

TUDORPICKERING HOLT & CO | ENERGY INVESTMENT & MERCHANT BANKING

Commodity Prices : "It's the economy..."



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Natural Gas and Crude Oil
Price Forecast
March 9, 2009

Changes Since Our Last Update...

- We last updated our fundamental/commodity price views in early Dec 2008.
 - We assumed a soft economy in 2009 and a recovery in 2010.
 - Our current outlook assumes slower economic/demand recovery...2010 demand is assumed flat compared to a soft 2009.
- This report outlines our fundamental outlook for the next few years. This fundamental outlook drives our supply and demand forecasts over the next several years.
 - Our natural gas and crude oil forecasts are based on the net supply and demand outlook.
 - As a result, changes to our demand outlook also results in changes to our price outlook.
 - Softer demand outlook equals slower price recovery.

Adjusting 2009/2010 Oil And Gas Price Assumptions

	<u>Natural Gas, \$/mcf</u>	<u>Crude oil, \$/bbl</u>
2009	4.50	45.00
2010	5.50	60.00
2011	7.50	75.00
2012+	8.00	90.00

NATURAL GAS (Slide 6)

- Too much supply
- Record 2008 drilling
 - Shales improving mix
- Rig count falling faster than expected
 - Gas prices softer/faster than expected
 - E&P living within cash flow
- Not enough demand
 - Industrial/electricity down with economy
 - Residential/commercial down with normal weather

CRUDE OIL (Slide 34)

- Weak global demand
- Above average inventories
- OPEC cutting production
- Slow non-OPEC supply growth when oil >\$100/bbl...will decline in 2009 and 2010 with <\$50/bbl oil

With weak economy more things can go wrong than right
 Market discounting soft prices
 Industry subsector and stock implications in a separate write-up

Natural Gas Price Revisions

■ Modifying natural gas price deck:

- 2009 - \$4.50/mcf (from \$5.5/mcf) on weak demand, onshore supply growth and full storage
- 2010 - \$5.50/mcf (from \$7/mcf)
- 2011 - \$7.5/mcf (from \$8/mcf)
- 2012+ - maintaining \$8/mcf long term natural gas price

Natural Gas - NYMEX								
	2005	2006	2007	2008	2009f	2010f	2011f	2012f
Q1	6.27	8.97	6.77	8.03	4.80	5.50	7.25	8.00
Q2	6.87	6.81	7.55	10.92	4.20	5.00	7.50	8.00
Q3	8.49	6.58	6.16	10.12	4.00	5.00	7.50	8.00
Q4	12.97	6.57	6.97	6.40	5.00	6.50	7.75	8.00
	8.65	7.23	6.86	8.87	4.50	5.50	7.50	8.00

Crude Oil Price Revisions

- Modifying crude oil price deck:

- 2009 - \$45/bbl (from \$60/bbl) on weak demand
- 2010 - \$60/bbl (from \$75/bbl) assumes weak economy doesn't worsen
- 2011 - \$75/bbl (from \$90/bbl)
- 2012+ - maintaining \$90/bbl long term oil price. Price will have to ration demand over time (thus, price driven by marginal consumption)

Crude Oil - NYMEX					2009f	2010f	2011f	2012f
	2005	2006	2007	2008				
Q1	50.28	63.53	58.23	97.82	40.00	60.00	75.00	90.00
Q2	53.24	70.84	65.02	123.80	40.00	60.00	75.00	90.00
Q3	63.42	70.39	75.15	118.22	50.00	60.00	75.00	90.00
Q4	60.01	60.16	90.50	59.06	50.00	60.00	75.00	90.00
FY Avg	56.74	66.23	72.23	99.72	45.00	60.00	75.00	90.00

- Oil supply inherently difficult to grow (not impossible)
- Demand is key problematic issue (and challenging to monitor/forecast) over the next 3+ years
- Over long-term, like oil supply/demand dynamic better than gas
- Oil discussion starts on slide 34

Natural Gas Outlook

- The current US market remains 4 to 5 bcf/day out of balance.
- We forecast a continued weak natural gas market in 2009
 - Weak industrial demand (-5% y/y)
 - Sluggish electricity demand (-2.4% y/y)
 - 6% y/y supply growth (in 2008) will be moderated in 2009 with rig count reductions...supply down 2.4% in 2009 and 5.2% in 2010.
 - Higher LNG imports due to weak global economy...2.1bcf/day (2009) and 3.5bcf/day (2010) vs. 1bcf/day (2008).
- Storage projected ~4,150 bcf at end of 2009 injection season...well above capacity of ~3,800bcf. This implies:
 - Shut-ins likely to occur this summer/fall and price dips well below \$4/mcf at times.
 - Significant risk of sustained \$4/mcf gas as storage fills.
- Equilibrium takes time to achieve - hence our 2009 \$4.50/mcf gas price outlook...not improving to \$7/mcf until late 2010.

Too Much Supply and Weak Demand Is A Bad Combination

Outlook - Base Case

US Natural Gas Supply and Demand Model

	Units:Bcf/Day					
	2005	2006	2007	2008e	2009f	2010f
Total Demand	60.3	59.4	63.2	63.6	61.2	61.3
Residential / Commercial	21.5	19.8	21.4	22.0	21.0	21.0
Industrial	18.1	17.9	18.2	18.1	17.2	17.2
Electrical	16.0	17.0	18.7	18.3	17.8	17.8
LP&P Fuel	4.6	4.7	5.0	5.2	5.2	5.3
Total Supply	59.4	60.1	62.7	64.3	63.7	61.5
U.S. Gas Supply	49.5	50.7	52.3	55.9	54.6	51.8
Net Imports	9.9	9.4	10.4	8.4	9.1	9.8
Pipeline	7.1	7.9	8.4	7.5	7.0	6.6
LNG	1.6	1.5	2.0	0.9	2.1	3.5
Supply Exceeds/(Trails) Demand	(1.0)	0.7	(0.6)	0.7	2.5	0.3
November 1 Storage, bcf	3,200	3,450	3,545	3,405	3,800	3,851

	2005	2006	2007	2008e	2009f	2010f
Total Demand	-1.4%	-1.5%	6.4%	0.6%	-3.7%	0.1%
Residential / Commercial	-1.7%	-7.9%	7.7%	3.0%	-4.6%	0.0%
Industrial	-8.6%	-1.3%	1.8%	-0.3%	-5.0%	0.0%
Electrical	7.6%	6.0%	10.0%	-2.4%	-2.4%	0.0%
LP&P Fuel	2.3%	1.8%	5.6%	4.3%	0.0%	1.0%
Total Supply	-1.2%	1.3%	4.3%	2.6%	-1.0%	-3.4%
U.S. Gas Supply	-2.6%	2.5%	3.2%	7.0%	-2.4%	-5.2%
Net Imports	6.5%	-4.8%	10.1%	-19.2%	8.2%	7.5%
Pipeline	-1.8%	10.9%	6.3%	-11.0%	-7.0%	-5.8%
LNG	25.2%	-2.1%	29.6%	-53.9%	133.0%	64.7%

Demand

- 2009 - 3.7% *lower* (2.4 bcf/day) on economic slowdown and normal weather.
- 2010 - approximately flat with 2009 as we *assume a slow recovery* from current economic situation.
- Storage fills in 2009 and 2010.
- Price recovers in 2H10 as falling supply trumps full storage.

Supply

- US production should start declining in Q2 (Q3 at the latest)
- 2009 US supply falls 2.4% (**1.3bcf/day**) as 3Q supply constrained by lack of storage capacity...would be down slightly if storage unconstrained.
- 2010 US supply falls 5.2% (**almost 3bcf/day**) as low gas price prevents drilling rebound.
- LNG imports increasing to 2.1 bcf/day in 2009 and 3.5 bcf/day in 2010.

The Details/Timing of Our Natural Gas Base Case

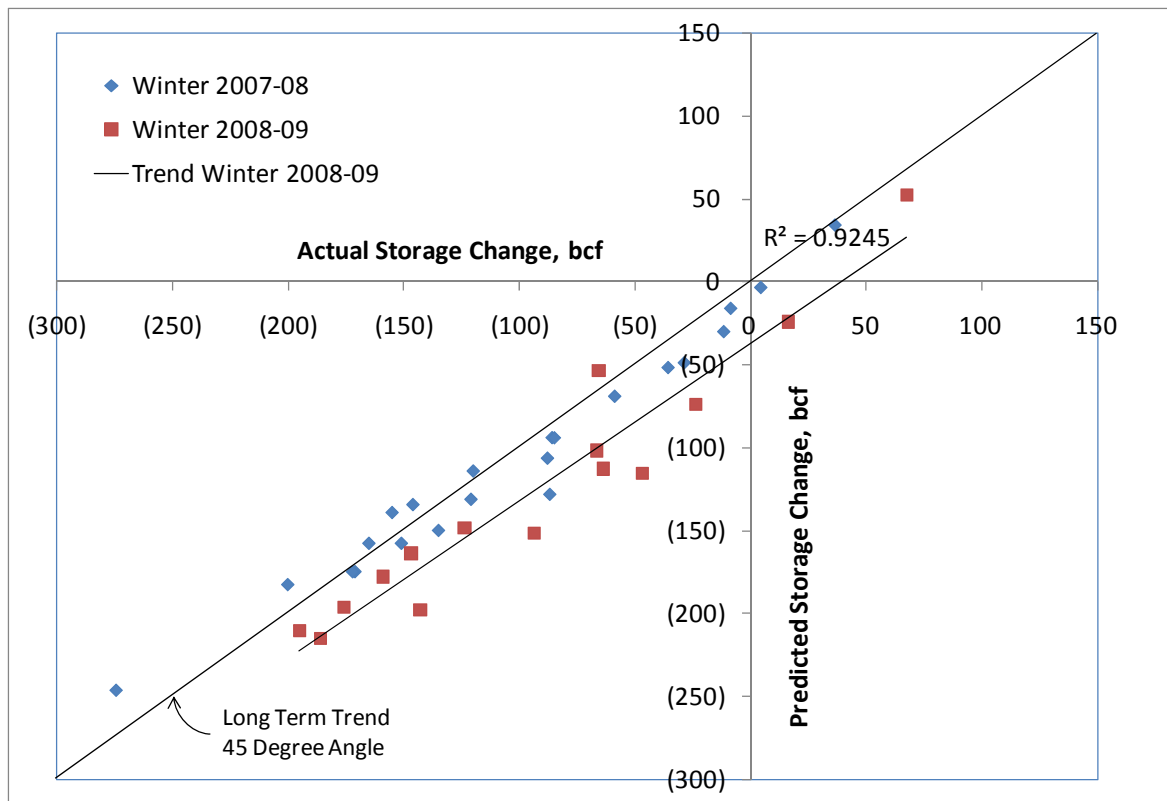
Detailed Natural Gas Supply and Demand Model

All Units: bcf/day	Actual								Forecast				Forecast					
	2005	2006	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010
Total Demand	60.3	59.4	63.2	82.2	55.1	52.9	64.2	63.6	78.6	53.3	52.7	60.2	61.2	78.7	53.4	52.8	60.2	61.3
<i>Residential</i>	13.3	12.0	13.0	25.9	8.5	3.8	15.5	13.4	24.8	8.5	3.8	13.9	12.8	24.8	8.5	3.8	13.9	12.8
<i>Commercial</i>	8.2	7.8	8.3	14.3	6.3	4.2	9.5	8.6	13.8	6.3	4.2	8.7	8.2	13.8	6.3	4.2	8.7	8.2
<i>Industrial</i>	18.1	17.9	18.2	20.6	17.7	16.7	17.5	18.1	19.5	16.8	15.9	16.6	17.2	19.5	16.8	15.9	16.6	17.2
<i>Electricity</i>	16.0	17.0	18.7	15.6	17.6	23.3	16.5	18.3	14.8	16.7	24.0	15.7	17.8	14.8	16.7	24.0	15.7	17.8
<i>LP&P Fuel</i>	4.6	4.7	5.0	5.7	5.0	4.9	5.2	5.2	5.7	5.0	4.9	5.2	5.2	5.8	5.1	4.9	5.3	5.3
Weather Data...vs Norm																		
<i>Heating Degree Days</i>	4,587	4,228	4,598	2,502	676	108	1,625	4,911	2,400	544	58	1,487	4,489	2,400	544	58	1,487	4,489
<i>Cooling Degree Days</i>	1,445	1,406	1,405	27	353	808	97	1,285	26	353	836	97	1,312	26	353	836	97	1,312
U.S. Gas Supply	49.5	50.7	52.3	55.8	56.4	55.5	56.1	55.9	57.8	56.4	50.5	53.9	54.6	54.3	53.0	49.2	50.6	51.8
Net Imports	9.9	9.4	10.4	8.6	7.5	8.3	9.2	8.4	8.3	8.6	9.4	10.0	9.1	10.1	9.0	9.7	10.2	9.8
<i>Pipeline</i>	8.3	7.9	8.4	7.8	6.6	7.4	8.1	7.5	7.3	6.1	6.9	7.5	7.0	6.6	5.5	6.2	6.7	6.3
<i>LNG</i>	1.6	1.5	2.0	0.7	0.9	0.9	1.1	0.9	1.0	2.5	2.5	2.5	2.1	3.5	3.5	3.5	3.5	3.5
Total Supply	59.4	60.1	62.7	64.4	63.9	63.8	65.3	64.3	66.1	65.0	59.9	63.8	63.7	64.4	62.0	58.9	60.9	61.5
Demand Exceeds Supply	1.0	(0.7)	0.6	17.8	(8.8)	(10.9)	(1.0)	(0.7)	12.6	(11.7)	(7.1)	(3.7)	(2.5)	14.3	(8.6)	(6.1)	(0.6)	(0.3)
Gas Storage Change	0.2	(1.2)	0.6	17.9	(10.2)	(10.8)	3.1	0.0	12.7	(13.0)	(7.0)	0.4	(1.7)	14.5	(10.0)	(6.0)	3.5	0.5
<i>Withdrawal / (Injection)</i>																		
Balancing Item	0.7	0.5	(0.0)	(0.1)	1.3	(0.1)	(4.1)	(0.8)	(0.1)	1.3	(0.1)	(4.1)	(0.8)	(0.1)	1.3	(0.1)	(4.1)	(0.8)
Working Gas, bcf				1,247	2,171	3,163	2,883		1,727	2,913	3,550	3,511		2,195	3,104	3,651	3,335	
					Nov 1st	3,405			Nov 1st	3,800				Nov 1st	3,851			

