Les Deman Energy Consulting - http://www.lesdemanenergy.com/

CEE 21st Annual Meeting/Think Day

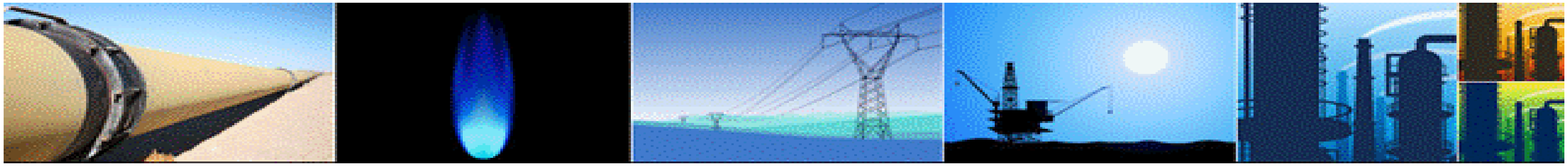
December 7-8, 2016

The Light at the End of the Tunnel or Musings on Producer Sustainability

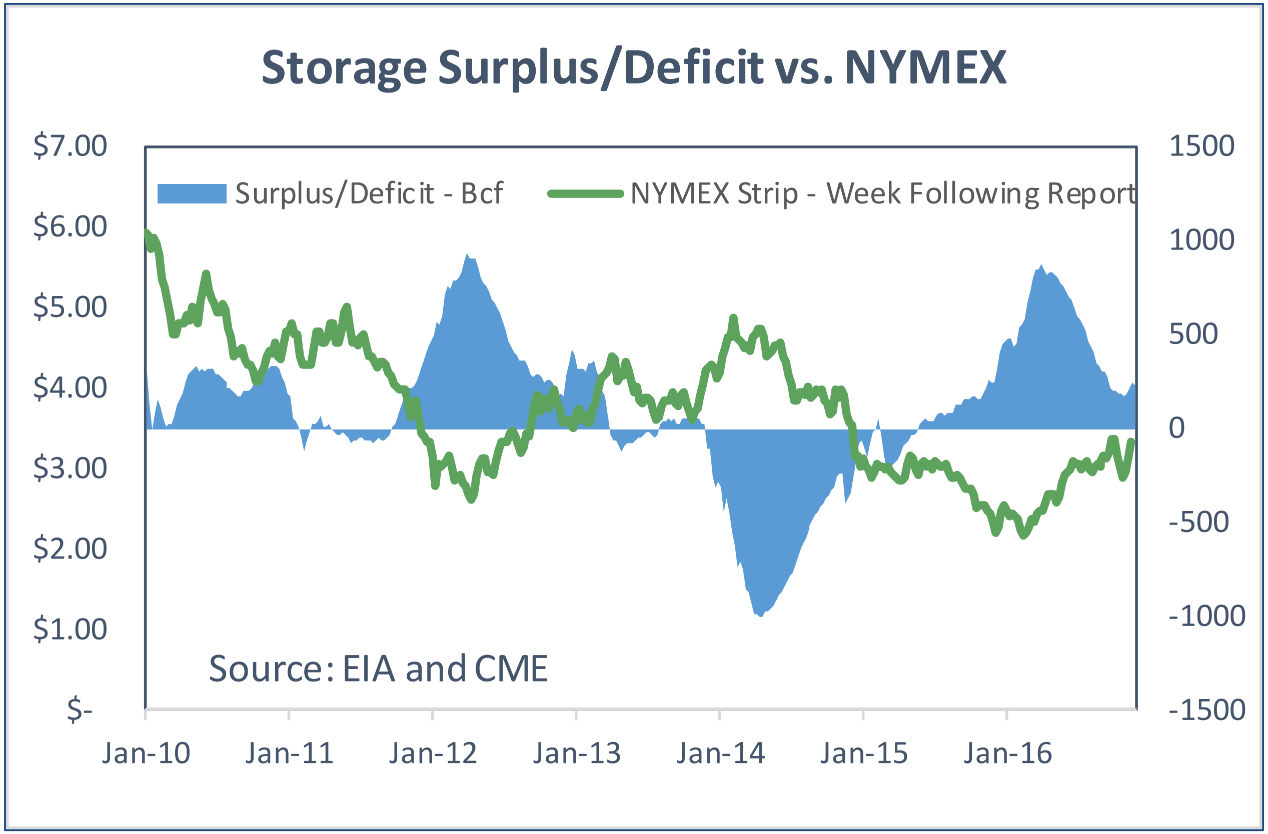
Les' Rules for Producers

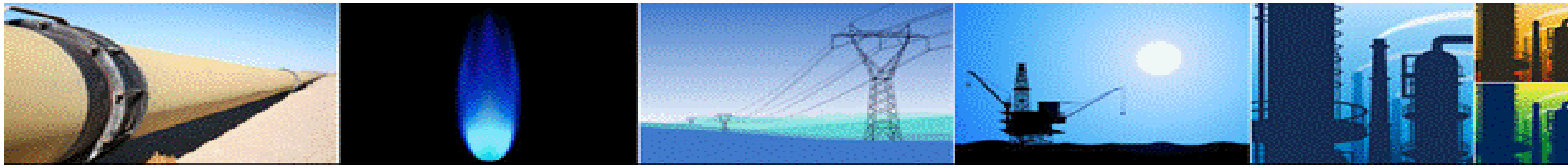
1. ***Hedge all "bets" that'll cost you the company.***
2. ***Try to be the lowest cost producer.***
3. ***Diversify if you can.***
4. ***If all is lost, ask the government for help.***

Yiddish Proverb: Man plans, god laughs.

