



Rejuvenation of America's Oil & Gas Industry – The Great State of Texas Leads the Way

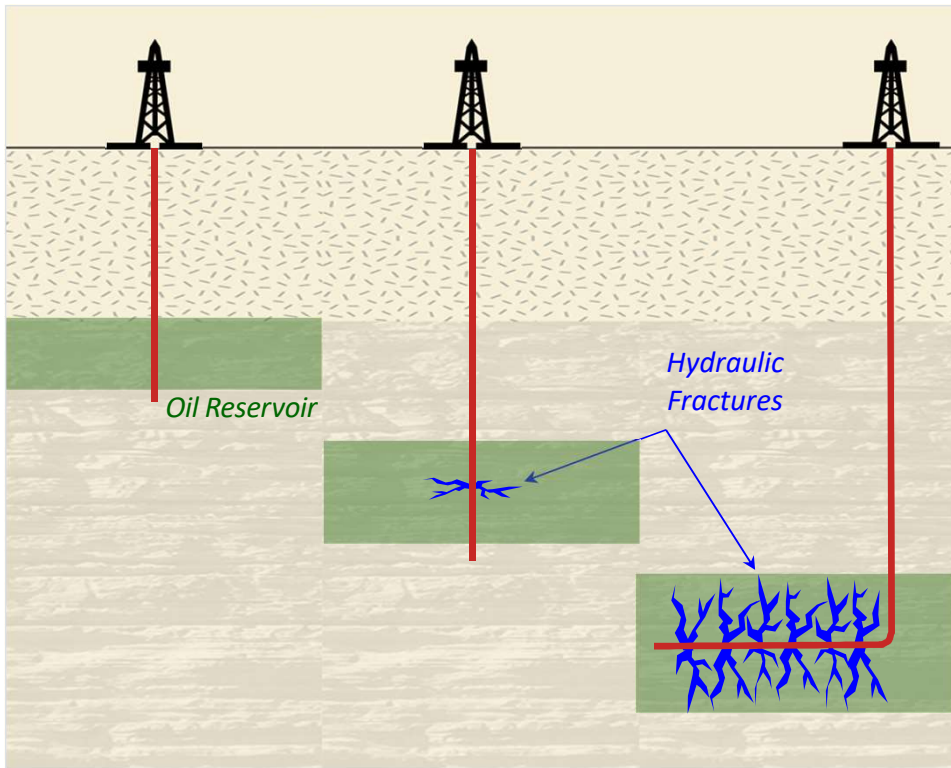
Greg Leveille
Chief Technology Officer
February 27, 2019

Ability to Hydraulically Fracture Horizontal Wells was the Key Technical Breakthrough