% Change, year/year

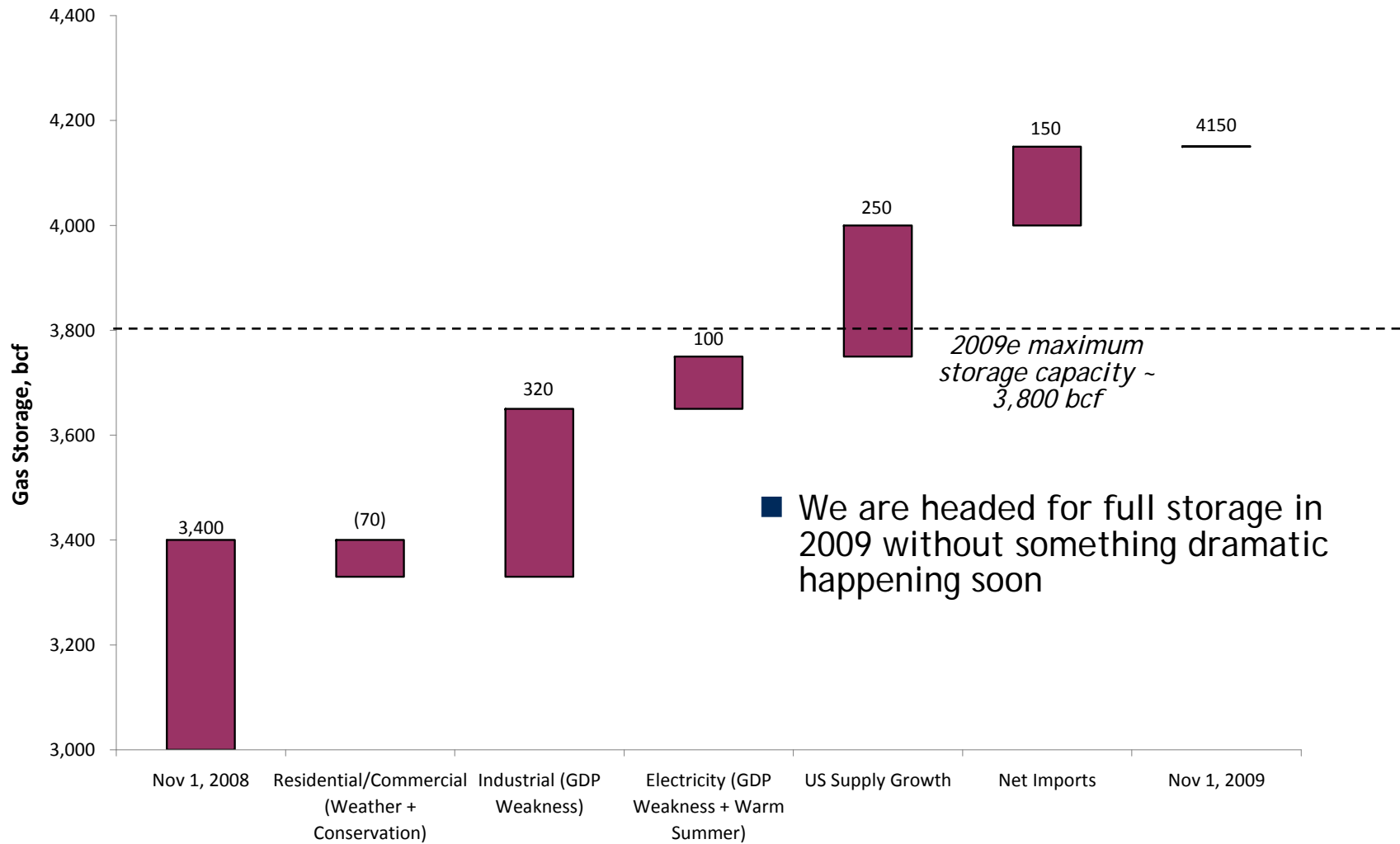
	2005	2006	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010
Total Demand	-1.4%	-1.5%	6.4%	2.9%	2.1%	-5.2%	1.3%	0.6%	-4.3%	-3.2%	-0.3%	-6.3%	-3.7%	0.1%	0.1%	0.1%	0.1%	0.1%
<i>Residential</i>	-0.4%	-9.4%	8.3%	0.0%	1.9%	0.3%	10.3%	3.1%	-4.5%	0.0%	0.0%	-10.2%	-5.1%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Commercial</i>	-3.8%	-5.5%	6.7%	1.2%	0.8%	1.2%	8.1%	3.0%	-4.0%	0.0%	0.0%	-8.2%	-3.9%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Industrial</i>	-8.6%	-1.3%	1.8%	3.0%	2.7%	-1.1%	-6.0%	-0.3%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Electricity</i>	7.6%	6.0%	10.0%	8.7%	0.8%	-10.9%	-2.0%	-2.4%	-5.0%	-5.0%	3.0%	-5.0%	-2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>LP&P Fuel</i>	2.3%	1.8%	5.6%	5.7%	6.8%	2.4%	2.4%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Weather Data...vs Norm																		
<i>Heating Degree Days</i>	4.6%	-3.6%	4.8%	8.9%	24.3%	86.2%	7.0%	11.9%	0.0%	N/A	N/A	1.0%	0.0%	0.0%	N/A	N/A	1.0%	0.0%
<i>Cooling Degree Days</i>	10.1%	7.2%	7.1%	3.8%	0.0%	-3.3%	0.0%	-2.1%	0.0%	0.0%	0.0%	N/A	0.0%	0.0%	0.0%	0.0%	N/A	0.0%
U.S. Gas Supply	-2.6%	2.5%	3.2%	9.8%	8.4%	5.5%	4.5%	7.0%	3.5%	0.0%	-9.0%	-4.0%	-2.4%	-6.0%	-6.0%	-2.5%	-6.0%	-5.2%
Net Imports	6.5%	-4.8%	10.1%	-20.4%	-30.0%	-24.2%	1.0%	-19.2%	-3.2%	14.8%	13.0%	9.1%	8.2%	21.4%	4.5%	3.3%	2.5%	7.5%
<i>Pipeline</i>	8.4%	-5.3%	6.3%	-11.8%	-15.2%	-3.0%	-3.0%	-11.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
<i>LNG</i>	-2.8%	-2.1%	29.6%	-61.1%	-68.9%	-61.3%	44.6%	-53.9%	37.5%	171.8%	177.4%	127.3%	133.0%	250.0%	40.0%	40.0%	40.0%	64.7%
Total Supply	-1.2%	1.3%	4.3%	4.5%	1.8%	0.3%	4.0%	2.6%	2.6%	1.7%	-6.1%	-2.2%	-1.0%	-2.6%	-4.6%	-1.6%	-4.7%	-3.4%

Storage Shows Gas Market Out-Of-Balance

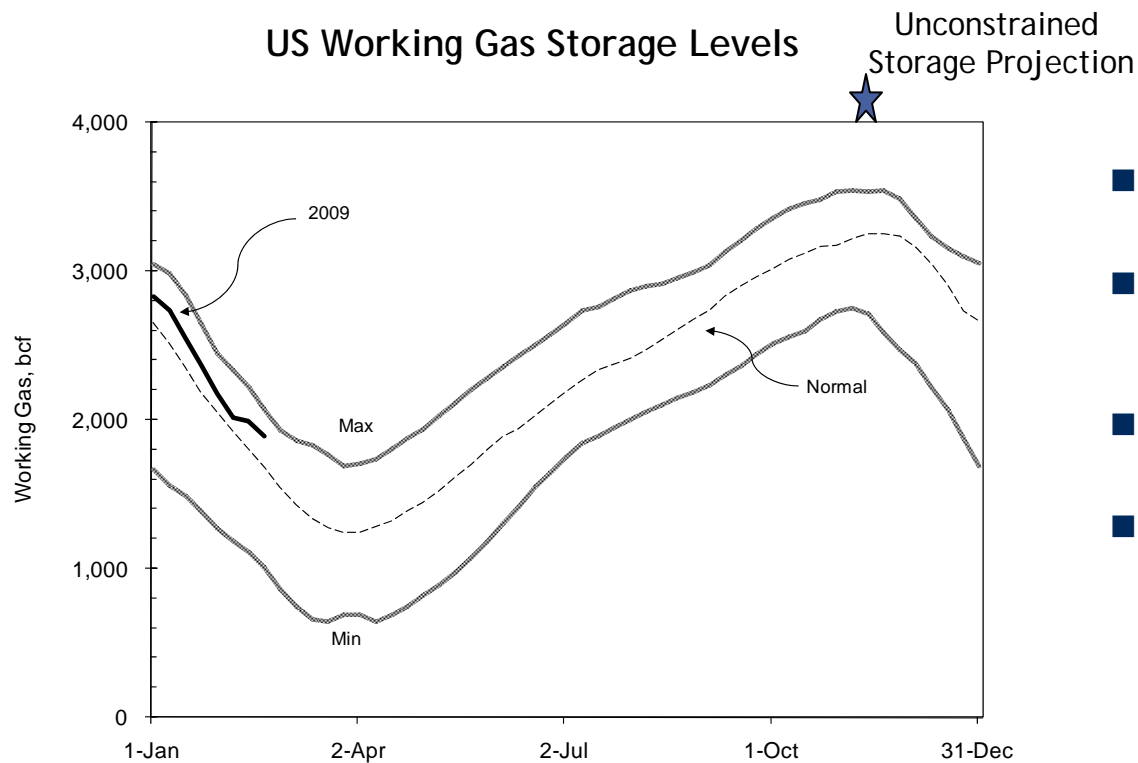


- Storage is single best datapoint to gauge the health of the gas market
- Weather-adjusted storage data shows **~4bcf/day out of balance**
- Production growth *and* demand destruction impacting gas market
- Storage on track to "over-fill" /reach max this fall

Storage Will Reach Maximum Levels

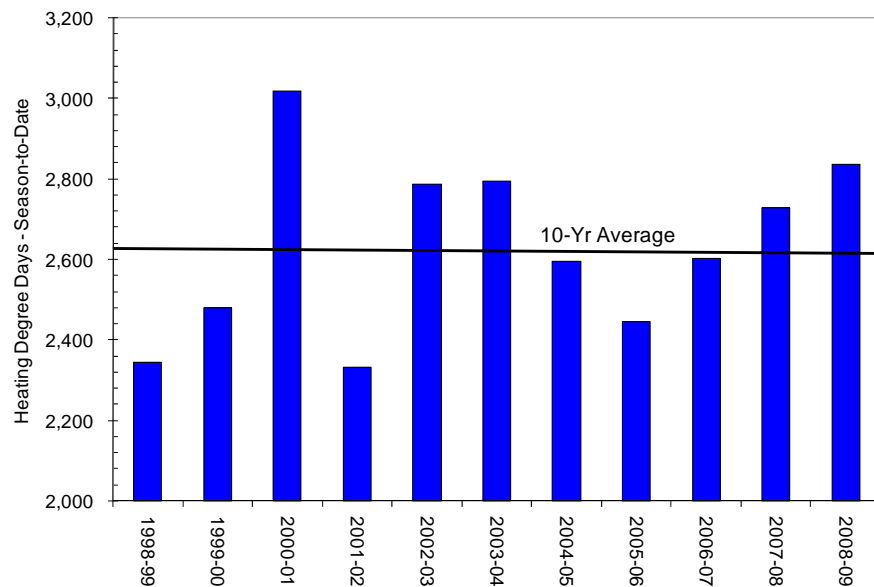


Gas Storage Facts



- Ended 2008 injection season at 3,488 bcf vs. 3,538 bcf year ago
- Projecting “over-fill” storage level of ~4,150bcf end summer 2009
- Max storage capacity ~3,800 bcf 2009
- Storage levels above normal despite 8% colder than normal winter.

