

Raymond James Energy Group

IPAA: RJ Energy Outlook

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Game Change in U.S. Oil & Gas!

- Oil price structurally challenged
 - Global oil demand is sputtering
 - U.S. oil supply up huge!
 - Oil market is telling you there is a problem!
 - Bulls must count on additional disruptions
- U.S. nat gas poised for longer-term recovery
 - Demand poised to surge
 - But plenty of gas @ \$4.00

Oil Outlook

**Without Strong Global Economic Recovery,
Oil Will Be Structurally Challenged**

Why Are We Worried About Oil?

- Oil inventories rising despite massive supply outages (3+ MMBpd offline since 2010)
- Oil inventories on track to max out in 2014
- OPEC excess capacity near 20+ year high
- Will Saudi/OPEC cut an additional 2 MMBpd?
- If not, oil prices are moving lower

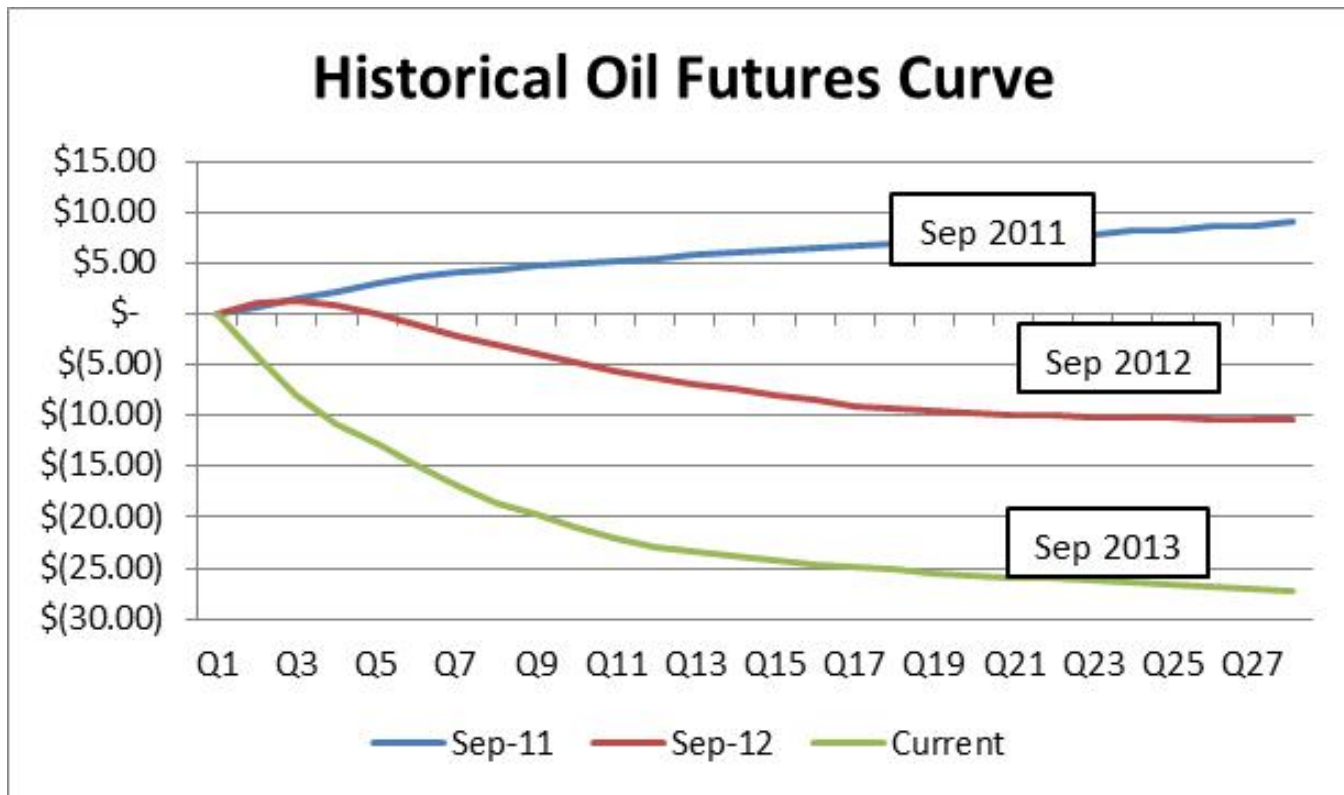
How Does Our Oil Forecast Stack Up?

- In-Line with Consensus for 2013
- 10 –15% below consensus in 2014
- 10 –20% below Consensus in 2015 +
- Way Below Street for 2015 WTI-Brent Spreads

	WTI				Brent				Spread			
	2013	2014	2015	Long Term	2013	2014	2015	Long Term	2013	2014	2015	Long Term
New RJ Forecast	\$100.00	\$83.00	\$70.00	\$80.00	\$109.00	\$95.00	\$90.00	\$90.00	\$9.00	\$12.00	\$20.00	\$10.00
NYMEX Futures Strip	\$99.86	\$99.19	\$89.86	\$82.93	\$109.65	\$106.38	\$99.15	\$90.96	\$9.79	\$7.19	\$9.29	\$8.03
% Change	0%	-16%	-22%	-4%	-1%	-11%	-9%	-1%	-8%	67%	115%	25%

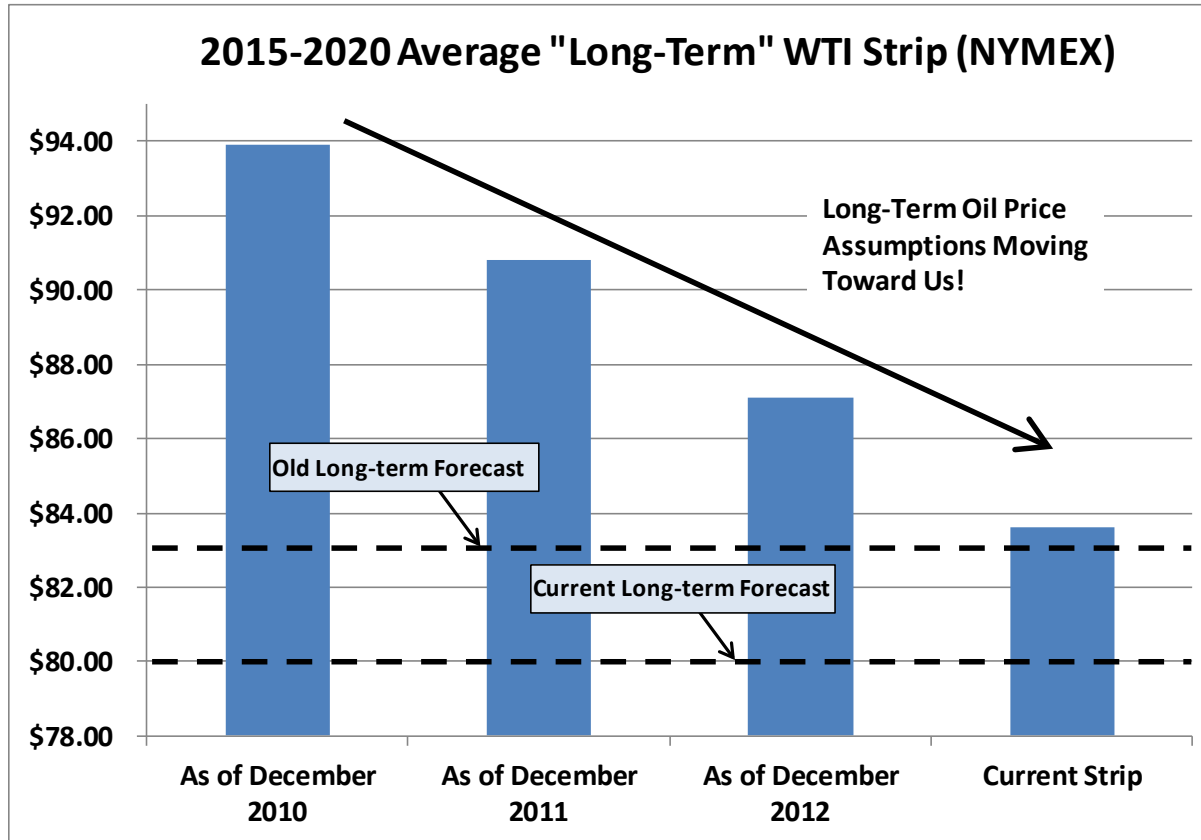
Source: Thomson Reuters; Raymond James Research

Does the Market Now Get It?



Source: Bloomberg; Raymond James Research

Long Term Strip is Coming Our Way

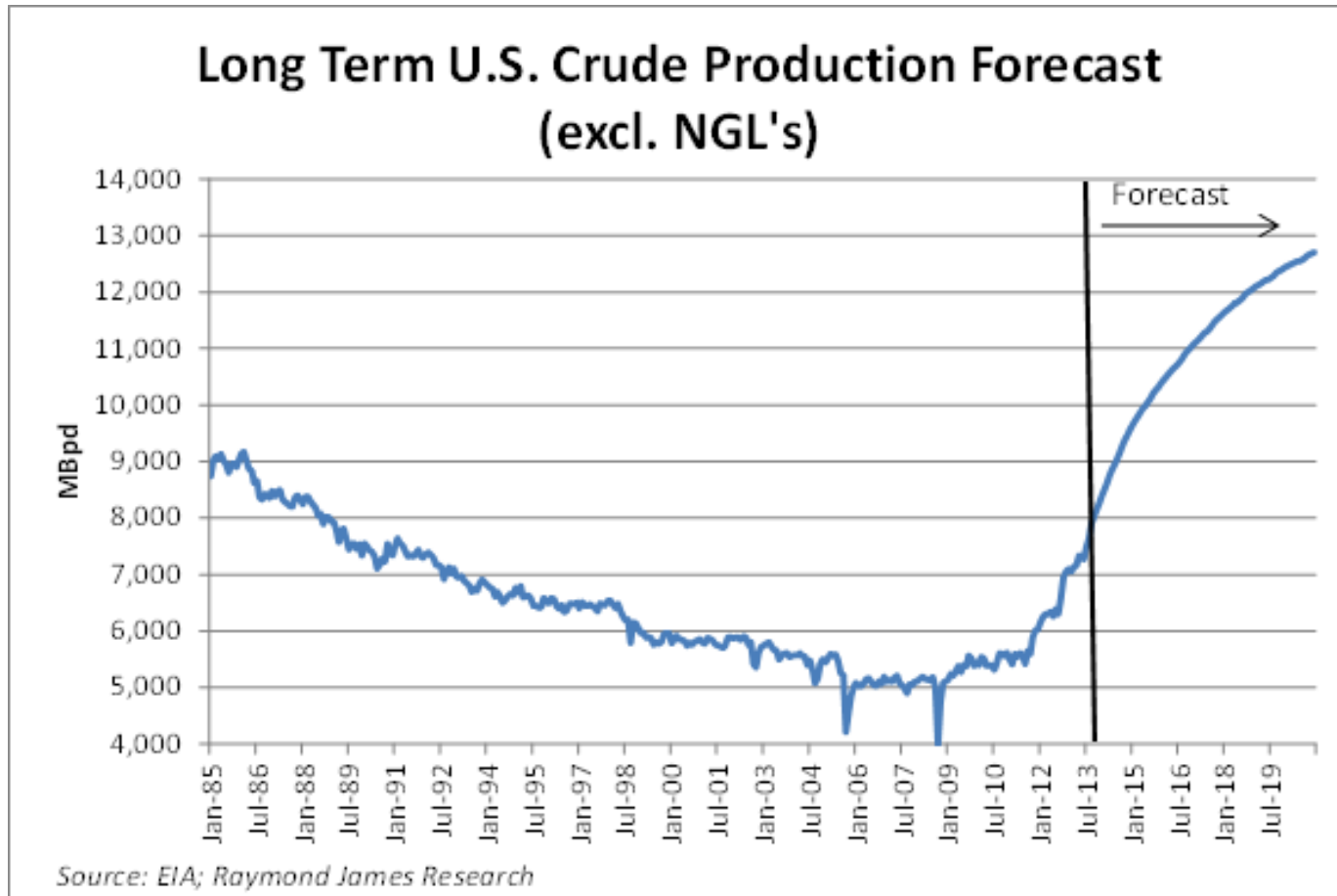


Source: FactSet; Raymond James Research

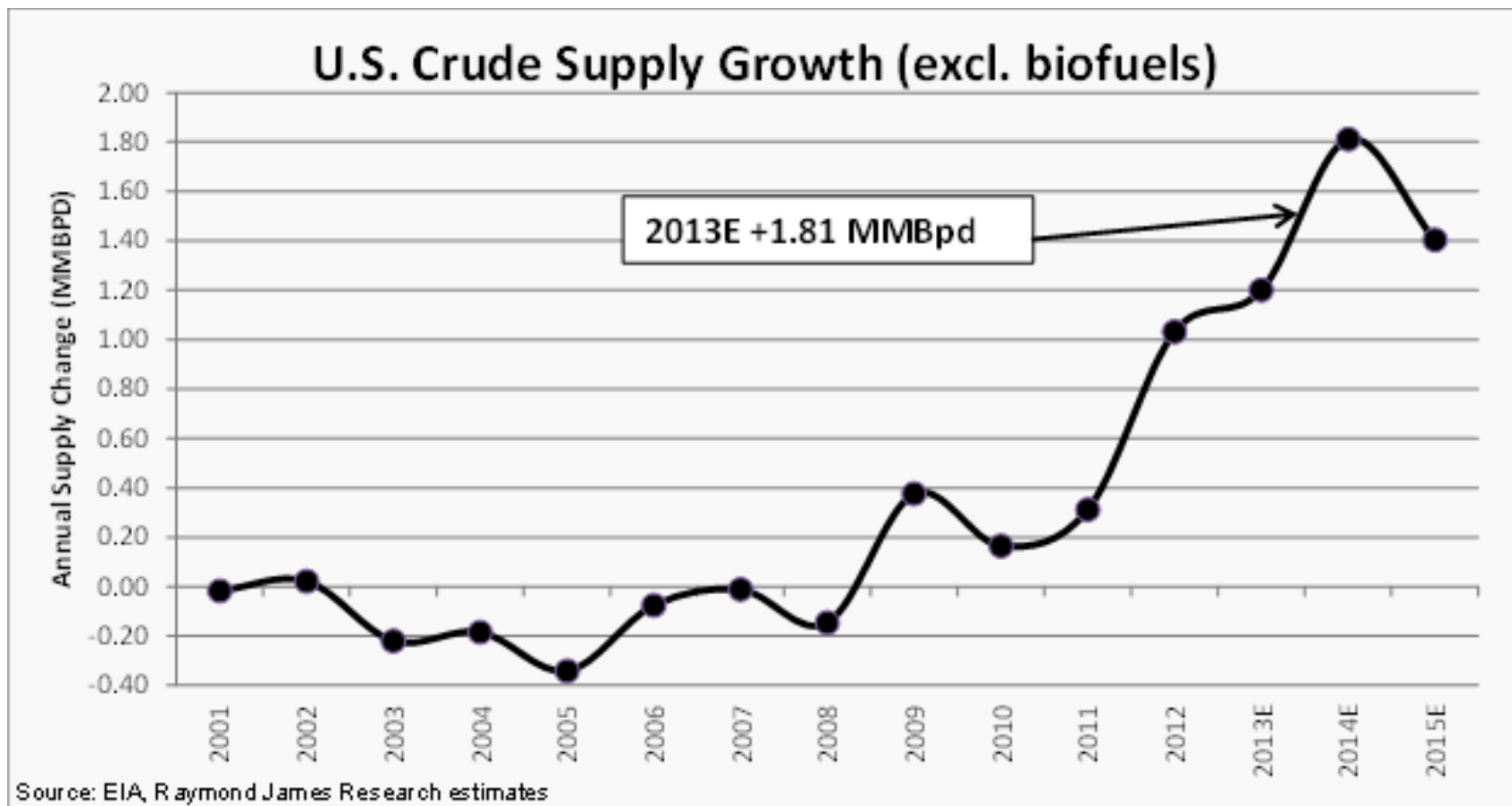
What are the Headwinds for Oil?

