

Natural Gas Outlook

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Center for Energy Studies

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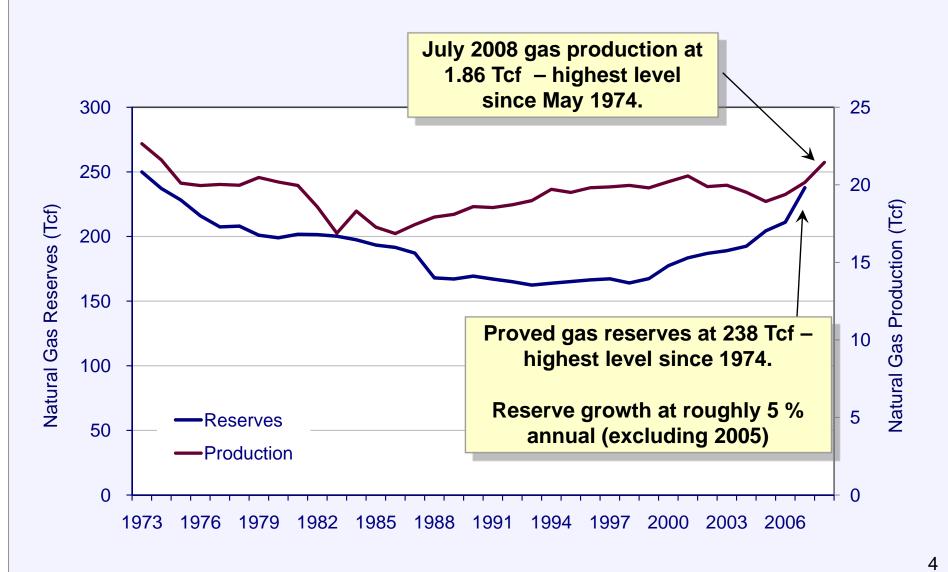
- Recent changes in natural gas prices reflect new dynamics in supply and demand.
- Natural gas supply (production, reserves, storage) is way up and at levels not seen in decades.
- Natural gas demand is down (power generation, industrial) and reduced to levels not seen in a decade.
- Still considerable uncertainty about the future and natural gas prices. Near term outlook positive for consumers.



Natural Gas Supply

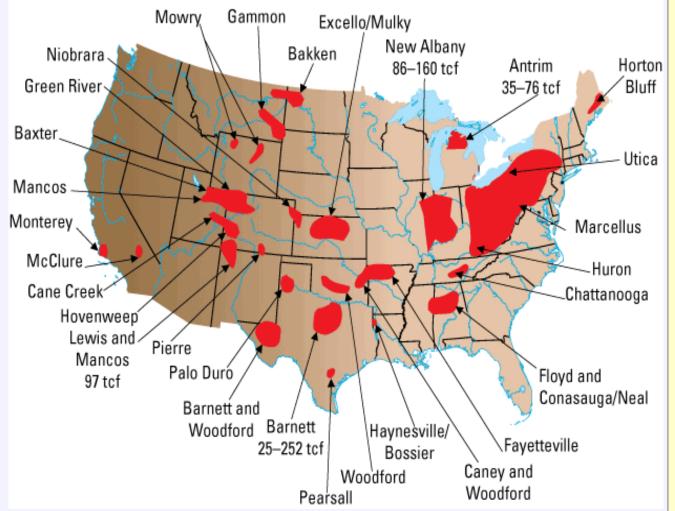
U.S. Dry Natural Gas Proved Reserves and Production, 1973 to 2007







Major Shale Gas Basins in U.S.



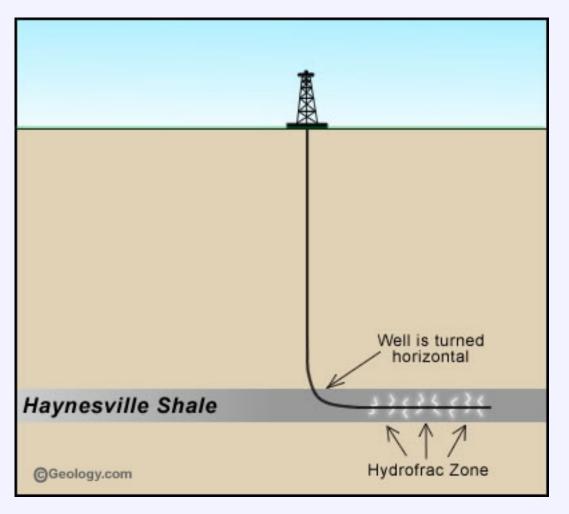
Total U.S. natural gas reserves are estimated to be between 1,500 to 1,680Tcf or between 80 to 88 years.

