



UTILITY REVENUE SERVICES

Weekly Energy Report

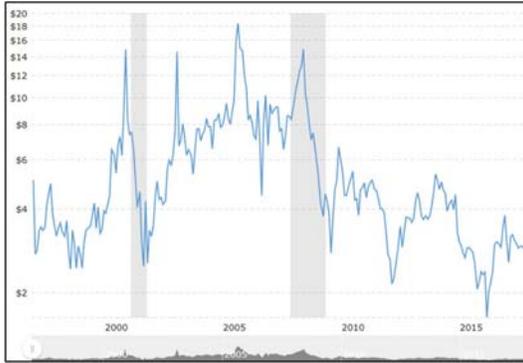


Natural Gas in Underground Storage

The weekly EIA Natural Gas Storage Report advised that there was an injection of 64Bcf (billion cubic feet) into Underground Storage for the week ending October 20th, 2017.

This is 1Bcf below the median forecast of a 65Bcf injection, the average prediction of sector analysts and traders in the Dow Jones Newswires weekly survey. The injection one year ago was 74Bcf and the 5-year average injection is 75Bcf. Storage is 189Bcf below last year for the same week and 46Bcf below the 5-year average...

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Natural Gas Pricing

As of 9:53AM CST, November 2017, (the prompt month) Natural Gas was trading at \$2.89, +\$0.05 from one week ago and the 1-Year Spread average was \$3.01, -\$0.01 from one week ago...

Crude Oil Pricing

As of 10:06AM CST, November, 2017, (the prompt month) Light, Sweet Crude on the NYMEX was at \$52.17, +\$0.58 from one week ago.

Crude Oil & Natural Gas							
INDEX	UNITS	PRICE	CHANGE	%CHANGE	CONTRACT	TIME (EDT)	2 DAY
CL1COM WTI Crude Oil (Nymex)	USD/bbl	52.17	-0.01	-0.02%	Dec 2017	11:06 AM	
CO1COM Brent Crude (ICE)	USD/bbl	58.37	-0.07	-0.12%	Dec 2017	11:05 AM	
CP1COM Crude Oil (Tokyo)	JPY/bbl	39,410.00	+220.00	+0.56%	Mar 2018	11:10 AM	
NG1COM Natural Gas (Nymex)	USD/MMBtu	2.89	-0.03	-1.13%	Nov 2017	11:05 AM	

U.S. Petroleum Balance Sheet, Week Ending 10/20/2017		
Petroleum Stocks (Million Barrels)	Current Week	
	10/20/17	10/13/17
Crude Oil	1,128.7	1,128.2
Commercial (Excluding SPR) ²	457.3	456.5
Strategic Petroleum Reserve (SPR) ³	671.4	671.7
Total Motor Gasoline ⁴	216.9	222.3
Reformulated	0.0	0.0
Conventional	22.0	23.8
Blending Components	194.8	198.5
Fuel Ethanol	21.0	21.5
Kerosene-Type Jet Fuel	40.8	41.6
Distillate Fuel Oil ⁶	129.2	134.5
< 15 ppm sulfur and Under ⁴	110.7	115.9
> 15 ppm to 500 ppm sulfur	7.2	6.9
> 500 ppm sulfur	11.4	11.6
Residual Fuel Oil	32.1	34.6
Propane/Propylene	77.6	78.8
Other Oils ⁵	296.8	294.3
Unfinished Oils	90.7	87.7
Total Stocks (Including SPR) ^{3,4}	1,943.2	1,955.8
Total Stocks (Excluding SPR) ⁴	1,271.9	1,284.1

Crude Oil Inventory

US crude inventories increased by 0.9 million barrels to 457.3 million barrels for the week ended October 20th, according to data released yesterday morning by the US Department of Energy. Traders in the Reuters poll projected a draw of 2.6 million barrels.

U.S. Rotary Rigs

U.S. Rotary Rigs drilling for natural gas were -8 at 177 for the week of October 20th. The number of rigs currently drilling for Natural Gas is 69 higher than last year's level of 108. US Rigs drilling for oil were -7 at 736 There are 293 more rigs targeting oil than last year. Canadian rigs were -10 at 202 for the week. Rigs targeting oil rise 1% to 80% of all drilling activity.

