

Weekly Fundamental Market Report September 4-8, 2017

Market Update

PRODUCTS	9/4/17	9/5/17	9/6/17	9/7/17	9/8/17
WTI Crude Oil	-	48.66	49.16	49.09	47.48
Brent Crude Oil	-	53.38	54.2	54.49	53.77
Natural Gas	-	2.97	3.00	2.98	2.89

- [CME Group](#)

Headlines

Local North Dakota

- **Davis Refinery to bring jobs, revenue to Billings county.** [Dickinson Press](#)
 - The proposed Davis Refinery has drawn ire from environmental groups who object to its close proximity to the borders of Theodore Roosevelt National Park. As the North Dakota Department of Health scrutinizes the refinery's permit application, William Prentice, CEO of Meridian Energy Group, spoke about why this refinery is going to be a "good neighbor" to the people of Billings County. "The local community wants the refinery there," Prentice said in a phone interview. "We've conclusively demonstrated that the refinery cannot be seen from the park. We're having a hard time understanding the resistance...especially when the local community is behind the project." Prentice estimates that the Billings' annual tax revenues will nearly triple when the refinery is open. "Meridian has never asked for and will never ask for any tax breaks from the state or county," Prentice said. "Billings county has an annual budget of \$2.3 million, the taxes we pay will bring that up to \$6 million a year." That money, Prentice said, would go to providing Billings County funds to improve schools, roads and anything else. The influx of money and workers could even help return a grocery store to the town, as Belfield has lacked one for years now, Prentice said. "Everything needs a little bit of tender loving care," Prentice said. The economic benefits to Billings would be quite large, by Prentice's estimation. Construction employment will peak out at 500 jobs and there will be 200 permanent employees at the refinery. However, in terms of broader impact to the local economy, Prentice said that they estimate the presence of this refinery will generate between 2,500 to 4,000 jobs in the area, to a ratio of approximately 12 jobs to every 1 refinery position, based on data from a study of petroleum work in Washington State by the Washington Research Council that Prentice cited and provided to the Press. "You add one refinery employee (then) they have to hire somebody extra over at the Roughrider Restaurant, somebody else gets hired at the Starbucks in Dickinson," Prentice said. "Refinery positions are very high paying, require a higher level of education and training (and) those types of people tend to spend more money." These jobs will be tailored towards hiring workers from North Dakota, whose work ethic Prentice praised. "Meridian was founded by ... the Davis family partnership," Prentice said. "The founder of the company wanted to make sure that the people who are a part of that partnership are descendants of people who are from North Dakota. The purpose ... was to create opportunity in North Dakota, high-paying opportunities that college graduates could take advantage of." Out of 200 permanent refinery jobs, Prentice estimates 180 will be local hires. Creating opportunity, he said, would entice young people to stay in North Dakota. "We don't want to be located where all the other refineries are on the coast," Prentice said. "We like Bakken crude and (would) build a nice, lanky refinery that can refine that crude and serve local markets. The benefits stay local. It's a good solution to what I think is a bad resource allocation model." There will be many technological innovations involved in this refinery, which is the first complex oil refinery to be built in the United States in over 50 years, Prentice said. Those innovations include optical sensors for detecting even

slight leaks in oil pipes, which themselves will be constructed using more modern machining methods and will be of a higher quality. “By the time you’d notice some leaks in an old refinery you’re probably already in danger of a fire,” Prentice said. “We don’t wait for those things to happen. You actually have an optical sensor that looks for leaks...when you have a leak it’ll sense it immediately and somebody goes out to fix it. So, you don’t have fugitive emissions.” Prentice directly challenged assertions made that there should be more federal overview brought into the permit approval process in a major environmental review. “One of the implications of that comment was that the health department was not capable of doing this adequately, that we were somehow getting away with something,” Prentice said. “The rigor of the analysis (that) the North Dakota Department of Health has (shown) ... would not support that contention. The North Dakota Department of Health is as knowledgeable, if not more knowledgeable than any other agency we’ve worked with on a complex project, including federal agencies. They are a world-class organization.” The refinery will be located north of Belfield, about three-and-a-half miles away from the park’s borders. Depending on when the permit is approved, Prentice hopes to begin work as soon as possible, and anticipate the first phase of the refinery, producing 27,500 barrels of gas and diesel a day, to be operation in early 2019.

