

Weekly Fundamental Market Report September 11-15, 2017

Market Update

PRODUCTS	9/11/17	9/12/17	9/13/17	9/14/17	9/15/17
WTI Crude Oil	48.07	48.23	49.30	49.89	49.89
Brent Crude Oil	53.84	54.27	55.16	55.47	55.62
Natural Gas	2.95	3.01	3.06	3.07	3.02

- [CME Group](#)

Headlines

Local North Dakota

- **Bakken Oil in demand after Hurricane Harvey.** [Bismarck Tribune](#)
 - Bakken crude and other light, sweet crude oils are in demand in the aftermath of Hurricane Harvey, a North Dakota official said Friday. After the hurricane, analysts are seeing a \$4 to \$5 premium for each barrel of Bakken crude over West Texas Intermediate oil at Clearbrook, Minn., said Justin Kringstad, director of the North Dakota Pipeline Authority. “The refiners are finding value in running these light, sweet crude barrels,” Kringstad said. “They’re easier to process and they have a higher yield of the products that have been in demand since the storm, gasolines and diesel fuels.” Kringstad said he’ll continue to monitor whether the price shifts will affect the state’s oil transportation trends. The price for a barrel of WTI was \$49.90 on Friday afternoon, according to Bloomberg. North Dakota oil production increased 1.4 percent in July to an average of nearly 1.05 million barrels per day, the Department of Mineral Resources said Friday. Natural gas production increased 1.35 percent to an average of nearly 1.88 billion cubic feet per day, according to the preliminary figures. “Not huge jumps, but very positive,” said Director Lynn Helms. Seventy-six percent of oil was transported by pipeline in July and 10 percent transported by rail, Kringstad said. Oil production and transportation figures are released two months later. With more barrels being transported by pipeline with the addition of the Dakota Access Pipeline, Kringstad estimates about 100,000 barrels to 130,000 barrels a day leave the state by rail. That’s equivalent to a little more than one train a day on average, Kringstad said. North Dakota’s oil industry has been challenged this year to recruit enough qualified workers, but the state now has 24 hydraulic fracturing crews, Helms said. “That should be enough personnel to keep up with our current rig count,” he said. An estimated 889 wells had been drilled but were waiting on hydraulic fracturing crews at the end of July, an increase of 34 from the previous month. The state had 56 drilling rigs operating on Friday, compared with 34 at this time last year and 71 at this time two years ago. North Dakota had 13,981 producing oil and gas wells in July, a new record for the state. The state’s natural gas plants also set a record in July, processing 180,000 barrels per day of natural gas liquids that month, Kringstad said. The percentage of natural gas flared in July remained at 12 percent, the same as the previous month. Helms said he was recently asked how much money the oil industry has invested in North Dakota and came up with a “stunning” figure: \$125 billion invested from 2007 through the middle of 2017. Helms, who presented that figure to a Williston oil industry group recently, said his estimate includes the dollars spent on drilling and completing oil wells, natural gas gathering and processing, the Dakota Access Pipeline and other pipeline expansions. The estimate does not include dollars invested to build housing, roads, power lines or other infrastructure to support the growing oil industry, he said. “It’s a pretty stunning number when you think about the investors around the world and the industry being willing to spend that kind of money here in the state,” Helms said.

Domestic U.S.