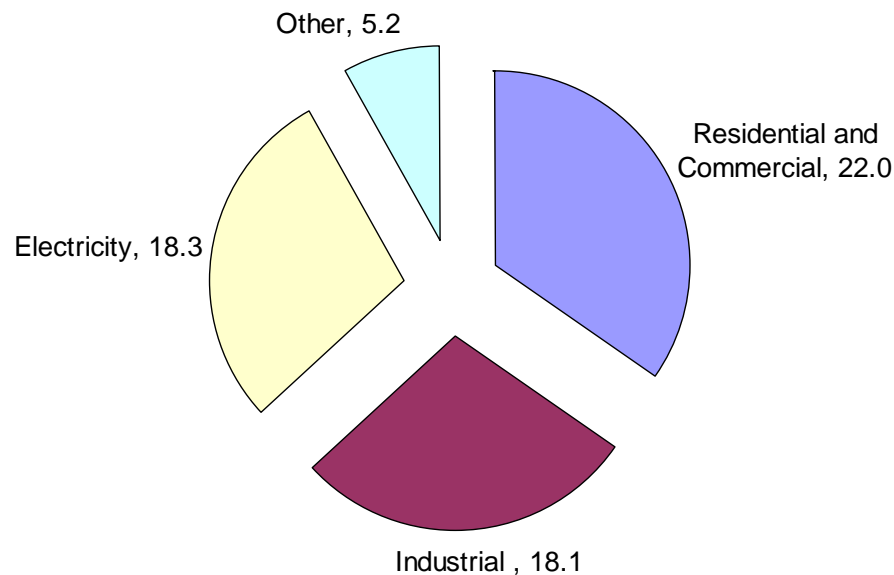
Weather - Cold Winter Not Enough



- Thru late February, this winter has been 8% colder than normal.
- Cold weather theoretically translates to ~350bcf of higher storage demand/draws than typical.
- Actual draws so far this winter have been ~140bcf *lower* than normal.
- **~4bcf/day out-of-balance** (weather-adjusted) for the 2008-09 winter.

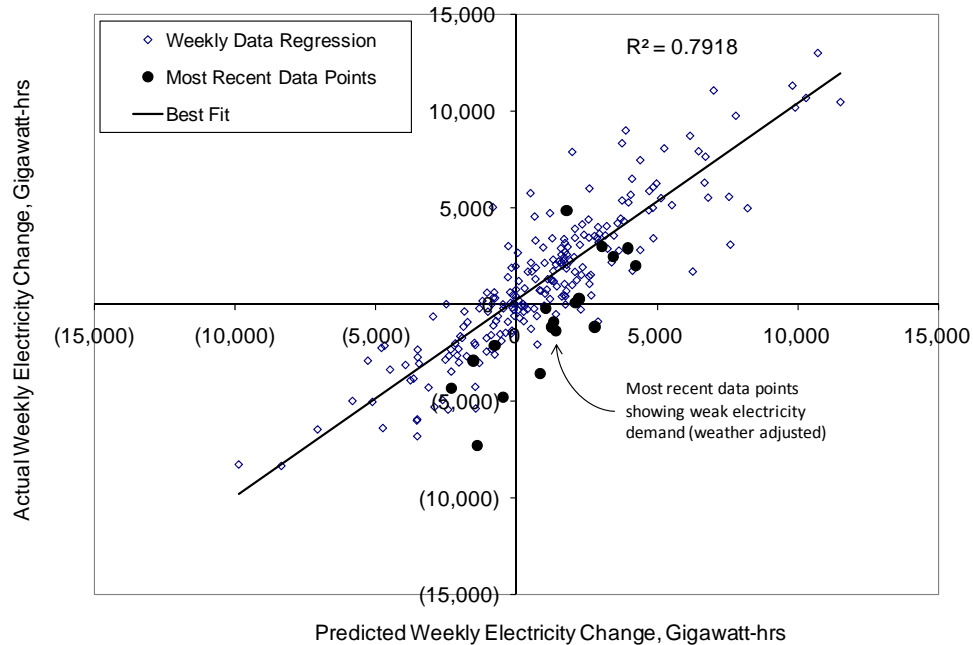
Natural Gas Demand

2008 Components of Demand, 63 bcf/day



- Residential and Commercial - driven by winter weather. Consumer efficiencies can also drive this demand.
- Industrial - linked to GDP. Should be much lower in 2009 with weak economy.
- Electricity - base growth driven by GDP growth/contraction and summer weather.
- Other - mainly natural gas used to produce, process, and transport gas...should be lower with lower supply.

Recent Electricity Data - Soft Demand



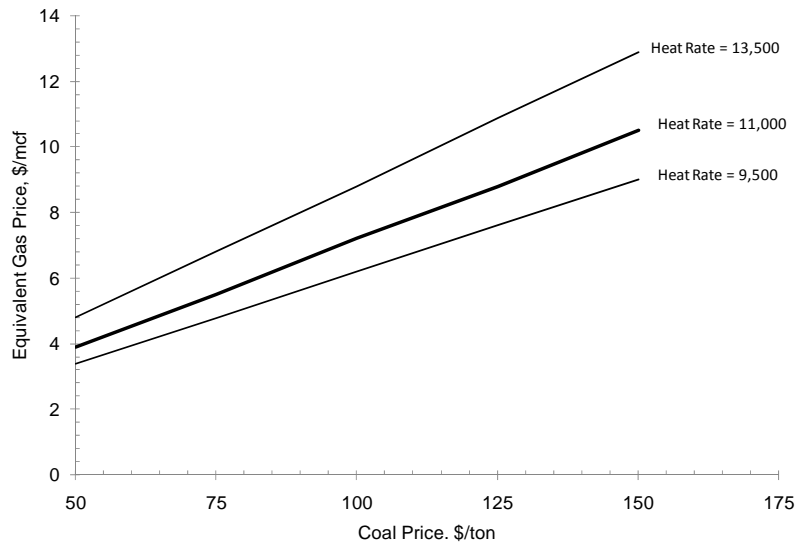
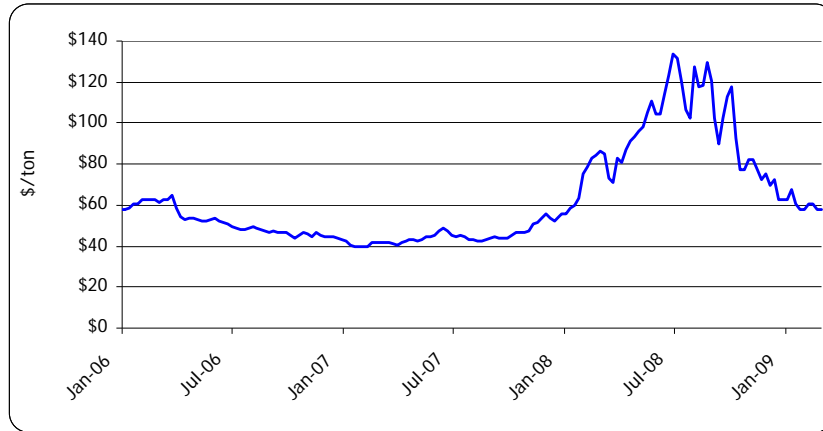
Source: EEI

Electricity Demand, bcf/day			
2007	2008	2009	2010
18.7	18.3	17.8	17.8

- Power represents ~30% of US gas demand (18bcf/day) and is likely to fall 0.5bcf/day in 2009.
- Weather-adjusted demand is falling below predictions - *further* evidence of economic softness.
- Economic troubles could drive noticeable conservation by electric consumers this winter (both industrial and residential).
- We assume weakness in gas-fired power demand in 2009 will be partially offset by slightly warmer (normal) summer weather.
- 2009 Electricity demand - *the bias is lower*, not higher.
- Flat 2010 assumes economic stability + normal summer weather.

Coal and Gas...the Elusive Demand Source

Eastern Coal Prices (Big Sandy Barge) (\$/ton)



- Price point where natural gas power generation can compete with coal is currently ~\$4/mcf (with coal ~<\$60/ton)
- This “switch point” has declined with coal prices...was ~\$10/mcf in mid-2008 when coal was \$125/ton.
- If gas prices fall below “coal equivalent” generation price, gas-fired power demand could increase by as much as 2bcf/day...but coal prices falling with gas.
- CPN indicated some coal/gas switching in the Southeast US happening (not seeing yet in weekly gas storage data).

Sources: Bloomberg and TPH

Industrial Demand Components

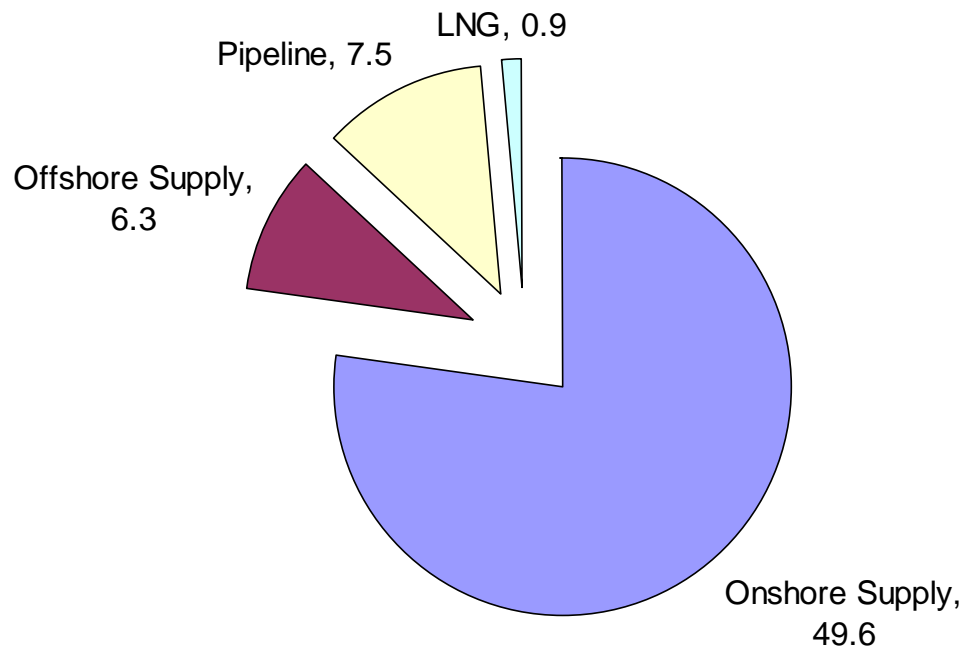
	Electricity (million kWh/day)	Electricity % Sector	Natural Gas bcf/day	Natural Gas Sector %
TOTAL	2,280	100%	17.3	100%
Chemicals	419	18%	6.2	36%
Petroleum/Coal	102	4%	2.3	14%
Primary Metals	396	17%	1.9	11%
Paper	179	8%	1.3	8%
Food	185	8%	1.6	9%
Nonmetallic Mineral	113	5%	1.1	7%
Others	885	39%	2.9	17%

Source: DOE

- Uncertain economic outlook creates challenges when forecasting natural gas demand as industrial sector accounts for ~30% of total US gas consumed.
- Weak automotive, chemical and steel outlook will likely result in lower industrial demand in 2009.
- US industrial sector accounts for 20% of total electricity output. Weakness in the industrial sector will have spill-over impact into US power sector, magnifying the natural gas demand impact.