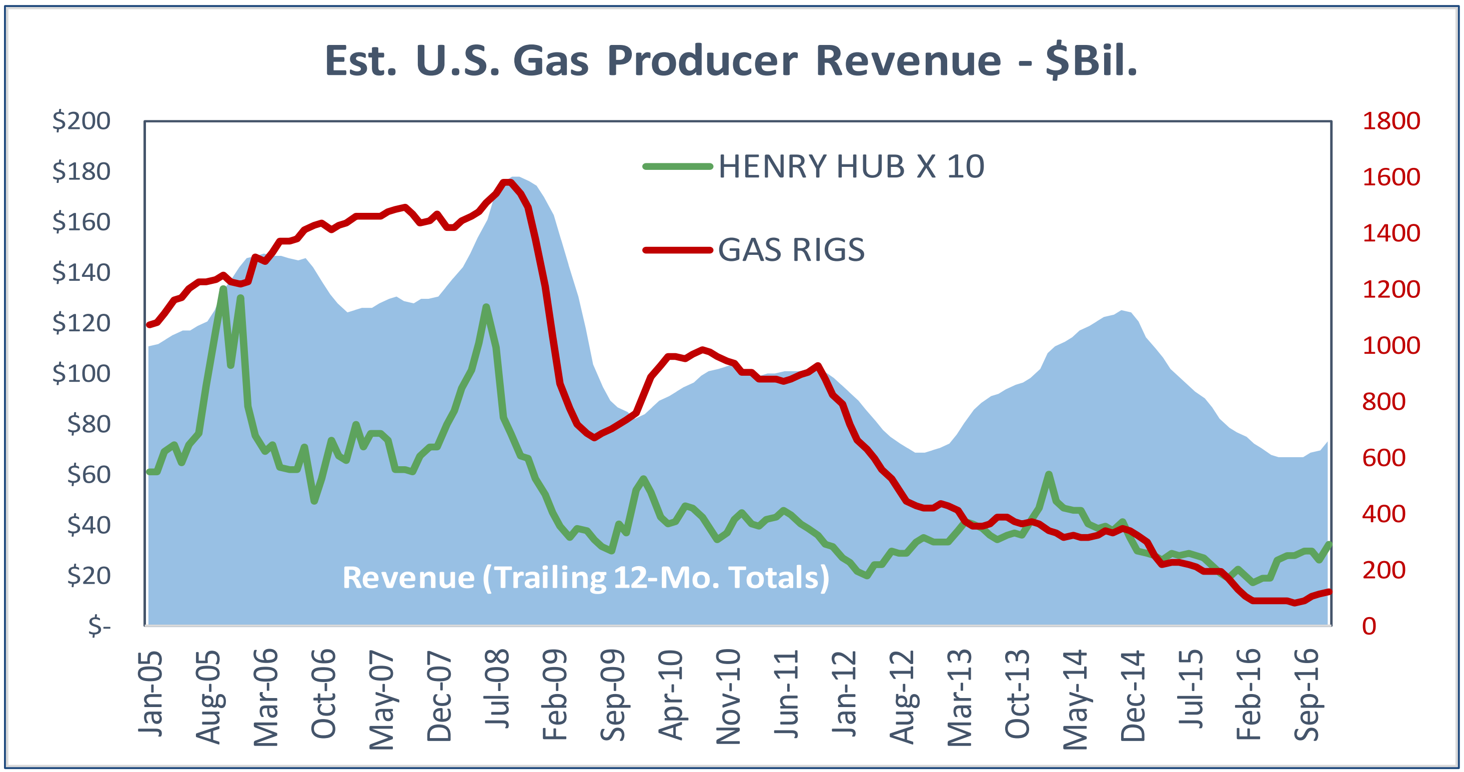


No “rocket-science” here; this is a cyclical business! Storage surpluses and deficits explain much of the cyclical behavior of gas prices. However, the price peaks and troughs differ in each cycle.



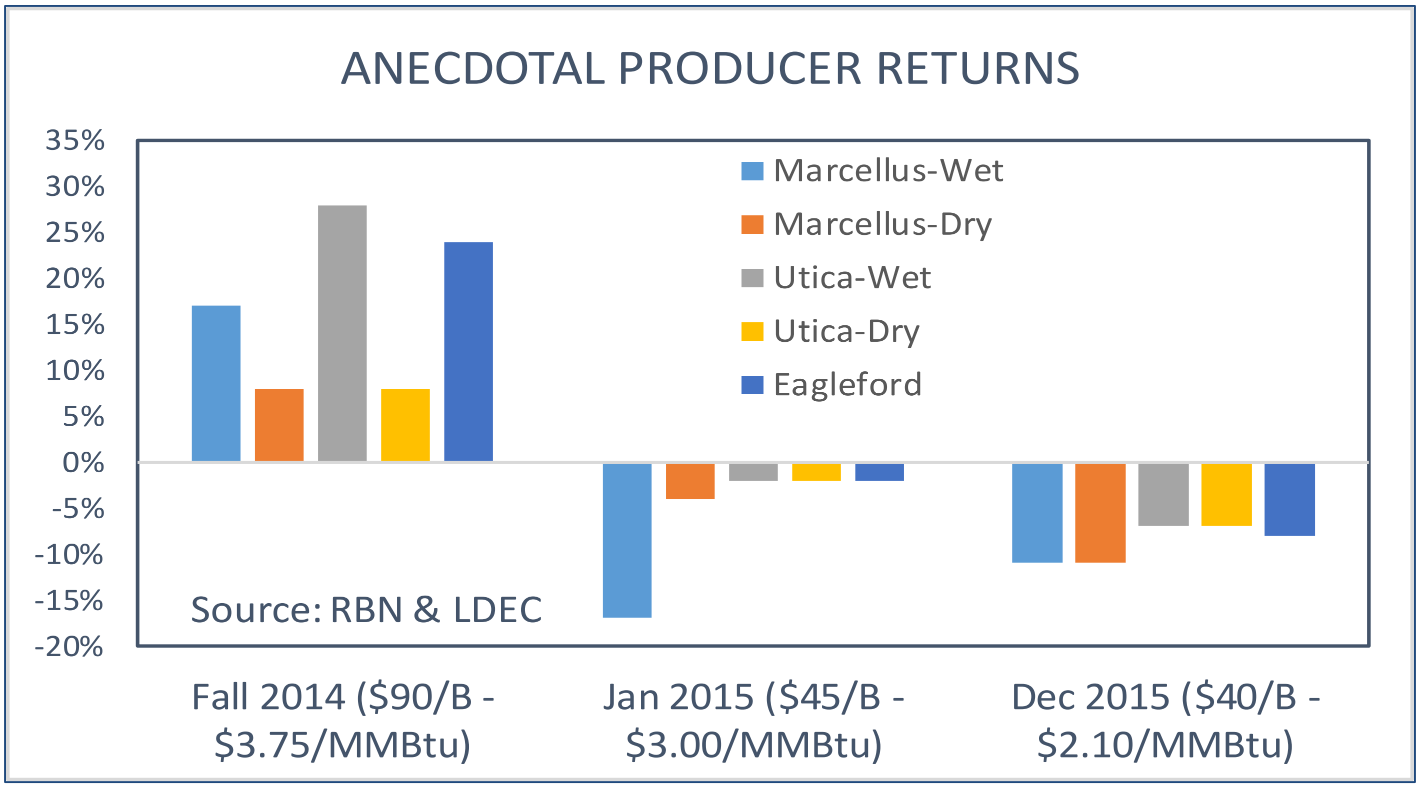


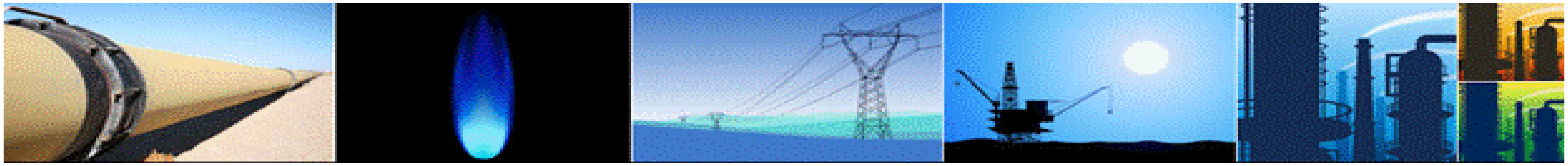
As is typical, producers are their own worst enemy. They increase drilling when prices and revenue are high, thereby exacerbating the cycle. Then they do the opposite.



