

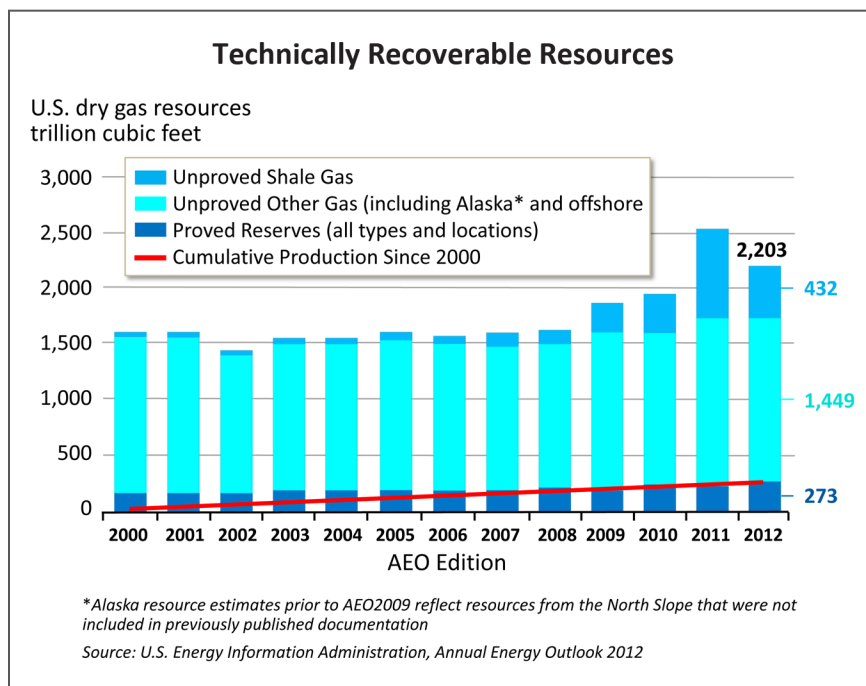
Why is Shale Gas Important?

With the advance of extraction technology, shale gas production has led to a **new abundance of natural gas supply** in the United States over the past decade, and is expected to continue to do so for the foreseeable future. According to the Energy Information Administration (EIA), the unproved technically recoverable U.S. shale gas resource is estimated at **482 trillion cubic feet**.¹

Estimated proved and unproved shale gas resources amount to a combined 542 trillion cubic feet (or 25 percent) out of a total U.S. resource of 2,203 trillion cubic feet.²



Shale drilling site in Wyoming. Photo: David Mott, U.S. Geological Survey Wyoming Water Science Center, http://pubs.usgs.gov/fs/2012/3049/FS12-3049_508.pdf



U.S. shale gas production has **increased 12-fold** over the last decade and this trend is expected to continue through at least 2035 – rising from 5 trillion cubic feet per year in 2010 (23 percent of total U.S. dry gas production) to 13.6 trillion cubic feet per year in 2035 (49 percent of total U.S. dry gas production) – see *Annual Energy Outlook 2012*, page 3.

¹ U.S. Energy Information Administration, “Annual Energy Outlook 2012,” Table 14, Unproved technically recoverable resource assumptions by basin, page 57.

² U.S. Energy Information Administration, “Annual Energy Outlook 2012,” Shale gas provides largest source of growth in U.S. natural gas supply, page 93.

In general, increased domestic production of energy resources often results in larger supplies and lower prices, a reduced need for imports and enhanced U.S. energy security. Aside from these benefits, developing domestic shale gas resources means **additional jobs** when wells are drilled, pipelines are constructed, and production facilities are built and operated. Shale gas production also means **increased tax and royalty receipts** for state and federal governments, and royalty and bonus payments to landowners.



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Shale gas is having a beneficial impact on supplies and consumer prices for natural gas, as well as additional environmental benefits:

- Natural gas provides a quarter of overall U.S. energy;
- It is used to generate a quarter of the nation's electricity. Net generation from natural gas-fired power plants increased 35 percent between 2005-2012, coinciding with a continuous upsurge in shale gas supplies;
- Natural gas provides heat for 56 million residences and businesses;
- It delivers 35 percent of the energy and feedstocks needed by U.S. industry;
- Onshore consists of around 7,000 companies, including 2,000 drilling operators and hundreds of service companies;
- It directly employs over 2 million Americans who earn over \$175 billion in labor income;
- Shale gas generates over \$250 billion annually in government revenue via corporate income taxes; severance taxes; royalties on federal lands; sales, payroll, property, use and excise taxes;
- Combined with the continued displacement/retirement of coal power plants, greater shale gas use has helped the U.S. achieve approximately 70 percent of the CO₂ reductions targeted under the Kyoto Protocol as of 2012; and,
- According to a 2011 report, the shale gas industry supports more than 600,000 American jobs today (growing to 870,000 jobs by 2015) and contributes \$118.2 billion to the nation's Gross Domestic Product.

Sources: National Petroleum Council, "Prudent Development: Realizing the Potential of North America's Abundant Natural Gas and Oil Resources," 2011, Executive Summary, pages 7 and 16; and Forbes magazine, "Surprise Side Effect of Shale Gas Boom: A Plunge in U.S. Greenhouse Emissions," December 7, 2012; IHS online, report available at <http://www.ihs.com/info/ecc/a/shale-gas-jobs-report.aspx>.