- North American crude supply growing ± 1.5 million BPD over next several years.
- “Other” supply growth outpacing declines
- Global demand growing about half as fast as supply (700,000 – 900,000 BPD)

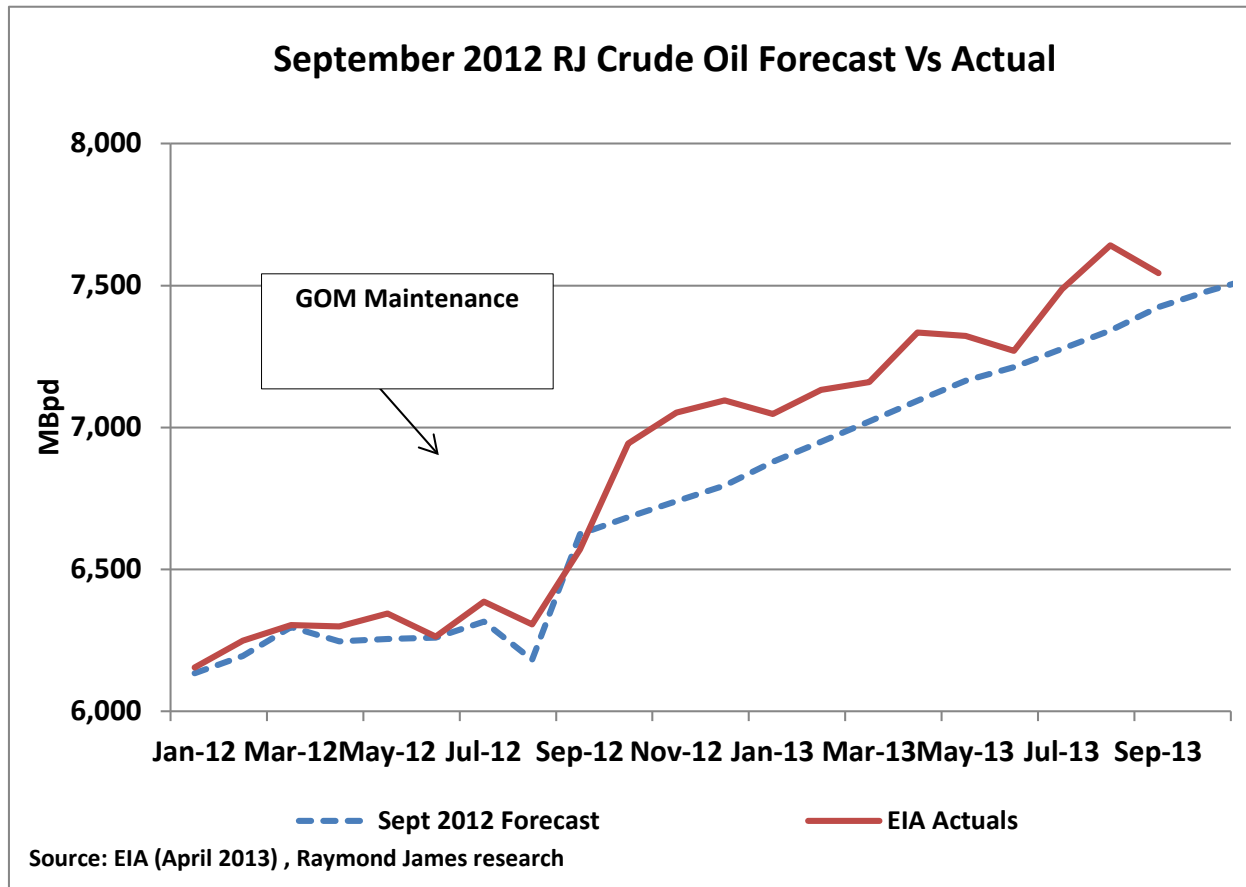
Staggering U.S. Oil Supply Growth!



Near-Term Supply Growth Very Visible

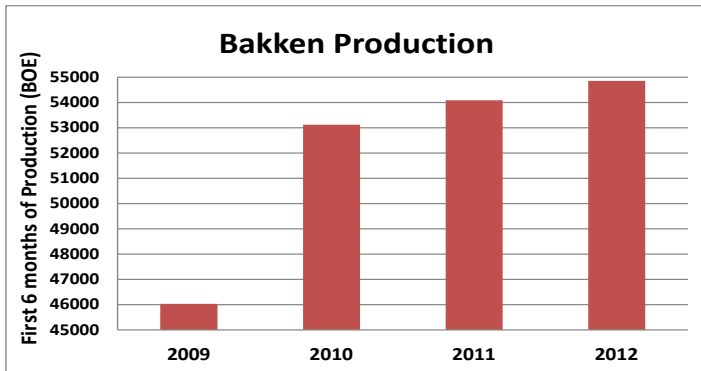


U.S. Actuals Tracking Above RJ 2012 Forecast

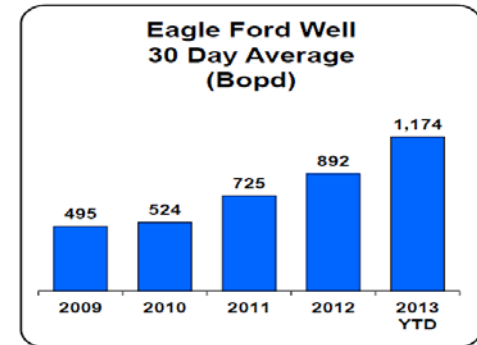


Source: EIA; Raymond James Research

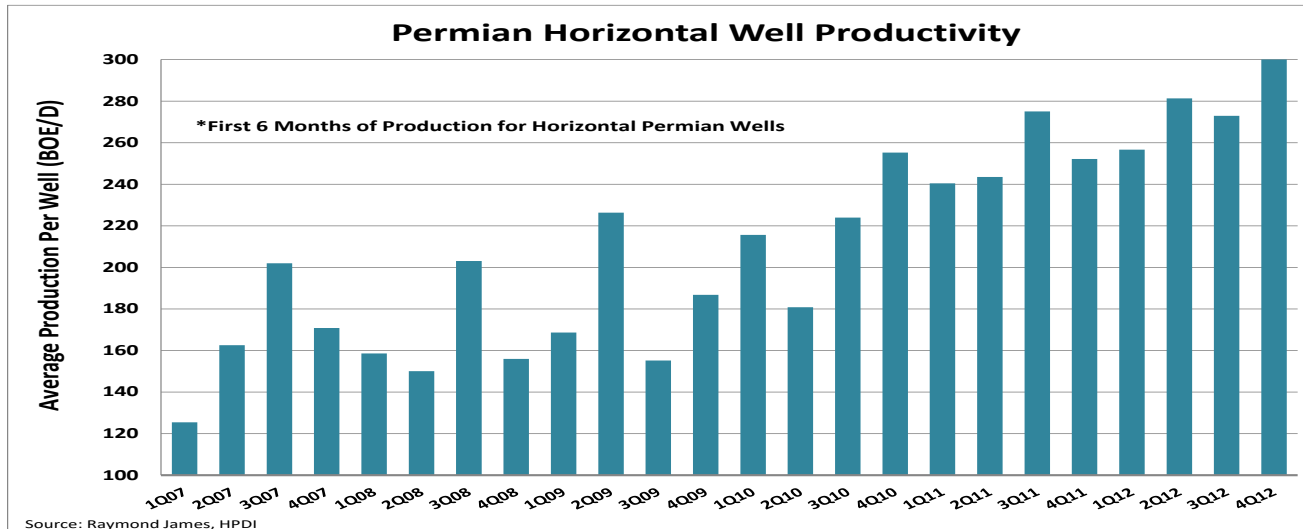
Efficiency Improvements Outpacing Our Model



Source: Raymond James; Drilling Info

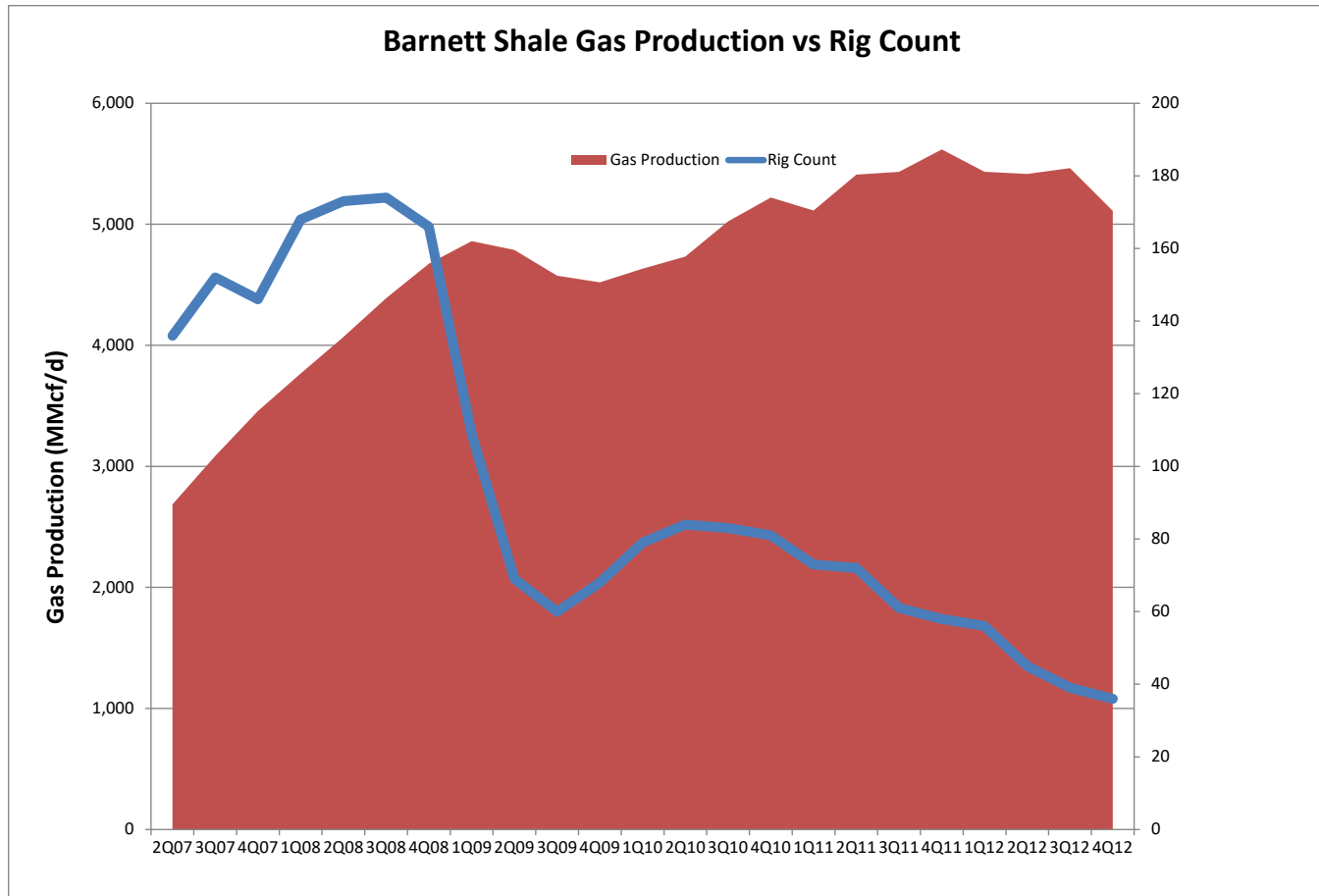


Source: EOG

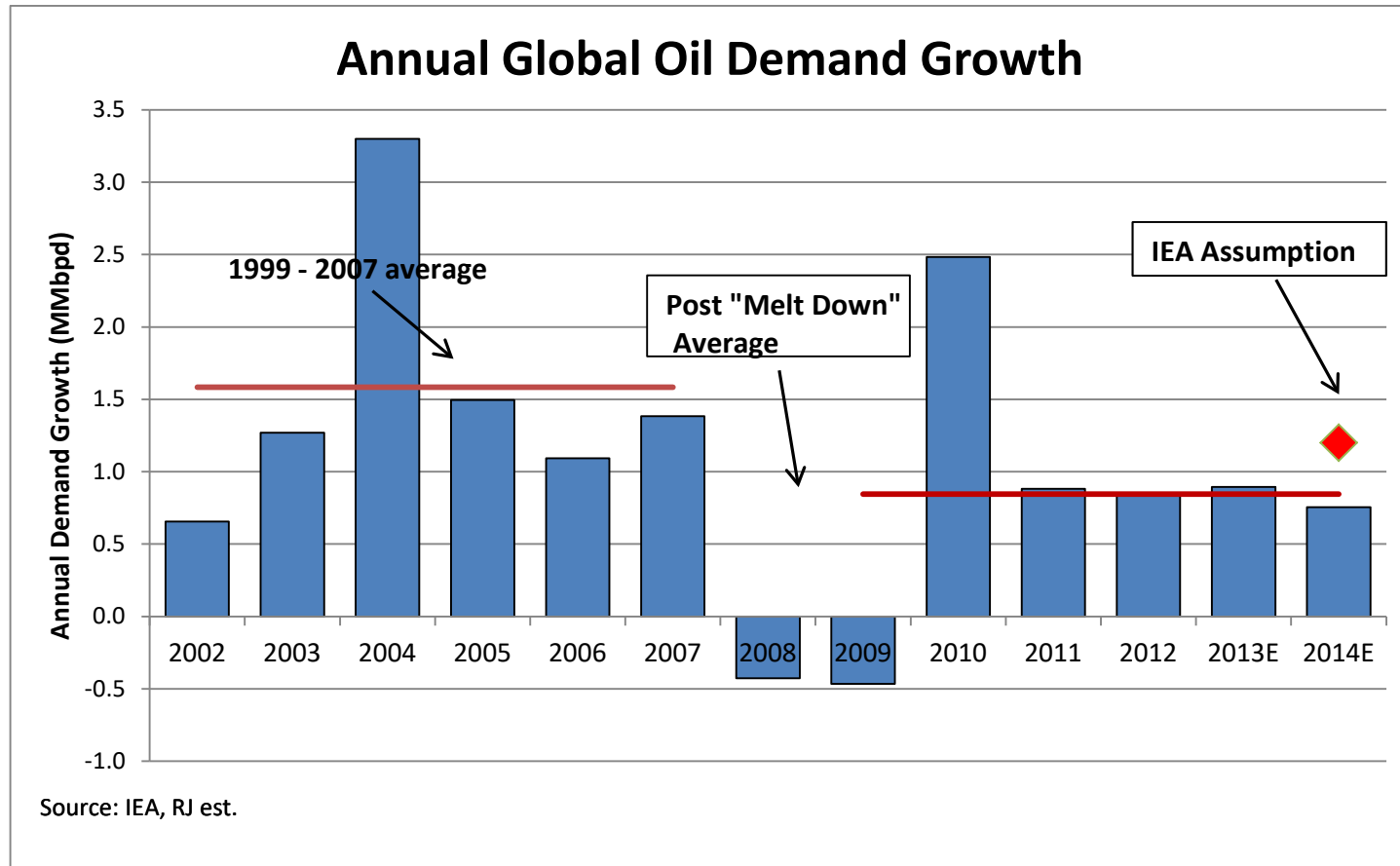


Source: Raymond James, HPDI

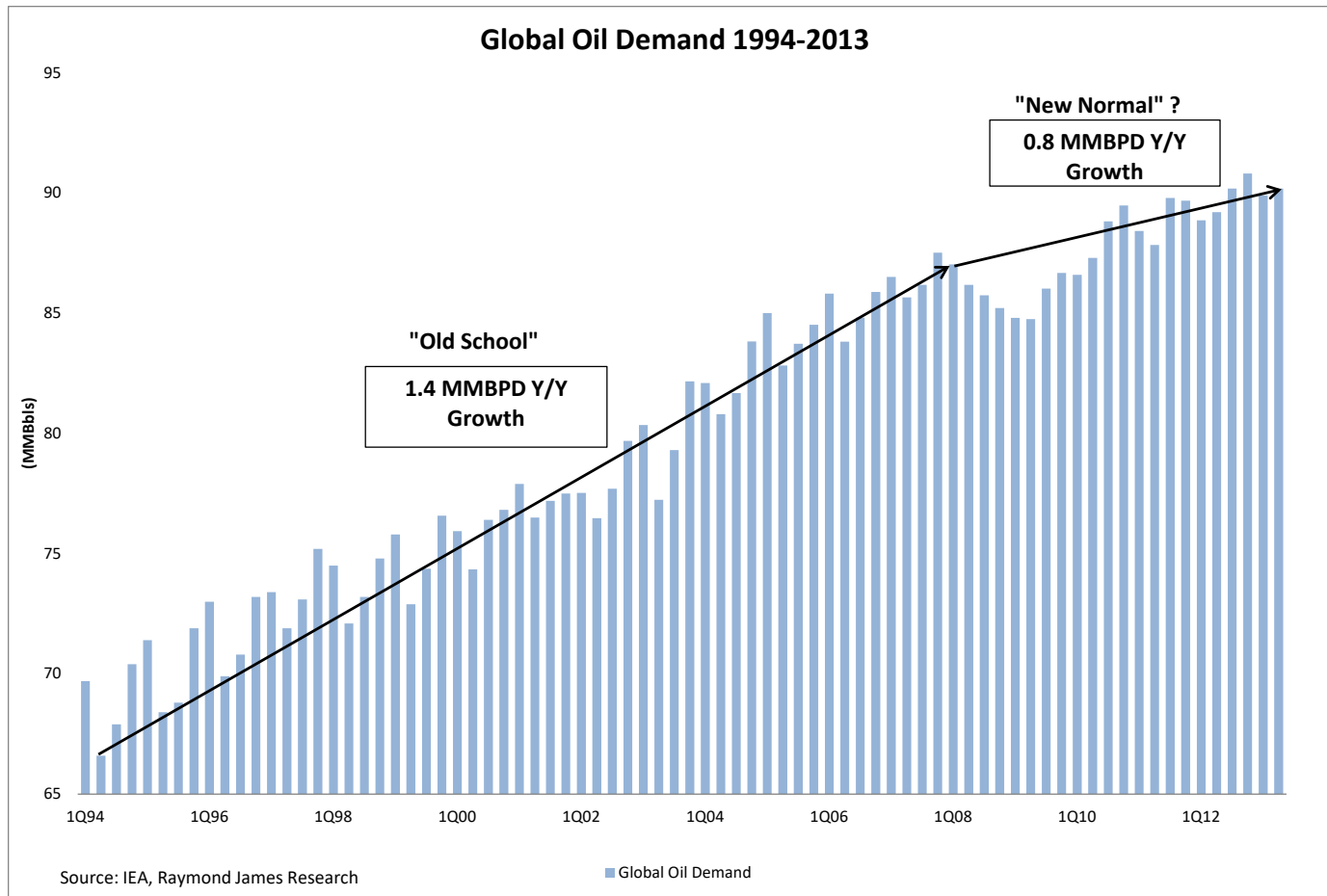
Won't Steep Declines Cause Oil Supply to Slow?