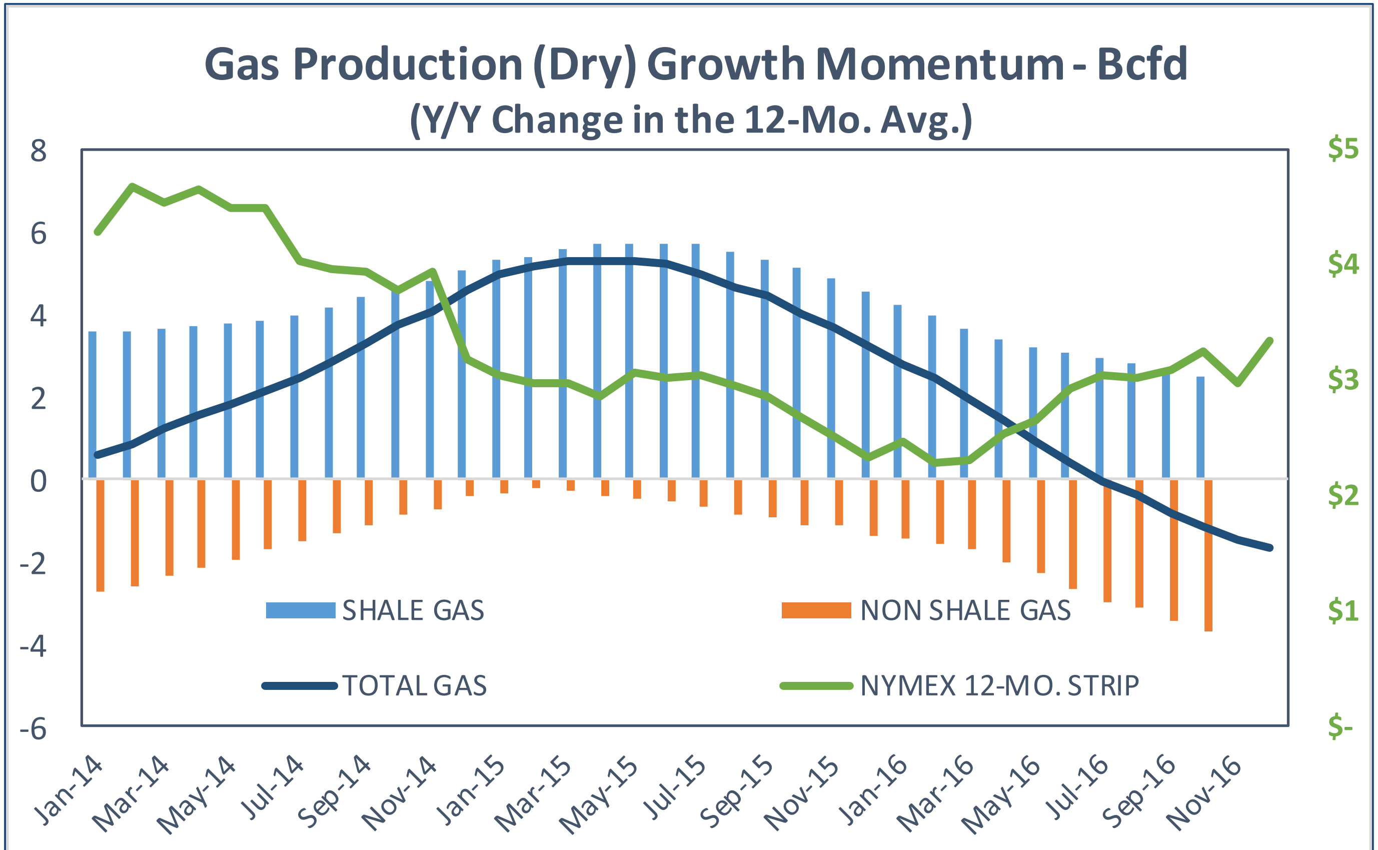
Source: EIA, CME, Baker-Hughes and LDEC

Average returns on new wells fell to <0% in early 2015. Of course, the gas rig count plunged from nearly 350 rigs in late 2014 to 80 rigs this summer.

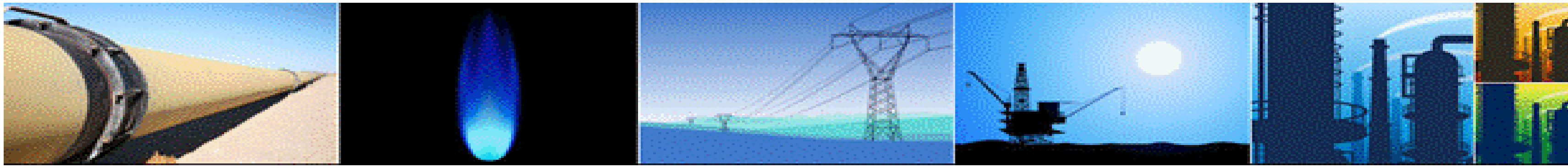




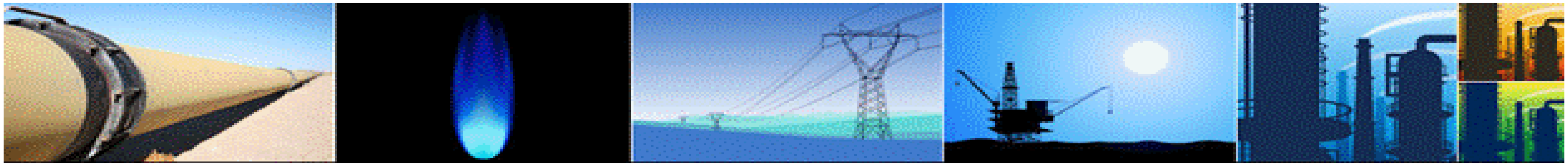
Since mid 2015 we've seen accelerating declines in non-shale production and a deceleration in shale gas growth.



