



## Hydraulic Fracturing

What is widely known today as hydraulic fracturing is actually the combination of two older, well-tested technologies – hydraulic fracturing and horizontal drilling – that have been combined to revolutionize the oil and gas industry in the U.S.

Since hydraulic fracturing began to be used widely in the U.S. in the early 2000s, residential natural gas prices have dropped 25%.<sup>1</sup>

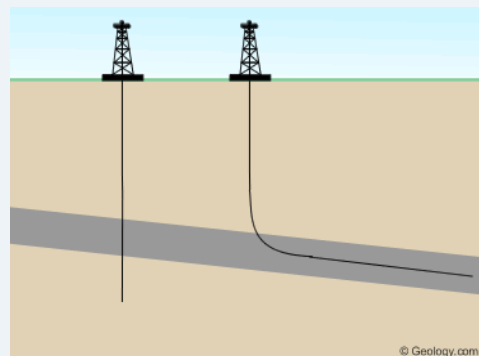
This increase in domestic energy production has provided and will continue to provide enormous benefits for American families and small businesses, such as reducing energy prices by supplying affordable, reliable energy for Americans to use to generate electricity for small businesses, to heat homes, and to power vehicles for generations to come. Thanks to advances in technology over the last decade, hydraulic fracturing now fuels more than half of the crude oil production and two-thirds of the natural gas production in the U.S.<sup>2</sup>

**In 2016, lower gas prices saved U.S. consumers \$115 billion, or about \$550 per licensed driver.**<sup>3</sup>

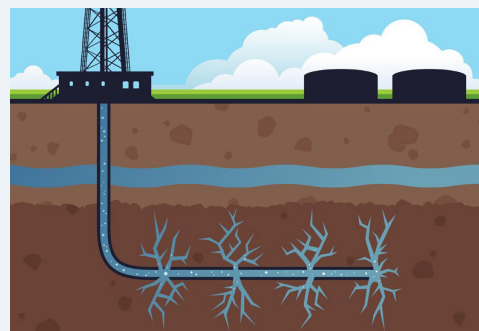
Studies show that in 2016, abundant production of domestic

1. Energy Information Administration, "U.S. Price of Natural Gas Delivered to Residential Consumers," Feb. 2017, <https://www.eia.gov/dnav/ng/hist/n3010us3M.htm>.
2. Energy Information Administration, "Hydraulically fractured wells provide two-thirds of U.S. natural gas production," May 2016, <http://www.eia.gov/todayinenergy/detail.php?id=26112>; Energy Information Administration, "Hydraulic fracturing accounts for about half of current U.S. crude oil production," March 2016, <http://www.eia.gov/todayinenergy/detail.php?id=25372>.
3. James Taylor, "Fracking, Lower Gasoline Prices Returned \$1,000 To Household Budgets Last Year," Forbes, Feb. 2017, <https://www.forbes.com/sites/jamestaylor/2017/02/03/fracking-lower-gasoline-prices-returned-1000-to-household-budgets-last-year/#7ab3700c30ce>.

**Horizontal drilling** involves turning the well horizontally at depth to access oil and natural gas from sources that run horizontally, such as a layer of shale rock.



**Hydraulic fracturing** involves injecting fluids at high pressure down a well and into rock formations to create fractures in the rock, which allow the trapped oil and gas to flow to the wellbore.





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oil and gas saved the average American household approximately \$2,000.<sup>4</sup> The same study predicted that those savings will increase to an average of \$3,500 per household by 2025.<sup>5</sup>

For the average American family, this could mean:

- Seven months of car payments,<sup>6</sup>
- Three months of mortgage payments,<sup>7</sup> or
- The average cost of a family vacation.<sup>8</sup>

For the poorest of American families, the impacts of these savings could mean the ability to make ends meet.

The energy produced from hydraulic fracturing also supports millions of jobs across all sectors of the U.S. economy. Currently, more than 2.1 million jobs are supported by the energy produced from this technology, and it is projected to support nearly 3.9 million jobs by 2025.<sup>9</sup> Additionally, the technology supports millions of American workers

and the economy by allowing companies to open U.S. operations due to lower energy costs.

Finally, hydraulic fracturing plays a key role in the U.S. clean energy future by allowing producers to safely access the nation's vast supply of clean-burning natural gas.

Studies from the Environmental Protection Agency further support hydraulic fracturing's strong environmental track record by concluding that, under regulated conditions, the technology itself is safe for the environment and the communities in which it is applied.<sup>10</sup>

Energy Information Association's Short-Term Energy Outlook projects that energy-associated CO2 emissions will fall to 5,179 million metric tons in 2016, the lowest annual level since 1992,<sup>11</sup> a higher proportion of natural gas fired electricity is a key driver of this dramatic reduction in carbon emissions.<sup>12</sup>

4. IHS, "America's New Energy Future: The Unconventional Oil and Gas Revolution and the US Economy," September 2013, [http://www.api.org/~media/Files/Policy/American-Energy/Americas\\_New\\_Energy\\_Future\\_Mfg\\_Renaissance\\_Main\\_Report\\_4Sept13.pdf](http://www.api.org/~media/Files/Policy/American-Energy/Americas_New_Energy_Future_Mfg_Renaissance_Main_Report_4Sept13.pdf).
5. Ibid.
6. Phil LeBeau, "New Car, new reality: Auto Loan borrowing hits fresh highs," CNBC, June 2, 2016, <http://www.cnbc.com/2016/06/02/us-borrowers-are-paying-more-and-for-longer-on-their-auto-loans.html>.
7. "What Does the Average Home Owner Pay on a Mortgage?" Realtor@Mag, Jan. 2012, <http://realtormag.realtor.org/daily-news/2012/01/03/what-does-average-home-owner-pay-mortgage>.
8. Kelly Phillips Erb, "The Real Cost Of Summer Vacation: Don't Get Buried In Taxes," Forbes, July 2014, <https://www.forbes.com/sites/kellyphillipserb/2014/07/07/the-real-cost-of-summer-vacation-dont-get-buried-in-taxes/#3cff6617597a>.
9. IHS, "America's New Energy Future: The Unconventional Oil and Gas Revolution and the US Economy," September 2013, [http://www.api.org/~media/Files/Policy/American-Energy/Americas\\_New\\_Energy\\_Future\\_Mfg\\_Renaissance\\_Main\\_Report\\_4Sept13.pdf](http://www.api.org/~media/Files/Policy/American-Energy/Americas_New_Energy_Future_Mfg_Renaissance_Main_Report_4Sept13.pdf).
10. Environmental Protection Agency, "Natural Gas Extraction – Hydraulic Fracturing," <https://www.epa.gov/hydraulicfracturing#providing>.
11. Energy Information Administration, "Energy-related CO2 emissions for first six months of 2016 are lowest since 1991", <https://www.eia.gov/todayinenergy/detail.php?id=28312>.
12. Energy Information Administration, "How much carbon dioxide is produced per kilowatthour when generating electricity with fossil fuels?," <http://www.eia.gov/tools/faqs/faq.cfm?id=74&t=11>.