Conventional ← → **Unconventional**

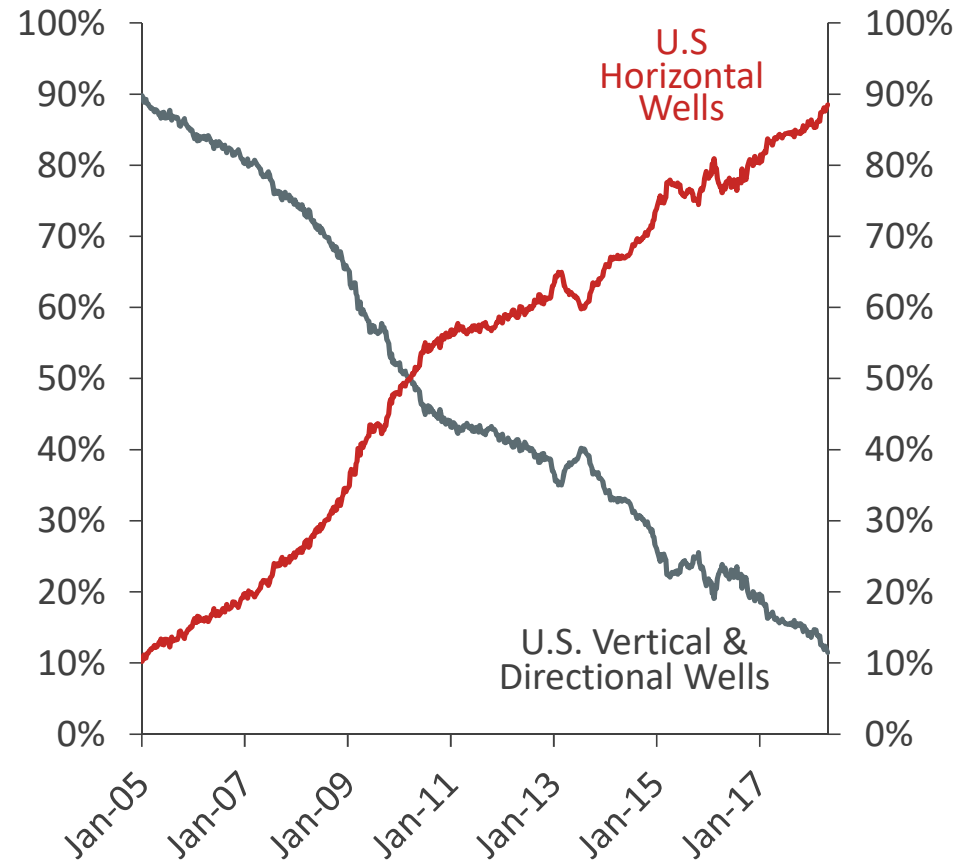
Oil Flows Easily Through Rocks

Rocks Must Be Fractured for Oil to Flow



Simplified depiction of differences between conventional and unconventional reservoirs shown in cross section view

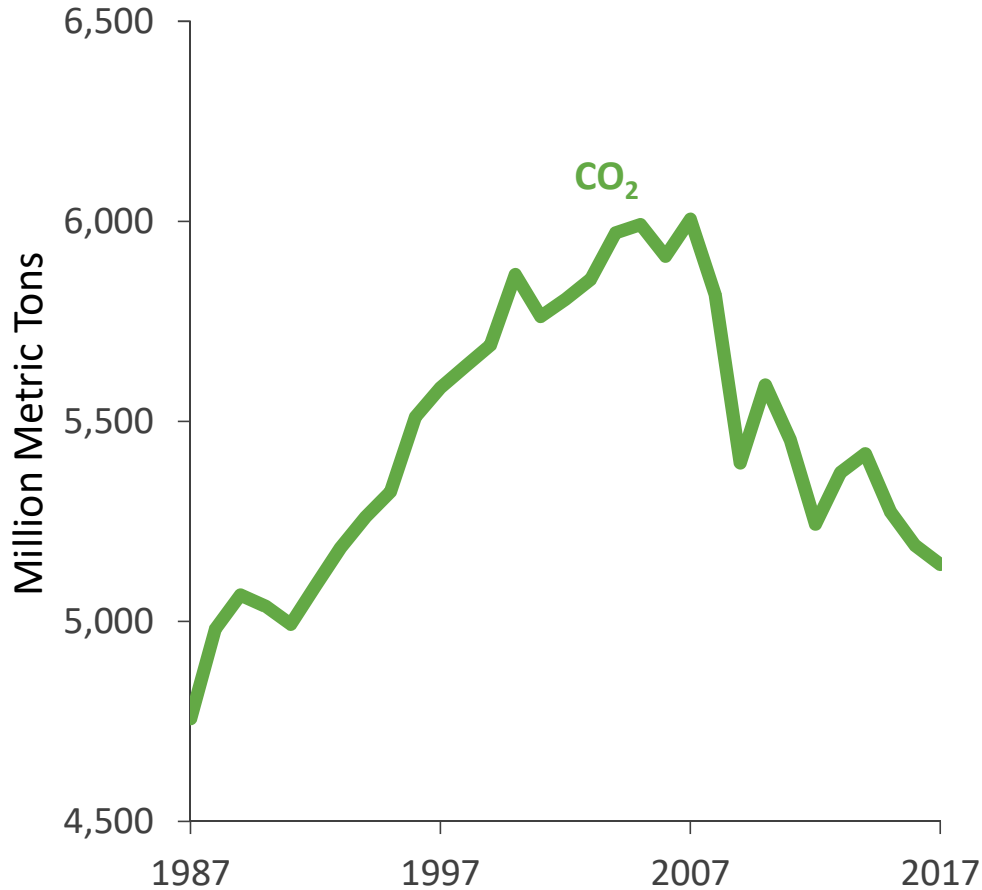
Horizontal Fracture Stimulated Wells Predominate in U.S.