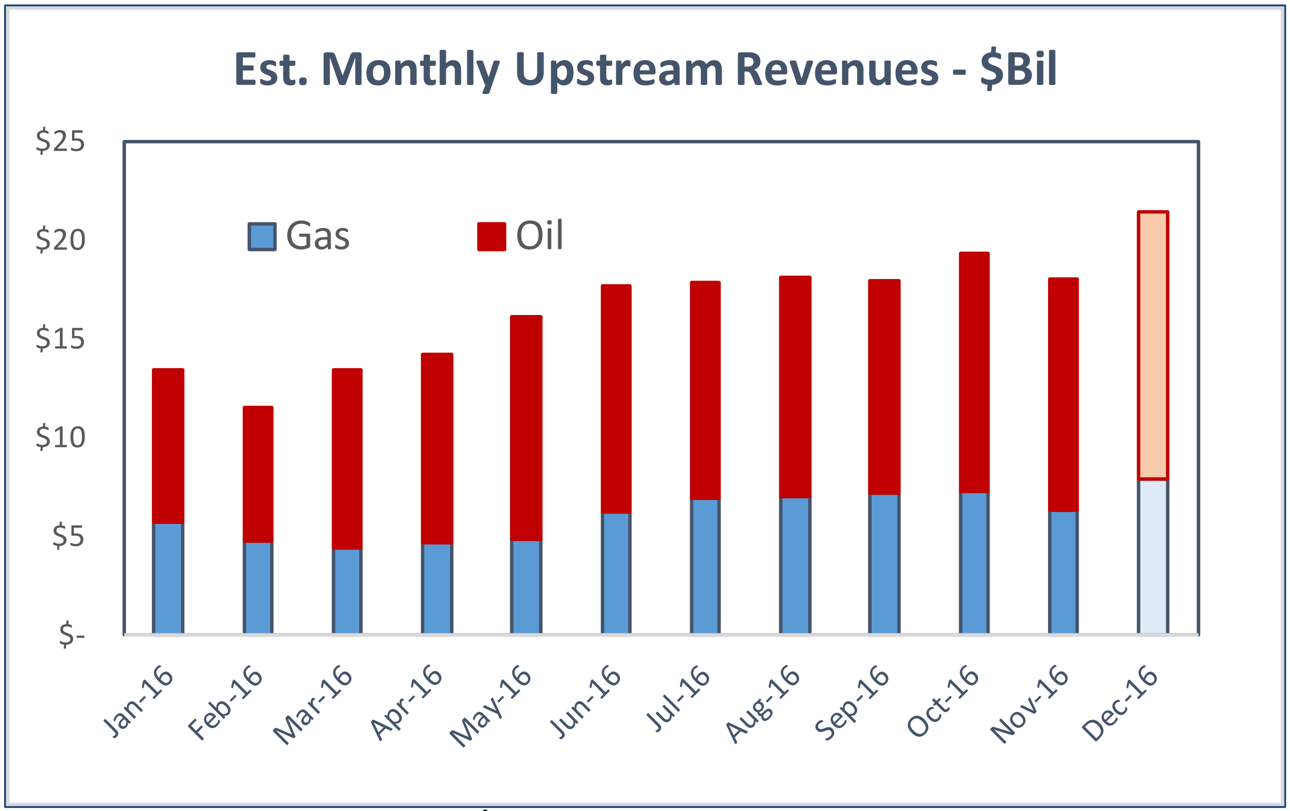
Source: EIA and CME



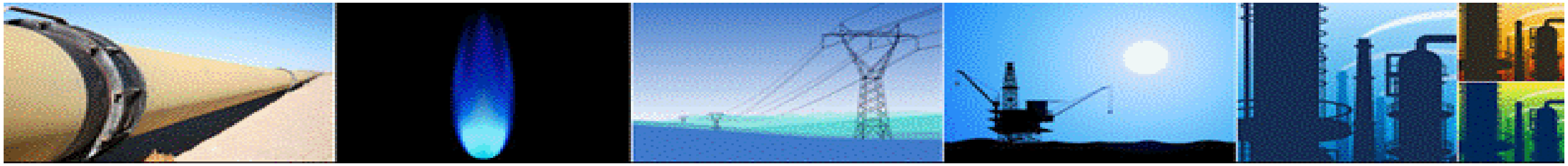
But…to quote our new Nobel Prize Laureate:
"The Times They Are A-Changin"



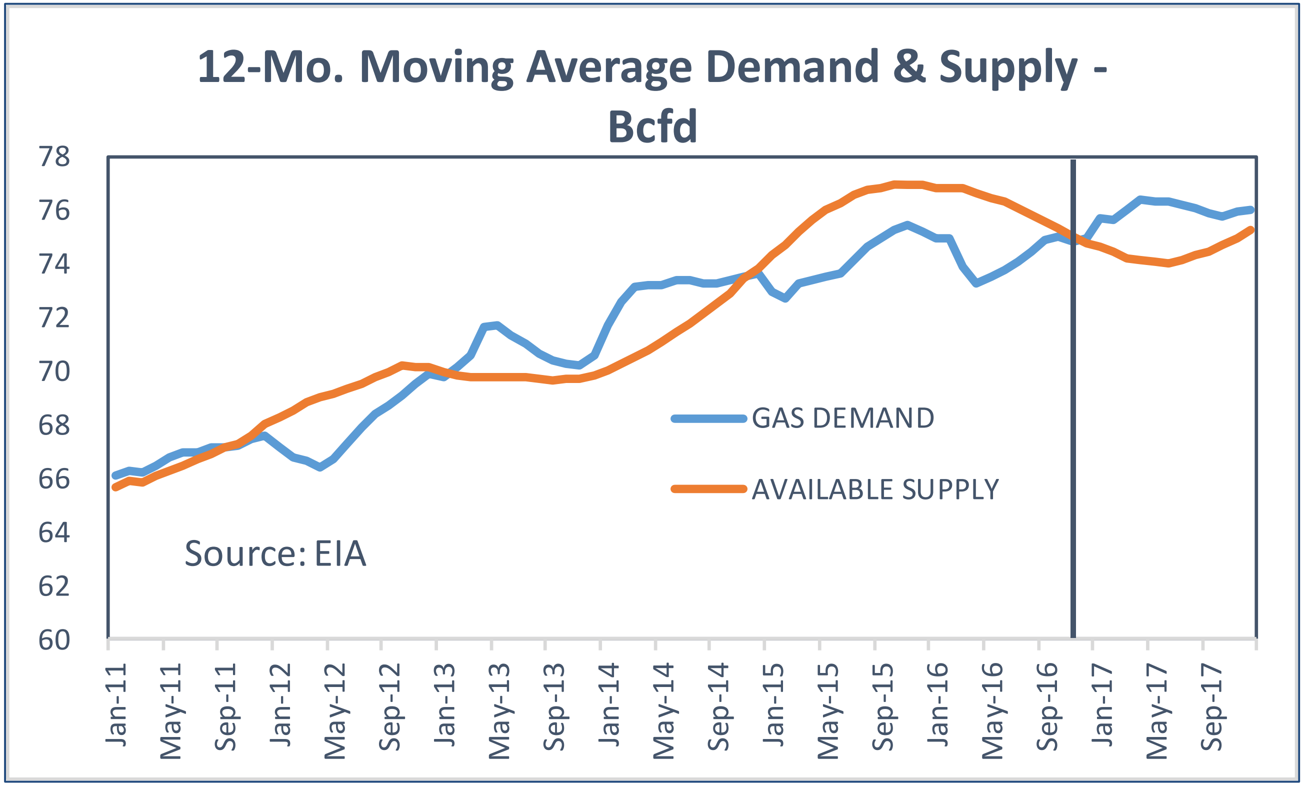
Cash flow turned higher at midyear and with December's price surge (M-T-D), capital expenditures are slated to move higher in 2017.