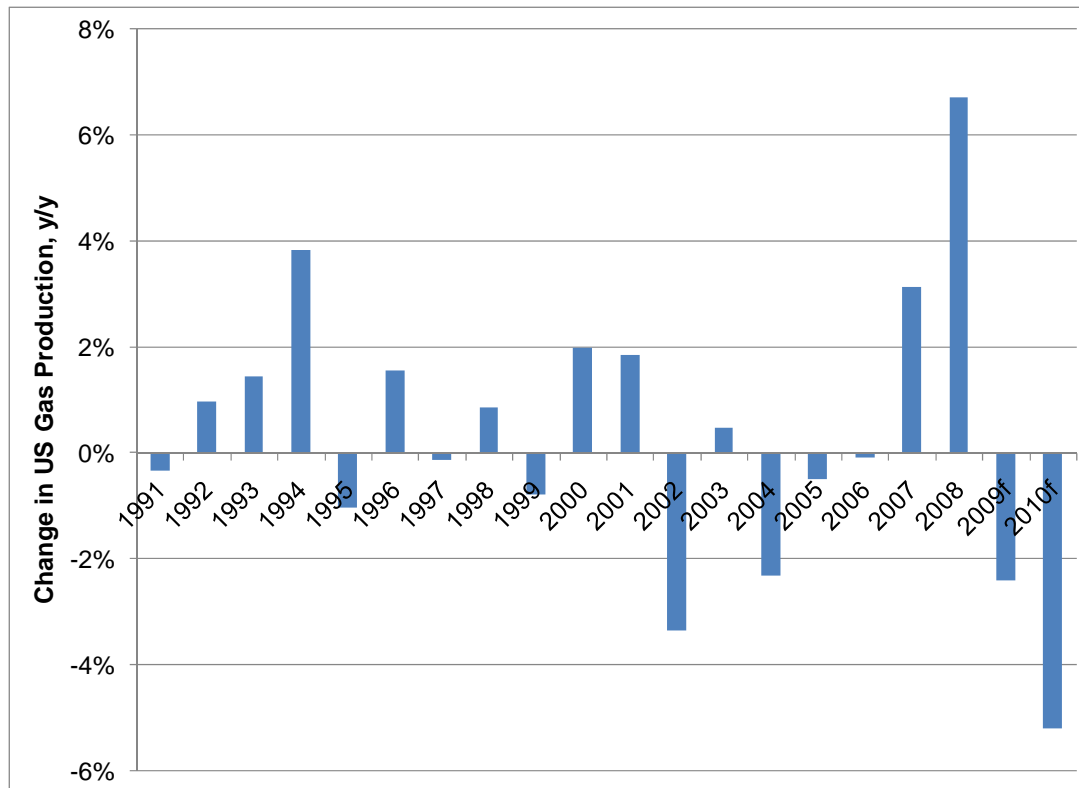
Natural Gas Supply Components

2008 Components of Supply, 64bcf/day



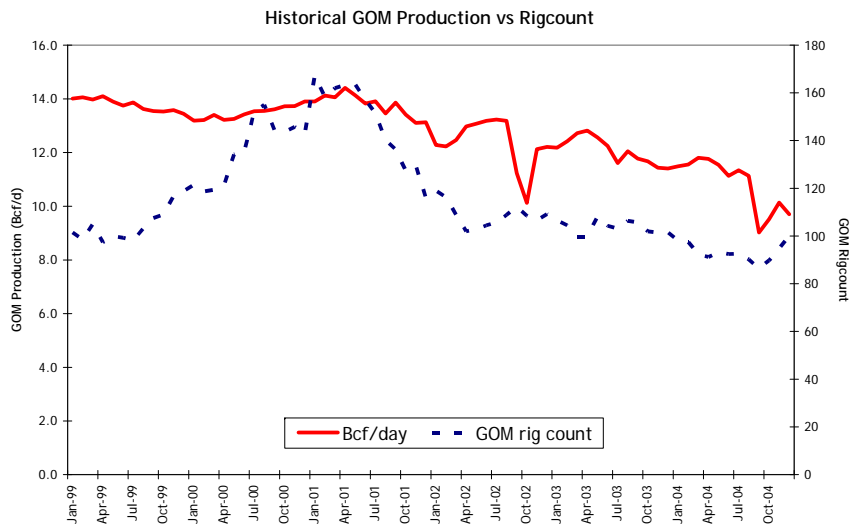
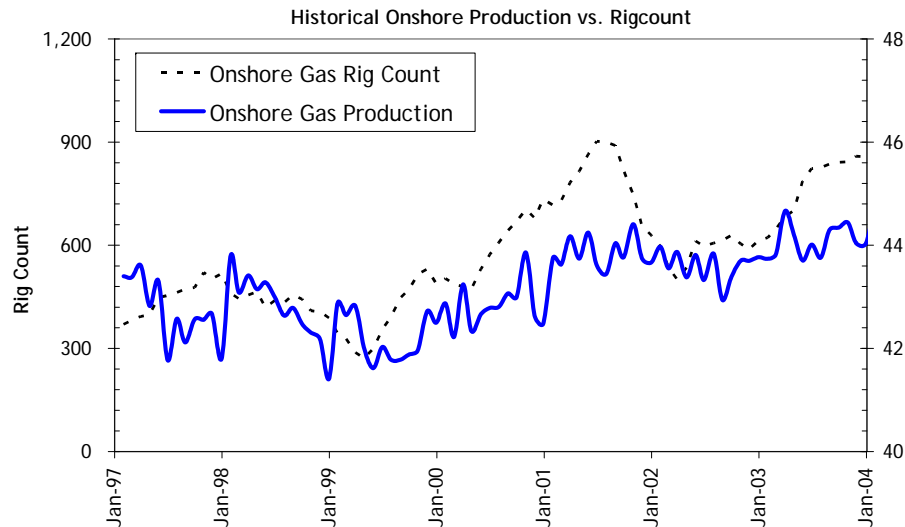
- US onshore supply - the largest component and driven by rig count/shale plays.
- Pipeline - net imports. Canadian imports less exports to Mexico.
- LNG - Smallest component of supply but proving to be hardest to predict. Driven by new global LNG supply and weak global gas demand.
- Offshore - 2008 GOM production one-half of 2001 levels. Declines will continue...but less important in next few years.

US Production - Declining in 2009 and 2010



- Dramatically falling rig count and soft prices will cause a production correction starting in 2Q which will accelerate into 2010.
- Production will fall ~2% in 2009 and ~5% in 2010.
- Full storage will force gas shut-ins. We think 2009 unconstrained wellhead supply will be flattish (1H09 +2%/y and 2H09 -2%/y).
- Shale play mix and completion timing make it difficult to know when production peaks.
- Watch monthly US production (EIA-914) and weekly gas storage for signals on timing.

2001 As A Historical Guide



US Gas Production (Gross)			
	<u>2000</u>	<u>2001</u>	<u>2002</u>
<u>Onshore</u>			
Production, bcf/d	42.8	43.9	43.6
△ bcf/day		+1.1	-0.3
△ %		+2.6%	-0.7%
<u>Offshore</u>			
Production, bcf/d	13.6	13.9	12.5
△ bcf/day		+0.3	-1.4
△ %		+2.5%	-10%
<u>Total</u>			
Production, bcf/d	56.4	57.8	56.1
△ bcf/day		+1.4	-1.7
△ %		+2.5%	-3%

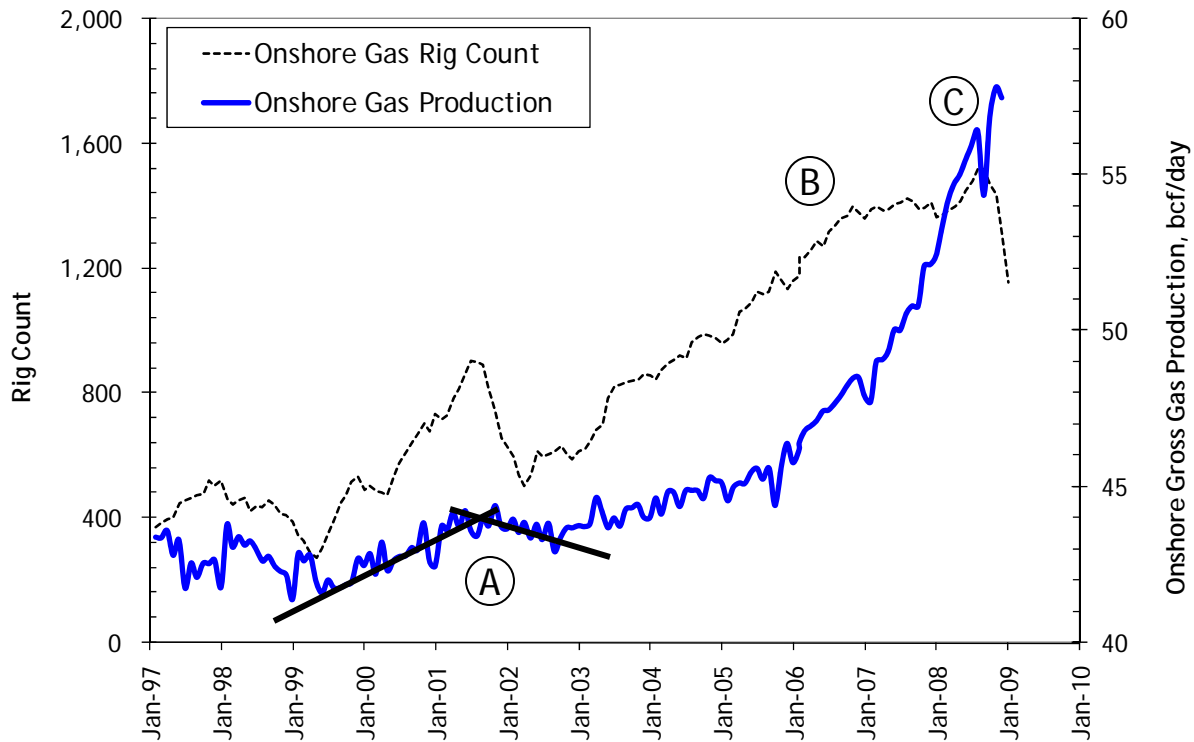
- Total supply ~3% y/y as industry reacted to low gas prices by dropping rigcount ~45%
- High-decline offshore represented 80% of total correction
- US land dropped only slightly as marginal wells were last drilled and first dropped

Wellhead Supply Current vs. 2001/2002 Cycle

Rigcount Drop Peak-To-Trough	2001-2002	2009-2010e
Onshore	508	1060
Offshore	47	30
Total	555	1090
% decline	(43%)	(53%)
Months-To-Trough	6	~8
Production Impact (gross bcf/d)		
Total wellhead supply	56.1	59
Onshore	43.6	53
Δ bcf/day	(0.3)	(2.5)
Δ%	(0.7%)	(5%)
Offshore	12.5	6.5
Δ bcf/day	(1.5)	(0.5)
Δ%	(10%)	(7%)

- Declines this cycle will be less dominated by offshore...which is now only 10% of US wellhead production.
- We are assuming that '09 drops in unconventional gas drilling will have a similar impact as the '01 offshore declines.
- 2010 is where drilling declines will really be felt (down 6%).

Onshore Supply Growth

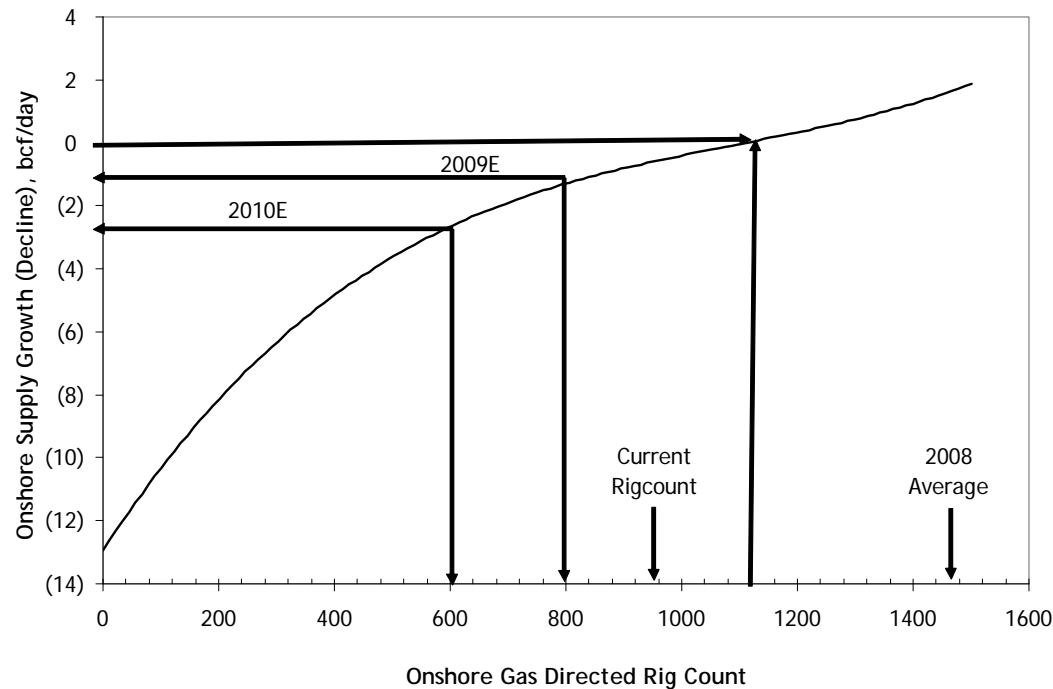


Source: Baker Hughes, EIA, TPH Estimates

- Ⓐ ~42% (400) rigs activity decline in 2001 impacted supply growth in 2002:

 - 2000 42.8 bcf/day
 - 2001 43.9 bcf/day
 - 2002 43.6 bcf/day
- Ⓑ 6% onshore supply growth with ~flat rig count from early 2006 - early 2008 - see our March 2007 report "The Yin and Yang of Natural Gas..."
- Ⓒ Onshore supply growing 8% y/y in 2008, with temporary dip a result of Ike/Gustav impacts.

Onshore Rig Count and Production Growth Relationship

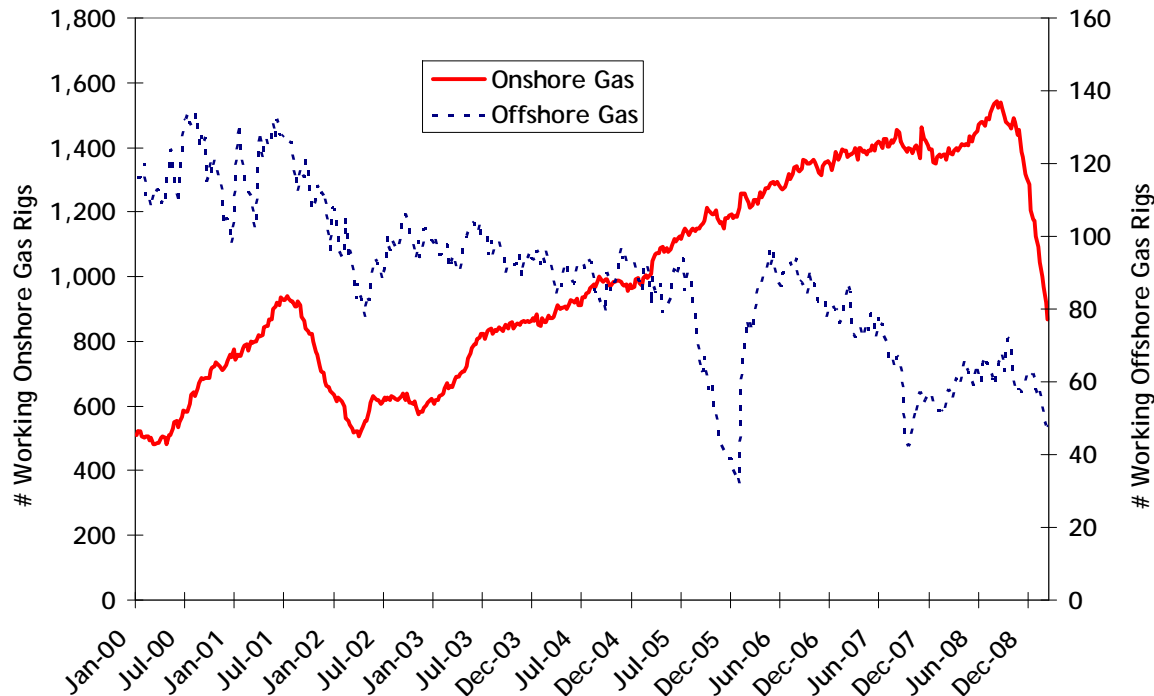


Source: TPH

- March 2007 Yin and Yang Report details rig count and production growth relationship.
- Flat production at ~1,100 gas-directed rigs.
- 2008 average 1,430 gas rigs. Activity needs to fall 400 rigs to flatten production...that has already happened.
- Not a perfect exercise, but our 2009 production estimate of down 1.3 bcf/d (2.4%) would require ~800 to 900 onshore gas rigs (wide error bar).
- 2010 decline of 3 bcf/d (6%) would only require ~600 to 700 onshore gas rigs.