Source: BHGE website

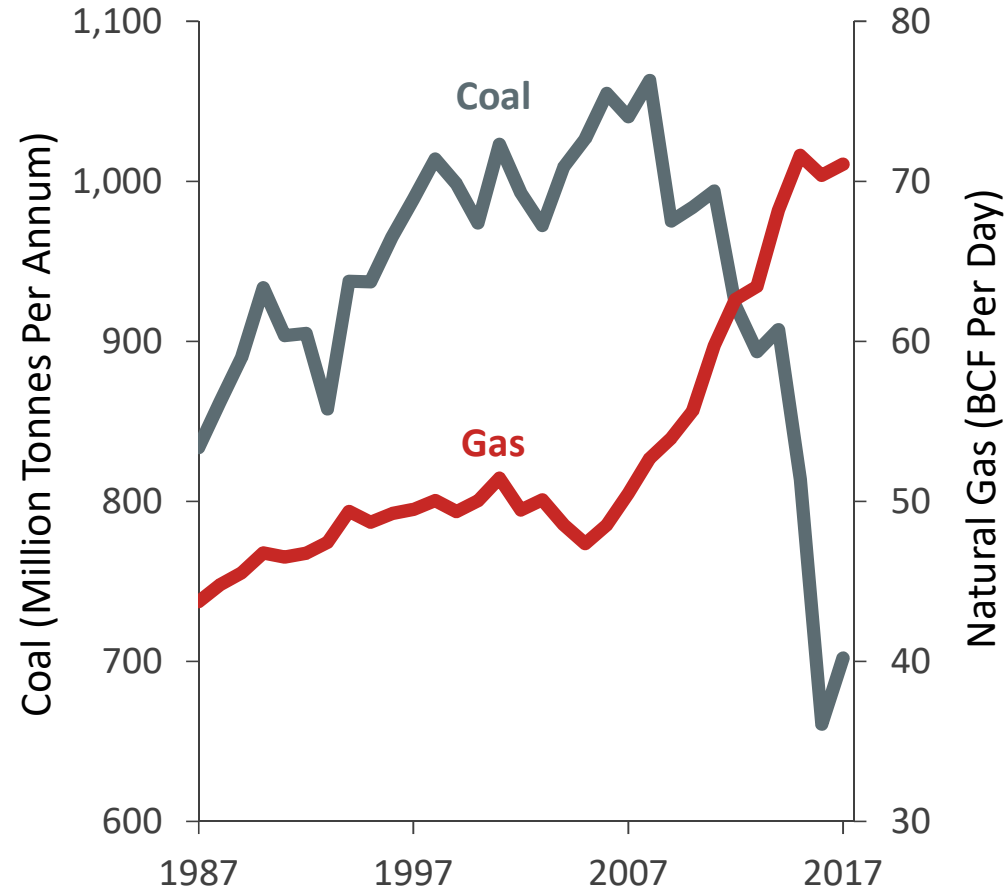
The Unconventional Revolution Has Also Delivered Environmental Benefits