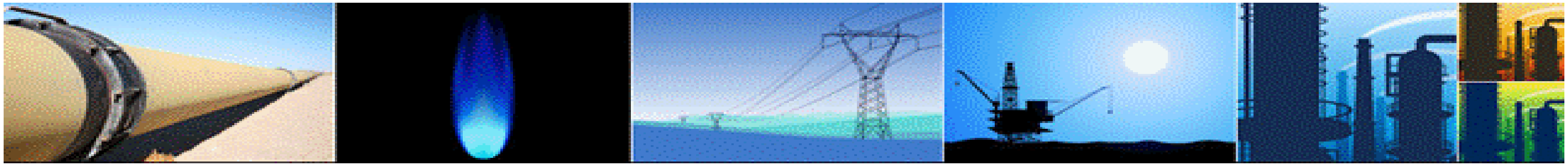


Source: EIA, CME and LDEC

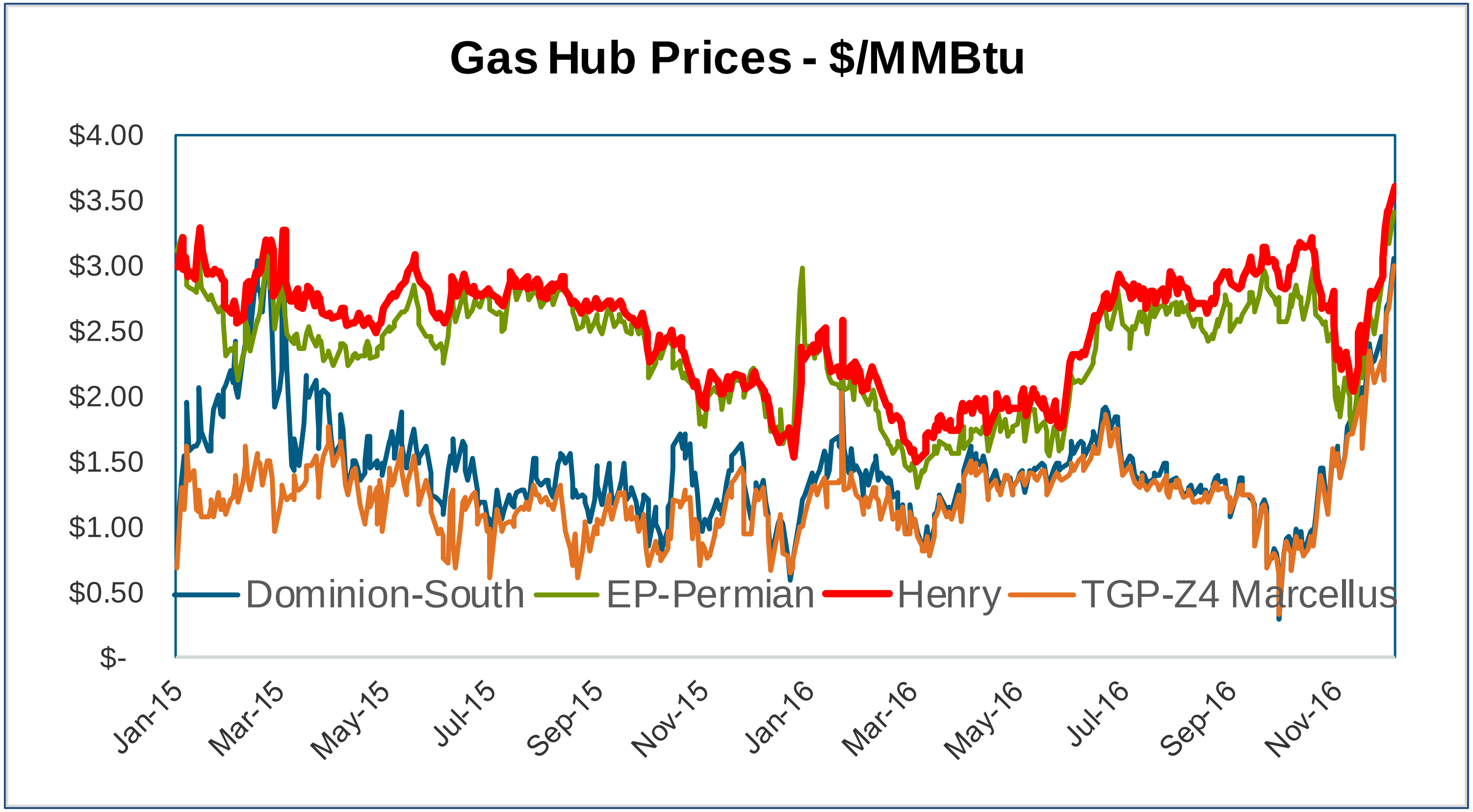


The EIA forecasts that the market is on the verge of tightening, with lower supply and higher exports reversing the storage surplus in the months ahead.

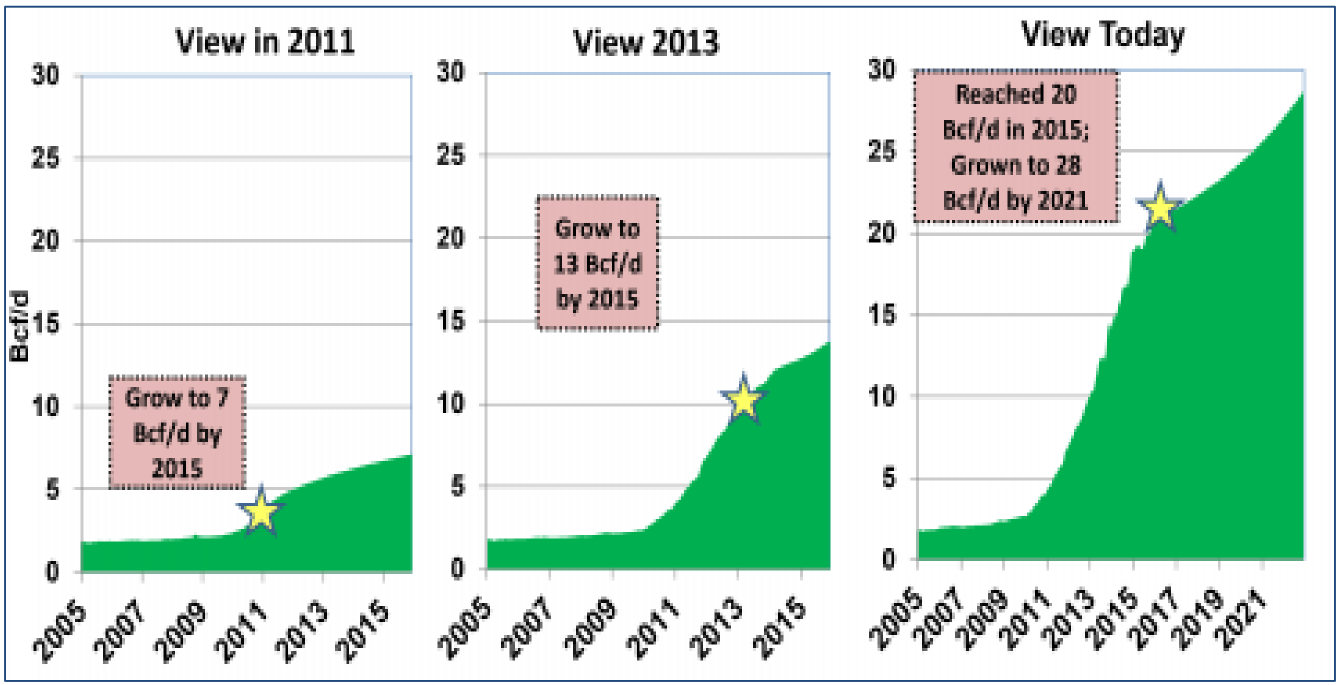




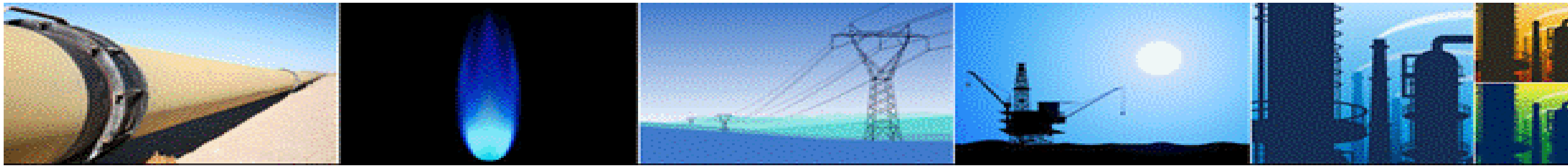
While Henry Hub has been on an upward trend since spring, Marcellus/Utica producers have seen relief only over the past few weeks. Pipeline expansions coming online over the next few years will tighten basis.



While the Permian, Eagleford, Niobrara and Haynesville are expected see growth, they are dwarfed by forecasts of **Marcellus/Utica** growth.