- **Oil caps best week since July as demand forecasts improve. Bloomberg Markets**
 - Oil had its biggest weekly gain since late July as Texas refineries recovering from Hurricane Harvey processed more crude and global demand forecasts brightened. Futures rose 5.1 percent this week in New York, settling just below the \$50-a-barrel threshold that's kept the industry in thrall. The increase was buoyed by higher demand forecasts from the International Energy Agency and expectations OPEC and its partners will extend output cuts beyond the March expiration date of their deal. "The narrative in the market is that demand has really picked up," said John Kilduff, a partner at New York-based hedge Again Capital LLC. "As a result, we've gotten this push higher." Nearly a quarter of U.S. refining capacity was shuttered in the wake of Harvey. Two weeks later, only three Gulf Coast refineries remain shut, according to the Department of Energy. The rest -- including Motiva Enterprises LLC's Port Arthur refinery, the nation's largest -- are gradually coming back online, helping boost crude demand. At the same time, the Paris-based IEA said on Wednesday it expects global demand to climb this year by the most since 2015 while the Organization of Petroleum Exporting Countries and its partners were said to be discussing an extension of its deal to cut output beyond its March expiration. "People are looking for the price to go ahead and settle above \$50 a barrel, but they need some more than just the current news," Michael Lynch, president of Strategic Energy & Economic Research in Winchester, Massachusetts, said by telephone. "We need a couple good inventory reports or perhaps some bearish supply data from Libya or from the U.S. shale patch." West Texas Intermediate futures for October delivery ended the session on the New York Mercantile Exchange at \$49.89, unchanged from the highest close since July 31 on Thursday. See also: Ex-Shell Boss Marvin Odum Tapped to Lead Houston Recovery Effort. Brent for November settlement closed 15 cents higher at \$55.62 a barrel on the London-based ICE Futures Europe exchange. Prices advanced 3.4 percent this week. The global benchmark crude traded at a premium of \$5.18 to November WTI. Meanwhile, the U.S. oil rig count fell for the fourth time in five weeks, according to Baker Hughes data released Friday. Rigs decreased by seven to 749. The decline included drops in Texas' Permian and Eagle Ford shale basins. "The feel-good factor appears to have returned to the oil market," said Stephen Brennock, an analyst at PVM Oil Associates Ltd. "Underpinning the prevailing sentiment is the positive afterglow of this week's frenzy of bullish oil demand forecasts from the leading energy agencies."
- **Oil and Chemical spills from Hurricane Harvey big, but dwarfed by Katrina. Reuters**
 - More than 22,000 barrels of oil, refined fuels and chemicals spilled at sites across Texas in the wake of Hurricane Harvey, along with millions of cubic feet of natural gas and hundreds of tons of other toxic substances, a Reuters review of company reports to the U.S. Coast Guard shows. The spills, clustered around the heart of the U.S. oil industry, together rank among the worst environmental mishaps in the country in years, but fall far short of the roughly 190,000 barrels spilled in Louisiana in 2005 after Hurricane Katrina - the last major storm to take dead aim at the U.S. Gulf Coast. Harvey slammed ashore in Texas on Aug. 26, unleashing record flooding around Houston that destroyed countless homes, displaced around a million people and killed scores. The U.S. Environmental Protection Agency warned people affected by the storm to avoid floodwaters, saying they could contain bacteria and other dangerous substances, but the agency has so far provided few details about spills. The EPA said earlier this week it is responding to more than a dozen spills in the wake of Harvey, but said it could not immediately provide volume estimates. The U.S. Coast Guard reports showed over 22,000 barrels of crude oil, gasoline, diesel, drilling wastewater, and petrochemicals spilled from refineries, storage terminals and other facilities in the days after the storm. Nearly half of those came from a 10,988-barrel spill of unleaded gasoline from Magellan Midstream Partners' storage facility in Galena Park, Texas, according to the reports, confirmed by a company official. "We expect clean-up operations to be completed within a few weeks," the company said in an email on Thursday. Most of the gasoline had been removed, it said, including quantities that spilled offsite and into the Houston Ship Channel, and remaining work was mainly focused on removing contaminated soil. The Coast Guard filings also showed some 365 tons of toxic chemicals like sulfur dioxide, ammonia, toluene, benzene, and carbon monoxide escaped from facilities during the storm. In addition, some 27 million cubic feet (765,000 cubic meters) of natural gas, 1,000 tons of asphalt, and unknown quantities of other substances from more than 200 other incidents also escaped, according to the data. Officials for the Coast Guard and the EPA did not immediately respond to requests for comment on the filings. As some spill estimates were preliminary, it was too early to assess pollution damage from the storm, said Tom Pelton, a spokesman for environmental advocacy group the Environmental Integrity Project. One company is already raising its spill estimates: Valero Energy Corp told the EPA it probably underestimated the emissions of dangerous chemicals when the roof of a tank at its Houston refinery collapsed in the storm. Katrina caused 190,000 barrels of oil spills along the

Louisiana coastline, according to Donald Davis, the administrator of the Louisiana Applied Oil Spill Research and Development Program, who presented his findings to the EPA in 2006.

