
The Haynesville Play: A New Opportunity to Prove the Strategic Value of Natural Gas in Peak Oil Mitigation

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ABSTRACT

Many oil supply analysts, including this author, believe that the worldwide rate of liquid fuels (crude + condensate + natural gas liquids [NGL]) production has passed a level that will never again be exceeded. This condition is sometimes referred to as “Peak Oil.” The International Energy Agency’s World Energy Outlook, released in November 2008, corroborated this viewpoint with its unrealistic call for the need to find and install new production capacity equal to “three Saudi Arabias by 2015,” and “six Saudi Arabias by 2030,” in order to meet demand. Currently, due to the economic contraction, worldwide liquid fuel demand is declining. This temporary decline in demand is masking worldwide production declines; in other words, because supply currently exceeds demand by a small amount, near term production declines are not creating upward price pressure. Many analysts believe that this condition will exist for no more than two years. According to the Hirsch Report, mitigation of a liquid fuels shortage without serious repercussions requires twenty years. However, it is likely that the world will encounter such a shortfall within two years. Thus, mitigation steps need to be implemented immediately. There will be no single solution for this problem; the solution path needs to follow what has sometimes been referred to as the “all of the above” plan. One short-term, partial mitigation step could be the widespread utilization of natural gas vehicles. Natural gas offers the only current alternative to gasoline and diesel as transportation fuel. And, thanks to the Haynesville, Marcellus, Fayetteville, and Barnett shale gas plays, natural gas is available in plentiful supplies. Furthermore, the conversion of vehicles from liquid fuels utilizes existing technology. The manufacturing of new natural gas vehicles, the conversion of existing vehicles and the creation of a natural gas fueling infrastructure would provide immediate, desperately needed jobs. Additionally, the demand for natural gas provided by vehicles would help mitigate the current natural gas surplus, thereby preventing further job loss in the oil and gas industry. Unfortunately, it appears that current policy makers believe that natural gas reserves are too small to make a difference, and that individual shale gas well decline rates imply an overall short term depletion of these reserves. Conversely, several in the industry believe that the Haynesville and Marcellus could contain over 1800 TCF. These gas supplies are essentially new; thus, they are incremental to the U.S. gas reserves of just two years ago. With a 50% recovery factor, these reserves could triple the proved U.S. gas reserves as of the end of 2007. The challenge for the industry will be to prove to the public and to the policy makers that with continuous drilling these reserves can be realized, and that clean, low-carbon natural gas is indeed ready to serve as a tool for the mitigation of the coming liquid fuels crisis.