Shale reserves could account for 131 to 274 Tcf of these reserves.

Total reported reserves from producers as high 2,247 Tcf or 118 years.



Haynesville Shale success based on gains in horizontal drilling and hydrofracing. These processes liberate gas from the shale and allows a single well to drain a much larger volume of rock than a traditional vertical well.



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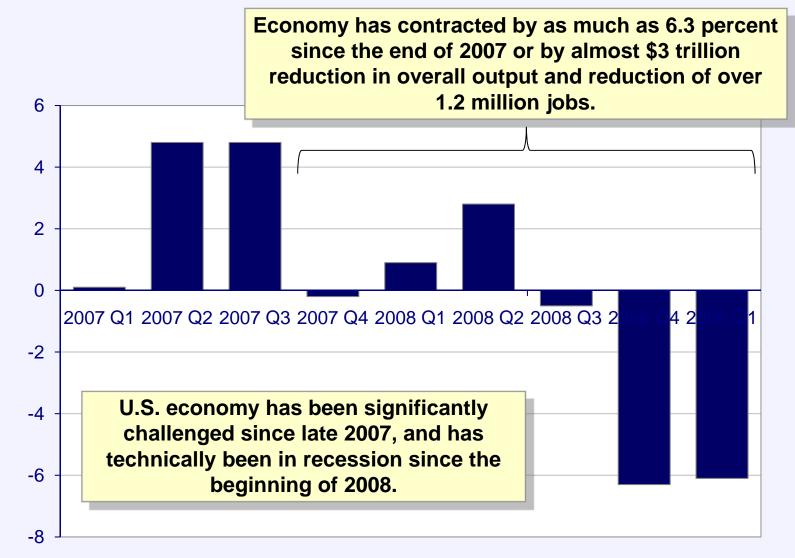


Natural Gas Demand



Percent Change (%)