Global

- **OPEC's second biggest producer could possibly split in two- and start an oil war. CNBC**
 - An oil-rich province in the north of Iraq plans to vote in a referendum on Kurdish independence later this month, prompting fears of regional conflict as tensions escalate over who owns a portion of the country's crude. Kurdish forces have been in complete control of the province of Kirkuk — as well as other disputed areas — since the summer of 2014, when so-called Islamic State swept across parts of Iraq. In addition to being home to much of Iraq's oil, the northern part of the country forms part of Kurdistan, the unofficial but centuries-old home of the Kurdish people. The Kurds have long sought their own state and began to believe it was near their grasp after American troops overthrew Saddam Hussein's Iraqi government in 2003. Both Iraqi government troops and Kurdish militia forces have fought to drive ISIS out from most of the country during the past two years, but now the long-running dispute between Baghdad and the Kurdish capital of Erbil over who should claim the spoils is sharpening. The Sept. 25 referendum is vehemently opposed by Baghdad, with Prime Minister Haider al-Abadi describing the vote as "unconstitutional and illegitimate." On Tuesday, Iraq's central government authorized the prime minister to "take all measures" to preserve the country's unity. Iraq's Kurdish leader, Massoud Barzani, rejected the notion that the vote endangered the nation's identity and vowed to press ahead with the referendum. "In Kirkuk especially, Baghdad will not accept a scenario in which all of the territories are annexed," Ayham Kamel, director for Middle East and North Africa at consulting firm Eurasia Group, told CNBC via phone interview. More than 6 million Kurds are estimated to live in Iraq — amounting to around 20 percent of the total population — with most situated in the landlocked northern region. With the 5 million Kurds who are eligible to vote largely united by dreams of self-determination, the outcome appears in little doubt. The Kurds have been pursuing an independent state since at least the end of World War I, when colonial powers divided up the Middle East, leaving Kurds largely in Iraq, Iran, Turkey and northeastern Syria. Western governments, including Germany, oppose the referendum, arguing the vote will undermine the fight against ISIS and escalate tensions with Baghdad. But it does have the support of Israel, which regards the Kurds as a buffer against Iran and Arab nations. The United States also opposes the referendum, though the Kurds have been a critical ally for the U.S. going back at least to the Iraq War. Opposition to the vote from Iraq's central government in Baghdad has been accentuated by its regional neighbors. Turkey, Syria and Iran are all staunchly against the referendum as they fear a potential contagion effect from their own Kurdish populations. Michael Stephens, a research fellow at think tank the Royal United Services Institute, argued that Iraq's relationship with its neighboring countries would be complicated "enormously" in the immediate aftermath of the contested referendum. Turkish officials have described Kirkuk's decision to hold a referendum as "dangerous" and a violation of Iraq's constitution. Ankara holds close political and economic ties with the Kurdistan Regional Government and appears to have considerable leverage over the area as it remains the only major outlet for Kurdish oil exports. The decision to hold a vote is a potential powder keg to an already long-running dispute between Baghdad and Erbil over Kurdish oil exports and revenue sharing. The relationship between Baghdad and Erbil is the biggest challenge to oil, with the Kurds using this upcoming referendum as a bargaining chip." Renad Mansour, an Iraq expert at London-based think tank Chatham House, told CNBC via phone interview. "Do I foresee all out conflict? Probably not. The referendum is a bit of a bluff in that sense because the Kurds need the U.S. and the U.K. and a conflict would mean losing this lifeline. I wouldn't rule out skirmishes, but an all-out war is in no-one's best interests," Mansour added. Iraq is the second largest OPEC producer and currently pumps 4.32 million barrels of oil a day, according to Iraqi Oil Minister Jabar Al-Luaibi. However, he conceded the government does not have reliable figures for shipments from the country's Kurdish region, which reportedly accounts for around a 10th of the nation's total production. "Independent Kurdish oil exports are still a long way off covering what is a very large and expensive public sector. In the current oil price environment, the economic foundations for independence look shaky," Torbjorn Soltvedt, principal analyst for the Middle East and Northern Africa at risk consulting firm Verisk Maplecroft, told CNBC via email. "It would be wrong to assume, however, that the issue of independence will be governed by economics alone. ... In particular, legal challenges from Iraqi courts against independent (Kurdistan Regional Government) crude are still a significant restraint under the Kurdistan Region's current semi-autonomous status," he added. U.S. oil giant Chevron has been operating in the Kurdistan region of Iraq since it signed an oil agreement with the semiautonomous government in 2012. Baghdad criticized the decision, suggesting any



oil firm operating in the northern region of the country without the approval of the central government could be blacklisted. A Chevron spokesperson told CNBC that it "seeks to work constructively with all stakeholders in any country in which it operates (and) with regards to any referendum, it is a decision to be made by those directly involved."

