulf region.
- **Section IV – Trends/Balances** contrasts the developing market trends described in the previous three sections with similar market developments in the 2008-10 natural gas market when growing Rockies gas production competed for market share with the early shale plays, including Haynesville, Fayetteville and Barnett. At the time, it was expected that LNG imports would soon be competing in the same arena. This previous battle for Henry Hub is instructive in what can be expected in the upcoming conflict, both in its similarities and its differences versus current market conditions.
- **Section V – Supply/Demand Dynamics, Prices and Implications** pulls together projections from RBN and BTU regarding supply/demand dynamics, an outlook for regional price basis, a review of risks to the pricing scenario, and recommendations for natural gas market participants.

This report, “Battle for Henry Hub” is available on a subscription basis from either BTU Analytics or RBN Energy.

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