North American Rig Count	10/20/2017		10/13/2017		10/21/2016		Change		Percent Change	
	Weekly	Annual	Weekly	Annual	Weekly	Annual	Weekly	Annual	Weekly	Annual
Total U.S.	913	928	553	(15)	360	-1.6%	65.1%			
Offshore	20	20	23	0	(3)	0.0%	-13.0%			
Land	893	908	530	(15)	363	-1.7%	68.5%			
Inland Waters	1	1	2	0	(1)	0.0%	-50.0%			
Oil	736	743	443	(7)	293	-0.9%	66.1%			
Percent	80.6%	80.1%	80.1%	0.5%	0.5%					
Gas	177	185	108	(8)	69	-4.3%	63.9%			
Percent	19.4%	19.9%	19.5%	-0.5%	-0.1%					
Directional	80	79	51	1	29	1.3%	56.9%			
Horizontal	771	786	445	-15	326	-1.9%	73.3%			
Vertical	62	63	57	-1	5	-1.6%	8.8%			
Gulf of Mexico	20	20	22	0	-2	0.0%	-9.1%			
Gulf Oil	17	17	22	0	-5	0.0%	-22.7%			
Percent	85.0%	85.0%	100.0%	0.0%	-15.0%					
Gulf Gas	3	3	0	0	3	0.0%	n.a.			
Percent	15.0%	15.0%	0.0%	0.0%	15.0%					
Canada	202	212	143	(10)	59	-4.7%	41.3%			
Oil	107	112	69	(5)	38	-4.5%	55.1%			
Percent	53.0%	52.8%	48.3%	0.1%	4.7%					
Gas	95	100	74	(5)	21	-5.0%	28.4%			
Percent	47.0%	47.2%	51.7%	-0.1%	-4.7%					
North America	1,115	1,140	696	(25)	419	-2.2%	60.2%			
Prices										
Oil \$/bbl.	\$51.92	\$50.75	\$50.67	\$1.17	\$1.25	2.3%	2.5%			
Oil \$/mmbtu	\$8.95	\$8.75	\$8.74	\$0.20	\$0.22	2.3%	2.5%			
Gas \$/mmbtu	\$2.86	\$2.92	\$3.10	(\$0.07)	(\$0.24)	-2.2%	-7.7%			



Geopolitical

Four Policies Can Reduce U.S. Transport Emissions 45%, Cut Oil Use 23%, Save 5,300 Lives Per Year: America's transportation sector is undergoing a profound shift toward cleaner and more efficient vehicles. Today, transportation is responsible for 27% of U.S. greenhouse gas emissions but continued cost declines in electric vehicle (EV) prices and sufficient deployment of charging infrastructure could...



Weather

The AccuWeather 1-5 day Outlook forecasts above-normal temperatures the West and the Northeast while the Central part of the country is projected to be normal or below-normal. The 6-10 Day Outlook forecasts the Southwest and Northeast at above normal temps with the North-central part of the US at below-normal temps with the balance of the country at normal temps...



Sustainability and Renewables

Battery innovations could spread renewable energy: In Edmond Hamilton's 1940 novella *Revolt On The Tenth World*, the science fiction author describes "solid power ... the most super-valuable substance in the Solar System." Solid power is "compressed energy 'frozen' by temporary transformation into artificial atoms. Trillions of units of power ... compressed thus into an inch-square cube."

Hamilton and other sci-fi writers throughout the life of the genre have fantasized about similar compact energy sources. They've had to. What else could make their starships fly, their laser guns blast and their communicators buzz?



This Week's Key Takeaway

The U.S. is ready to drop a cannonball splash into the global liquefied natural gas (LNG) export business, a market that is rapidly growing and evolving. From 2016-2020, per the latest projections - which are even more bullish than previous ones - the US will account for about half of the 20 Bcf/d of new export capacity worldwide (worldwide LNG demand is now about 37 Bcf/d). As such, in less than four years, the U.S. will have surged from exporting almost no LNG to becoming the second or third largest producer, rivaling Qatar and Australia. How will this affect Natural Gas prices in the US? While it remains to be seen, it is reasonable to assume that it would have a bullish effect on prices...

Next Day On-Peak Power (traded for 10/24/2017)

ISO-NE Mass Hub \$39.33	MISO Indiana Hub \$31.70	NYISO Zone G \$31.97
PJM West Hub \$33.52	ERCOT North \$22.52	CAISO SP15 \$120.90