Oil and Gas Analysis

o Rotary Rig Count Summary

Location	Date	Week	+/-	Week Ago	+/-	Year Ago
United States	8-Sep-17	943	3	940	446	497
	15-Sep-17	936	-8	943	430	506
North Dakota	8-Sep-17	52	0	52	24	28
	15-Sep-17	52	-1	53	25	27
Canada	8-Sep-17	201	-16	217	64	137
	15-Sep-17	212	11	201	80	132
International	Aug-17	951	-7	958	15	937

- [Baker Hughes](#)

o WTI & Bakken Spot Price

September 2017 Daily Spot Prices					
	Mon	Tue	Wed	Thu	Fri
Bakken (FH)					
2017 August-28 to September-1	42.33	42.17	42.14	42.14	41.75
September-4 to September-8	-	43.05	43.05	43.47	43.27
September-11 to September-15	42.45	42.45	43.21	43.21	43.49
WTI					
2017 August-28 to September-1	46.4	46.46	45.96	47.26	47.32
September-4 to September-8	-	48.63	49.13	49.1	47.44
September-11 to September-15	48.06				
Differentials					
2017 August-28 to September-1	4.07	4.29	3.82	5.12	5.57
September-4 to September-8	-	5.58	5.58	6.08	4.17
September-11 to September-15	5.61				

- [Flint Hills Resource](#)
- [EIA](#)

o Weekly Petroleum Status Report

Stocks (Million Barrels)			
	Four Weeks Ending		
	9/8/2017	9/1/2017	9/9/2016
Crude Oil (Excluding SPR)	468.2	462.4	480.2
Motor Gasoline	218.3	226.7	228.4
Distillate Fuel Oil	144.6	147.8	162.8
All Other Oils	481.1	473.6	495.0
Crude Oil in SPR	677.0	678.6	695.1
Total	1,989.2	1,989.0	2,061.4

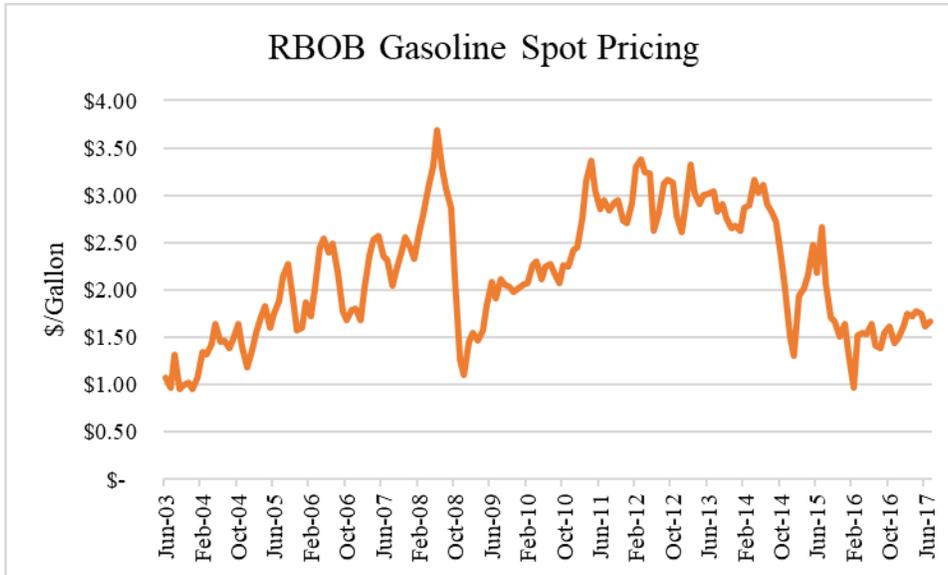
Products Supplied (Thousand Barrels per Day)			
	Four Weeks Ending		
	9/8/2017	9/1/2017	9/9/2016
Motor Gasoline	9,564	9,540	9,543
Distillate Fuel Oil	4,027	4,068	3,648
All Other Products	6,854	7,148	7,415
Total	20,445	20,756	20,606

Refinery Activity (Thousand Barrels per Day)			
	Four Weeks Ending		
	9/8/2017	9/1/2017	9/9/2016
Crude Oil Input to Refineries	15,934	16,806	16,739
Refinery Capacity Utilization	87.4	92	93.0
Motor Gasoline Production	10,143	10,183	10,032
Distillate Fuel Oil Production	4,653	4,981	4,947