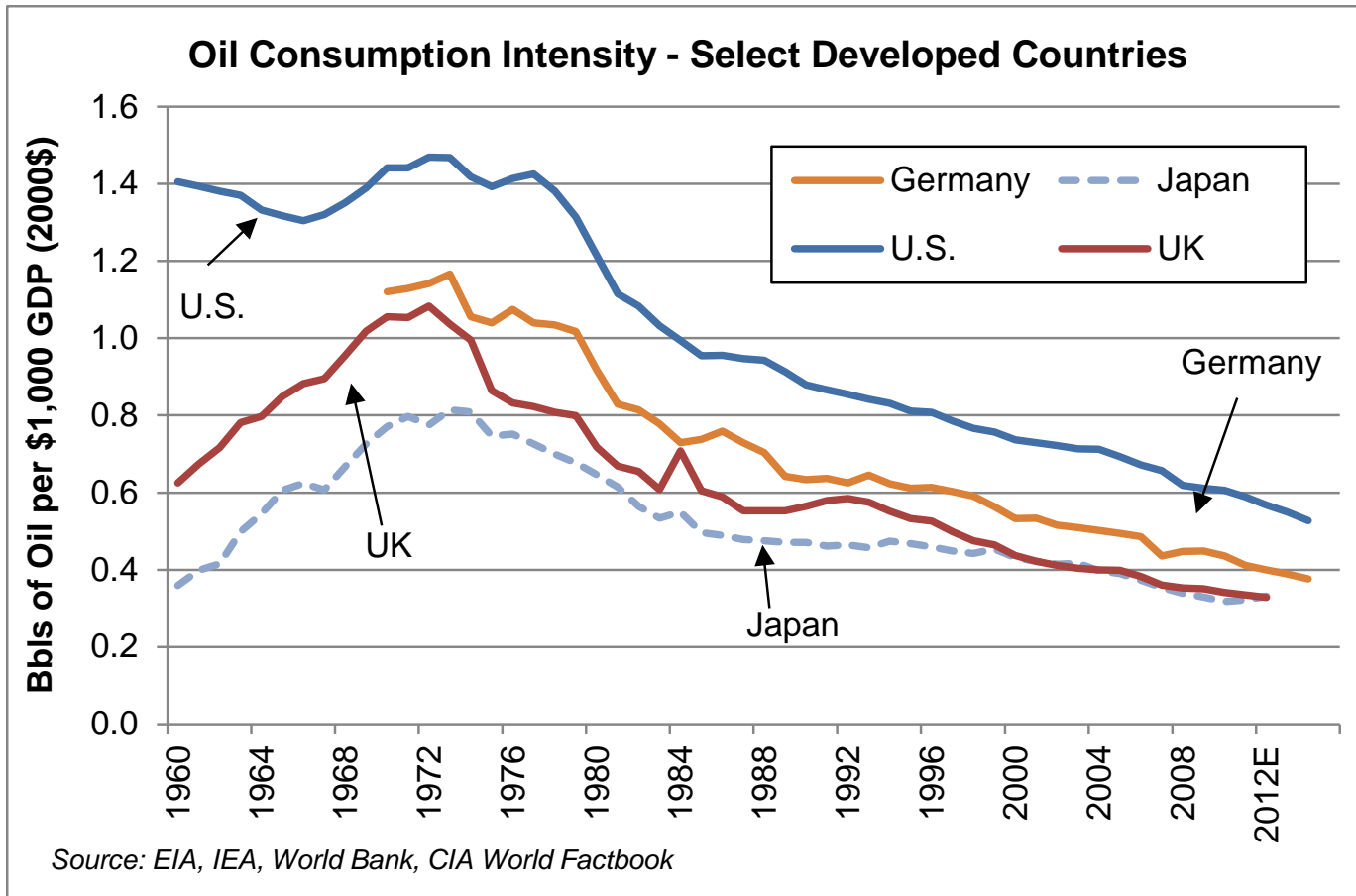
Growing Supply is Not the Only Problem



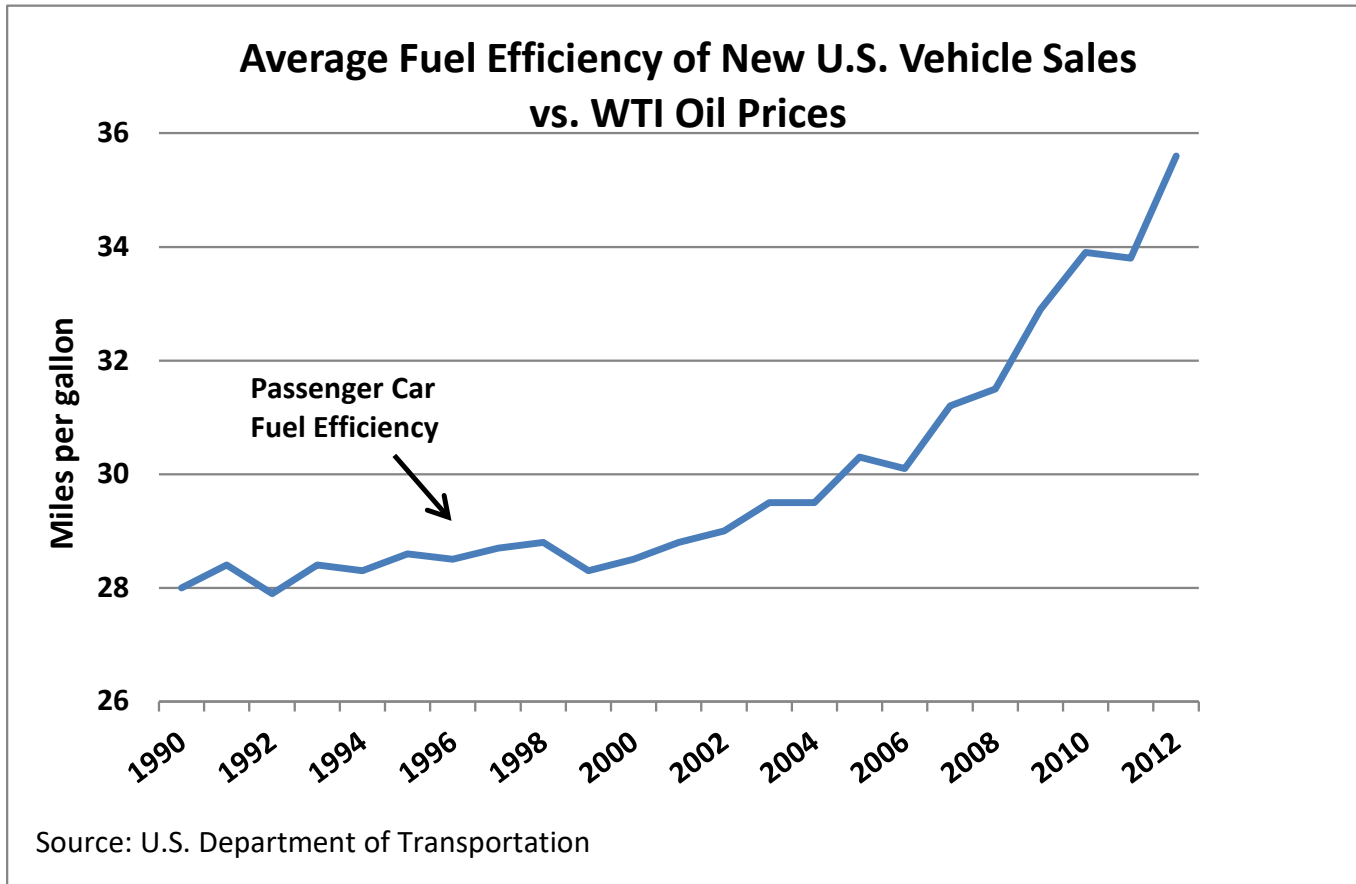
What is “New Normal” For Oil Demand Growth?



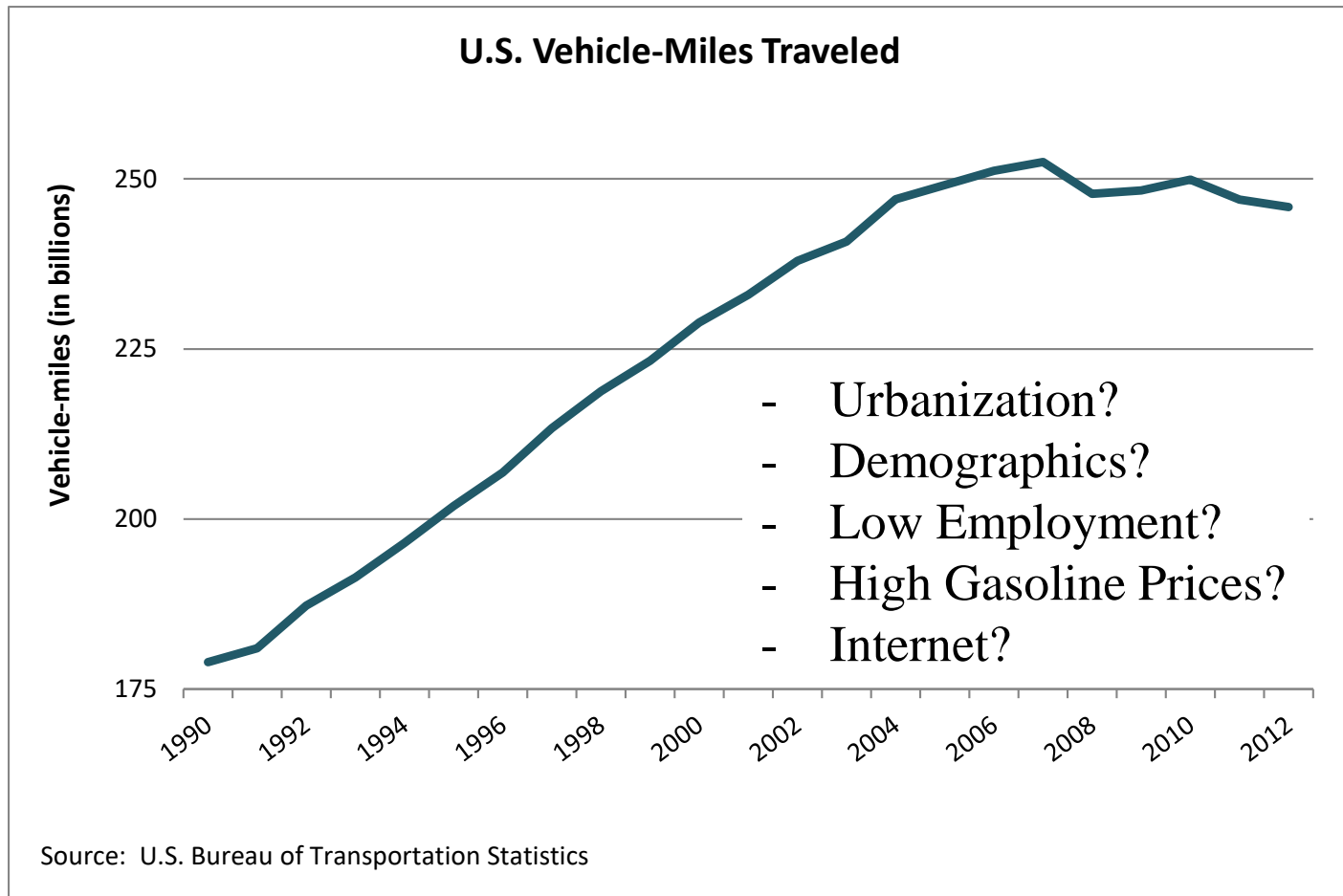
Why is Oil Demand Growth Slowing?