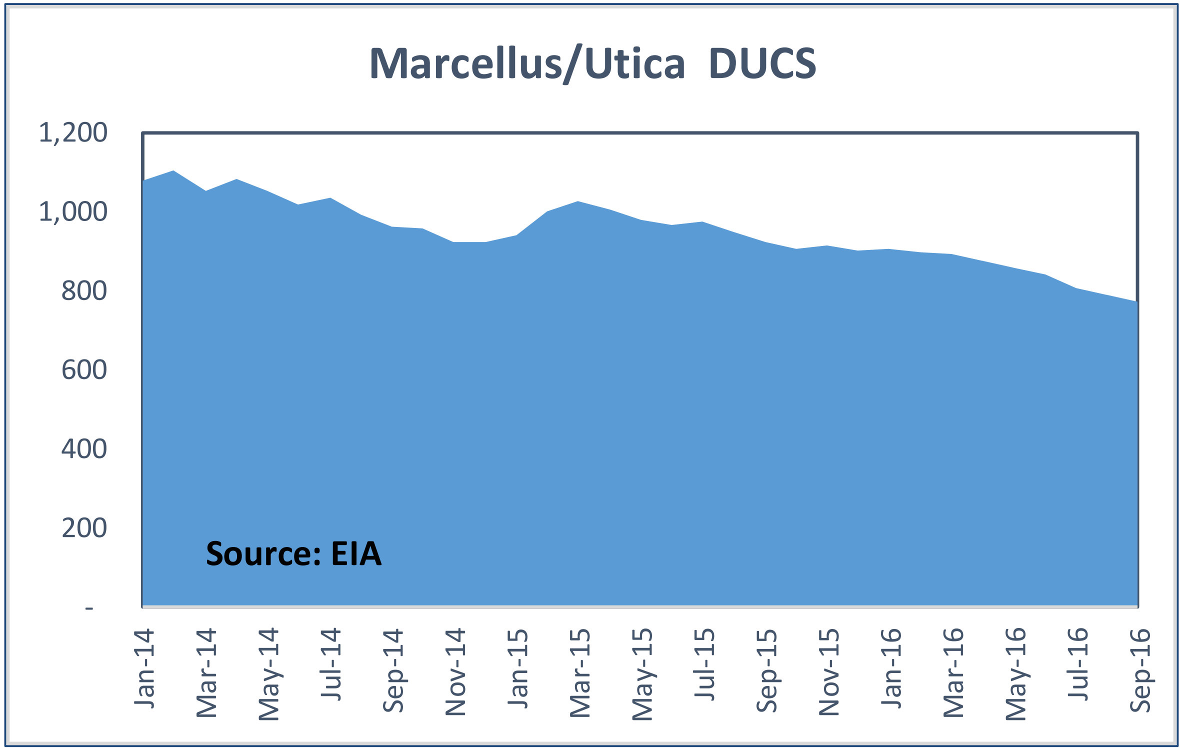


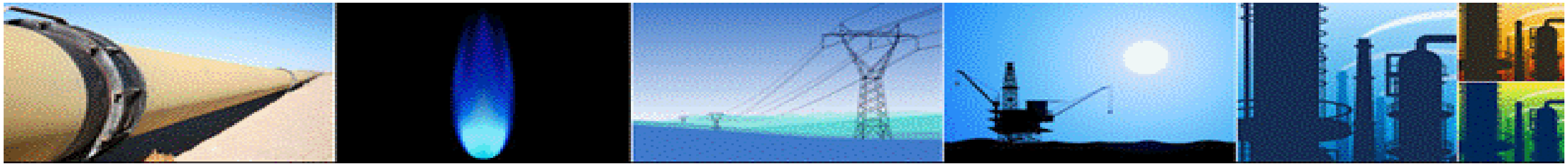
Source: RBN



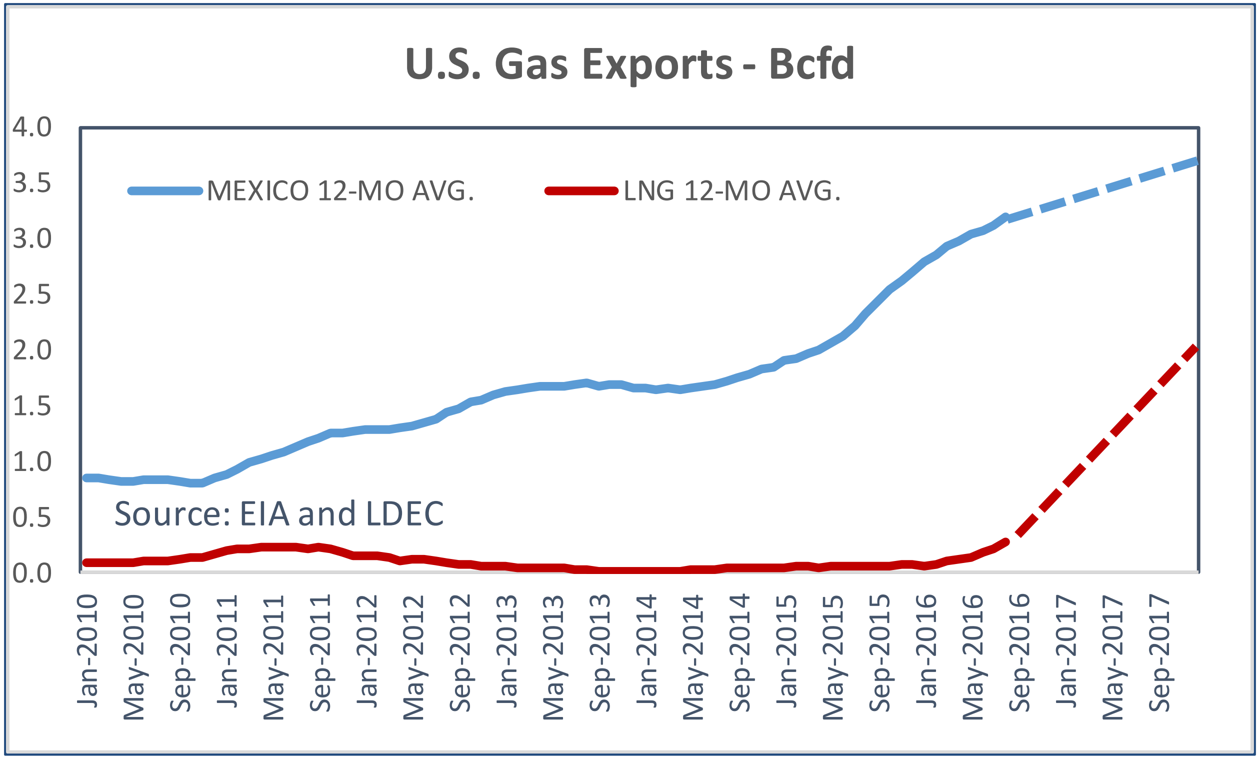
Are we entering a new era of producer sustainability or are we "Blowin' in the Wind"

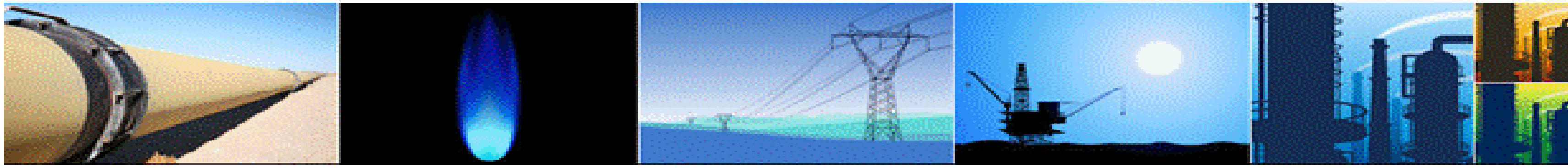
Still, the inventory of DUCs remains sizeable, allowing producers to monetize production when prices reach threshold values and pipe and gathering are developed. Some estimates put the potential at 4.0 Bcfd if fully developed.



