The Long-term Outlook for Natural Gas

Saudi Arabia – United States Energy Consultation
February 2, 2011
Washington, D.C.

Richard G. Newell, Administrator
30% domestic gas production growth outpaces 16% consumption growth, leading to declining imports.

Richard Newell, February 2, 2011

Source: EIA, Annual Energy Outlook 2011
Horizontal drilling and hydraulic fracturing

Hydraulic fracturing, or "fracking," involves the injection of more than a million gallons of water, sand and chemicals at high pressure down and across into horizontally drilled wells as far as 10,000 feet below the surface. The pressurized mixture causes the rock layer, in this case the Marcellus Shale, to crack. These fissures are held open by the sand particles so that natural gas from the shale can flow up the well.

Success in the Barnett prompted companies to look at other shale formations in the United States.
Over the last decade, U.S. shale gas production has increased 14-fold and now comprises about 22 percent of total U.S. production.

Source: EIA, Lippman Consulting (2010 estimated)
Shale gas has been the primary source of recent growth in U.S. technically recoverable natural gas resources.

Richard Newell, February 2, 2011

Source: EIA, *Annual Energy Outlook 2011*
Four-fold increase in shale gas production offsets declines in other U.S. supply, meeting consumption growth and lowering import needs

U.S. dry gas trillion cubic feet per year

History 2009 Projections

- Net imports
- Shale gas
- Non-associated onshore
- Non-associated offshore
- Tight gas
- Coalbed methane
- Associated with oil
- Alaska

Source: EIA, Annual Energy Outlook 2011
Natural gas price projections are significantly lower than past years due to an expanded shale gas resource base.

natural gas spot price (Henry Hub)
2009 dollars per million Btu

Source: EIA, Annual Energy Outlook 2011
A 2007 study ranked 688 shale formations in 142 petroleum basins.
EIA is currently compiling geological studies and analyzing basin reservoir properties in 33 countries to estimate the technically recoverable shale gas resources

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Source: EIA, Global Shale Gas Resources and Activities

Richard Newell, February 2, 2011
For more information


Short-Term Energy Outlook  www.eia.gov/emeu/steo/pub/contents.html

Annual Energy Outlook  www.eia.gov/oiaf/aeo/index.html


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