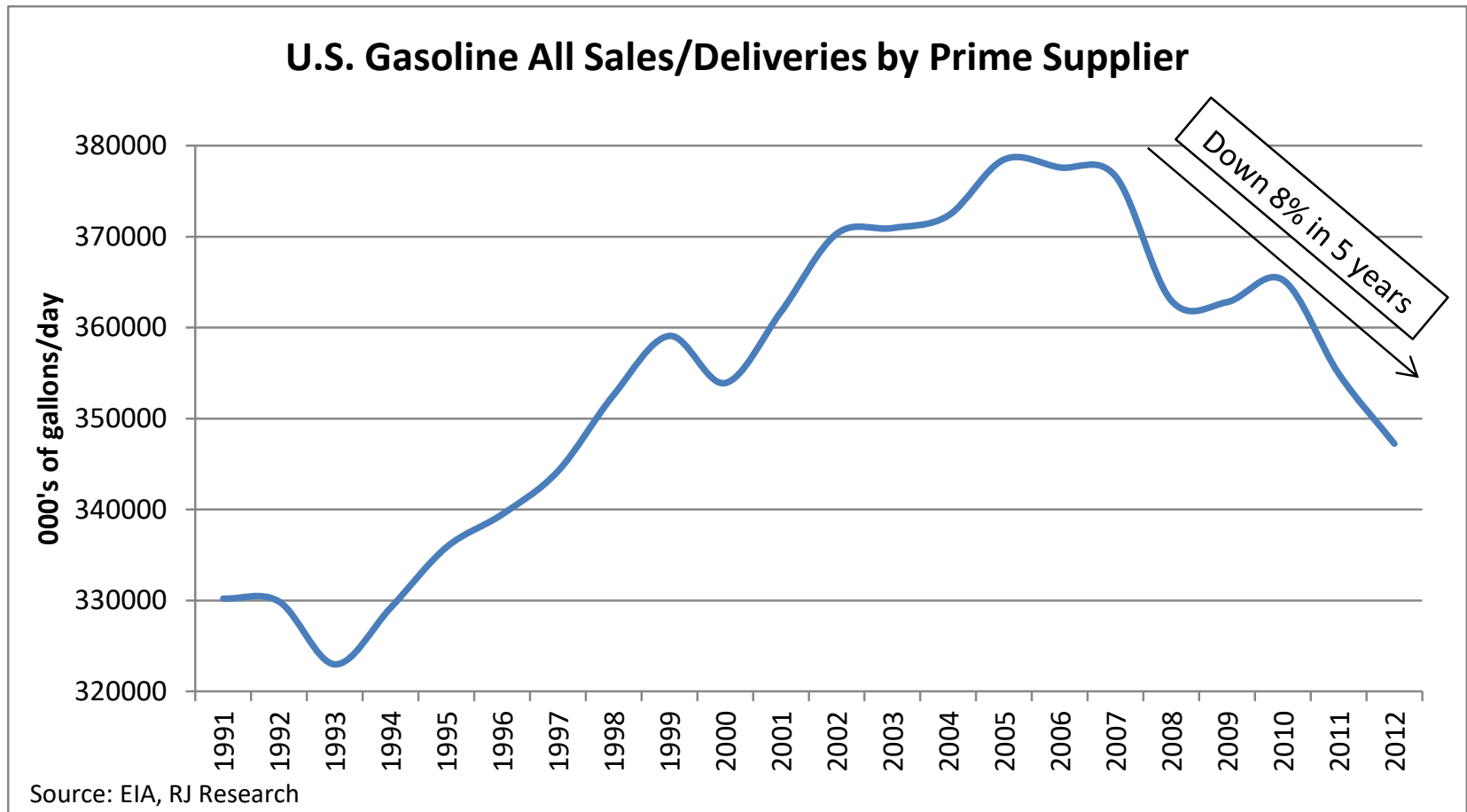
Efficiency Gains are Real



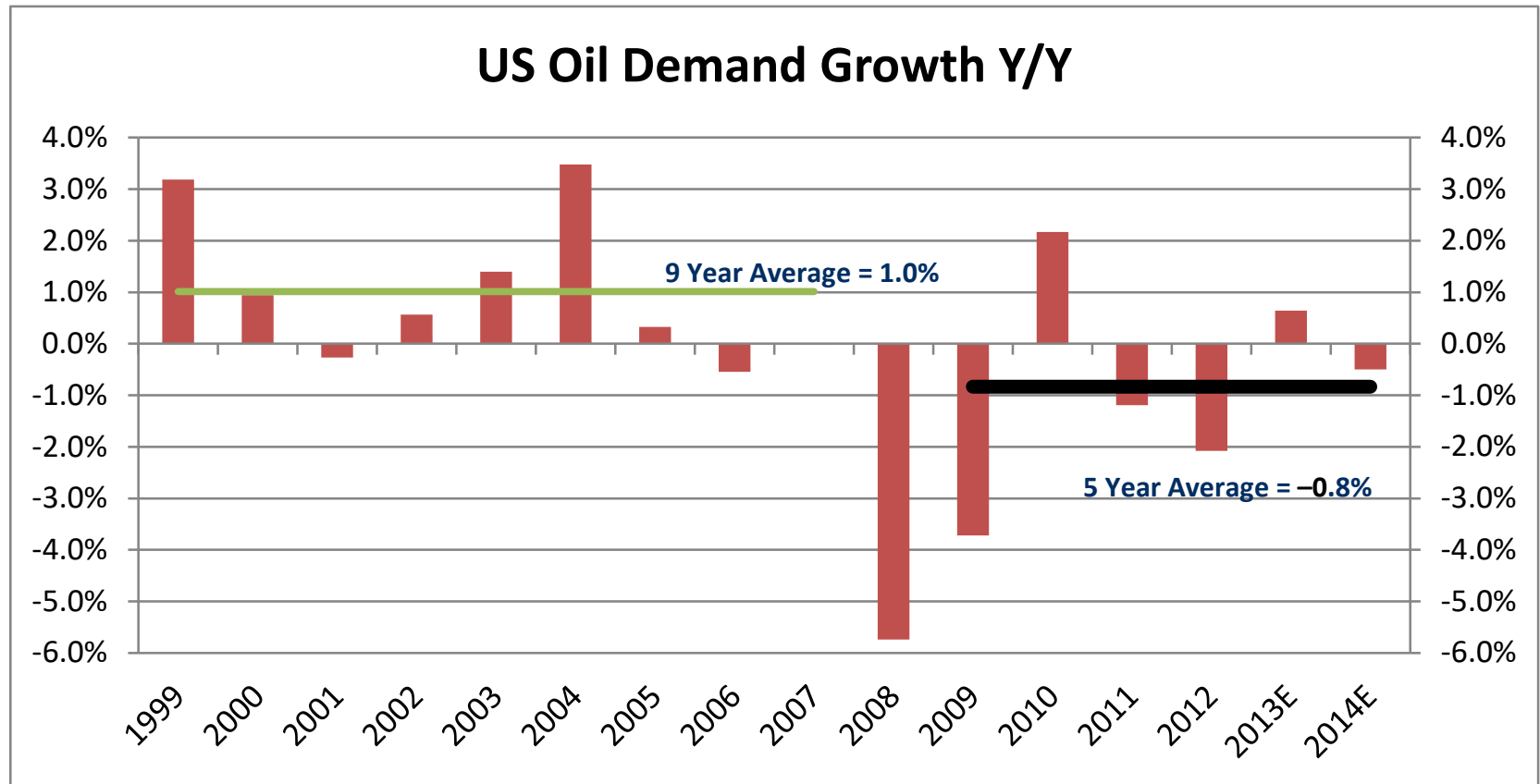
Are People Driving Less?



Better Mileage + Less Driving = Falling Demand

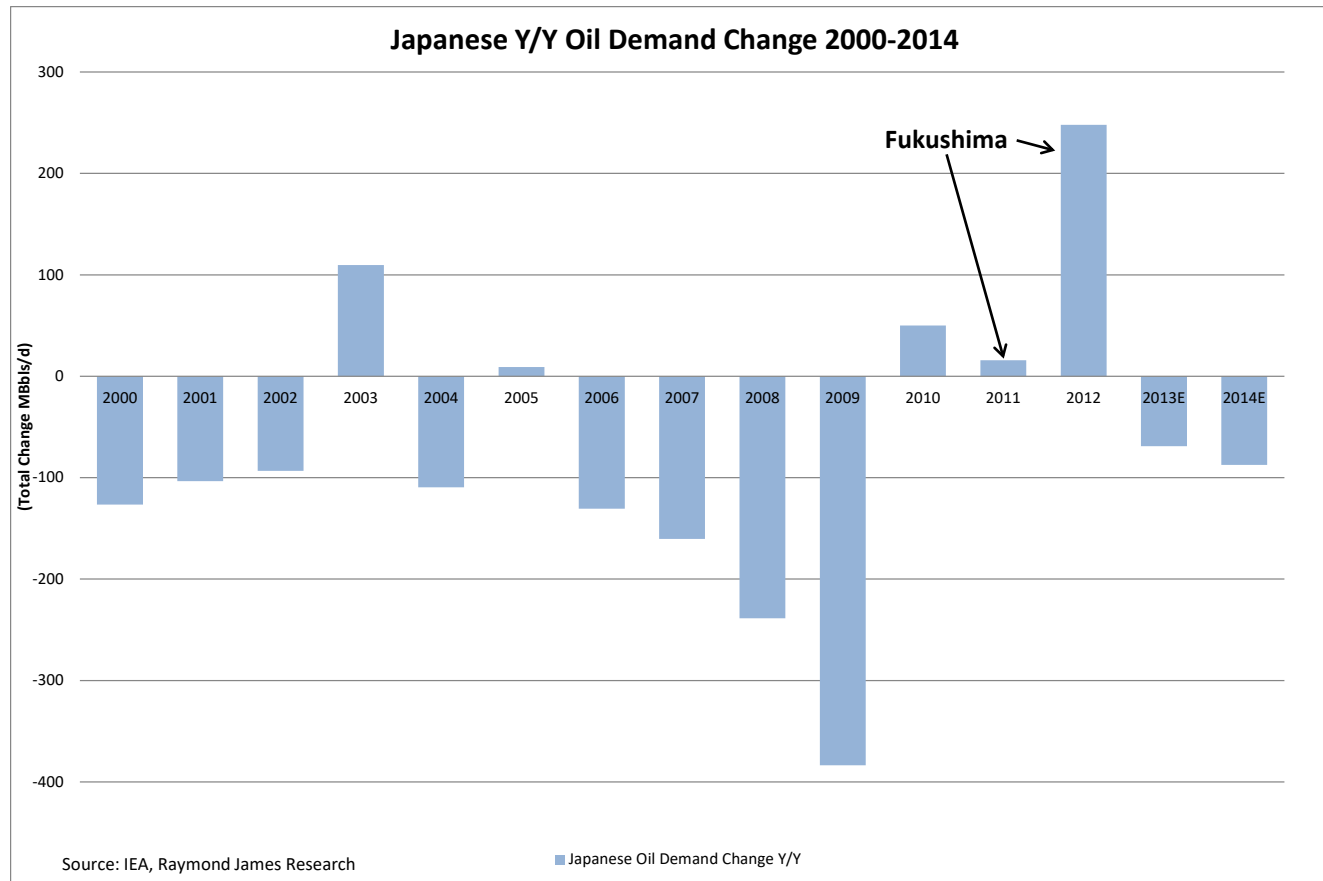


U.S. Demand Falling But Lumpy

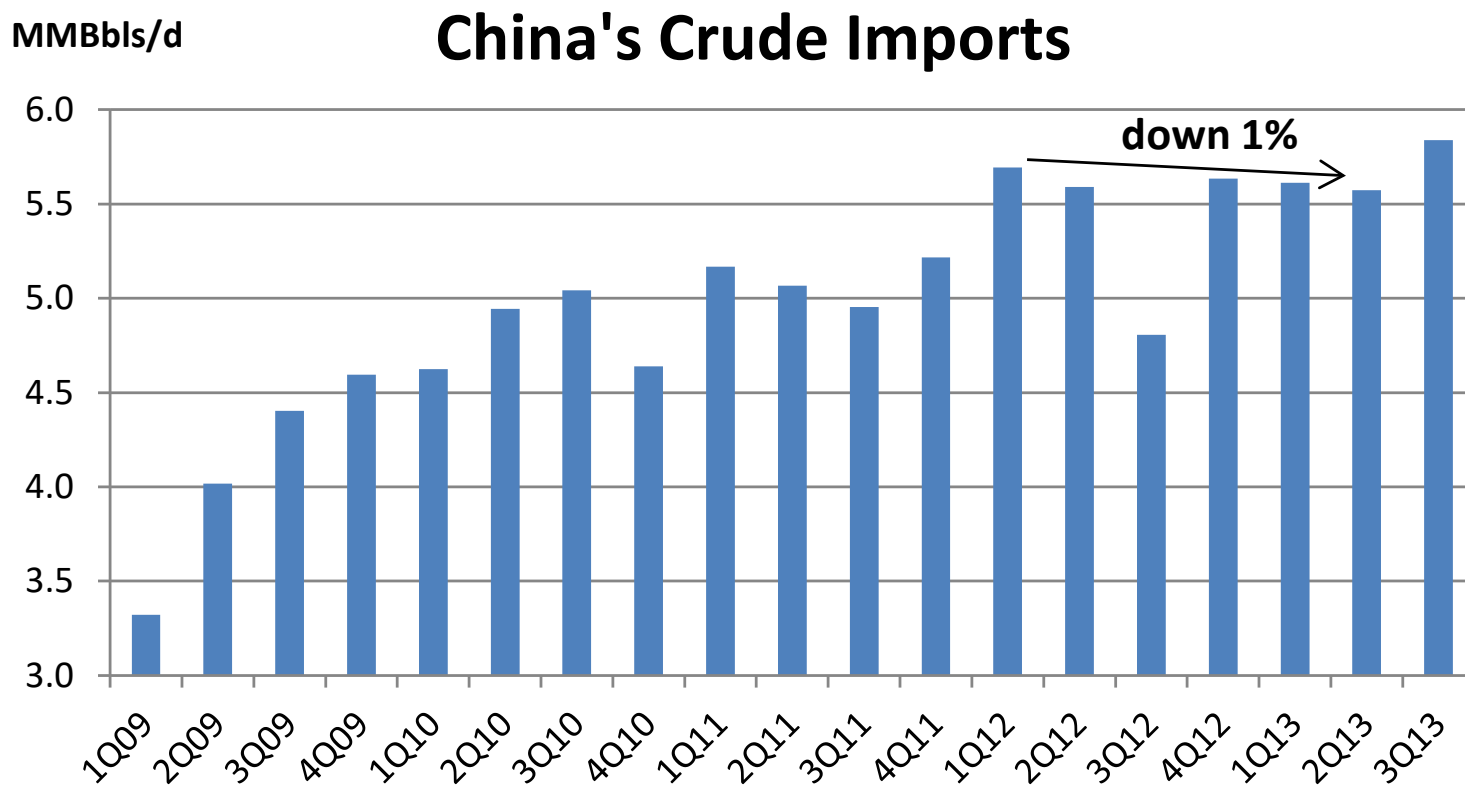


Source: IEA; Raymond James Research

Japanese Oil Demand Fell 8/10 Years Last Decade



Is China Worse than People Think?



Source: Bloomberg, National Bureau of Statistics of China, & RJ estimates.

Global Oil Demand is Facing Serious Headwinds

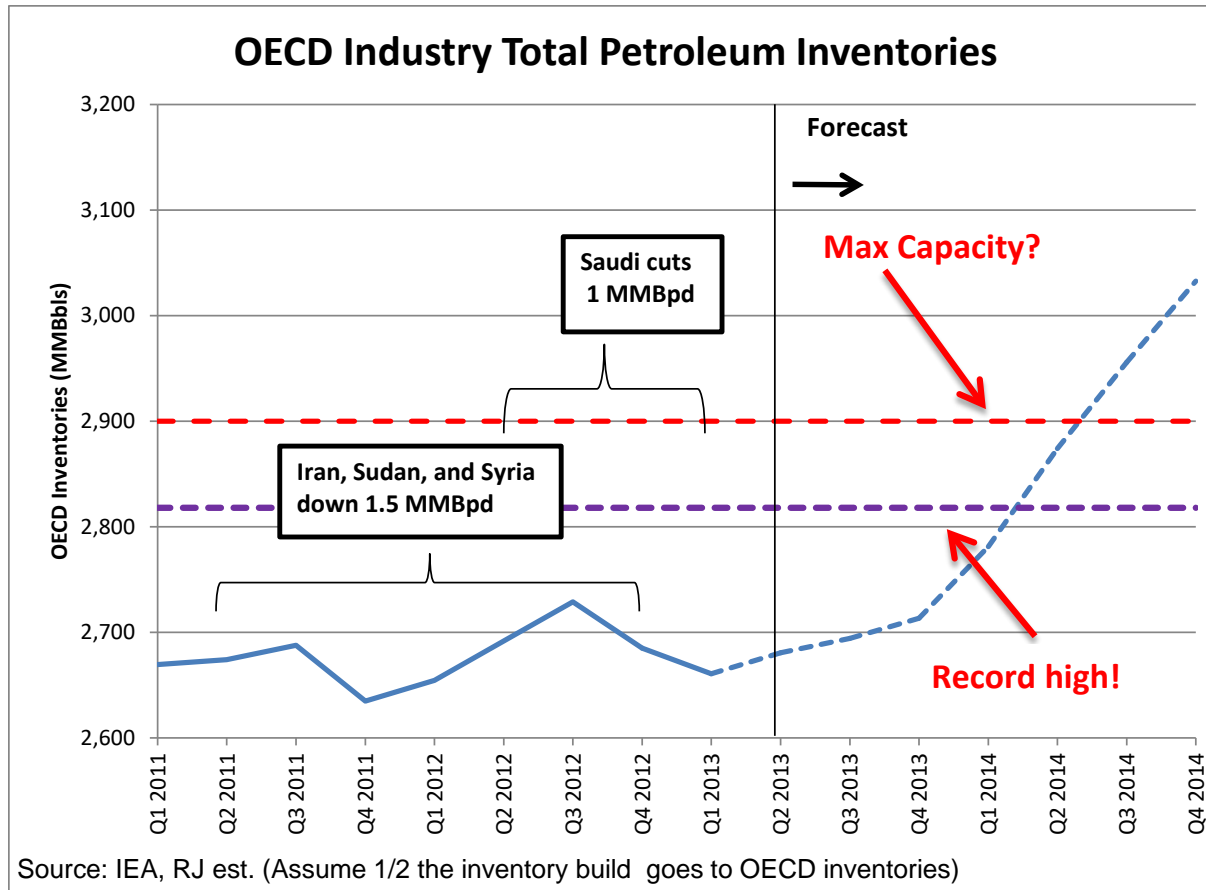
Oil Demand: Year-Over-Year Changes				
Region	Oil Demand 1999-07 Avg.	Oil Demand 2012A	Oil Demand 2013E	Oil Demand 2014E
North America	0.7%	-1.2%	0.5%	-0.5%
Europe	0.5%	-4.0%	-2.0%	-1.9%
Pacific (mainly Japan)	0.2%	4.2%	-1.6%	-1.9%
CIS (mainly Russia)	1.3%	1.6%	1.9%	1.5%
China	6.0%	6.2%	3.7%	3.4%
Other Asia	3.1%	2.4%	2.9%	3.0%
Latin America	1.9%	3.5%	2.7%	2.9%
Middle East	3.9%	3.1%	2.4%	2.7%
Africa	2.9%	3.9%	5.0%	3.5%
World (RJ Est.)	1.8%A	1.1% A	1.1%	0.8%
World (IEA)			1.2%	
GDP Data (IMF)		3.1%	3.1%	3.8%
Average Annual Growth	1.6 MMbpd	1.0 MMbpd	1.0 MMbpd	0.8 MMbpd