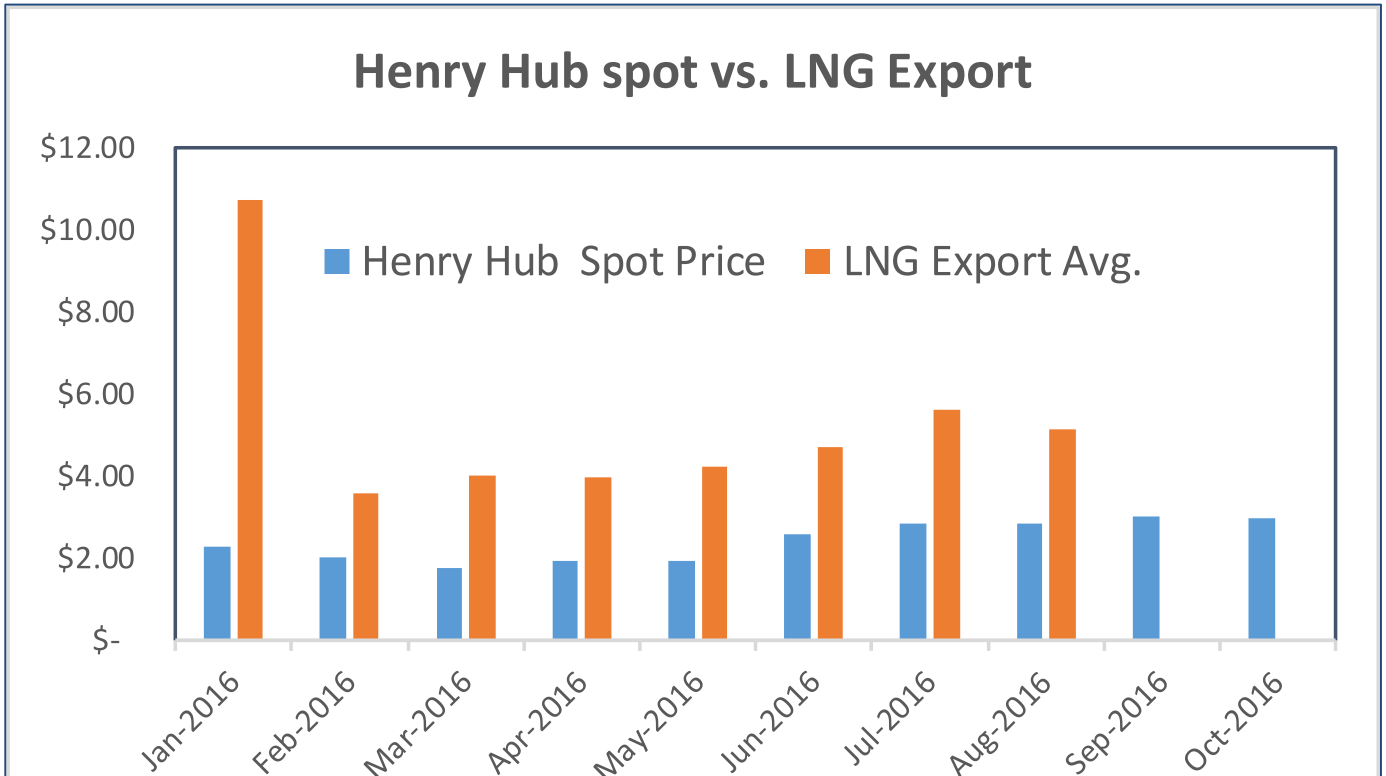


"Demand" for U.S. gas will be increasingly driven by economic developments in Mexico and worldwide LNG requirements. Infrastructure investments are conducive to this growth if production and prices are accommodative.

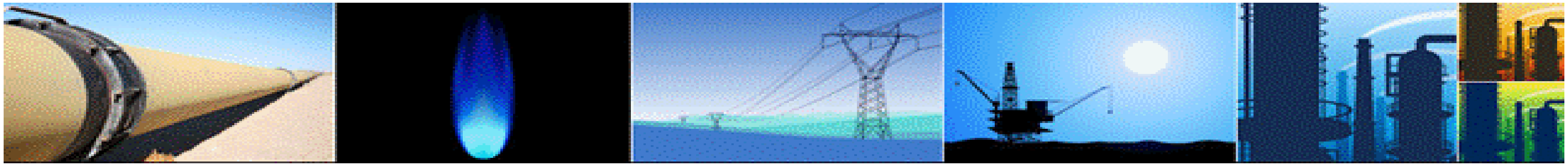




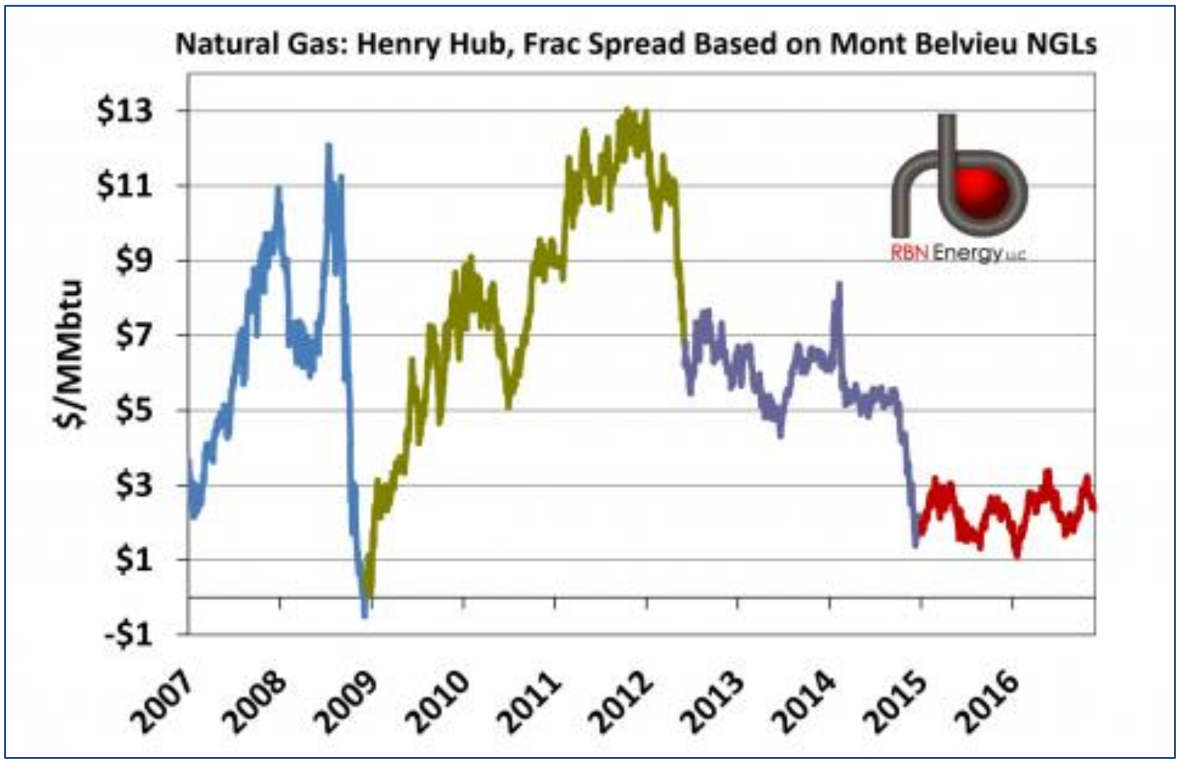
So far, LNG export prices have been very attractive, but there is competition for markets from Russian gas and other new LNG suppliers.



Source: EIA



Wet gas by-product credits have depressed gas producer economics. Low NGL prices have resulted in significant volumes of ethane rejection. But new petrochemical plants and higher oil prices might be changing this in 2017.