○ **North Dakota in Spotlight after oil spill. Oil Price**

- Oil production in North Dakota reached an all-time high in August. As of 2011, the U.S. Energy Department said the state was the fourth largest in the union in terms of oil production and North Dakota’s oil accounted for 7 percent of the U.S. total, a 35 percent increase from the previous year. The state’s Department of Mineral Resources said most of that crude oil would be able to make it to regional refineries so long as rail deliveries continue on their current trajectory. Scrutiny over crude oil deliveries by rail and the first major pipeline spill in the state, however, may dampen some of the state’s optimism. The North Dakota Industrial Commission, a division within the Department of Mineral Resources, published its monthly “director’s cut” this week. Director Lynn Helms said 95 percent of all drilling in the state targets the Bakken and Three Forks formations. In April, the U.S. Geological Survey said those formations, spread out over North Dakota, South Dakota and Montana, contain a mean 7.4 billion barrels of undiscovered, technically recoverable oil. By August, the NDIC said production in the state reached 911,242 barrels per day, an all-time high. North Dakota’s shared border with Canada makes it a strategic state for North American crude oil transportation. Though the much-lauded Keystone XL pipeline from Alberta would sidestep North Dakota, there are more than 2,000 miles of pipeline under construction in the state at the heart of the U.S. shale boom. NDIC director Helms, however, said crude takeaway may depend in part on rail. “Crude oil take away capacity is expected to be adequate as long as rail deliveries to coastal refineries keep growing,” he said. For the week ending Oct. 5, the Association of American Railroads said 12,640 carloads of petroleum and petroleum products, or about 8.8 million barrels of oil, were delivered on U.S. rail systems. That’s a 7.5 percent increase from the previous year and part of a growing trend attributed to an overburdened pipeline system in the region. That increase caught the attention of the U.S. Department of Transportation, which in August started a “Bakken Blitz” on the rail industry. The probe followed a deadly explosion in Lac-Mégantic, Quebec, of a train carrying Bakken crude oil to Canadian refineries. State regulators, meanwhile, are scrambling to assess what went wrong when at least 20,000 barrels of oil spilled from a ruptured pipeline in rural Tioga, in western North Dakota. Helms said inspections of the pipeline’s interior walls conducted by operator Tesoro Logistics uncovered “serious problems.” The company, however, wasn’t aware of them until after the September spill. The spill is North Dakota’s first major black-eye in an otherwise spot-free history of mining for black gold. Helms suggested the state is looking to rail for crude takeaway and, with Tesoro’s line closed, it may become more important in the immediate future. Rail’s long-term potential, however, may be slowed by the DOT’s “Bakken Blitz” inspection once the federal government returns to service. Meanwhile, it could years before Tesoro’s spill is cleaned up, a process the company estimates will cost about \$4 million. While North Dakota’s production will likely remain unscathed, how it copes with these new challenges may be a factor in its oil legacy.

Domestic U.S.

○ **Hurricanes dent oil output as Saudi Arabia cuts supplies. Reuters**

- Oil markets were mixed on Friday, with Brent crude supported by expectations that Saudi Arabia could cut its October supplies, while US crude was weighed down by refinery outages due to damage from Hurricane Harvey, which dented demand. Focus was shifting to three other hurricanes that are currently tearing through the Caribbean and Gulf of Mexico. Brent crude futures were up 8 cents at \$54.57 a barrel at, with the benchmark for international oil prices earlier marking its highest since April at \$54.79 a barrel. Saudi Arabia will cut crude