Source: IEA, IMF, Raymond James research

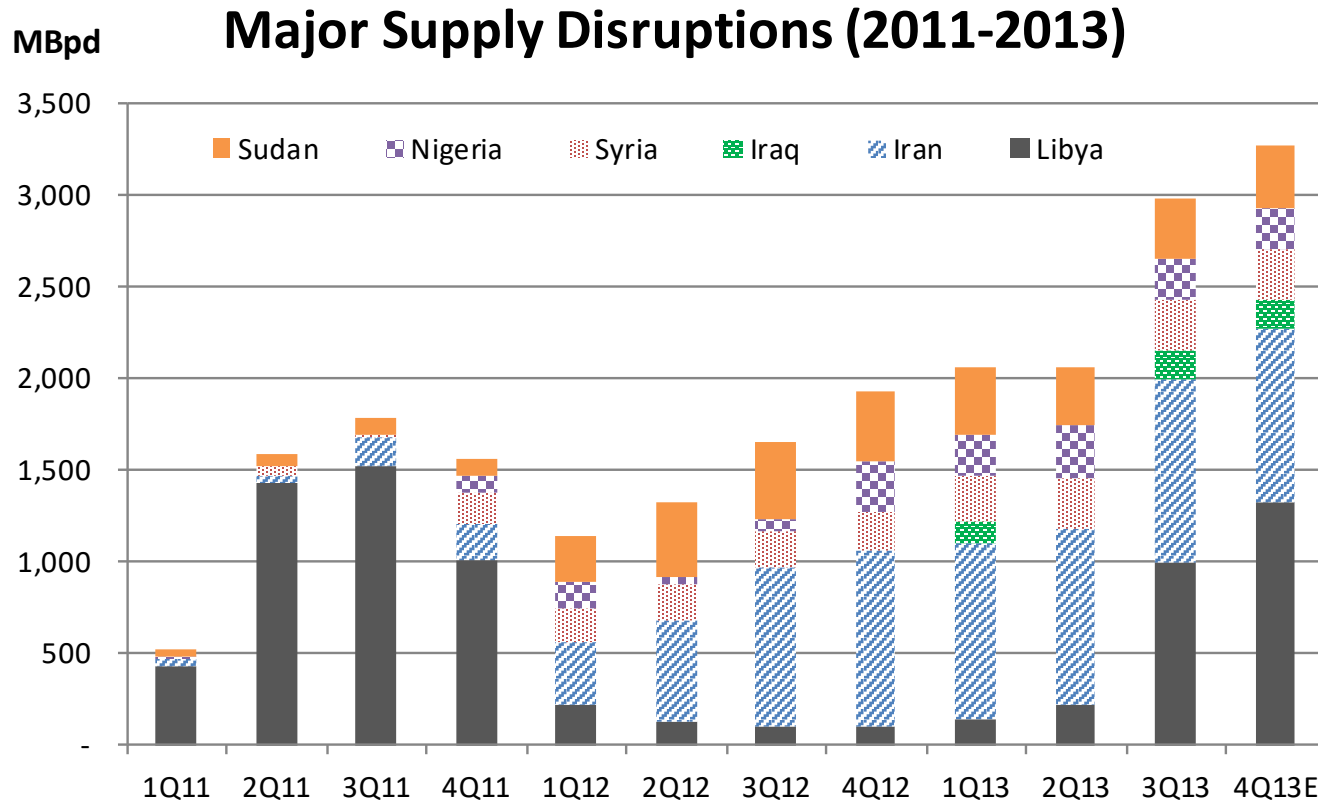
Where Does That Leave Our Global Oil Model

Oil Supply-Demand: Year-Over-Year Changes (MM bpd)			
Source	2012 A	2013 E	2014 E
<u>Previous Year Build/Draw</u>	<u>-1.0</u>	<u>0.5</u>	<u>0.2</u>
North Am. Supply Growth	1.2	1.4	2.0
Other Non-OPEC	-0.5	-0.1	0.5
OPEC Supply Growth	1.8	-0.6	0.2
<i>Saudi Arabia</i>	0.5	-0.1	0.1
<i>Libya</i>	0.9	-0.5	-0.2
<i>Iran</i>	-0.6	-0.3	0.0
<i>Other (Iraq, , Kuwait, UAE)</i>	1.0	0.3	0.4
Global Demand	+1.0	+1.0	+0.8
Inventory Build	+0.5	+0.2	+2.1
Source: IEA, RJ est.			

Question Is Not “If” But “When?”



If Fundamentals Suck, Why is Spot So High?



Source: IEA; Raymond James Research

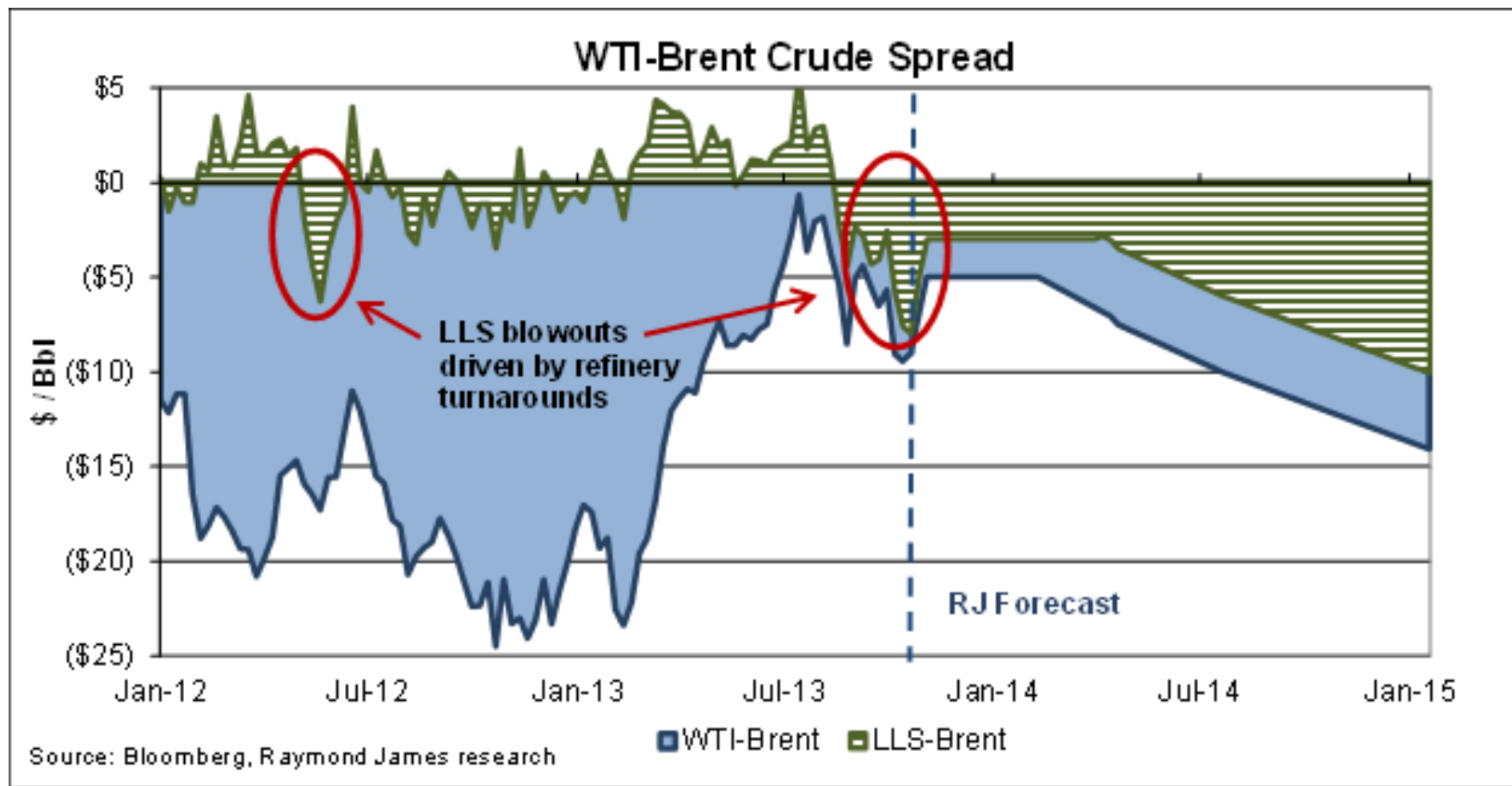
Where Could We Be Wrong?

- U.S. Supply & Global Demand #'s Conservative
- Bad Data?
 - Data May be Wrong...But It's Consistently Wrong
 - Either Way Demand is Worse Than Pre-2008
- More MENA Supply Interruptions?

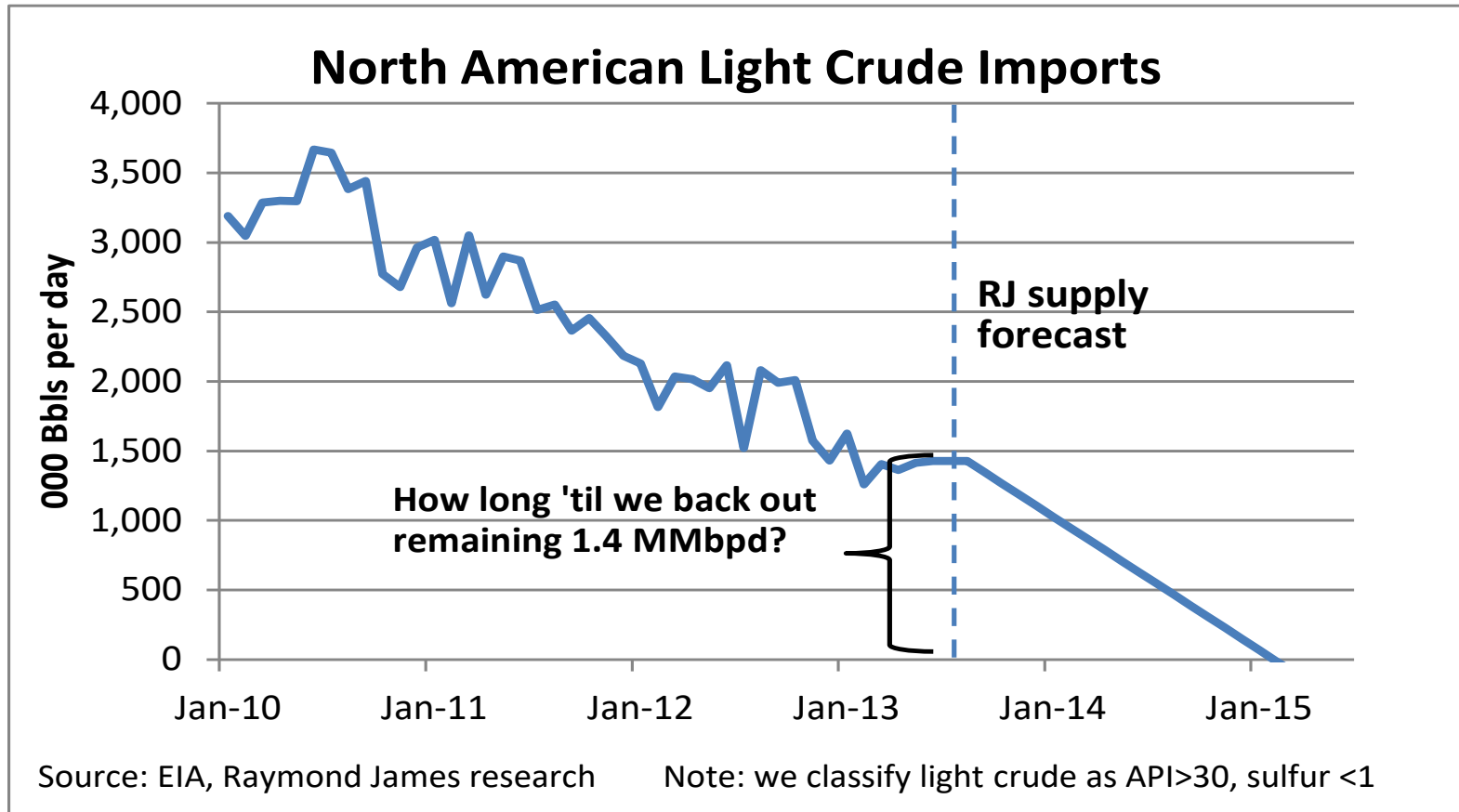
What Solves Structural Oil Problems?

- Robust Global Economic Recovery
 - Difficult With De-levering & High Oil Prices
- Cut Supply
 - Temporary Solution
 - OPEC Excess Capacity Becomes Problem
- **Lower Oil Prices** - SOLUTION!
 - Slows U.S. Drillers
 - Spurs the Global Economy