Rig Count Falling Fast

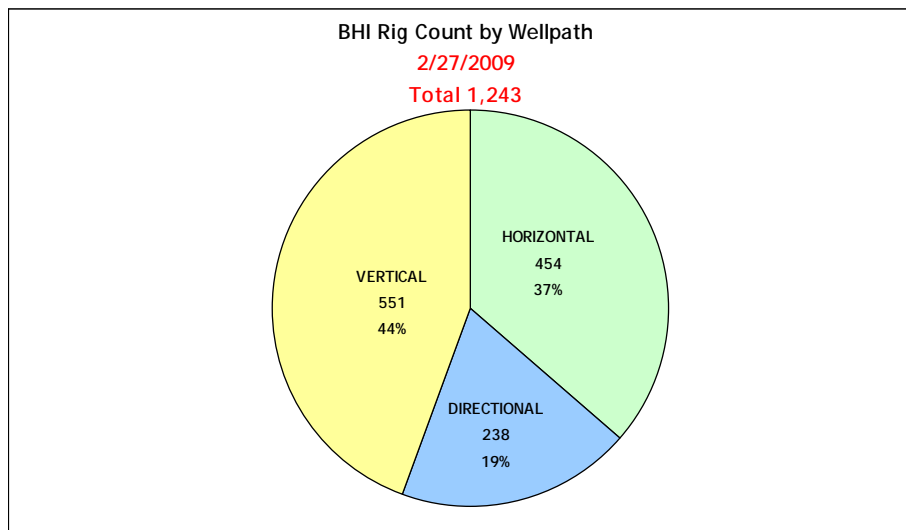
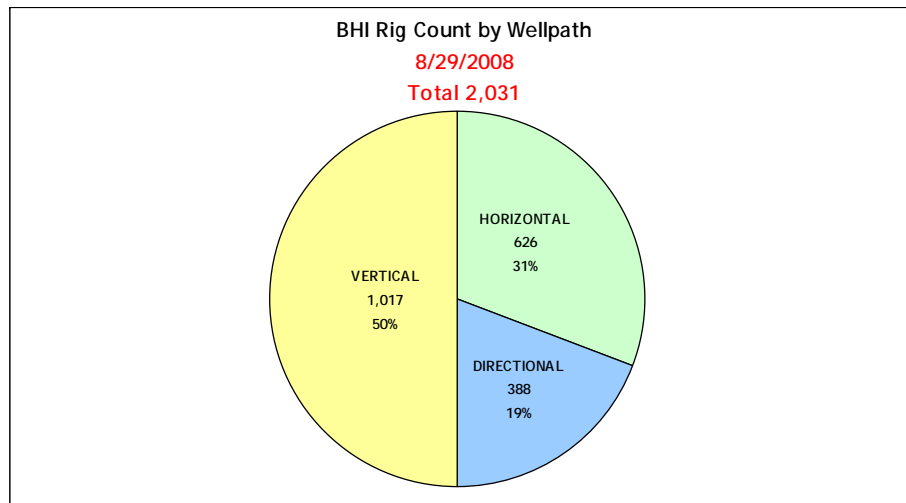
U.S. Historical Gas Directed Rigs: Onshore v. Offshore



Source: Baker Hughes

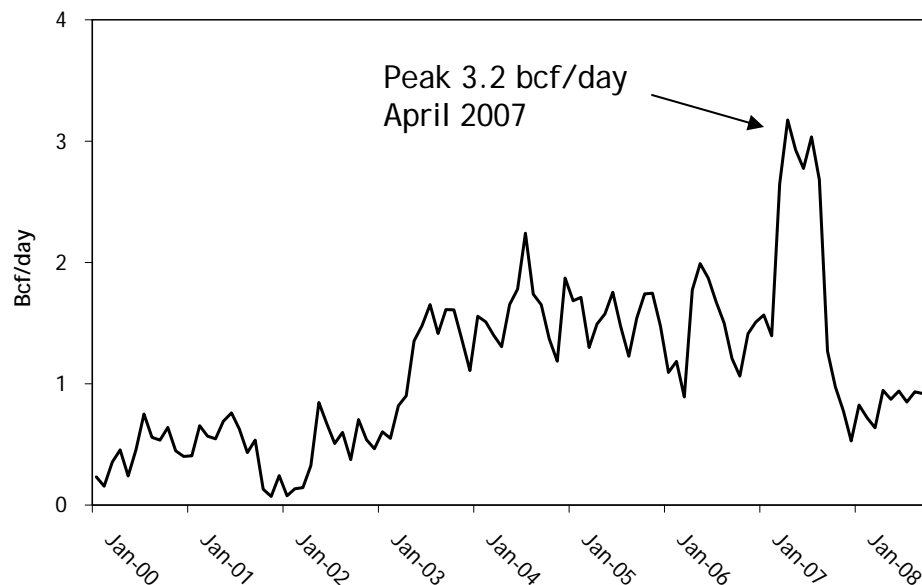
- Rig count has already started to decline.
- US gas-directed rig count is down 43% (685 rigs) from August peak and 38% y/y (556 rigs).
- Offshore rigs/production is in secular decline with traditional shallow water decline being offset/augmented by deepwater fields.

Rig Count Falling...But Led by Verticals



- Overall drilling down 39% from peak (2,031rigs), but lower impact verticals -46% while prolific horizontals are only -27%.
- Potentially meaningful mix impact as we believe the average horizontal well is 2x+ as productive as a conventional vertical.
- Watch BHI/Rig Data by wellpath for signs that industry cutting into the bone.
- More horizontals likely means longer time for supply declines to appear.

A Look At LNG



Average Imports:

2005 - 2006 = 1.5 bcf/day
2007 = 2.0 bcf/day
2008 = 0.9 bcf/day
2009E = 2.1 bcf/day
2010E = 3.5 bcf/day

Source: DOE

- Rising oil prices and strong emerging market demand pulled LNG away from the US during 2008.
- Falling oil prices, increased liquifaction supply, and weak global demand changes LNG dynamics in 2009/2010.

LNG Imports – Increasing in 2009/2010

Global Liquifaction Projects

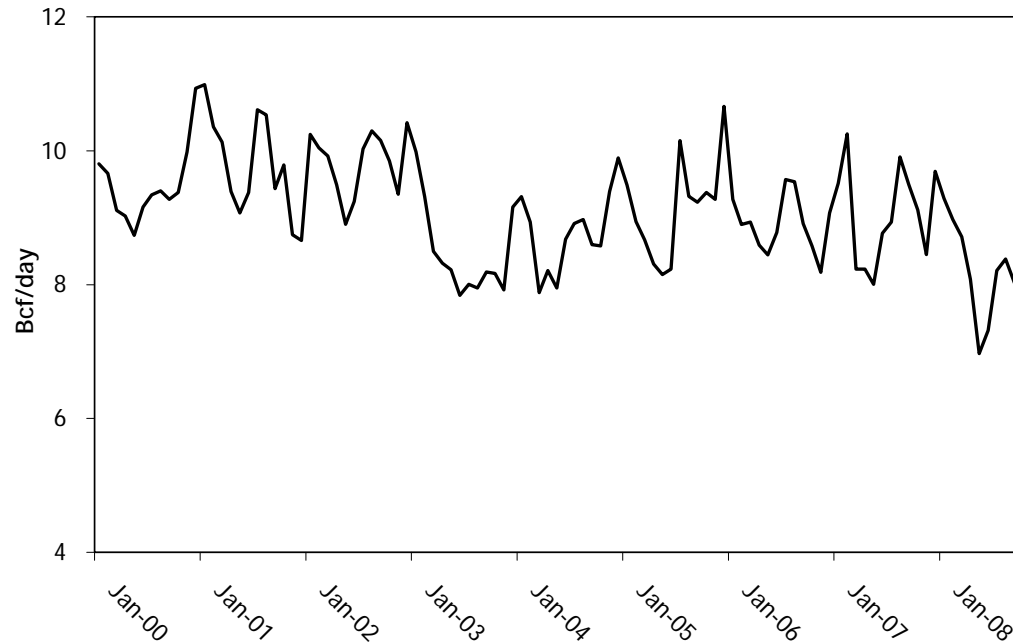
2009 LNG Projects			
<i>Country</i>	<i>Project</i>	<i>In-Service</i>	<i>Estimated Capacity bc/day</i>
Qatar	Qatargas II	1Q09	1.0
Russia	Sakhalin	1Q09	0.6
Indonesia	Tangguh	2Q09	0.5
Yemen	Yemen LNG	3Q09	0.4
Russia	Sakhalin	3Q09	0.6
Indonesia	Tangguh	3Q09	0.5
Qatar	RasGas	4Q09	1.0
Total			4.7

2010/2011 LNG Projects			
<i>Country</i>	<i>Project</i>	<i>In-Service</i>	<i>Estimated Capacity bc/day</i>
Qatar	QatarGas II	1Q10	1.0
Qatar	Ras Gas	1Q10	1.0
Qatar	QatarGas III	1Q10	1.0
Peru	Camisea	4Q10	0.5
Australia	Pluto	2H11	0.5
Australia	Gladstone 1	2H11	0.4
Algeria	Skikda Revamp	2H11	0.5
Qatar	QatarGas IV	2H11	1.0
Total			5.9

Source: Waterborne

- A negative for the US gas market/prices.
- 2009 liquifaction projects are a reality and will add 5 bcf/day to global supply. Early 2010 projects add another 3bcf/day.
- Projects in late 2010 and 2011 have a high likelihood of delay.
- With global GDP clearly at risk/contracting, it is uncertain if there will be demand for new liquifaction capacity.
- Storage infrastructure makes the US the market of last resort.
- 2009 LNG imports will rise by 1.1bcf/day. 2010 will be even higher.
- Given full storage, LNG imports are unlikely to reach the 5bcf/day some fear later this year...but LNG can put pressure on Gulf coast gas prices.

Net Pipeline Imports



Source: DOE

- Finally saw decline in Canada pipeline imports in 2008.
 - 2005 7.1 bcf/day
 - 2006 7.9 bcf/day
 - 2007 8.4 bcf/day
 - 2008E 7.5 bcf/day
 - 2009f 7.0 bcf/day
 - 2010f 6.6 bcf/day
- Canada activity sensitive to both gas prices and capital markets (junior E&P's) - expecting ~7% decline in 2009 imports to US.
- While Canada supply is falling, so is Canadian demand...thus hard to see exports fall more rapidly than our forecast.

What To Watch?

SUPPLY

- Rig Count - location and type of activity reduction.
 - Rockies rigs less important as region already has too much supply
 - Horizontal activity reduction = faster production impact
- EIA-914 Production Survey gauges magnitude and duration of supply impact from reduced rig count.
- Inventories - always watch inventories! Combined with EIA-914 survey can be a “real time” indicator.
- LNG - watch to see if oil/gas price differential and global demand weakness creates incentive or necessity for higher US imports. Should see increase in LNG imports during 2Q.
- Production shut-ins - as storage fills this summer, production in the Rockies, Mid Continent, and South Texas most at risk of forced shut-ins. Regional price differentials will be weakest where production is shut-in.

DEMAND

- Economic data points - useful to *qualitatively* assess direction of demand.
 - Electricity output weather-normalized
 - Chemical railcar loadings
 - Fertilizer production
 - Overall industrial production

Where Could We Be Wrong?

- Tougher than usual to forecast given economic situation, credit crunch and shale play dynamics. Not much can save 2009, but 2010 outcomes have a wide error bar.
- **Upside Case** - \$7/mcf 2010, \$8/mcf 2011 if:
 - Economic stimulus is successful and creates flattish 2009 industrial and electricity demand, and some 2010 growth.
 - Supply reacts more quickly to declining rig count.
- **Downside Case** - Price Armageddon. \$4/mcf 2009 and <\$5/mcf 2010 if:
 - Demand is worse than we anticipate...industrial and electricity demand weakness spills into 2010.
 - Supply response to declining lower rig count is slower to react.
 - Companies are hedged and are slow to lay down impactful rigs.
 - Shale gas provides a more stable base than we anticipate.
 - LNG imports accelerate as liquifaction is built and global demand remains weak.

Upside Surprise?