oil allocations to its customers worldwide in October by 350,000 barrels per day (bpd), an industry source familiar with Saudi oil policy told Reuters on Thursday. US West Texas Intermediate (WTI) crude futures were at \$48.98 barrel, 11 cents below their last settlement. Traders said that the dip was a result of low refining activity following Hurricane Harvey, which hit the US Gulf coast two weeks ago and knocked out almost a quarter of the country's huge refinery industry, cutting demand for crude oil, refining's lifeblood. But as the refinery sector gradually recovers, so is its crude processing. "Most refineries are restarting and we expect a near-full recovery by month-end," US investment bank Jefferies said. Harvey's impact was also felt in oil production. US oil output fell by almost 8 per cent, from 9.5 million barrels per day (bpd) to 8.8 million bpd, according to the Energy Information Administration. Port and refinery closures along the Gulf coast and harsh sea conditions in the Caribbean have also impacted shipping. "Imports (of oil) to the US Gulf Coast fell to levels not seen since the 1990s," ANZ bank said. Traders said it would take weeks for the US petroleum industry to return to full capacity, and that under the current conditions it was difficult to identify fundamental market trends. "The data for this week and next will be taken with a grain of salt as the underlying trend will be obscured by the effects of the hurricane," said William O'Loughlin, investment analyst at Rivkin Securities. Even as the oil industry continues to grapple with the fallout from Harvey, a much bigger Hurricane was lashing the Caribbean islands and heading for the United States. But as the refinery sector gradually recovers, so is its crude processing. "Most refineries are restarting and we expect a near-full recovery by month-end," US investment bank Jefferies said. Harvey's impact was also felt in oil production. US oil output fell by almost 8 per cent, from 9.5 million barrels per day (bpd) to 8.8 million bpd, according to the Energy Information Administration. Port and refinery closures along the Gulf coast and harsh sea conditions in the Caribbean have also impacted shipping. "Imports (of oil) to the US Gulf Coast fell to levels not seen since the 1990s," ANZ bank said. Traders said it would take weeks for the US petroleum industry to return to full capacity, and that under the current conditions it was difficult to identify fundamental market trends. "The data for this week and next will be taken with a grain of salt as the underlying trend will be obscured by the effects of the hurricane," said William O'Loughlin, investment analyst at Rivkin Securities. Even as the oil industry continues to grapple with the fallout from Harvey, a much bigger Hurricane was lashing the Caribbean islands and heading for the United States.

○ **Oil prices slip amid falling US rig count. Oil Price**

- The number of active oil and gas rigs in the United States rose this week by 1 rig. Baker Hughes Rig Count last week was largely unchanged as well, with data for 47 counties South Texas largely unavailable last week due to the Hurricane, according to BH. The total oil and gas rig count in the United States, two weeks post-Harvey, now stands at 944 rigs, up 436 rigs from the year prior, with the number of oil rigs in the United States decreasing by 3 this week and the number of gas rigs increasing by 4. Oil rigs in the United States now number 756—342 rigs above this time last year. The number of rigs fell in Arkoma Woodford (1), DJ-Niobrara (1), Fayetteville (1), and Granite Wash (1). Permian, Haynesville, and Cana Woodford, and Marcellus all gained two rigs. Prices fell on Friday despite promises of decreased exports from Saudi Arabia for the month of October, with promises of a 350,000-bpd decline for the month, with exports to the United States to be below 600,000 bpd. At 10:53pm Friday, WTI was trading down 1.63 percent at US\$48.29, with Brent trading down 0.48 percent at US\$54.23—both benchmarks up from last week. Despite the small rise in the number of active rigs in the United States, US crude oil production slipped the week ending September 1 to 8,781 bpd—the first under-9,000 bpd week since February. Hurricane Irma is currently headed for Florida, and expected to weaken demand further in the coming week, as ports have closed ahead of the storm. Hurricane Katia is following closely behind, and expected to hit the Mexican coast by early tomorrow. At 8 minutes after the hour, WTI was trading at \$48.06 with Brent crude trading at \$54.10.