Source: RBN 2-Dec-16

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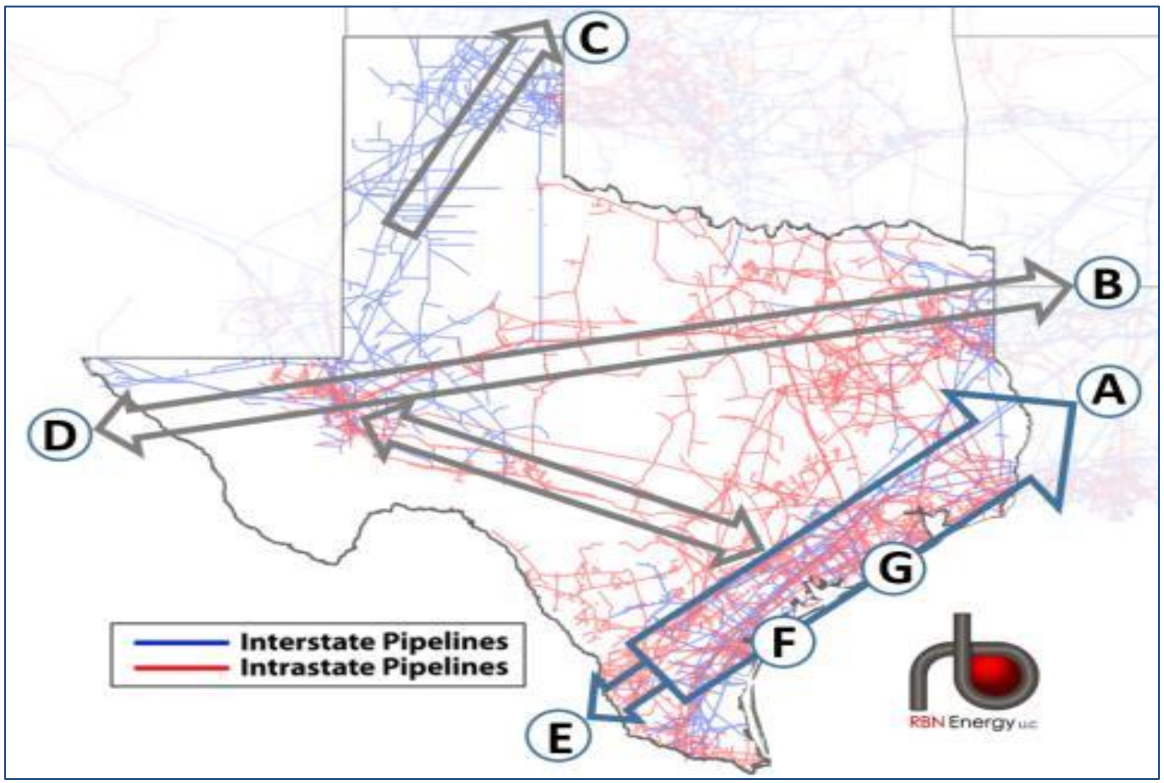
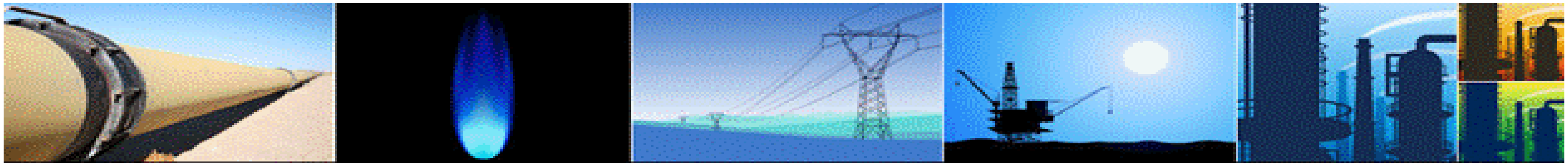
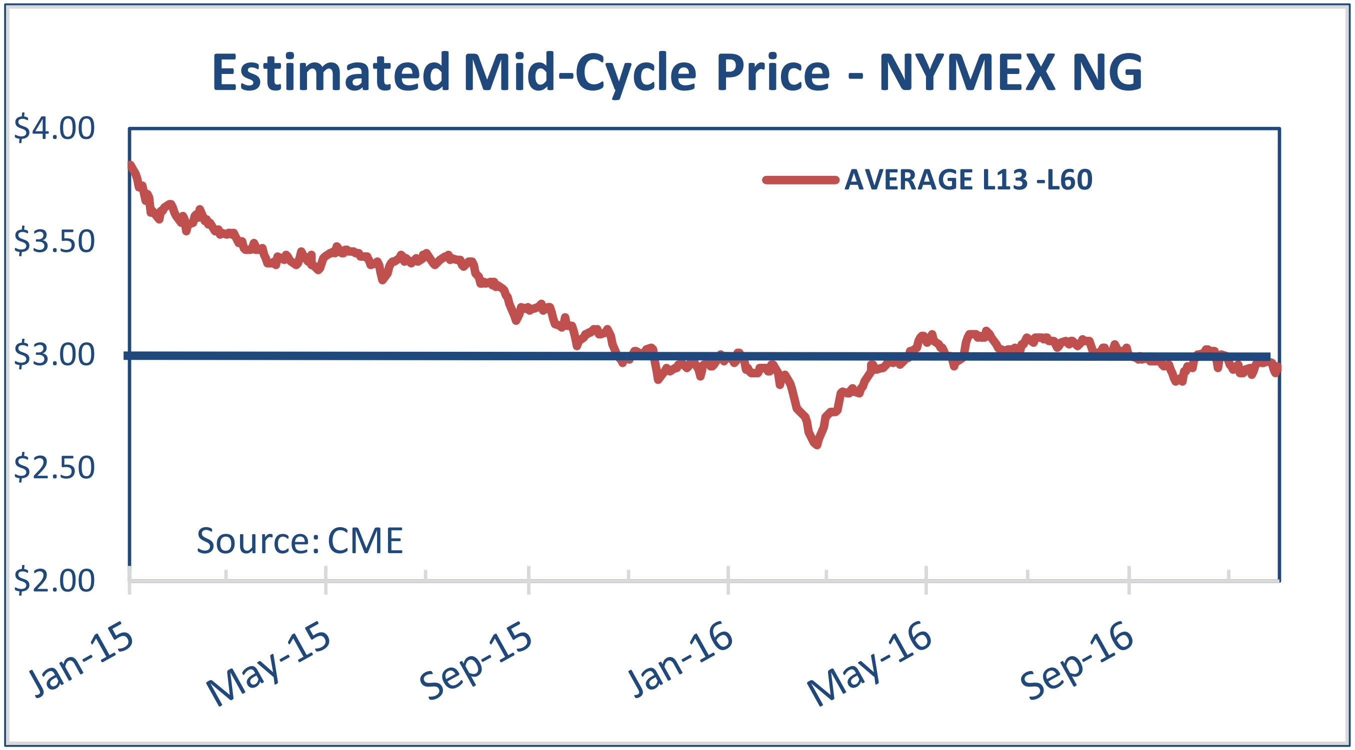
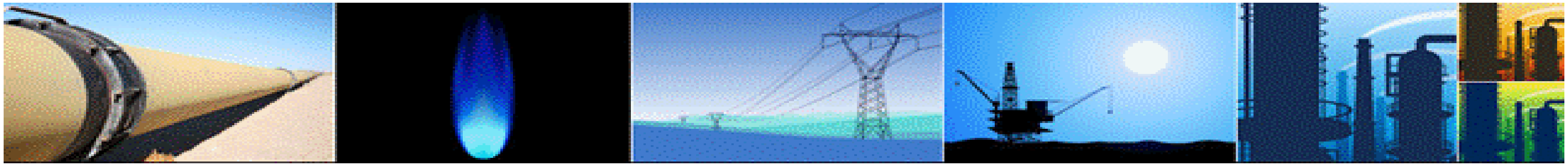
Will the basis for Texas gas prices change from consuming market netbacks to export netbacks (LNG and Mexico)? Impacts of Northeast pipe reversals?





Over the past 2 years the market's perceived mid-cycle Henry Hub price has fallen by nearly $1.00. Today's market perceives a price closer to $3.00. **What might change this expectation?**





Any Trump Effects?

1. Decreased regulatory costs?
2. More pipelines?
3. Reduced DUC inventory?
4. Reduced tax rates?
5. Higher interest rates?
6. Higher cost of capital?
7. Reduced gas exports to Mexico?
8. Higher economic growth?
9. Changes in electric generation mix?
10. Higher/lower oil prices?
11. Market exuberance/pessimism?
12. Others?