



Research & Economic Development

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Comparative Emissions

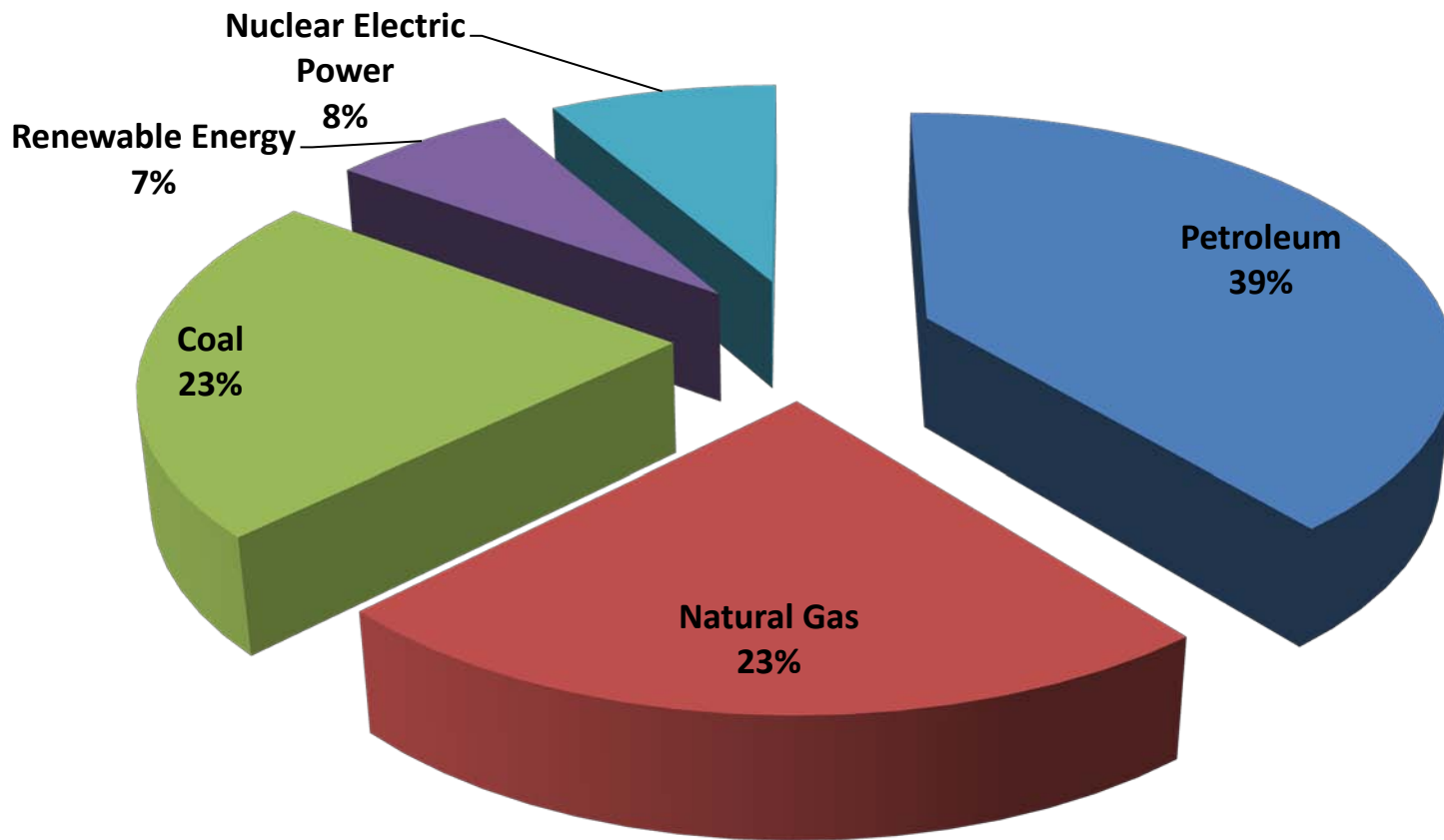
Emission Levels: Natural Gas vs. Oil & Coal

Pounds per Billion Btu of Energy Input

POLLUTANT	NATURAL GAS	OIL	COAL
CARBON DIOXIDE	117,000	164,000	208,000
CARBON MONOXIDE	40	33	208
NITROGEN OXIDES	92	448	457
SULFUR DIOXIDE	1	1,122	2,591
PARTICULATES	7	84	2,744
MERCURY	0.000	0.007	0.016