U.S. Energy-Related CO₂ Emissions



Source: U.S. Energy Information Administration

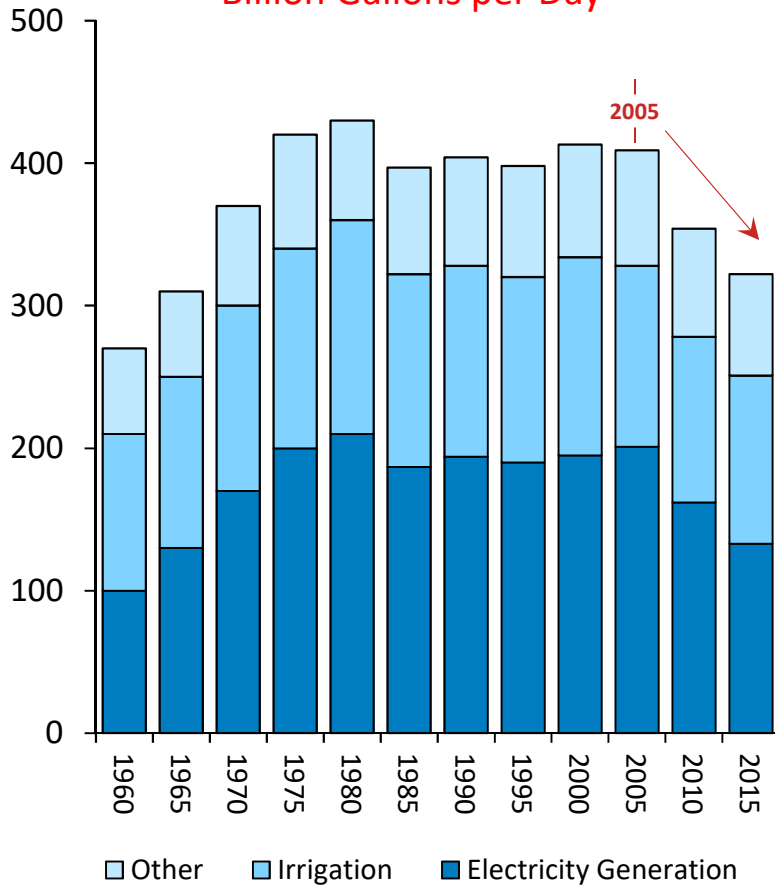
U.S. Coal and Natural Gas Production



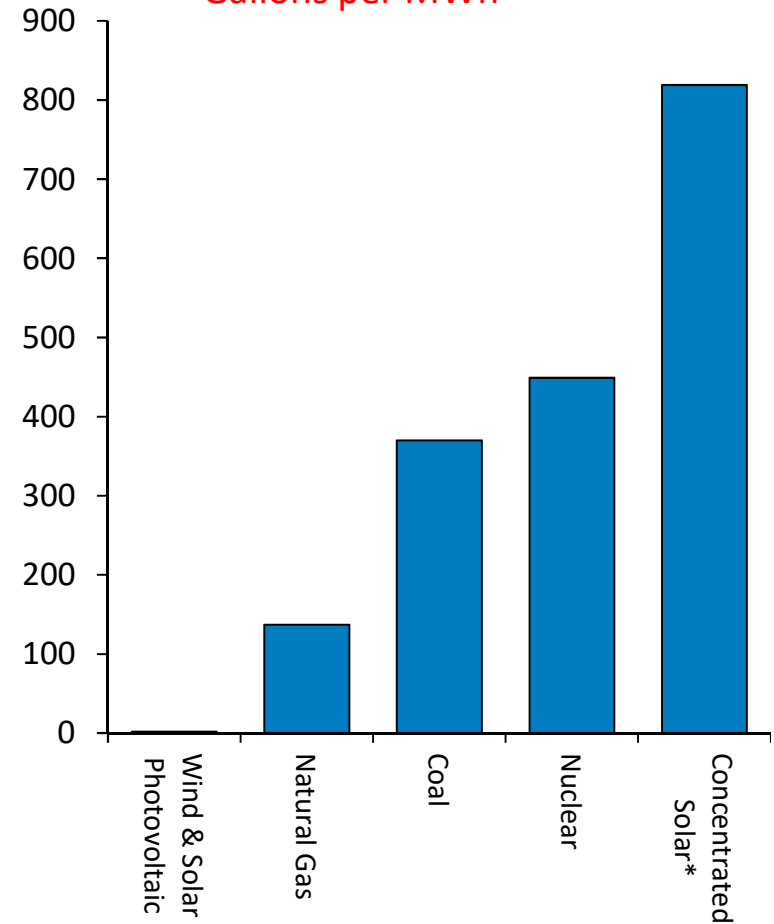
Source: BP Statistical Review of World Energy 2018

The Unconventional Revolution has Even Reduced U.S. Water Withdrawals

Total Water Use in the United States
Billion Gallons per Day



Water Use in Electricity Generation by Type
Gallons per MWh



Data Source = USGS Circular 1441 - Estimated Use of Water in the United States in 2015; Published in 2018

Data Source = The Environmental Costs and Benefits of Fracking; Annual Review of Environment and Resources; 2014 *Hybrid Trough