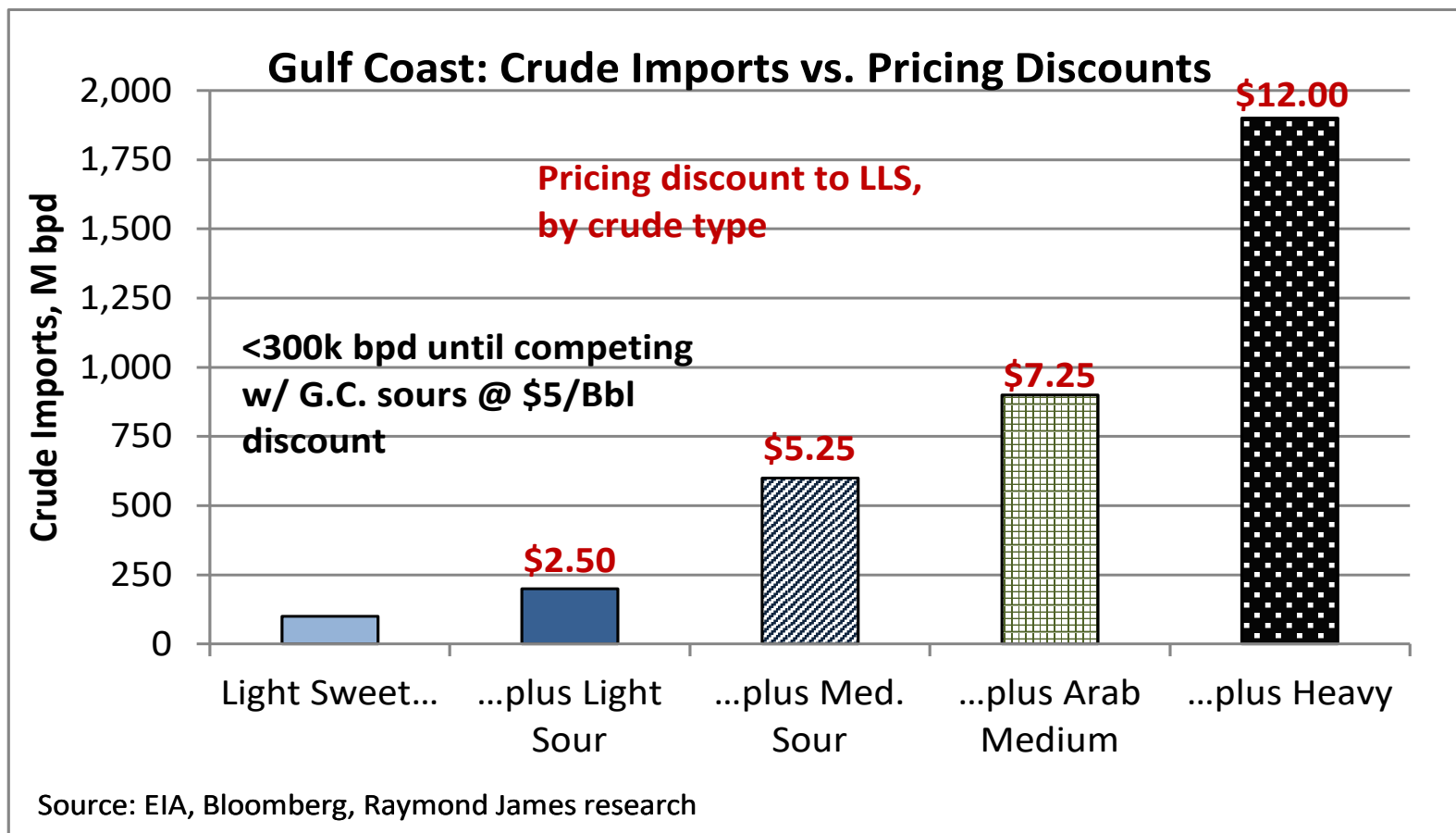
WTI Disconnect Isn't Going Away



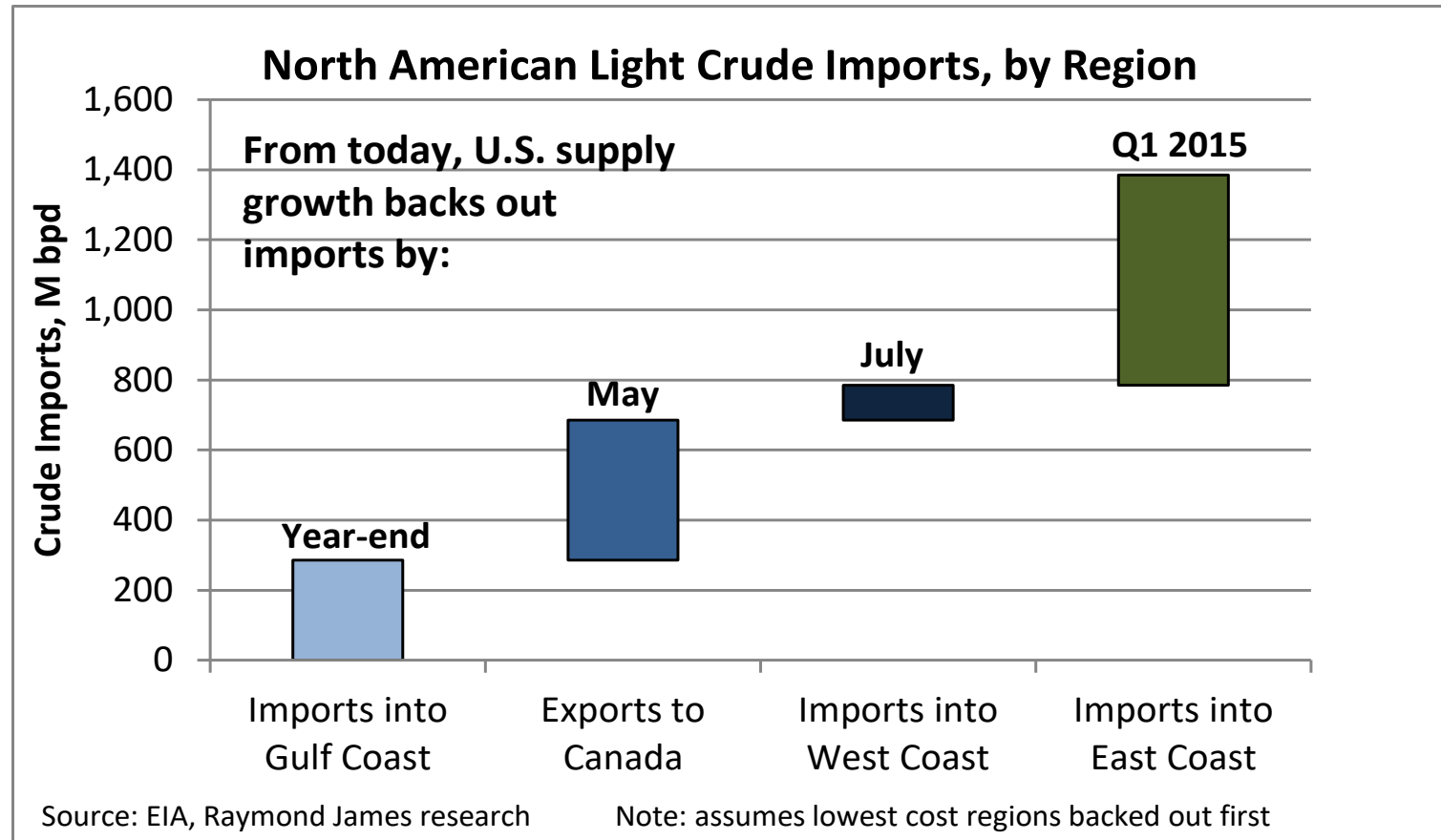
Watch Light/Sweet Oil Import Timing!



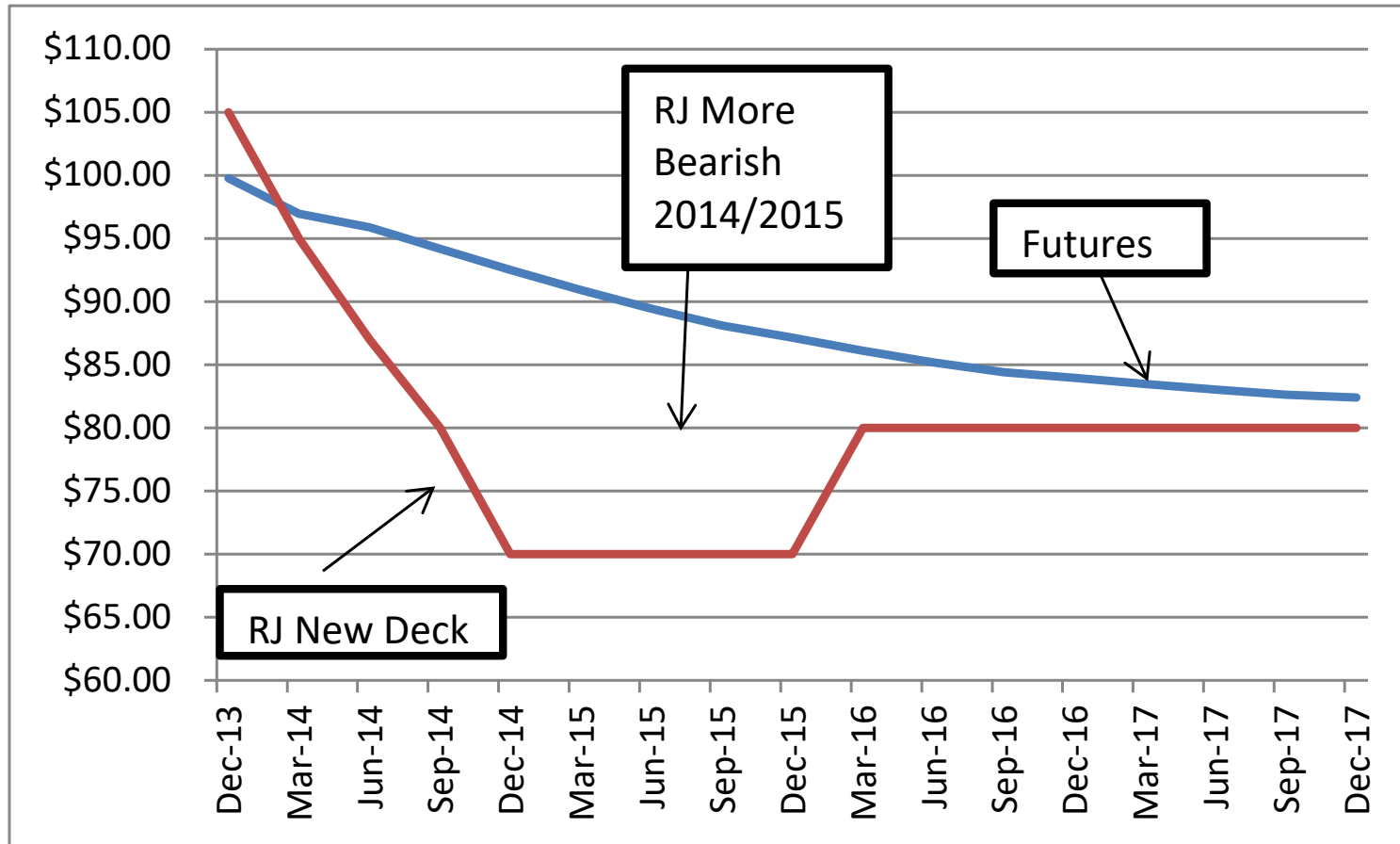
Gulf Coast Spread Widens When Light is Gone



North American Timing Will Be “Squishy”



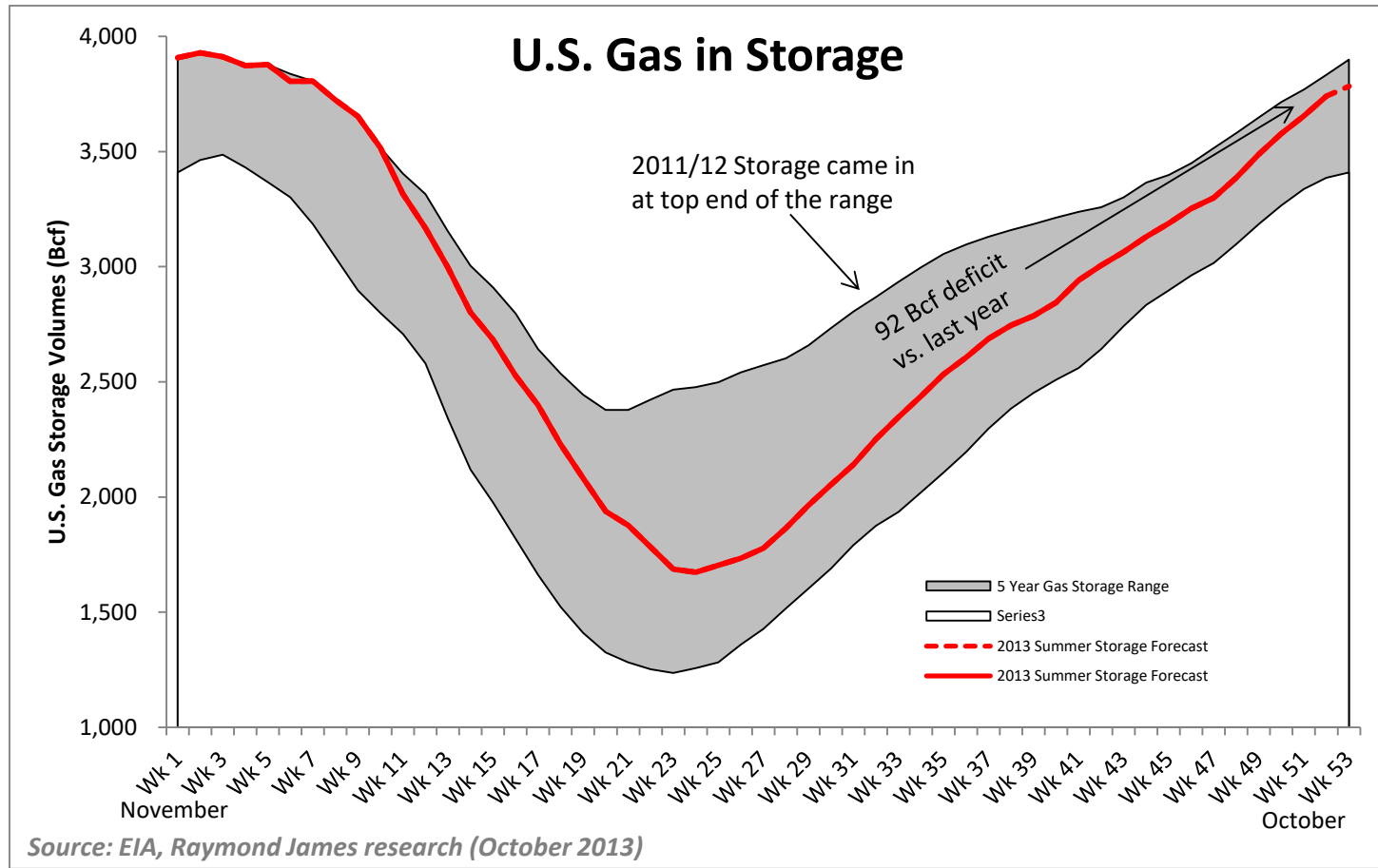
Where is our WTI vs. Consensus?



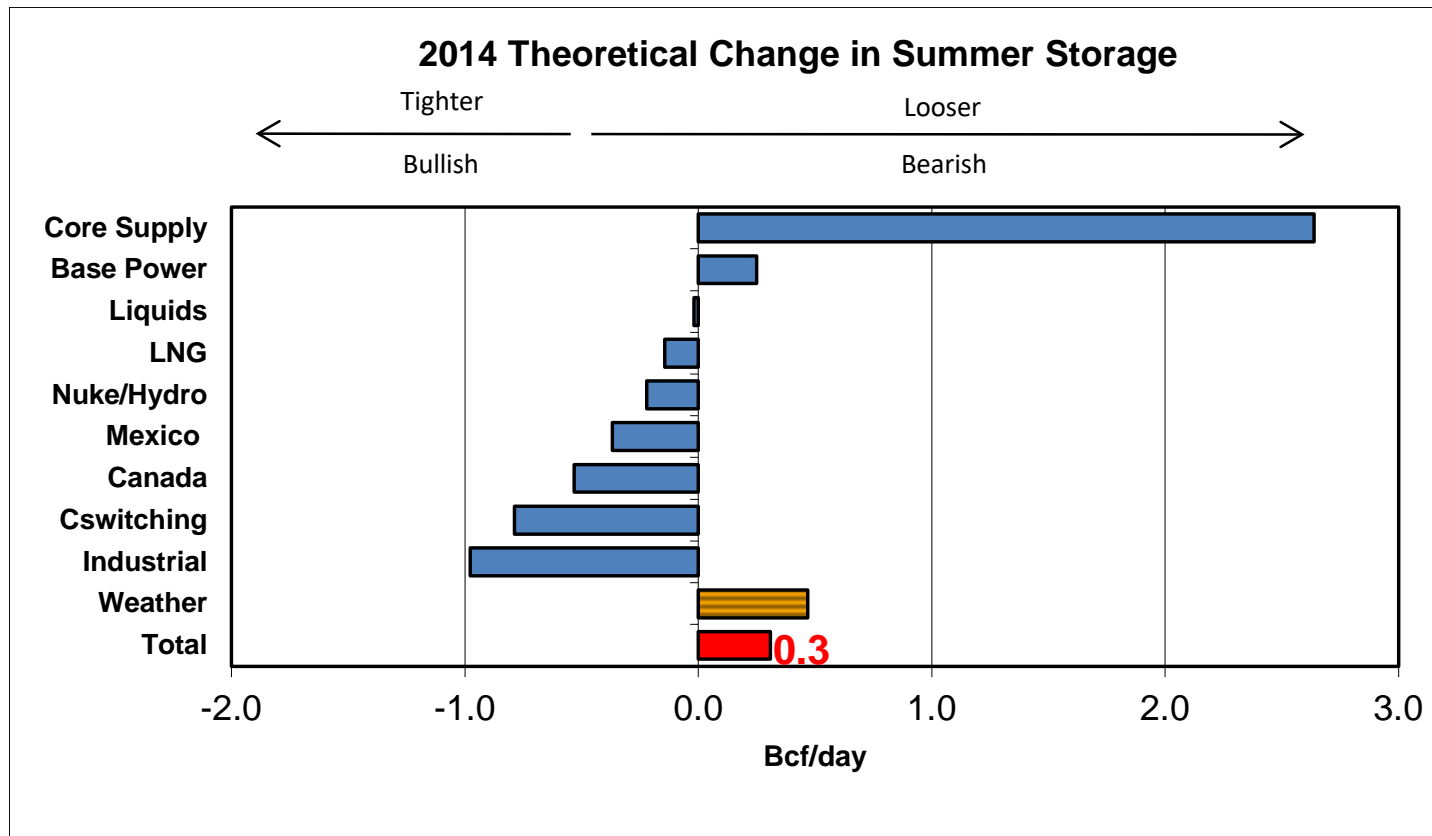
Source: FactSet; Raymond James Research

What About U.S. Natural Gas?

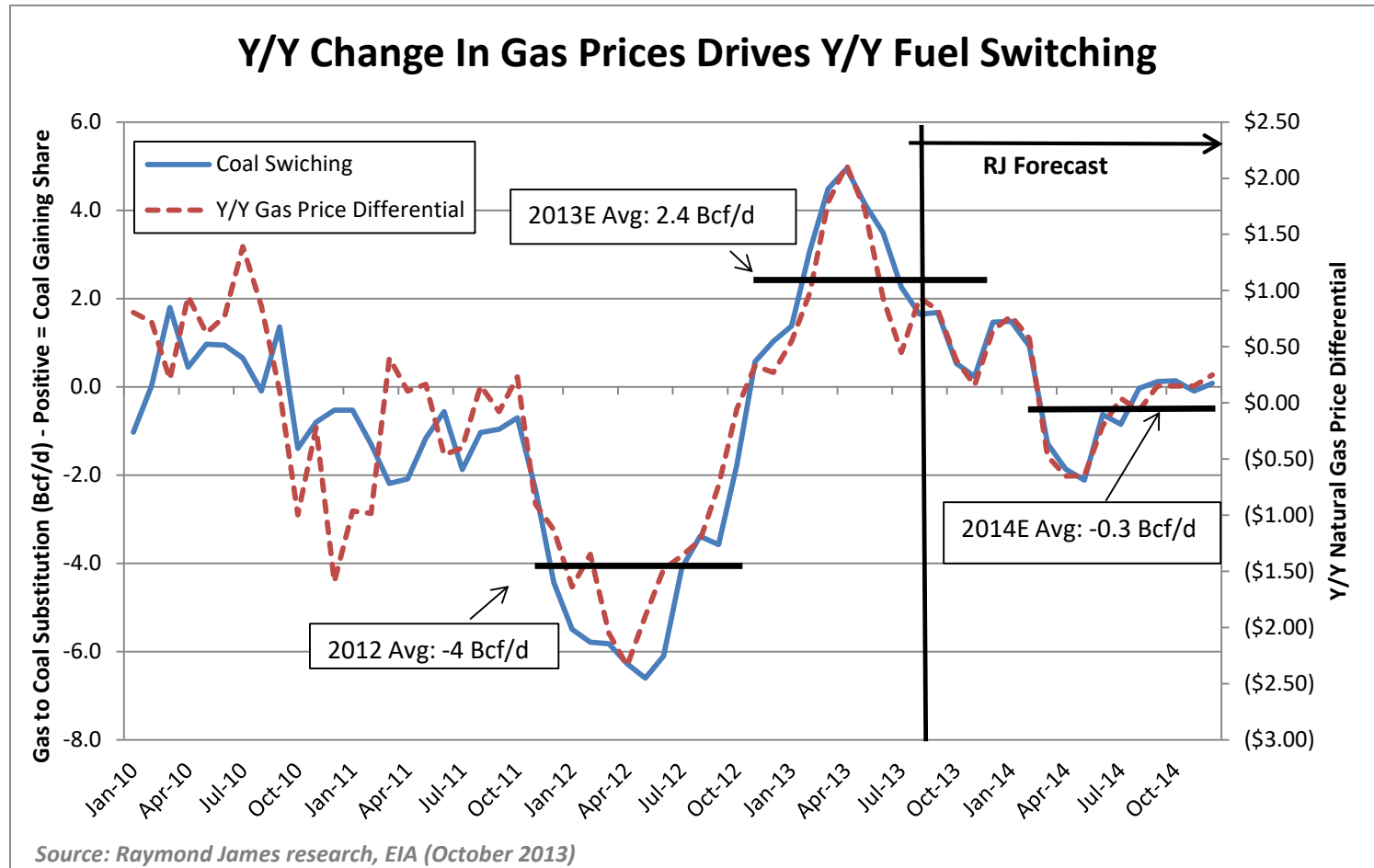
Low Prices & Weather Solved Oversupply in 2013



How Do We Offset Supply Growth?