SOURCE: EIA-NATURAL GAS ISSUES AND TRENDS

U.S. Primary Energy Consumption by Source, 2007

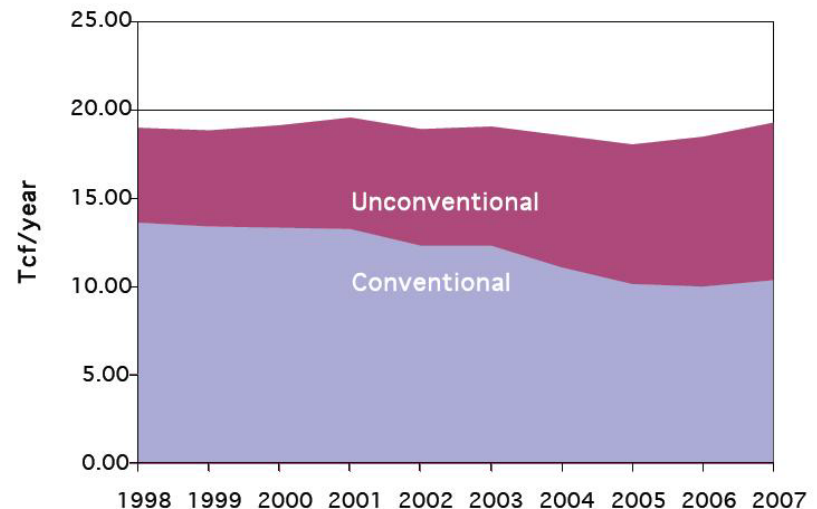


U.S. Production

Production has Increased Over the Last Few years, Largely due to a Decade of Increased Unconventional Production

- Total U.S. production reached 20.5 Tcf/year by the end of 2008, a 7.3% increase over the 19.1 Tcf/year level at the end of 2007.
- Over the last decade, production from unconventional sources has increased almost 65% from 5.4 Tcf/year in 1998 to 8.9 Tcf/year in 2007.
- Unconventional production has increased from 28% of total production in 1998 to 46% in 2007.

U.S. Dry Natural Gas Production (Tcf/year)



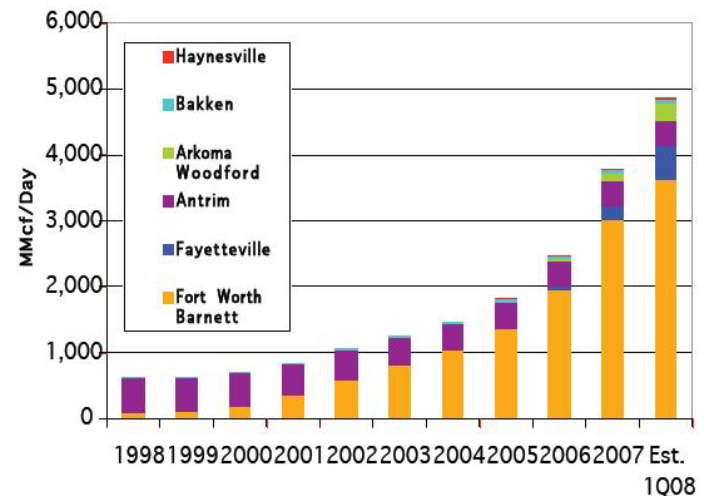
Source: EIA- Natural Gas Production Reports

U.S. Gas Shales: Production by Play

Gas Shales have Experienced Tremendous Growth in Recent Years with Barnett Leading the way

- Barnett has grown from 94 MMcf/day production levels in 1998 to 3,104 MMcf/day in 2007; an increase of more than 3000%
- Fayetteville, Haynesville and Woodford show similar signs of ramping production
- Technology has allowed access to and economic production of a vastly greater resource base. Specifically, improved hydraulic fracturing techniques and greatly improved horizontal drilling have allowed tight, geographically diffuse reserves to be developed in large volumes.