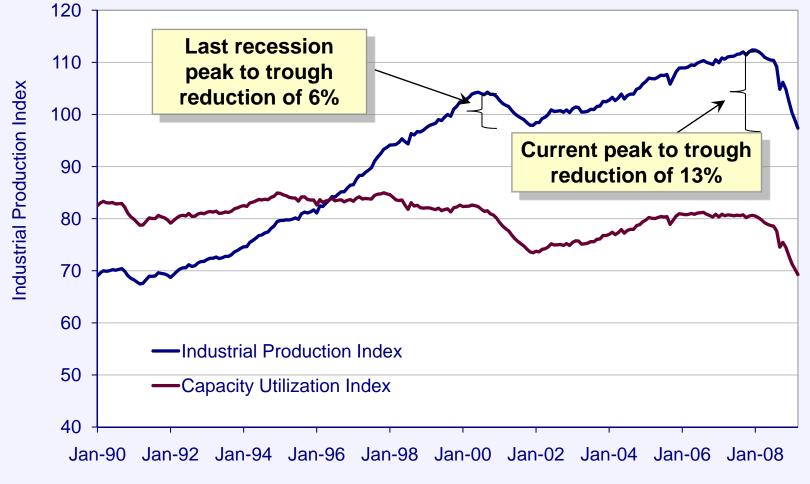
Percent Change in Quarterly GDP





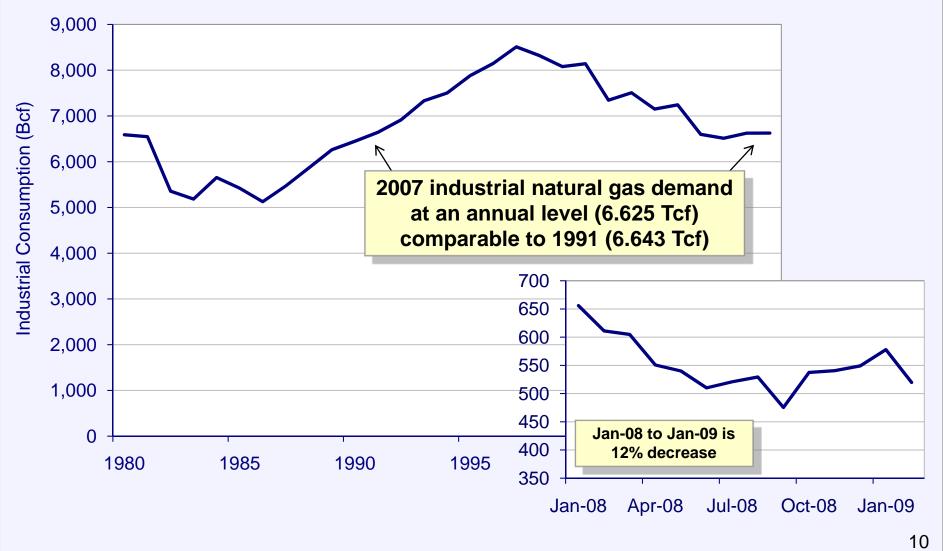
Industrial production is down to levels comparable to January 1999.

Industrial capacity utilization fell to 69.3 percent, the lowest level since records began in 1967.