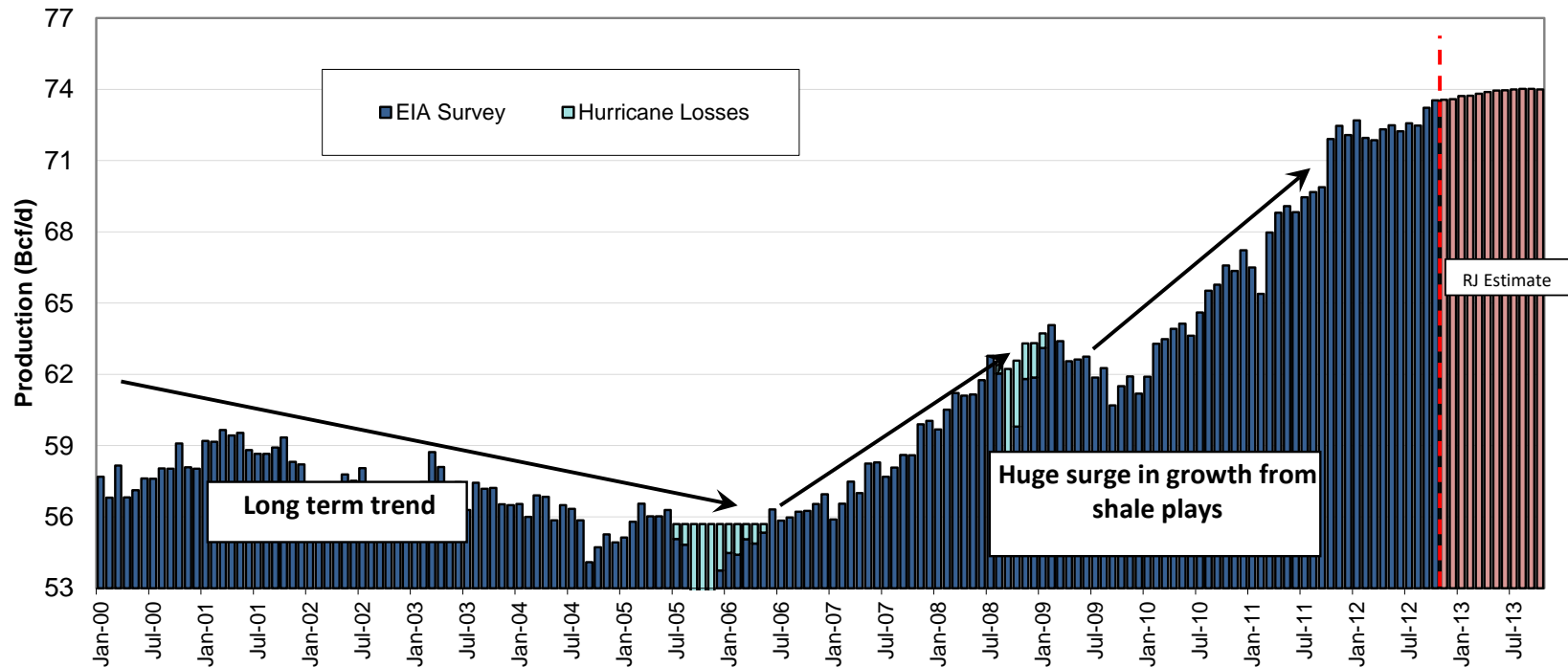


Gas to Coal Switching Key To Late 2013 Pricing



Gas Growth Slowing But Not Down!

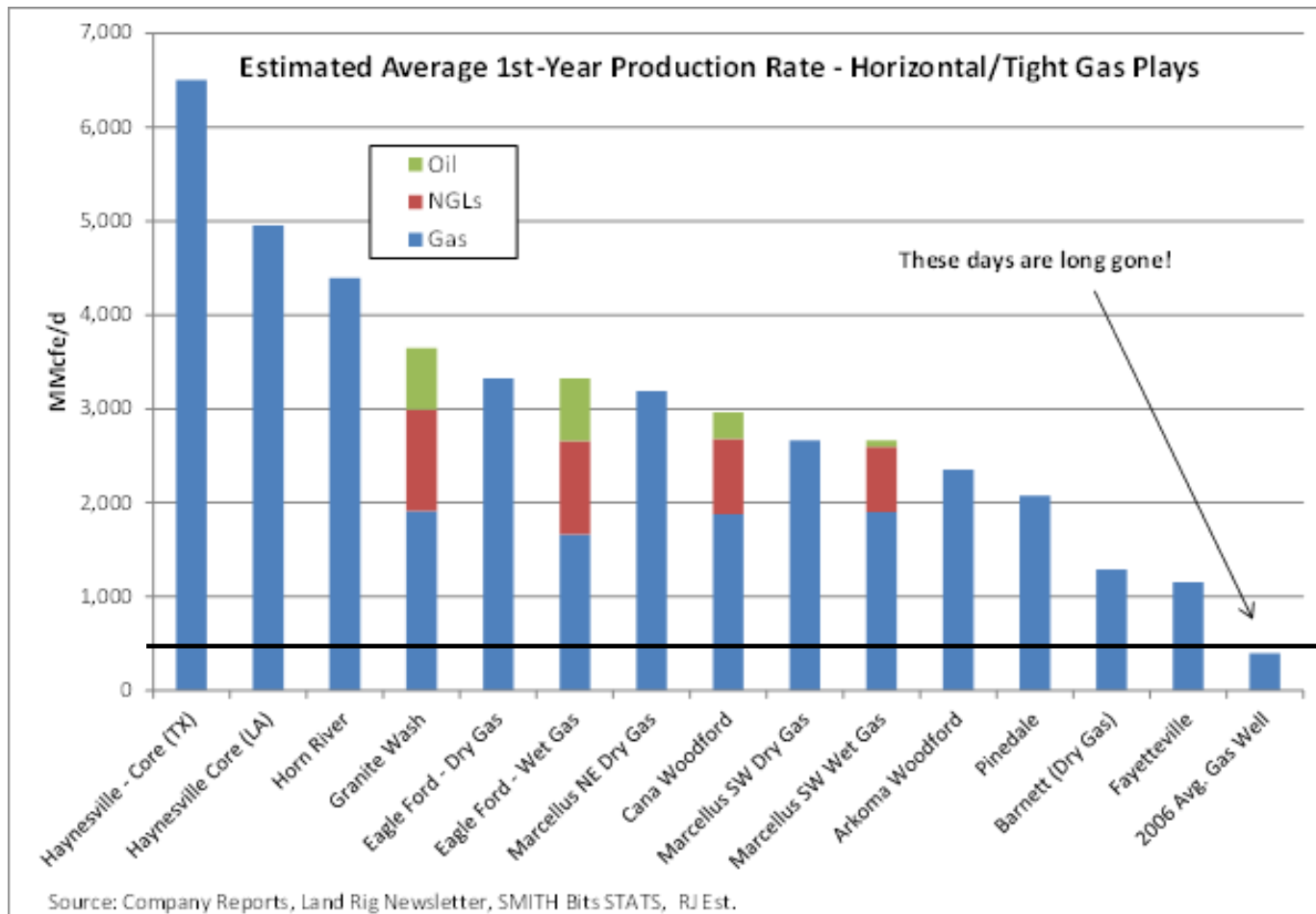
U.S. Natural Gas Production- EIA 914 Data



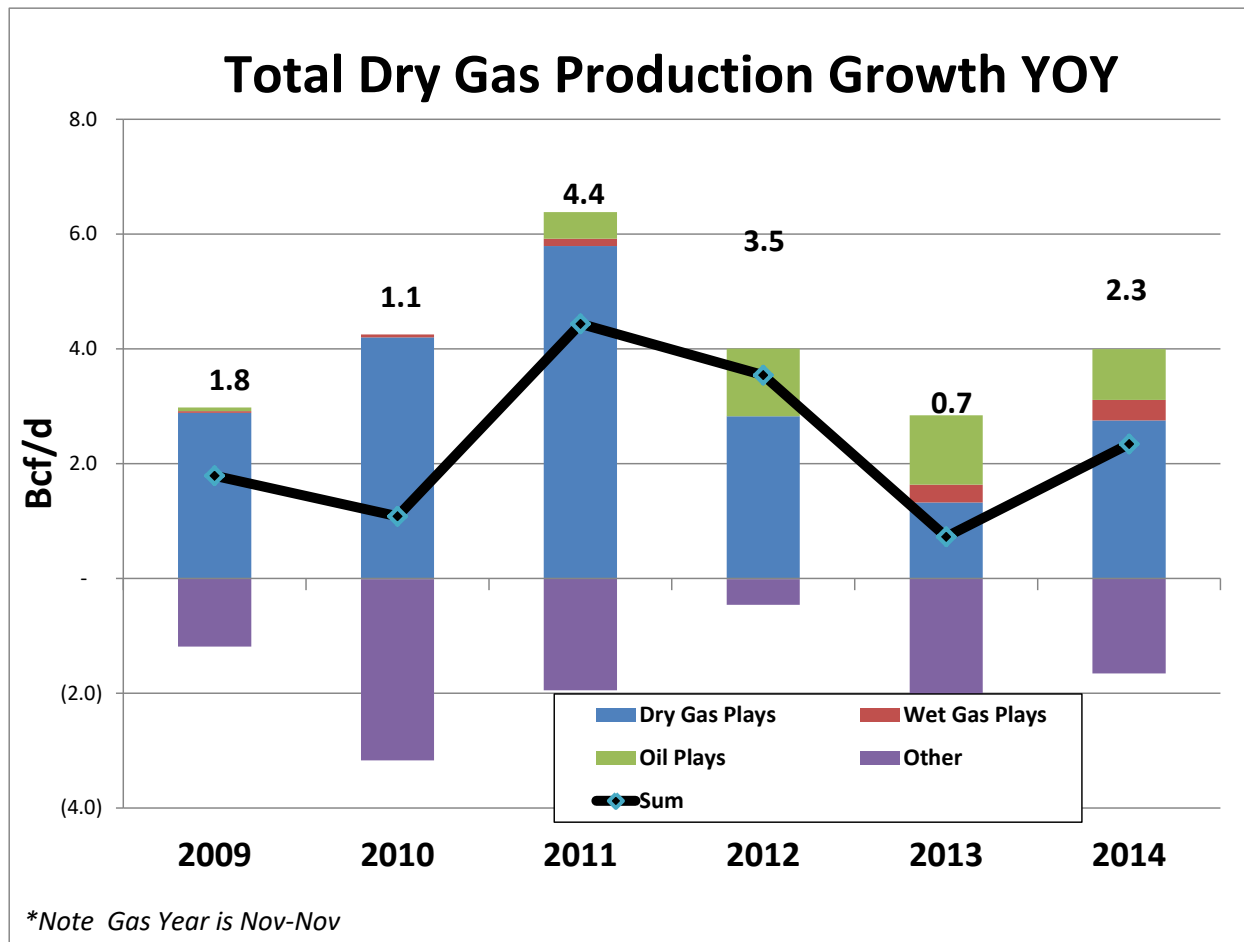
Source: U.S. Energy Information Administration (December 2012), RJ est.

Note: Data sets adjusted to reflect hurricane-related shut ins

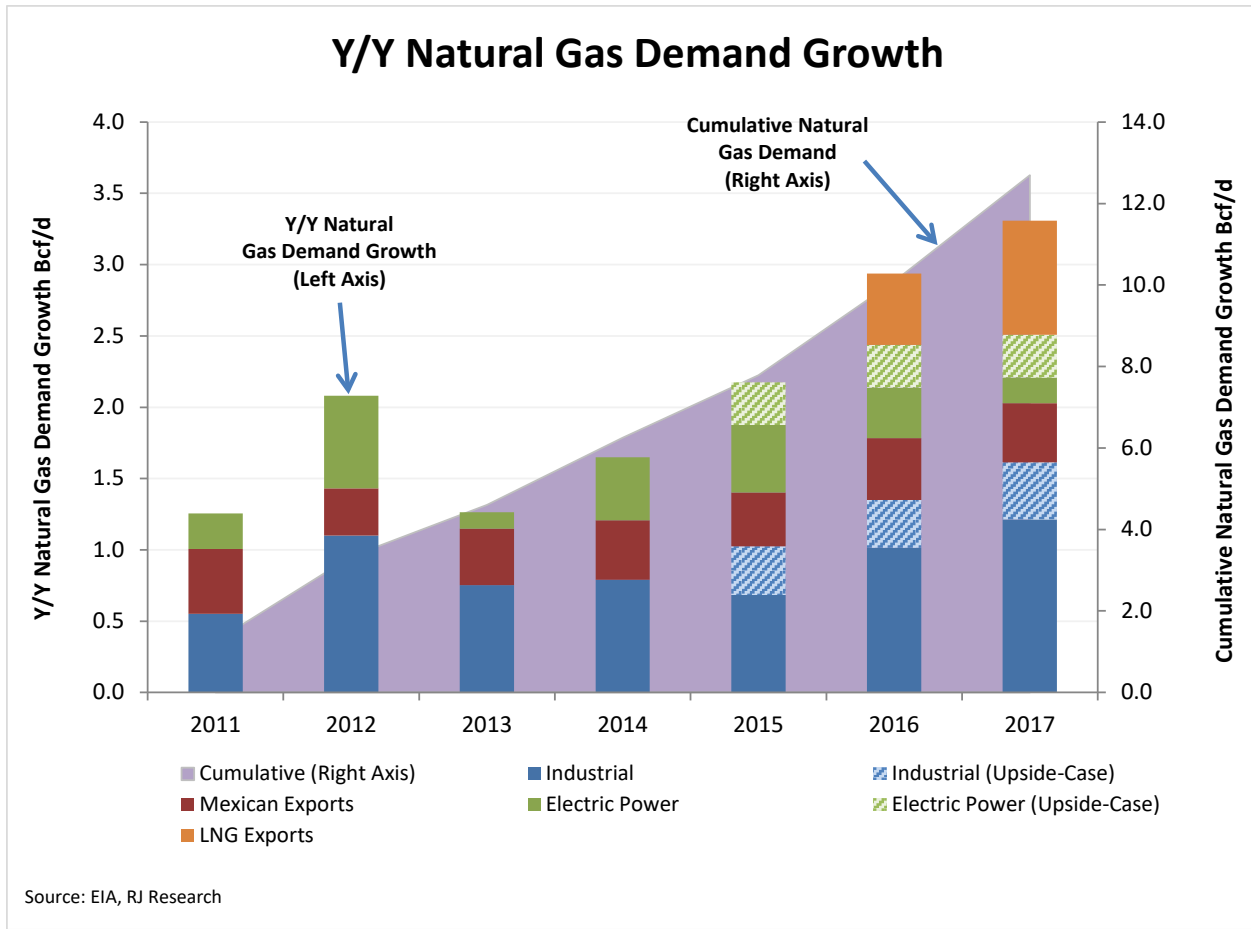
Well Productivity Now 5x-10x Better?