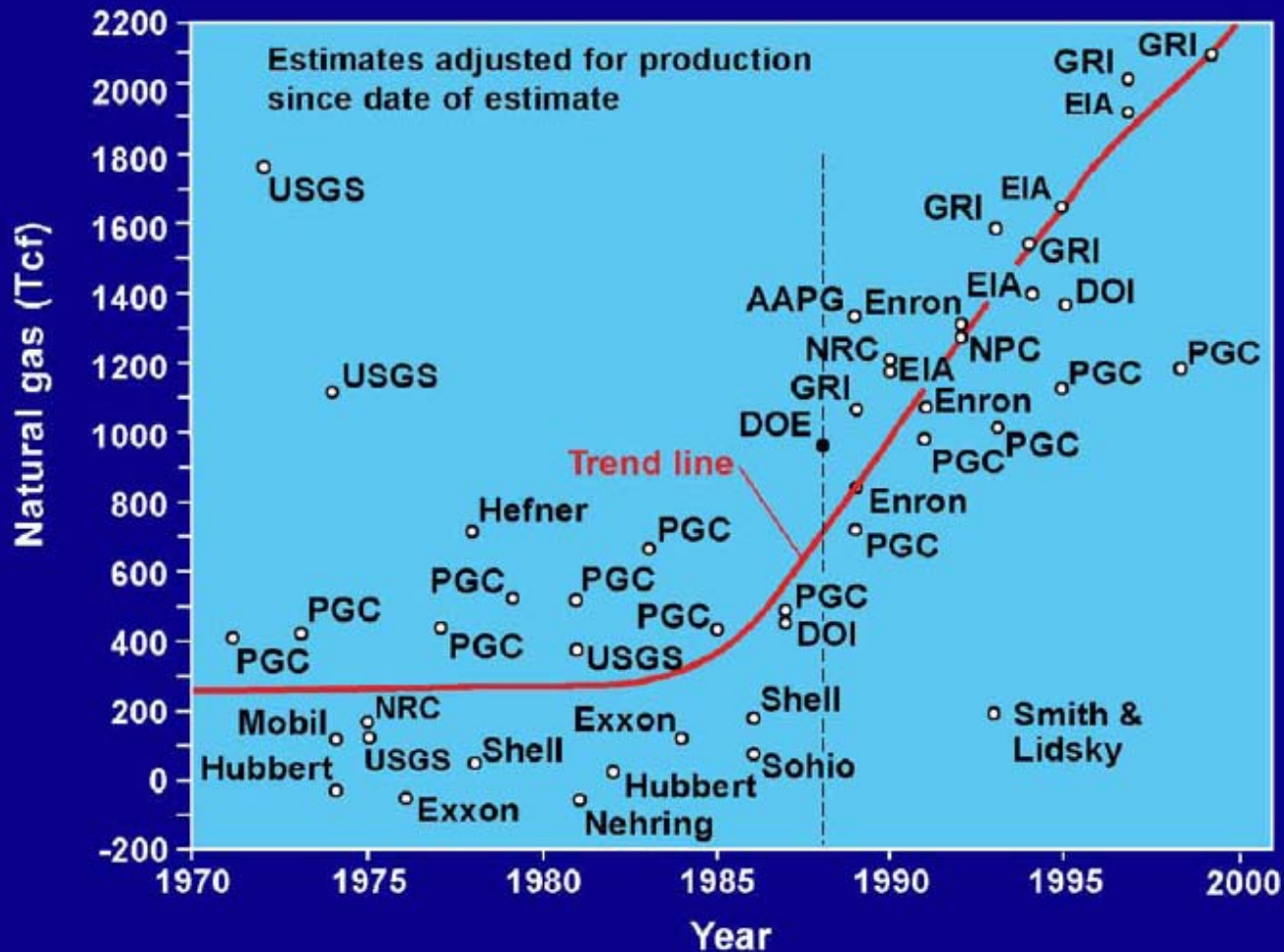
U.S. Shale Gas Production* (MMcf/day)



Source: American Clean Skies

US Gas Resources Continue to Increase

ESTIMATES OF REMAINING NATURAL GAS IN THE U.S. LOWER 48 STATES



Monthly U.S. Natural Gas Wellhead Price



Source: U.S. Energy Information Administration

Good News?

- Production is down in New Mexico
(25% of tax revenue comes from oil and gas)
- Major producers are leaving the state
- Independent producers shutting wells
- Research budget eliminated at DOE

EPACT 2005

Section 999

- Provides \$37.5M for unconventional onshore and ultra deep water oil and gas research
- Section is perceived as “give away” to big oil
- Section is under attack
- Funding supports University research
- Educating the next generation workforce
- Increases domestic oil and gas production