A FOUNDATION FOR U.S. NATURAL GAS SUPPLY ABUNDANCE AND ENERGY MARKET STABILITY: EXAMINING KEY FACTS

Domestic Natural Gas Resources, Reserves and Production

Lower market prices, changes in natural gas extraction efficiency and challenges embraced by natural gas producers to meet environmental compliance at well sites have reduced domestic natural gas production in the United States – right? Actually, nothing could be further from the truth. In 2013, US natural gas production has grown once again and reflects, particularly, the influence of less conventional sources of natural gas compared to years past.

- In 2006, the Energy Information Administration estimated that domestic dry natural gas production would not grow beyond 23 trillion cubic feet (tcf) annually for the duration of their forecast – through 2030. By 2013 that vision had changed dramatically.

Dry Natural Gas Production
EIA Annual Energy Outlook (2013 compared to 2006)

The basis for EIA’s optimism may be founded, in part, in the evolution of current data from the evaluation of U.S. natural gas resource potential and the routine accounting for natural gas reserves. In addition, new information, science and data are accumulating with respect to anticipated natural gas emissions and the relative greenhouse gas implications of growing natural gas production, which is also summarized in this fact sheet.
The Potential Gas Committee (Colorado School of Mines) now estimates a U.S. natural gas technically recoverable resource base of nearly 2,400 tcf compared to the 1990 assessment of 1,003 tcf. Natural gas resources are those volumes of gas estimated to be available for future development based on current extraction technology and economics.

The shale gas component of the resource estimate by itself, today, is larger than the total resource estimate of 22 years ago.

U.S. natural gas reserves (Energy Information Administration, US Department of Energy) are at record levels (over 330 tcf at year-end 2011) and have grown with the continued development of shale gas during the past seven years.

Natural gas reserves are the on-the-shelf inventory associated with drilled wells and thus most immediately available for production. In 1990, that inventory represented about 9 years of domestic dry gas production. Today, the 334 tcf of proven dry gas reserves represents nearly 14 years of an on-the-shelf inventory supported by over 100 years of resources and reserves combined – assuming U.S. natural gas production of 24 tcf.

Even after a record setting year for domestic natural gas production in 2012, Bentek Energy LLC reports on September 9, 2013 that year-to-date volumes exceed that of 2012 by 1.9 percent, (64.6 billion cubic feet per day compared to 63.4), pointing to another record year (2013) for domestic production.
Facts Regarding Domestic System-Wide Natural Gas Emissions

Natural gas system methane emissions are improving due to better technology and industry best practices.

According to the Energy Information Agency and the Environmental Protection Agency, less than 1.5 percent of natural gas is emitted as it travels from where it is produced to homes and businesses. Of that, only 0.3 percent is emitted from systems operated by local natural gas utilities. Continued efforts to upgrade and modernize the natural gas pipeline network to enhance safety are lowering emissions even further.

Distribution system emissions have dropped 16 percent since 1990, even as the industry added nearly 300,000 miles of distribution mains to serve 17 million more customers, an increase of 30 percent in both cases.

The U.S. Environmental Protection Agency has confirmed that lost and unaccounted for gas (LUAF) should not be used to estimate emissions from the natural gas delivery system because it does not provide the desired level of data accuracy and quality and no current studies exist that accurately define the percentage of LUAF that reflects actual emissions from a system.

Lost and unaccounted for gas (LUAF) is an accounting mechanism that is used in the ratemaking process to address the difference between the gas measured into the distribution system and the gas measured out of the utility system. In general, most of that volumetric difference is not attributable to emissions. The primary cause of LUAF is meter uncertainty.

The natural gas industry is actively engaged in a fact-based dialogue and science-based analysis to ensure natural gas is a leading solution for building a clean and secure energy future for our nation.
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