	Units:Bcf/Day					
	2005	2006	2007	2008e	2009f	2010f
Total Demand	60.3	59.4	63.2	63.6	61.2	62.3
Residential / Commercial	21.5	19.8	21.4	22.0	21.0	21.0
Industrial	18.1	17.9	18.2	18.1	17.2	17.7
Electrical	16.0	17.0	18.7	18.3	17.8	18.3
LP&P Fuel	4.6	4.7	5.0	5.2	5.2	5.3
Total Supply	59.4	60.1	62.7	64.3	63.7	61.5
U.S. Gas Supply	49.5	50.7	52.3	55.9	54.6	51.7
Net Imports	9.9	9.4	10.4	8.4	9.1	9.8
Pipeline	7.1	7.9	8.4	7.5	7.0	6.6
LNG	1.6	1.5	2.0	0.9	2.1	3.5
Supply Exceeds/(Trails) Demand	(1.0)	0.7	(0.6)	0.7	2.5	(0.8)
November 1 Storage, bcf	3,200	3,450	3,545	3,405	3,800	3,598

	2005	2006	2007	2008e	2009f	2010f
Total Demand	-1.4%	-1.5%	6.4%	0.6%	-3.7%	1.7%
Residential / Commercial	-1.7%	-7.9%	7.7%	3.0%	-4.6%	0.0%
Industrial	-8.6%	-1.3%	1.8%	-0.3%	-5.0%	3.0%
Electrical	7.6%	6.0%	10.0%	-2.4%	-2.4%	2.7%
LP&P Fuel	2.3%	1.8%	5.6%	4.3%	0.0%	1.0%
Total Supply	-1.2%	1.3%	4.3%	2.6%	-1.0%	-3.5%
U.S. Gas Supply	-2.6%	2.5%	3.2%	7.0%	-2.4%	-5.3%
Net Imports	6.5%	-4.8%	10.1%	-19.2%	8.2%	7.5%
Pipeline	-1.8%	10.9%	6.3%	-11.0%	-7.0%	-5.8%
LNG	25.2%	-2.1%	29.6%	-53.9%	133.0%	64.7%

- Demand recovery in 2010 meets falling supply = rapid price recovery.
- Inventories end 2009 injection season at high levels...but 2010 below maximum capacity.
- Gas prices are \$5/mcf in 2009 and \$7 to 8/mcf in 2010 in this scenario.

Upside Model Details

All Units: bcf/day	Actual								Forecast				Forecast					
	2005	2006	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010
Total Demand	60.3	59.4	63.2	82.2	55.1	52.9	64.2	63.6	78.6	53.3	52.7	60.2	61.2	79.7	54.4	53.7	61.2	62.3
Residential	13.3	12.0	13.0	25.9	8.5	3.8	15.5	13.4	24.8	8.5	3.8	13.9	12.8	24.8	8.5	3.8	13.9	12.8
Commercial	8.2	7.8	8.3	14.3	6.3	4.2	9.5	8.6	13.8	6.3	4.2	8.7	8.2	13.8	6.3	4.2	8.7	8.2
Industrial	18.1	17.9	18.2	20.6	17.7	16.7	17.5	18.1	19.5	16.8	15.9	16.6	17.2	20.1	17.3	16.3	17.1	17.7
Electricity	16.0	17.0	18.7	15.6	17.6	23.3	16.5	18.3	14.8	16.7	24.0	15.7	17.8	15.3	17.2	24.5	16.1	18.3
LP&P Fuel	4.6	4.7	5.0	5.7	5.0	4.9	5.2	5.2	5.7	5.0	4.9	5.2	5.2	5.8	5.1	4.9	5.3	5.3
Weather Data...vs Norm																		
Heating Degree Days	4,587	4,228	4,598	2,502	676	108	1,625	4,911	2,400	544	58	1,487	4,489	2,400	544	58	1,487	4,489
Cooling Degree Days	1,445	1,406	1,405	27	353	808	97	1,285	26	353	836	97	1,312	26	353	836	97	1,312
U.S. Gas Supply	49.5	50.7	52.3	55.8	56.4	55.5	56.1	55.9	57.8	56.4	50.5	53.9	54.6	53.7	52.4	50.6	50.1	51.7
Net Imports	9.9	9.4	10.4	8.6	7.5	8.3	9.2	8.4	8.3	8.6	9.4	10.0	9.1	10.1	9.0	9.7	10.2	9.8
Pipeline	8.3	7.9	8.4	7.8	6.6	7.4	8.1	7.5	7.3	6.1	6.9	7.5	7.0	6.6	5.5	6.2	6.7	6.3
LNG	1.6	1.5	2.0	0.7	0.9	0.9	1.1	0.9	1.0	2.5	2.5	2.5	2.1	3.5	3.5	3.5	3.5	3.5
Total Supply	59.4	60.1	62.7	64.4	63.9	63.8	65.3	64.3	66.1	65.0	59.9	63.8	63.7	63.8	61.5	60.3	60.3	61.5
Demand Exceeds Supply	1.0	(0.7)	0.6	17.8	(8.8)	(10.9)	(1.0)	(0.7)	12.6	(11.7)	(7.1)	(3.7)	(2.5)	15.9	(7.1)	(6.6)	0.9	0.8
Gas Storage Change	0.2	(1.2)	0.6	17.9	(10.2)	(10.8)	3.1	0.0	12.7	(13.0)	(7.0)	0.4	(1.7)	16.1	(8.4)	(6.4)	5.0	1.6
Withdrawal / (Injection)																		
Balancing Item	0.7	0.5	(0.0)	(0.1)	1.3	(0.1)	(4.1)	(0.8)	(0.1)	1.3	(0.1)	(4.1)	(0.8)	(0.1)	1.3	(0.1)	(4.1)	(0.8)
Working Gas, bcf				1,247	2,171	3,163	2,883		1,727	2,913	3,550	3,511		2,049	2,815	3,398	2,946	
					Nov 1st	3,405				Nov 1st	3,800				Nov 1st	3,598		

% Change, year/year

	2005	2006	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010
Total Demand	-1.4%	-1.5%	6.4%	2.9%	2.1%	-5.2%	1.3%	0.6%	-4.3%	-3.2%	-0.3%	-6.3%	-3.7%	1.4%	2.0%	1.9%	1.7%	1.7%
Residential	-0.4%	-9.4%	8.3%	0.0%	1.9%	0.3%	10.3%	3.1%	-4.5%	0.0%	0.0%	-10.2%	-5.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Commercial	-3.8%	-5.5%	6.7%	1.2%	0.8%	1.2%	8.1%	3.0%	-4.0%	0.0%	0.0%	-8.2%	-3.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrial	-8.6%	-1.3%	1.8%	3.0%	2.7%	-1.1%	-6.0%	-0.3%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Electricity	7.6%	6.0%	10.0%	8.7%	0.8%	-10.9%	-2.0%	-2.4%	-5.0%	-5.0%	3.0%	-5.0%	-2.4%	3.0%	3.0%	2.0%	3.0%	2.7%
LP&P Fuel	2.3%	1.8%	5.6%	5.7%	6.8%	2.4%	2.4%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Weather Data...vs Norm																		
Heating Degree Days	4.6%	-3.6%	4.8%	8.9%	24.3%	86.2%	9.3%	11.9%	0.0%	N/A	N/A	1.0%	0.0%	0.0%	N/A	N/A	1.0%	0.0%
Cooling Degree Days	10.1%	7.2%	7.1%	3.8%	0.0%	-3.3%	0.0%	-2.1%	0.0%	0.0%	0.0%	N/A	0.0%	0.0%	0.0%	0.0%	N/A	0.0%
U.S. Gas Supply	-2.6%	2.5%	3.2%	9.8%	8.4%	5.5%	4.5%	7.0%	3.5%	0.0%	-9.0%	-4.0%	-2.4%	-7.0%	-7.0%	0.2%	-7.0%	-5.3%
Net Imports	6.5%	-4.8%	10.1%	-20.4%	-30.0%	-24.2%	1.0%	-19.2%	-3.2%	14.8%	13.0%	9.1%	8.2%	21.4%	4.5%	3.3%	2.5%	7.5%
Pipeline	8.4%	-5.3%	6.3%	-11.8%	-15.2%	-3.0%	-3.0%	-11.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
LNG	-2.8%	-2.1%	29.6%	-61.1%	-68.9%	-61.3%	44.6%	-53.9%	37.5%	171.8%	177.4%	127.3%	133.0%	250.0%	40.0%	40.0%	40.0%	64.7%
Total Supply	-1.2%	1.3%	4.3%	4.5%	1.8%	0.3%	4.0%	2.6%	2.6%	1.7%	-6.1%	-2.2%	-1.0%	-3.4%	-5.5%	0.7%	-5.5%	-3.5%

Downside

	Units:Bcf/Day					
	2005	2006	2007	2008e	2009f	2010f
Total Demand	60.3	59.4	63.2	63.6	61.2	60.2
Residential / Commercial	21.5	19.8	21.4	22.0	21.0	21.0
Industrial	18.1	17.9	18.2	18.1	17.2	16.7
Electrical	16.0	17.0	18.7	18.3	17.8	17.3
LP&P Fuel	4.6	4.7	5.0	5.2	5.2	5.2
Total Supply	59.4	60.1	62.7	64.3	63.7	61.0
U.S. Gas Supply	49.5	50.7	52.3	55.9	54.6	50.8
Net Imports	9.9	9.4	10.4	8.4	9.1	10.3
Pipeline	7.1	7.9	8.4	7.5	7.0	6.6
LNG	1.6	1.5	2.0	0.9	2.1	4.0
Supply Exceeds/(Trails) Demand	(1.0)	0.7	(0.6)	0.7	2.5	0.8
November 1 Storage, bcf	3,200	3,450	3,545	3,405	3,800	3,849

	2005	2006	2007	2008e	2009f	2010f
Total Demand	-1.4%	-1.5%	6.4%	0.6%	-3.7%	-1.6%
Residential / Commercial	-1.7%	-7.9%	7.7%	3.0%	-4.6%	0.0%
Industrial	-8.6%	-1.3%	1.8%	-0.3%	-5.0%	-3.0%
Electrical	7.6%	6.0%	10.0%	-2.4%	-2.4%	-2.7%
LP&P Fuel	2.3%	1.8%	5.6%	4.3%	0.0%	0.0%
Total Supply	-1.2%	1.3%	4.3%	2.6%	-1.0%	-4.2%
U.S. Gas Supply	-2.6%	2.5%	3.2%	7.0%	-2.4%	-7.1%
Net Imports	6.5%	-4.8%	10.1%	-19.2%	8.2%	13.0%
Pipeline	-1.8%	10.9%	6.3%	-11.0%	-7.0%	-5.8%
LNG	25.2%	-2.1%	29.6%	-53.9%	133.0%	88.2%

- 2009 demand down 2bcf/day or 3% (2003 levels) as US economy struggles.
- Supply growth tapers off more slowly as the E&P industry continues drilling high impact shale wells.
- Does not include more LNG than the base case... but the risk is real if the global economy remains weak.
- Storage at/above capacity in both 2009 & 2010.
- Gas prices are below \$5/mcf in 2009...with potentially very low prices during 3Q09.
- <\$5/mcf in 2010 is likely in this scenario.

Downside Model Details

All Units: bcf/day	Actual								Forecast				Forecast					
	2005	2006	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010
Total Demand	60.3	59.4	63.2	82.2	55.1	52.9	64.2	63.6	78.6	53.3	52.7	60.2	61.2	77.6	52.3	51.8	59.2	60.2
Residential	13.3	12.0	13.0	25.9	8.5	3.8	15.5	13.4	24.8	8.5	3.8	13.9	12.8	24.8	8.5	3.8	13.9	12.8
Commercial	8.2	7.8	8.3	14.3	6.3	4.2	9.5	8.6	13.8	6.3	4.2	8.7	8.2	13.8	6.3	4.2	8.7	8.2
Industrial	18.1	17.9	18.2	20.6	17.7	16.7	17.5	18.1	19.5	16.8	15.9	16.6	17.2	19.0	16.3	15.4	16.1	16.7
Electricity	16.0	17.0	18.7	15.6	17.6	23.3	16.5	18.3	14.8	16.7	24.0	15.7	17.8	14.4	16.2	23.6	15.2	17.3
LP&P Fuel	4.6	4.7	5.0	5.7	5.0	4.9	5.2	5.2	5.7	5.0	4.9	5.2	5.2	5.7	5.0	4.9	5.2	5.2
Weather Data...vs Norm																		
Heating Degree Days	4,587	4,228	4,598	2,502	676	108	1,625	4,911	2,400	544	58	1,487	4,489	2,400	544	58	1,487	4,489
Cooling Degree Days	1,445	1,406	1,405	27	353	808	97	1,285	26	353	836	97	1,312	26	353	836	97	1,312
U.S. Gas Supply	49.5	50.7	52.3	55.8	56.4	55.5	56.1	55.9	57.8	56.4	50.5	53.9	54.6	54.9	53.5	43.4	51.2	50.8
Net Imports	9.9	9.4	10.4	8.6	7.5	8.3	9.2	8.4	8.3	8.6	9.4	10.0	9.1	10.6	9.5	10.2	10.7	10.3
Pipeline	8.3	7.9	8.4	7.8	6.6	7.4	8.1	7.5	7.3	6.1	6.9	7.5	7.0	6.6	5.5	6.2	6.7	6.3
LNG	1.6	1.5	2.0	0.7	0.9	0.9	1.1	0.9	1.0	2.5	2.5	2.5	2.1	4.0	4.0	4.0	4.0	4.0
Total Supply	59.4	60.1	62.7	64.4	63.9	63.8	65.3	64.3	66.1	65.0	59.9	63.8	63.7	65.4	63.1	53.6	61.9	61.0
Demand Exceeds Supply	1.0	(0.7)	0.6	17.8	(8.8)	(10.9)	(1.0)	(0.7)	12.6	(11.7)	(7.1)	(3.7)	(2.5)	12.1	(10.8)	(1.8)	(2.7)	(0.8)
Gas Storage Change	0.2	(1.2)	0.6	17.9	(10.2)	(10.8)	3.1	0.0	12.7	(13.0)	(7.0)	0.4	(1.7)	12.3	(12.1)	(1.7)	1.4	(0.0)
Withdrawal / (Injection)																		
Balancing Item	0.7	0.5	(0.0)	(0.1)	1.3	(0.1)	(4.1)	(0.8)	(0.1)	1.3	(0.1)	(4.1)	(0.8)	(0.1)	1.3	(0.1)	(4.1)	(0.8)
Working Gas, bcf				1,247	2,171	3,163	2,883		1,727	2,913	3,550	3,511		2,392	3,494	3,649	3,521	
					Nov 1st	3,405				Nov 1st	3,800				Nov 1st	3,849		