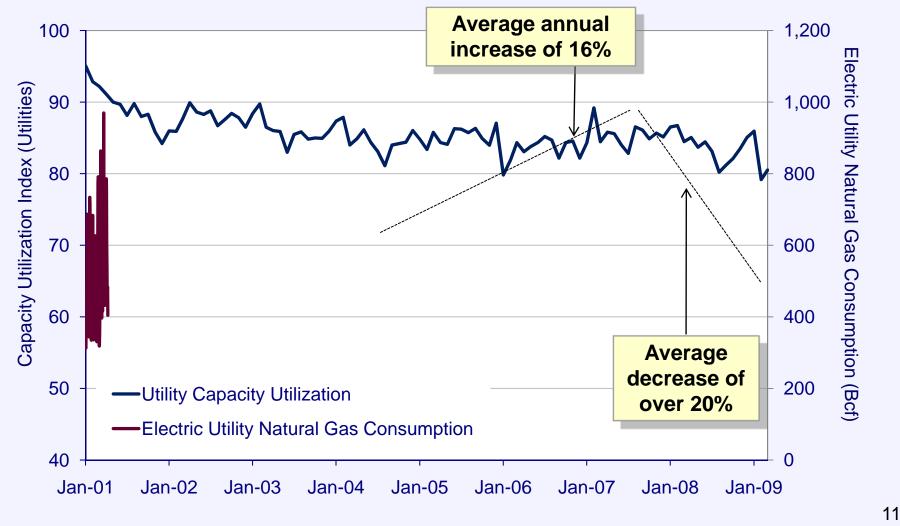


Industrial Natural Gas Consumption





Utility Capacity Utilization and Electric Power Consumption

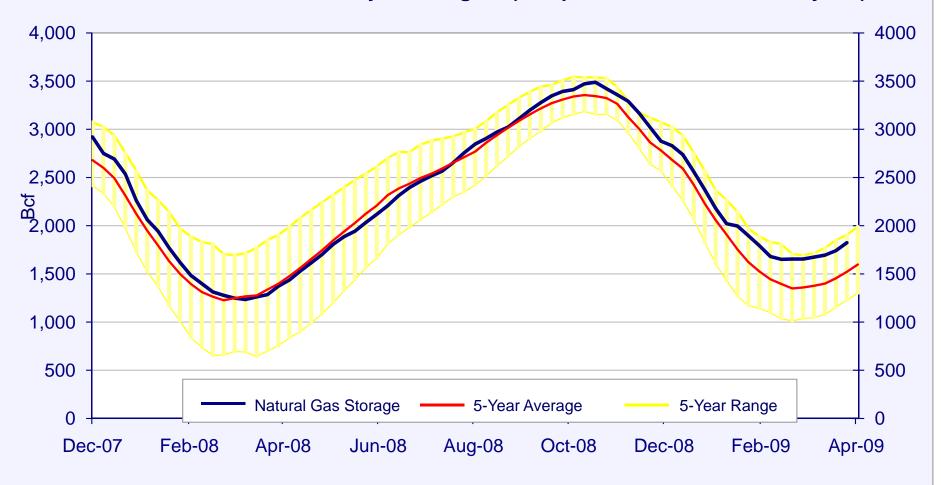




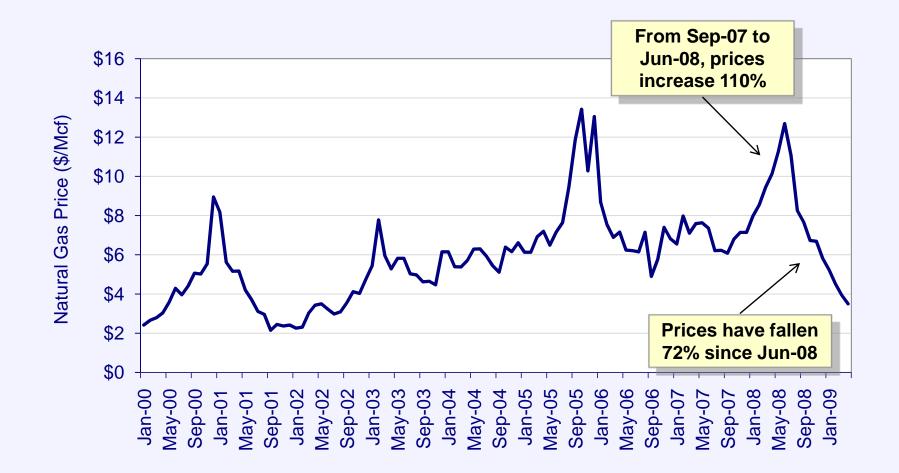
Storage and Prices



Current storage levels are 34% higher than this time last year and over 20% higher than the five-year average. If injections continue at the same rate, storage inventories will reach 3.4 Tcf by mid-August (compared to October 31 last year.)









Crude Oil and Natural Gas Futures Prices

	Cr	ude Oil (\$/Bbl)	Natural Gas (\$/Mcf)
Jun-09	\$	58.50	\$ 4.302
Jul-09	\$	59.41	\$ 4.412
Aug-09	\$	60.23	\$ 4.517
Sep-09	\$	61.08	\$ 4.581
Oct-09	\$	61.91	\$ 4.703
Nov-09	\$	62.73	\$ 5.345
Dec-09	\$	63.45	\$ 6.018
Jan-10	\$	64.07	\$ 6.313
Feb-10	\$	64.65	\$ 6.337
Mar-10	\$	65.21	\$ 6.281
Apr-10	\$	65.76	\$ 6.096
May-10	\$	66.30	\$ 6.136
Jun-10	\$	66.83	\$ 6.236
Jul-10	\$	67.29	\$ 6.356
Aug-10	\$	67.70	\$ 6.439
Sep-10	\$	<mark>68</mark> .11	\$ 6.479
Oct-10	\$	68.52	\$ 6.566
Nov-10	\$	68.93	\$ 6.891
Dec-10	\$	69.34	\$ 7.266

Note: Prices as of May 12, 2009. Source: NYMEX



Conclusions

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- California Energy Commission is examining utility procurement of natural gas and the impact of volatile prices on utilities and their ratepayers.
- West Virginia Consumer Advocate has petitioned the **PSC** to initiate an investigation into natural gas prices hedging practices.
- Maryland PSC ordered utilities to buy 40% of next winter's gas supply now, while prices are low.**

Note: **This order was rescinded after an emergency Commission hearing at which the state's two largest utilities - BG&E and WGL - said that because of an increase in natural gas prices after the orders were issued, they would be unable to buy enough supply to meet the 40% requirement at or below the price cap. Source: Tradepress © LSU Center for Energy Studies





	Impact on Natural Gas Prices			
	Summer	Fall	Winter	
Economy				
Storage				
Weather			?	
Crude				
Policy/Regulation				
Overall				



- Very recent success in unconventional resources has undermined pre-2005 conventional wisdom completely (running out of gas, LNG is only rescue).
- Consumers should (will) see some good news on utility bills
- While short-run news is good, there are longer term concerns that will put upward pressure on gas prices and volatility.
 - Infrastructure/resource development was challenged in low price/financially challenged market – challenges future production
 - Efficiency and clean energy goals are going to have unexpected consequences for gas market
- Economic rebound is entirely unclear growth vs. inflation



Questions, Comments, & Discussion

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