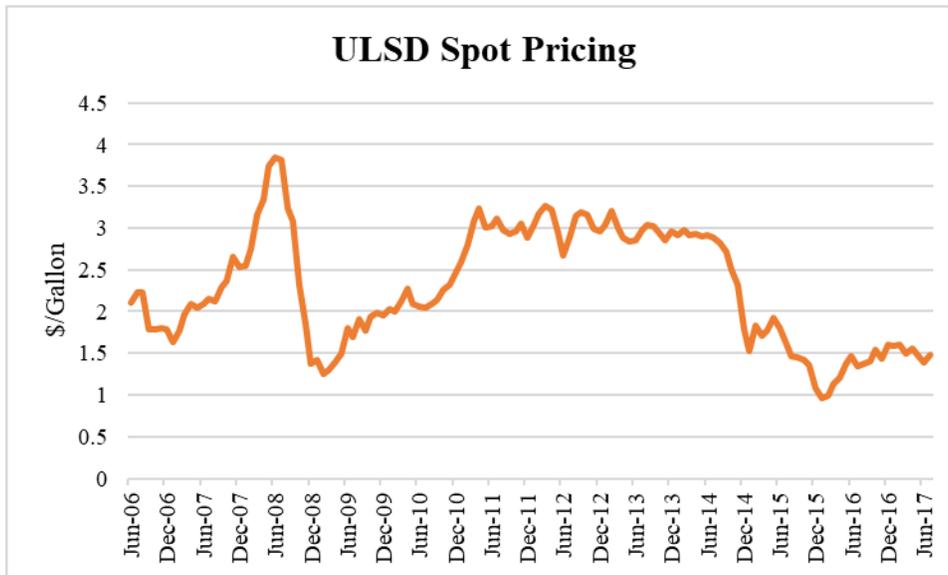
Net Imports (Thousand Barrels per Day)			
	Four Weeks Ending		
	9/8/2017	9/1/2017	9/9/2016
Crude Oil	6,873	7,259	7,599
Petroleum Products	-1,414	-1,816	-1,662
Total	5,460	5,444	5,937

- [EIA](#)

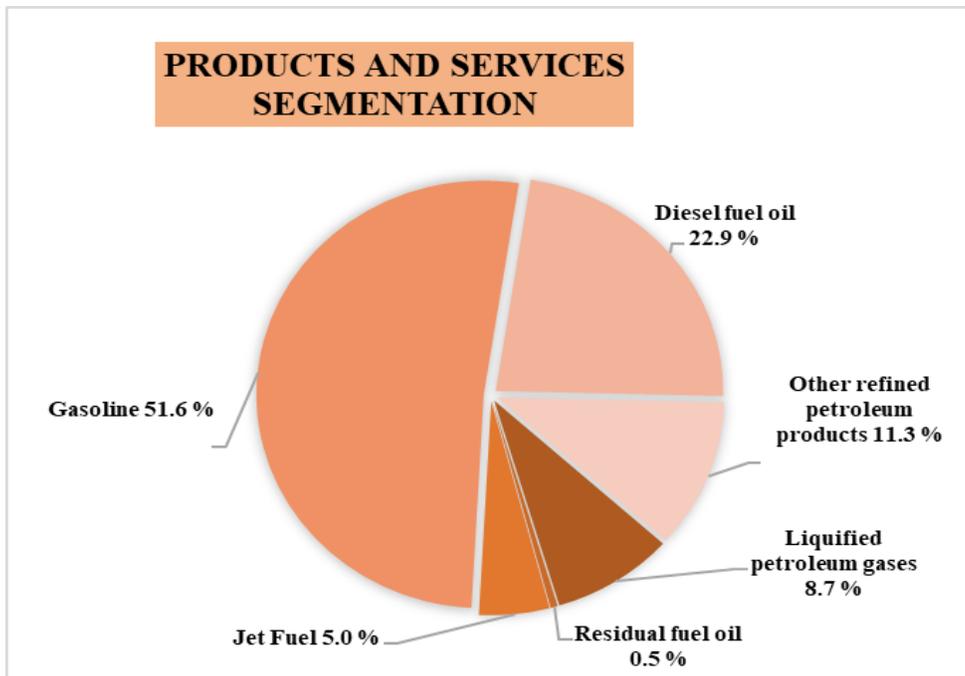
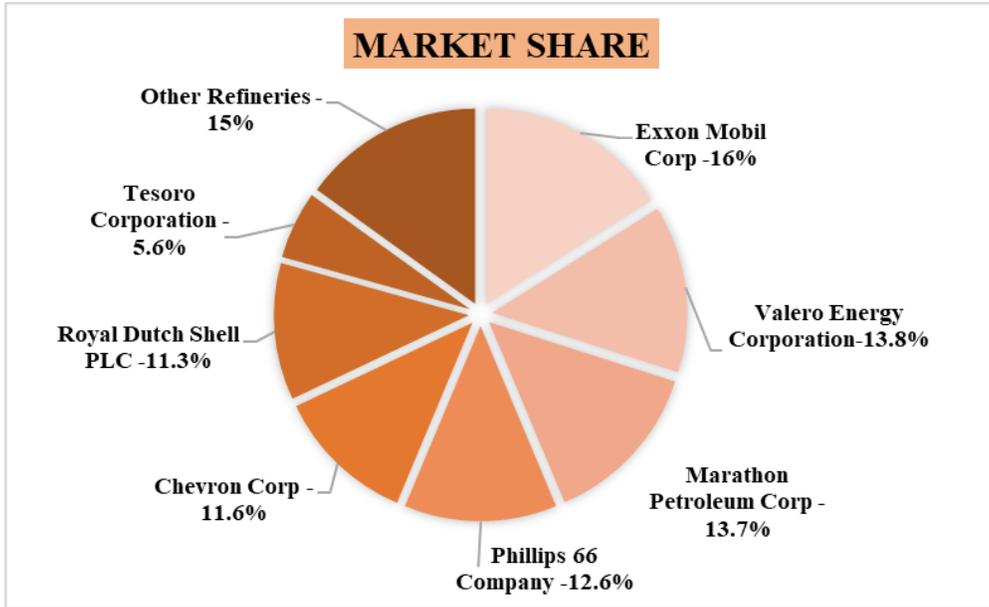
o **RBOB Gasoline**