% Change, year/year

	2005	2006	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010
Total Demand	-1.4%	-1.5%	6.4%	2.9%	2.1%	-5.2%	1.3%	0.6%	-4.3%	-3.2%	-0.3%	-6.3%	-3.7%	-1.3%	-1.9%	-1.8%	-1.6%	-1.6%
Residential	-0.4%	-9.4%	8.3%	0.0%	1.9%	0.3%	10.3%	3.1%	-4.5%	0.0%	0.0%	-10.2%	-5.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Commercial	-3.8%	-5.5%	6.7%	1.2%	0.8%	1.2%	8.1%	3.0%	-4.0%	0.0%	0.0%	-8.2%	-3.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrial	-8.6%	-1.3%	1.8%	3.0%	2.7%	-1.1%	-6.0%	-0.3%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	-3.0%	-3.0%	-3.0%	-3.0%	-3.0%
Electricity	7.6%	6.0%	10.0%	8.7%	0.8%	-10.9%	-2.0%	-2.4%	-5.0%	-5.0%	3.0%	-5.0%	-2.4%	-3.0%	-3.0%	-2.0%	-3.0%	-2.7%
LP&P Fuel	2.3%	1.8%	5.6%	5.7%	6.8%	2.4%	2.4%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Weather Data...vs Norm																		
Heating Degree Days	4.6%	-3.6%	4.8%	8.9%	24.3%	86.2%	9.3%	11.9%	0.0%	N/A	N/A	1.0%	0.0%	0.0%	N/A	N/A	1.0%	0.0%
Cooling Degree Days	10.1%	7.2%	7.1%	3.8%	0.0%	-3.3%	0.0%	-2.1%	0.0%	0.0%	0.0%	N/A	0.0%	0.0%	0.0%	0.0%	N/A	0.0%
U.S. Gas Supply	-2.6%	2.5%	3.2%	9.8%	8.4%	5.5%	4.5%	7.0%	3.5%	0.0%	-9.0%	-4.0%	-2.4%	-5.0%	-5.0%	-14.0%	-5.0%	-7.1%
Net Imports	6.5%	-4.8%	10.1%	-20.4%	-30.0%	-24.2%	1.0%	-19.2%	-3.2%	14.8%	13.0%	9.1%	8.2%	27.4%	10.2%	8.6%	7.5%	13.0%
Pipeline	8.4%	-5.3%	6.3%	-11.8%	-15.2%	-3.0%	-3.0%	-11.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
LNG	-2.8%	-2.1%	29.6%	-61.1%	-68.9%	-61.3%	44.6%	-53.9%	37.5%	171.8%	177.4%	127.3%	133.0%	300.0%	60.0%	60.0%	60.0%	88.2%
Total Supply	-1.2%	1.3%	4.3%	4.5%	1.8%	0.3%	4.0%	2.6%	2.6%	1.7%	-6.1%	-2.2%	-1.0%	-0.9%	-3.0%	-10.4%	-3.0%	-4.2%

Thoughts On Oil

- This is primarily a gas market report, but we have summarized our oil-related thoughts here:
 - Demand - the only variable the market cares about...for now.
 - Global economic/oil demand contraction continues to put downside pressure on oil prices.
 - Demand recovery is difficult/impossible to forecast, but lower prices certainly help.
 - OPEC - The cartel will matter eventually to this market.
 - Aggressively cutting production (quota reduced by 4.5mmbpd; actual cuts ~2.5mmbpd)...but just keeping up with demand erosion. Bears says further cuts only add to "excess capacity".
 - *Today, excess capacity created by demand erosion...in early 1980's excess capacity due to demand contraction and non-OPEC supply growth.*
 - Non-OPEC Supply -
 - Declining production in late 2009/2010 as economic events are impacting key non-OPEC countries (Mexico and Russia to name two).
 - **When demand stabilizes, supply challenges will provide catalyst for crude price recovery.**
- Inventory - Building from approximately normal levels. Says demand is weak.

Crude Oil - Supply and Demand Model

Units: million barrels per day

	2001	2002	2003	2004	2005	2006	2007	2008e	2009f	2010f
Demand: Total	77.1	77.9	79.4	82.3	83.5	84.5	86.0	86.7	85.3	85.3
North America	24.0	24.1	24.5	25.4	25.5	25.3	25.6	25.0	24.5	24.5
Asia / Pacific	20.9	21.5	22.3	23.5	23.9	24.5	25.1	25.8	25.5	25.5
Europe / Africa / Lt. Am	23.5	23.4	23.6	24.0	24.3	24.5	24.7	25.0	24.5	24.5
FSU / Middle East	8.7	8.8	9.1	9.4	9.7	10.3	10.6	11.0	10.8	10.8
Supply: Total	77.3	77.0	79.9	83.0	84.6	85.4	85.4	86.8	85.0	84.6
non-OPEC	44.3	45.4	46.4	47.2	47.0	47.3	47.6	47.7	47.5	47.0
OPEC-10	25.6	24.3	26.7	27.0	28.1	27.8	26.9	27.2	25.0	25.0
Angola	0.7	0.9	0.9	1.0	1.2	1.4	1.6	1.9	2.0	2.0
Iraq	2.4	2.0	1.3	2.0	1.8	1.9	2.1	2.4	2.5	2.5
NGLs	3.3	3.5	3.7	3.9	4.5	4.7	4.8	4.9	5.2	5.3
Processing Gains + Other Ethanol	1.8	1.8	1.9	1.9	2.0	2.3	2.4	2.7	2.9	2.9
Supply Exceeds Demand	0.2	(0.9)	0.5	0.6	1.1	0.9	(0.7)	0.2	(0.2)	(0.7)
Balancing Item	(0.4)	(0.6)	0.1	0.5	0.7	0.5	0.0	0.1	0.1	0.1
Implied Inventory Change	0.6	(0.3)	0.4	0.1	0.3	0.5	(0.7)	0.1	(0.3)	(0.7)

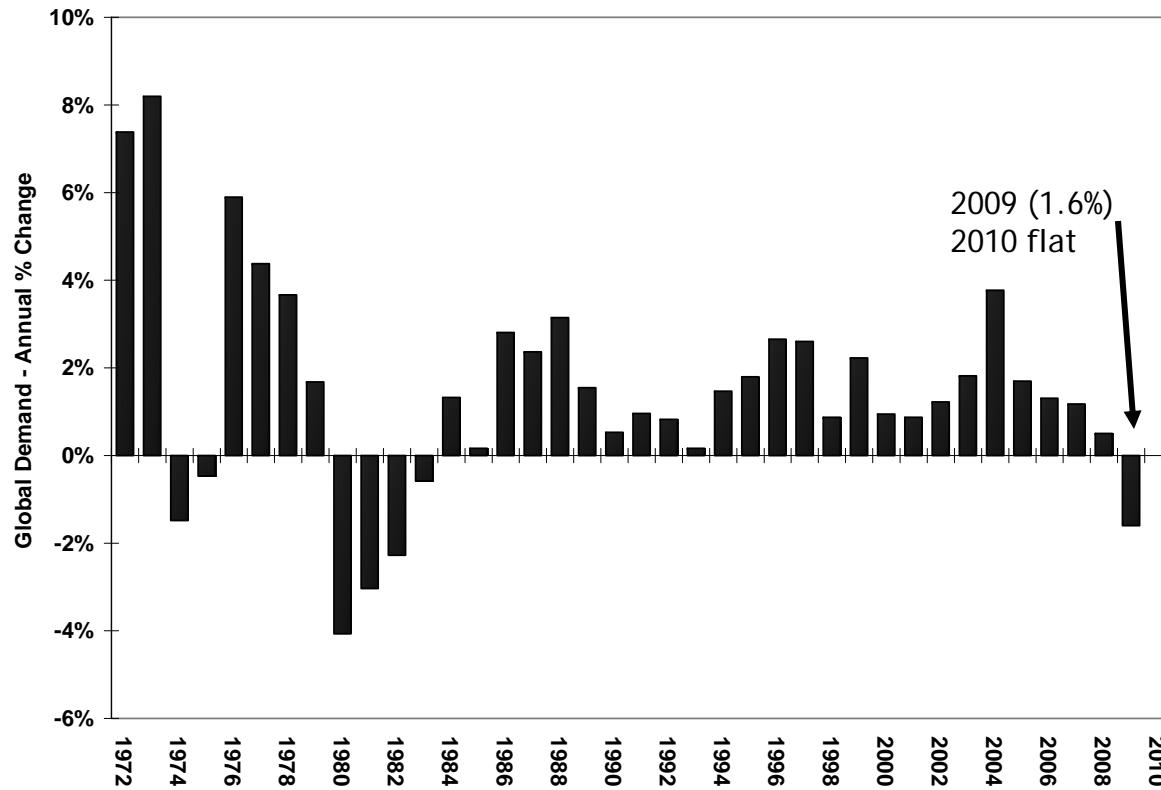
% Change : Year-to-Year

Demand: Total	0.8%	1.0%	2.0%	3.7%	1.4%	1.2%	1.8%	0.7%	-1.6%	0.0%
North America	-0.1%	0.3%	1.7%	3.4%	0.6%	-0.8%	1.0%	-2.3%	-2.0%	0.0%
Asia / Pacific	0.9%	2.7%	3.6%	5.7%	1.9%	2.1%	2.8%	2.5%	-1.0%	0.0%
Europe / Africa / Lt. Am	1.2%	-0.1%	0.6%	1.9%	1.4%	0.6%	1.0%	0.9%	-2.0%	0.0%
FSU / Middle East	2.1%	1.3%	2.4%	4.3%	2.9%	5.8%	3.4%	3.3%	-1.1%	0.0%
Supply: Total	0.3%	-0.4%	3.8%	3.8%	1.9%	1.0%	-0.1%	1.7%	-2.1%	-0.5%
non-OPEC	1.6%	2.6%	2.1%	1.9%	-0.5%	0.7%	0.5%	0.4%	-0.5%	-1.0%
OPEC-10	-1.8%	-5.0%	9.9%	1.1%	4.0%	-0.9%	-3.4%	1.2%	-8.1%	0.0%
Angola		21.6%	-2.5%	12.8%	24.2%	11.4%	17.3%	17.4%	6.0%	0.0%
Iraq	-8.2%	-14.8%	-34.1%	50.4%	-9.3%	5.0%	9.9%	17.3%	1.0%	0.0%
NGLs	4.4%	5.8%	5.2%	5.5%	15.5%	5.1%	2.8%	1.8%	6.0%	1.0%
Processing Gains	2.9%	1.7%	3.3%	2.2%	4.3%	16.0%	5.5%	9.8%	7.8%	0.0%

- Demand is THE question in the global oil markets.
- Global demand declines in 2009 by 1.6%.
- Flattish non-OPEC supply in 2009 says large OPEC cuts not required to fundamentally balance the market unless demand completely evaporates.