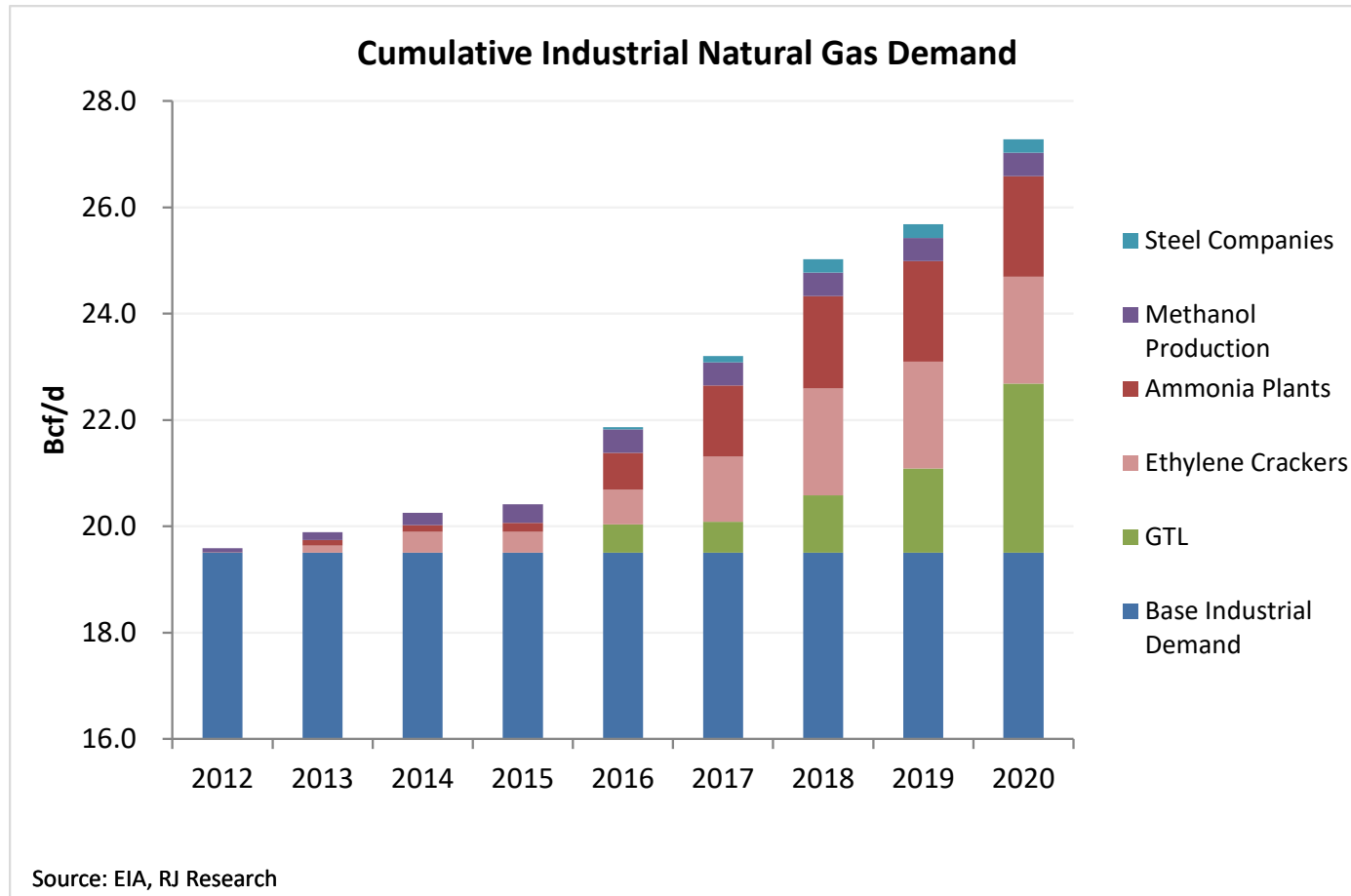
Lower Oil Prices Are Bullish For Gas!



Huge Nat U.S. Demand Growth Coming...



...Driven Largely by Industrial Gas Demand



And Wave of LNG Export Facilities?

North American Liquefaction Plants

Project	Location	Est. Capacity (Bcf/d)		Est. Cost (\$ MM)	Status	Targeted Startup	Owner/Applicant
		Initial	Max. Target				
Kenai	Alaska	0.19	0.19	NM	In operation	Producing	ConocoPhillips
Douglas Channel	BC, Canada	0.1	0.3	\$3,500	CNEB-approved	2015	BC LNG Export Cooperative
Sabine Pass	Louisiana	1.0	3.0	\$12,000	Under construction	Late 2015	Cheniere
Plaquemines	Louisiana	0.2	1.1	?	DOE-approved	2016	Cambridge Energy (CE FLNG)
Elba Island	Georgia	-	0.2	\$1,100	DOE-approved; under FERC review	2016	Kinder Morgan, Shell
Kitimat	BC, Canada	0.7	1.4	\$5,500	CNEB-approved	2017	Chevron, Apache
Cameron LNG	Louisiana	-	1.7	\$6,000	DOE-approved; under FERC review	2017	Sempra, Mitsui, Mitsubishi, NYK
Cove Point	Maryland	-	0.8	\$3,400 - \$3,800	DOE-approved (incl. non-FTA); under FERC review	2017	Dominion
Lavaca Bay FLNG	Texas	0.4	1.1	?	DOE-approved; under FERC review	2017	Excelerate Energy
Oregon LNG	Oregon	-	1.3	\$6,000	DOE-approved; under FERC review	2017	LNG Development Co.
Main Pass Energy Hub	Louisiana	-	3.2	\$10,000-\$12,000	DOE-approved	Mid-2017	McMoRan Exploration, United LNG
Corpus Christi	Texas	-	1.5	?	DOE-approved; under FERC review	Late 2017	Cheniere
Freeport	Texas	0.6	1.9	\$4,000	DOE-approved (incl. non-FTA); under FERC review	Late 2017	Freeport LNG, Zachry, Dow Chemical, Osaka Gas
Gulf Coast	Texas	-	2.8	?	DOE-approved	2018	Gulf Coast LNG Export
S. Texas LNG Export	Texas	-	1.1	?	Under DOE review	2018	Pangea LNG (North America)
Gulf LNG	Mississippi	-	0.3	\$1,000	DOE-approved	2018	El Paso, GE Energy Financial Services
Goldboro LNG	NS, Canada	0.7	1.4	\$5,000	Preliminary project design	Late 2018	Pieridae Energy Canada
Lake Charles	Louisiana	-	2.0	\$9,500	DOE-approved (incl. non-FTA); under FERC review	2019	Energy Transfer, BG Group
Pacific NorthWest LNG	BC, Canada	-	2.8	\$9,000-\$11,000	Under CNEB review	2019	Petronas, Japex
Prince Rupert LNG	BC, Canada	2.0	3.0	?	Under CNEB review	2020	BG Group
West Coast Canada LNG	BC, Canada	2.1	4.3	?	Under CNEB review	2021	ExxonMobil, Imperial Oil
Alaska LNG	Alaska	-	3.5	?	Preliminary project design	2024	ExxonMobil, ConocoPhillips, BP, TransCanada
LNG Canada	BC, Canada	-	3.2	?	CNEB-approved	TBD	Shell, Kogas, Mitsubishi, PetroChina
Jordan Cove	Oregon	-	0.9	\$7,500	DOE-approved; under FERC review	TBD	Veresen
Golden Pass	Texas	-	2.2	\$10,000	DOE-approved	TBD	Qatar Petroleum, ExxonMobil
Waller Point	Louisiana	-	0.2	?	DOE-approved	TBD	Waller LNG Services
Magnolia LNG	Louisiana	0.5	1.1	\$2,200	Under DOE review	TBD	Liquefied Natural Gas Ltd.
Total			46.6				

Source: FERC, EIA, Waterborne LNG, company reports. Assumes 1 mtpa = 0.1433 Bcf/d unless specific Bcf/d figure is given by company.

U.S. Gas Prices Drift Slowly Higher

RJ&A Natural Gas Price Estimates (as of September 2013)					
2012 H Hub Actual	Q1	Q2	Q3	Q4	2012
	\$2.74	\$2.22	\$2.81	\$3.40	\$2.79

2013 Estimates	Q1 13A	Q2 13A	Q3 13E	Q4 13E	2013E
Bloomberg Consensus	\$3.34	\$4.09	\$3.80	\$4.00	\$3.81
NYMEX Futures	\$3.34	\$4.09	\$3.54	\$3.63	\$3.65
Old RJ Gas Est.	\$3.50	\$3.90	\$4.15	\$4.00	\$3.85
Current RJ Gas	\$3.35	\$4.09	\$3.54	\$3.85	\$3.71

2014 Estimates	Q1 14E	Q2 14E	Q3 14E	Q4 14E	2014E
Bloomberg Consensus	\$4.16	\$4.07	\$4.20	\$4.35	\$4.20
NYMEX Futures	\$3.87	\$3.82	\$3.90	\$4.03	\$3.91
Old RJ Gas Est.	\$4.10	\$4.00	\$4.00	\$3.90	\$4.00
Current RJ Gas	\$4.00	\$3.50	\$3.50	\$4.00	\$3.75

Source: Bloomberg, Thomson Reuters, Raymond James research

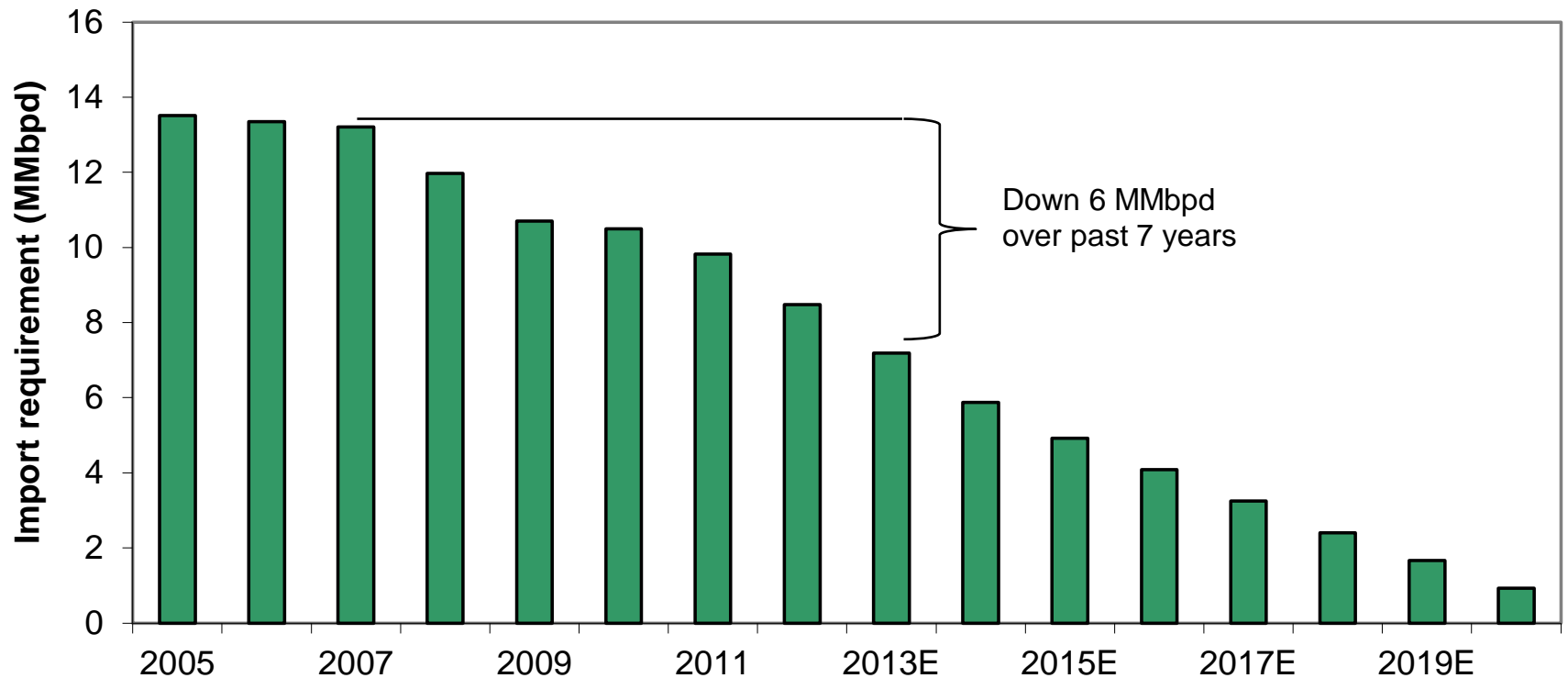
Who Are The “Winners” In This New World?

- Energy Spectrum:
 - Infrastructure, Refiners & Niche Stories
- U.S. wins as trade deficit shrinks
- U.S. manufacturing wins
 - Gas input costs provide huge cost advantage
- U.S. dollar goes higher
- U.S. workers & consumers win

Outlook For Oil Independence?

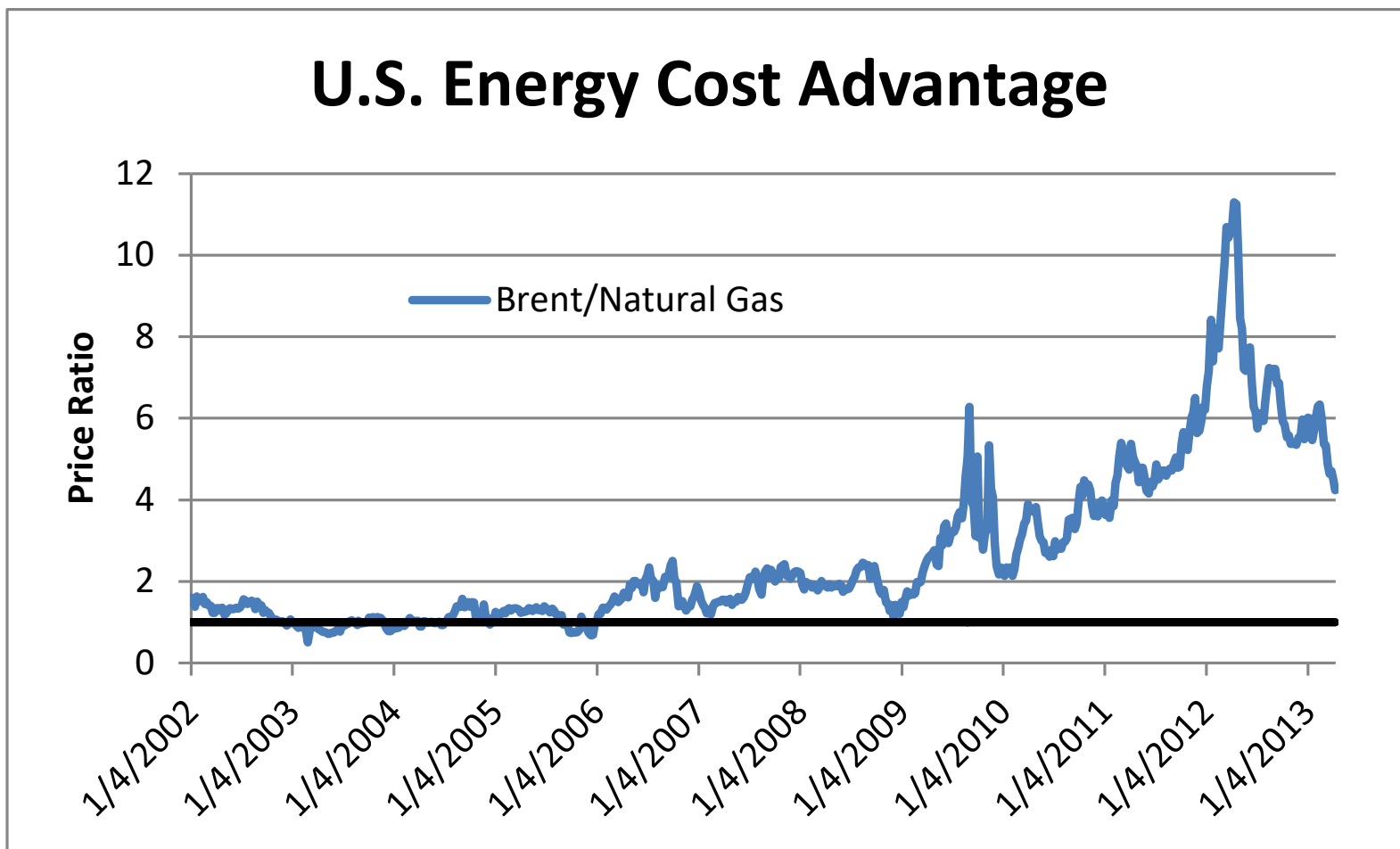
(Pay Attention To This Graph!)

Lower U.S. Oil Imports Contribute to a Narrowing Trade Deficit



Source: EIA, IEA, RJ est.

What About the Non-Oil Trade Deficit?



Conclusion

- Game Changed For U.S. Gas 5 Years Ago
- Oil Game Changing Now!
- Oil Decline Pushed Out by Interruptions
- U.S. Nat Gas Price Improvement Here to stay!