○ **TransCanada requests suspension of oil pipeline. Oil Pipeline**

- TransCanada has asked for a 30-day suspension of its application for the Energy East pipeline that should transport crude oil from Alberta and Saskatchewan to the eastern part of Canada. According to the company, it wants to review the National Energy Board's August decision to toughen the pipeline project assessment procedure. In a statement, TransCanada suggested it might shelve the project overall if the new assessment procedure turns out to be too taxing on costs, schedule, and the viability of the project. NEB said it will decide on the request "in a timely manner". The decision of the watchdog to make rules tougher for oil and gas infrastructure builders earned it the praise of environmentalists but drew criticism from the industry, as was to be expected. For Energy East, this is yet another major setback, after last year some members of a panel overseeing the hearings on the project at NEB resigned over allegations of a conflict of interest. At the start of



this year, the regulator canceled all decisions the panel had made over the last two years and appointed a new one. At the same time, NEB itself is under intense scrutiny on criticism that it is playing in the oil industry's field. The US\$13billion (C\$15.7 billion) Energy East was planned to carry 1.1 million barrels of crude daily over 4,500 km to refineries in Eastern Canada and an export terminal in New Brunswick. The project is part of a response to the growing oil output in the oil sands that is putting a strain on the existing pipeline network in the country. This response is meeting with solid opposition from environmentalists and some local governments, such as that of British Columbia, which recently said it will do its best to block the expansion of another pipeline, Kinder Morgan's Trans Mountain.

Oil and Gas Analysis

o Rotary Rig Count Summary

Location	Date	Week	+/-	Week Ago	+/-	Year Ago
United States	25-Aug-17	940	-6	946	451	489
	1-Sep-17	943	3	940	446	497
North Dakota	25-Aug-17	52	1	51	25	27
	1-Sep-17	52	0	52	24	28
Canada	25-Aug-17	217	3	214	71	146
	1-Sep-17	201	-16	217	64	137
International	Jul-17	945	-1	960	21	938

- Due to the impact of Hurricane Harvey on South Texas this week, we could not verify the change in rig counts across 47 counties in South Texas, with the exception of one rig moving out of Dimmit County. Therefore, we're reporting the same counts as last week, minus the one rig that has been accounted for, totaling 87 rigs across the 47 counties.
 - [Baker Hughes](#)

o WTI & Bakken Spot Prices

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
WTI					
2017 August-28 to September-1	46.4	46.46	45.96	47.26	47.32
September-4 to September-8	-	48.63			
Differentials					
2017 August-28 to September-1	4.07	4.29	3.82	5.12	5.57
September-4 to September-8	-	5.58			

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

o Weekly Petroleum Status Report

Stocks (Million Barrels)			
	Four Weeks Ending		
	9/1/2017	8/25/2017	9/2/2016
Crude Oil (Excluding SPR)	462.4	457.8	480.7
Motor Gasoline	226.7	229.9	227.8
Distillate Fuel Oil	147.8	149.2	158.1
All Other Oils	473.6	466.5	493.7
Crude Oil in SPR	678.6	678.9	695.1
Total	1,989.0	1,982.3	2,055.4