Global Demand

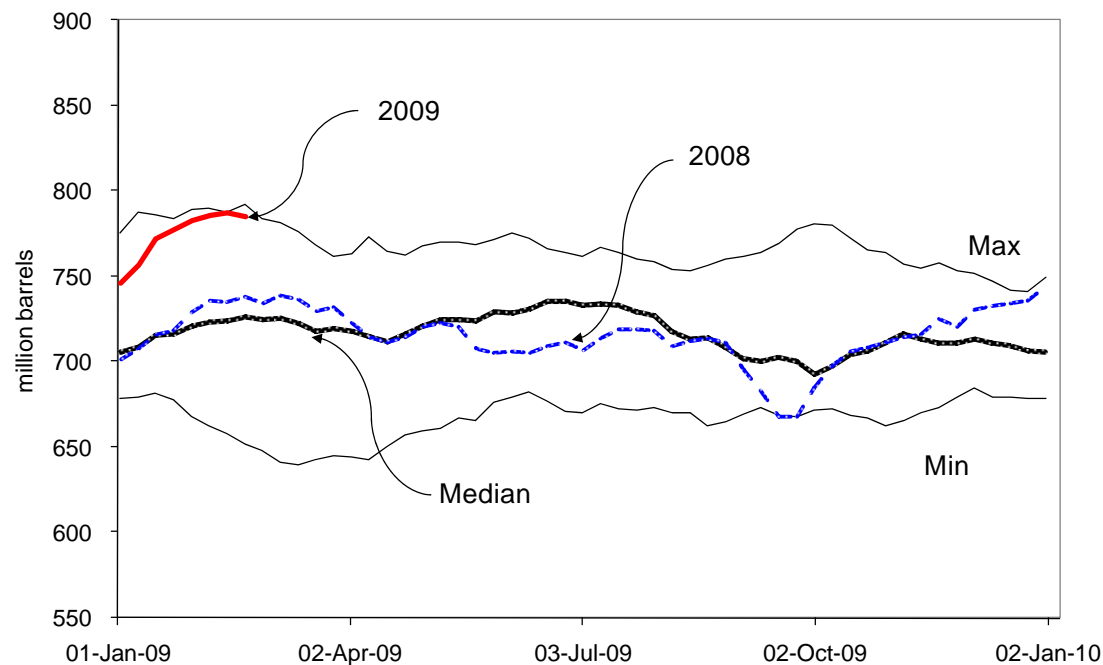
Global Demand Change, y/y



- Demand contraction in early 1980's was profound and a repeat would create several years of low oil prices.
- Compared to 1980, for this cycle we forecast a more rapid recovery in demand (and price) with demand down 1.6% in 2009 and flat in 2010.
- Unlike the 1980's, excess capacity is being created only by demand contraction.

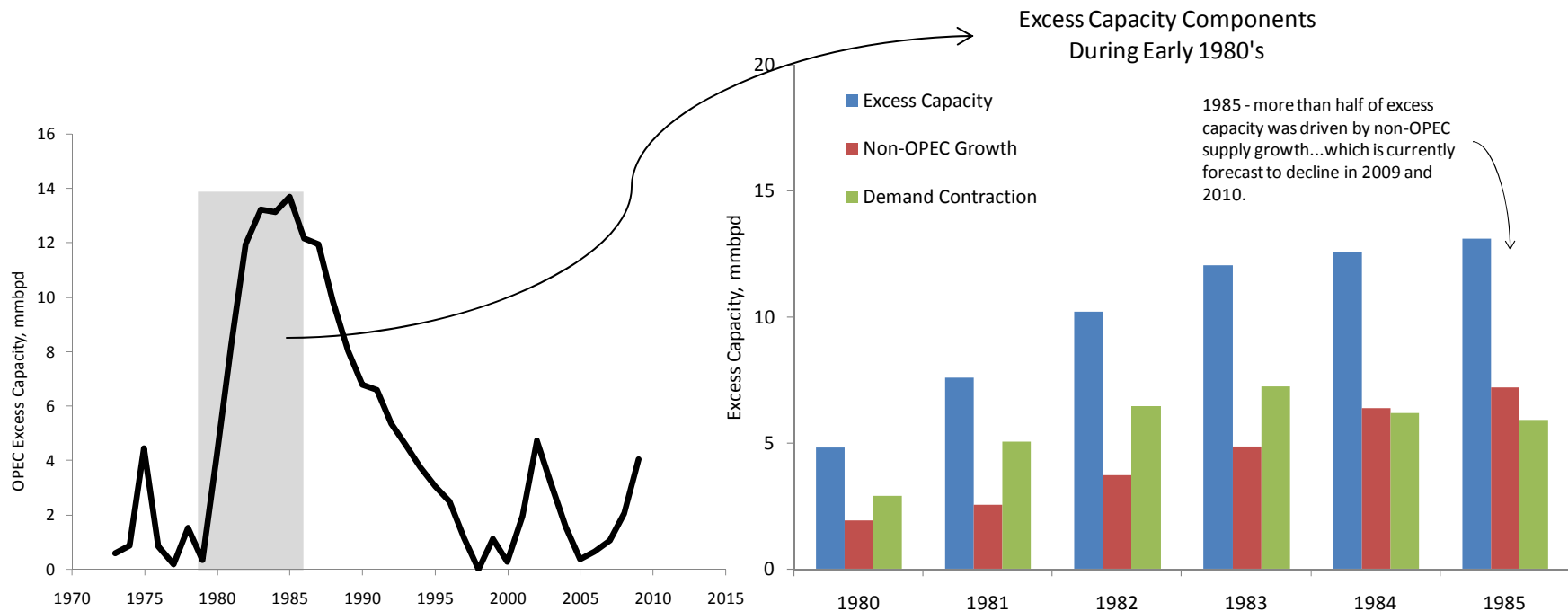
US Inventories Showing Demand Weakness

U.S. Inventories - Crude and Key Products



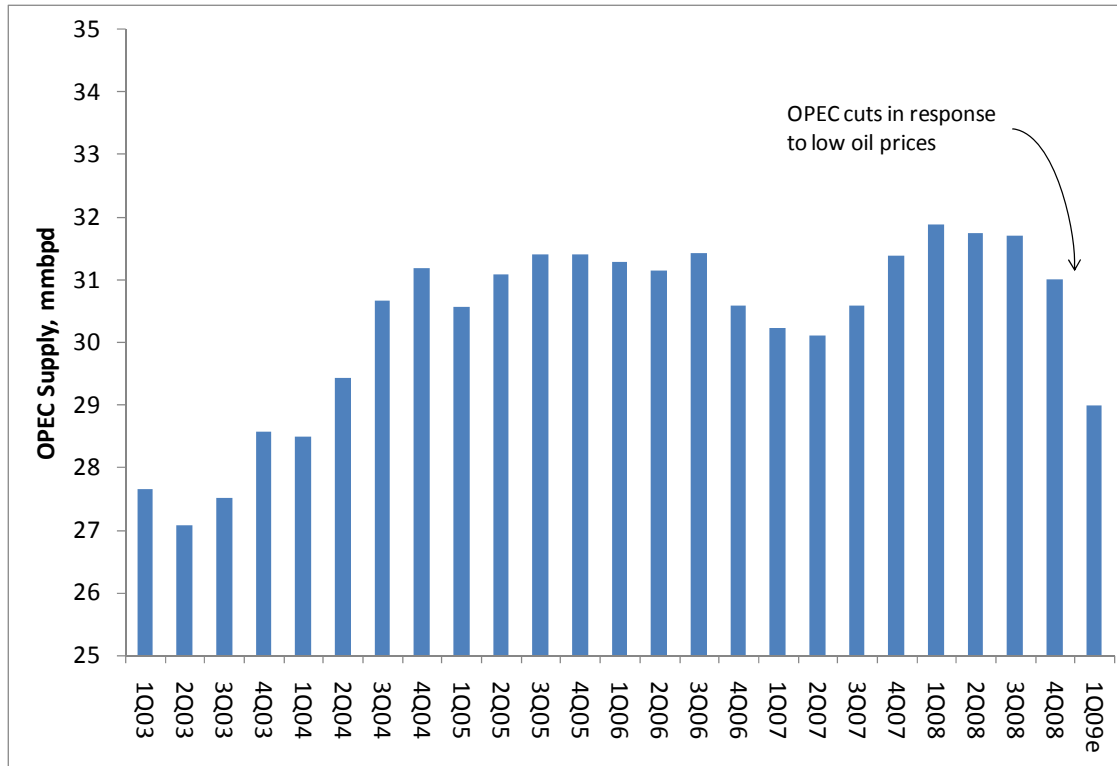
- Mid-Nov2008 US petroleum inventories normal.
- In last 3 months, inventories at seasonal max levels.
- Inventory builds occurring even though OPEC cutting production.

Historical OPEC Excess Capacity



- Dramatic increase in OPEC excess capacity was driven by 1) weak global demand and 2) growing non-OPEC production.
- Excess capacity represented ~23% of total demand in 1985
- Excess capacity will build slower in 2009 as non-OPEC supply is forecast to decline.

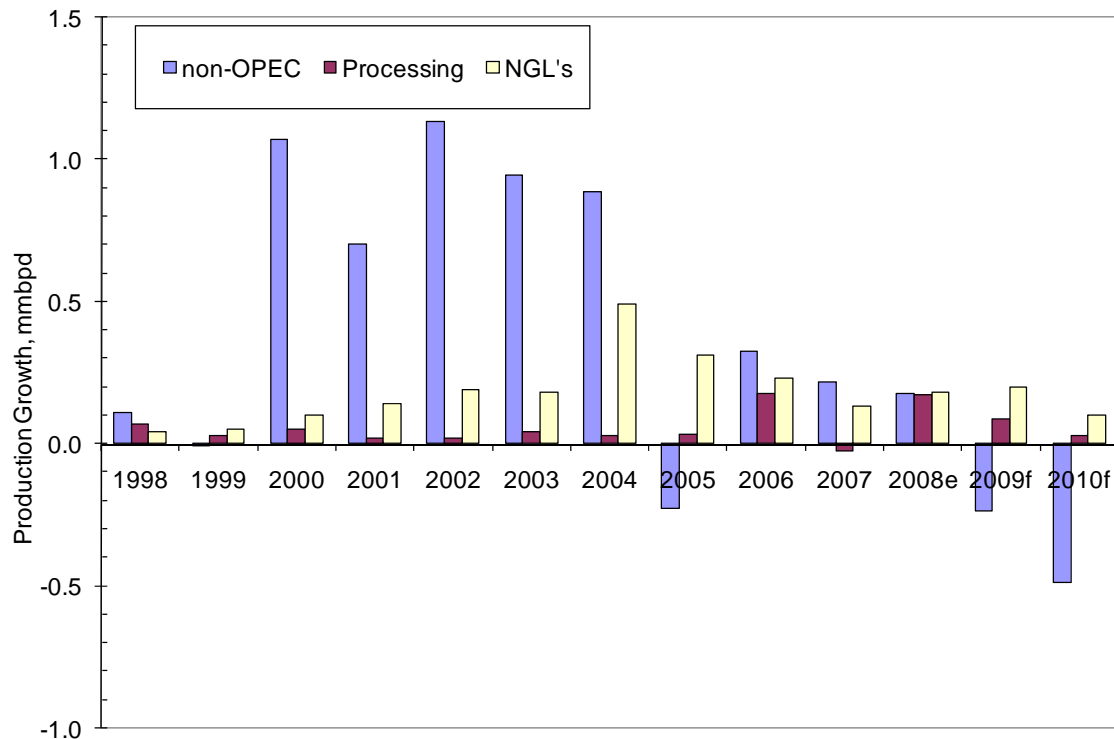
OPEC Production



Sources: IEA and TPH

- Low oil prices matter to OPEC. Aggressive cuts implemented from early 2008 highs.
- OPEC has helped to stabilize prices in a soft demand environment.
- Saudi Arabia accounts for ~55% of the 2.5mmbpd cuts implemented so far.
- Current excess capacity is ~4mmbpd...or 5% of total demand.
- It will likely take demand recovery to push oil prices back toward the \$70 to \$90/bbl range.

Non-OPEC Supply



Source: IEA and TPH

- Non-OPEC supply poised to decline 0.5% in 2009.
- Further 1% decline in 2010.
- Low oil price and volatile capital markets combine for tough sledding for oil production.
- Components of 2009/2010 decline include:
 - Mexico - continues.
 - Russia - decline after growing continuously since 1998.
 - North Sea declines continue.
- These 3 regions account for ~40% of non-OPEC supply.

Crude Oil Price Revisions

- 2009 - \$45/bbl (from \$57.50/bbl)
- 2010 - \$60/bbl (from \$75/bbl)
- 2011 - \$75/bbl (from \$90/bbl)
- 2012 and beyond - maintaining \$90/bbl long term oil price

Crude Oil - NYMEX										2009f	2010f	2011f	2012f
	2000	2001	2002	2003	2004	2005	2006	2007	2008				
Q1	28.82	28.67	21.72	33.77	35.26	50.28	63.53	58.23	97.82	40.00	60.00	75.00	90.00
Q2	28.77	27.98	26.27	28.92	38.36	53.24	70.84	65.02	123.80	40.00	60.00	75.00	90.00
Q3	31.58	26.56	28.31	30.20	44.07	63.42	70.39	75.15	118.22	50.00	60.00	75.00	90.00
Q4	31.90	20.49	28.25	31.23	48.14	60.01	60.16	90.50	59.06	50.00	60.00	75.00	90.00
FY Avg	30.27	25.93	26.14	31.03	41.46	56.74	66.23	72.23	99.72	45.00	60.00	75.00	90.00

Summary

- The economic situation rules all!
- 2009 and 2010 will be tough in the gas markets unless demand improves in the US and the rest of the world.
- Things to watch to assess the health of the gas market:
 - Drilling activity and composition.
 - Gas storage trends vs. normal.
 - E&P sentiment - will rig count continue rapid decline?
 - General economic health - demand implications.
 - The weatherman.
 - Global LNG prices and subsequent US import levels.
- Gas price will average below \$5/mcf in 2009 and could average below \$6/mcf in 2010.
- Oil - needs demand to improve for oil prices to be much higher, but non-OPEC supply decline and OPEC discipline can support prices by managing inventories.

Analyst Certification:

We, Dan Pickering and Dave Pursell, do hereby certify that, to the best of our knowledge, the views and opinions in this research report accurately reflect our personal views about the company and its securities. We have not nor will we receive direct or indirect compensation in return for expressing specific recommendations or viewpoints in this report.

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