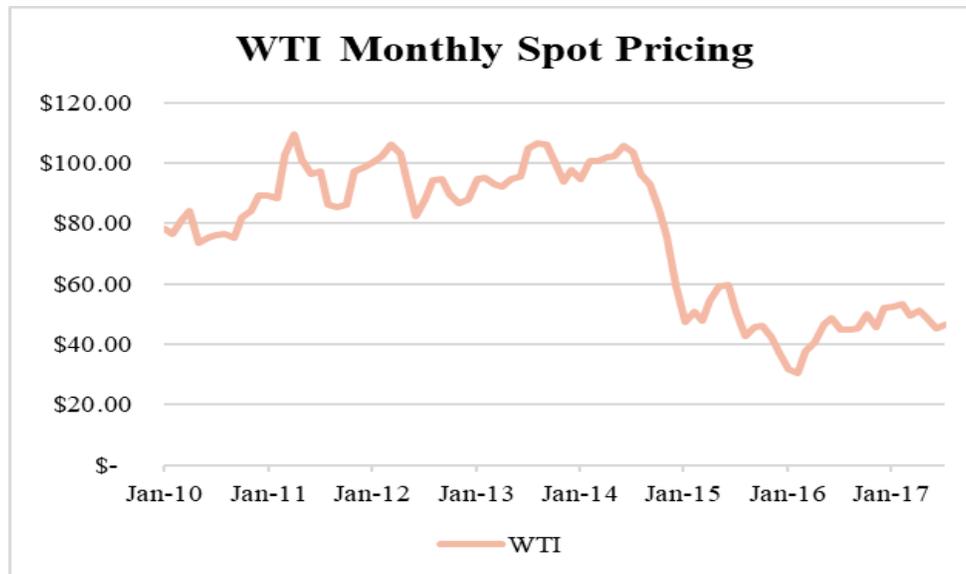


o **Ultra-Low Sulfur Diesel**



o US Petroleum Refining at a Glance





- [EIA](#)

o Key External Drivers

- o **World price of crude oil**
 - <https://www.vivaenergy.com.au/driven/innovation/the-key-drivers-behind-global-crude-oil-prices>
- o **Demand from gasoline and petroleum bulk stations**
 - <https://www.eia.gov/petroleum/weekly/>
- o **GDP of mainland China**
 - <http://china-trade-research.hktdc.com/business-news/article/Facts-and-Figures/Economic-and-Trade-Information-on-China/ff/en/1/1X000000/1X09PHBA.htm>
- o **Trade-weighted index**
 - <https://seekingalpha.com/article/4102493-dollars-drop-still-bullish-oil>
- o **Total vehicle miles**
 - <https://www.advisorperspectives.com/dshort/updates/2017/08/31/vehicle-miles-traveled-another-look-at-our-evolving-behavior>