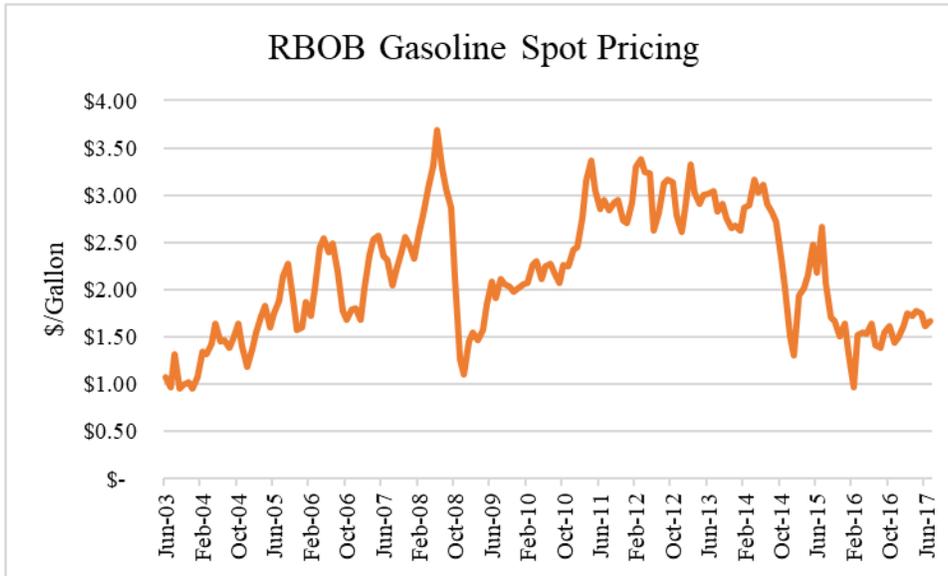
Products Supplied (Thousand Barrels per Day)			
	Four Weeks Ending		
	9/1/2017	8/25/2017	9/2/2016
Motor Gasoline	9,540	9,699	9,632
Distillate Fuel Oil	4,068	4,180	3,701
All Other Products	7,148	7,371	7,374
Total	20,756	21,249	20,707

Refinery Activity (Thousand Barrels per Day)			
	Four Weeks Ending		
	9/1/2017	8/25/2017	9/2/2016
Crude Oil Input to Refineries	16,806	17,581	16,772
Refinery Capacity Utilization	92	96.1	93.1
Motor Gasoline Production	10,183	10,379	10,127
Distillate Fuel Oil Production	4,981	5,185	4,948

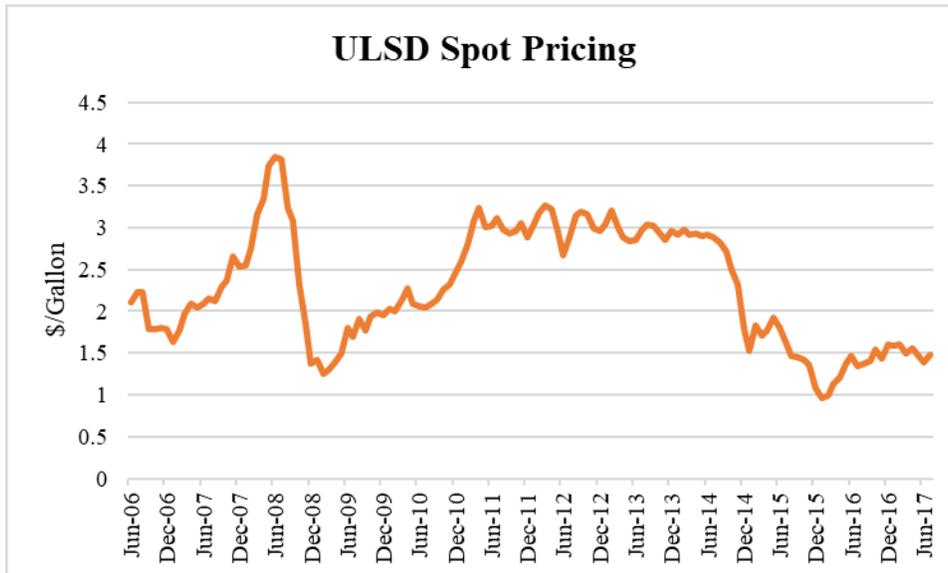
Net Imports (Thousand Barrels per Day)			
	Four Weeks Ending		
	9/1/2017	8/25/2017	9/2/2016
Crude Oil	7,259	7,290	7,567
Petroleum Products	-1,816	-2,161	-1,699
Total	5,444	5,130	5,869

- [EIA](#)

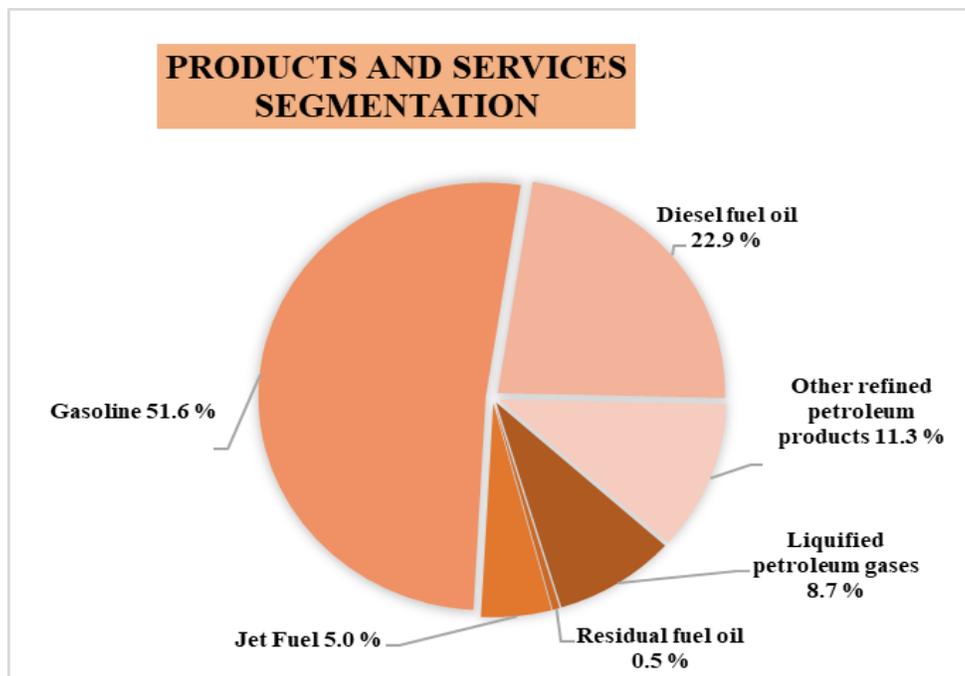
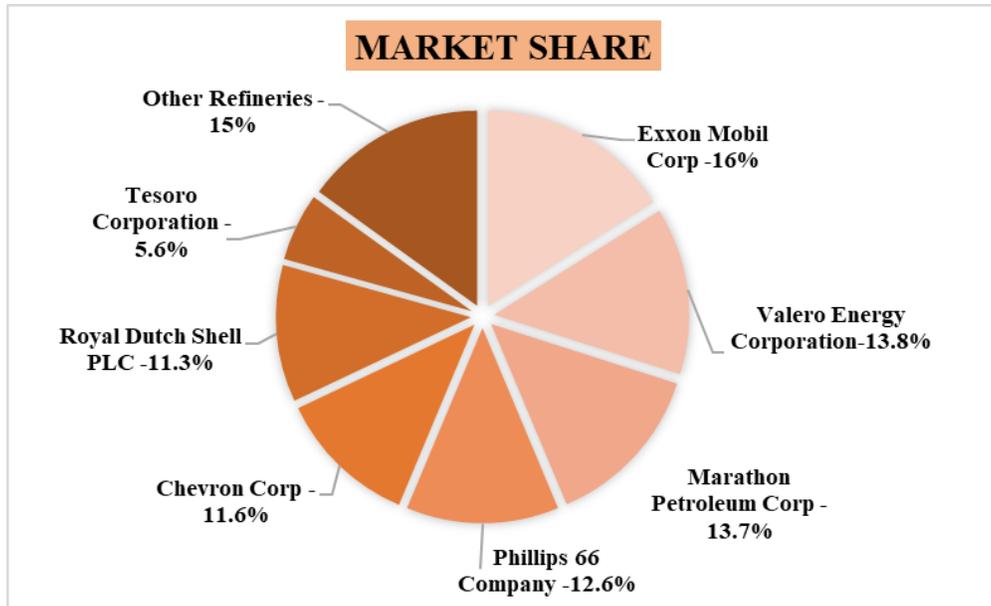
o RBOB Gasoline

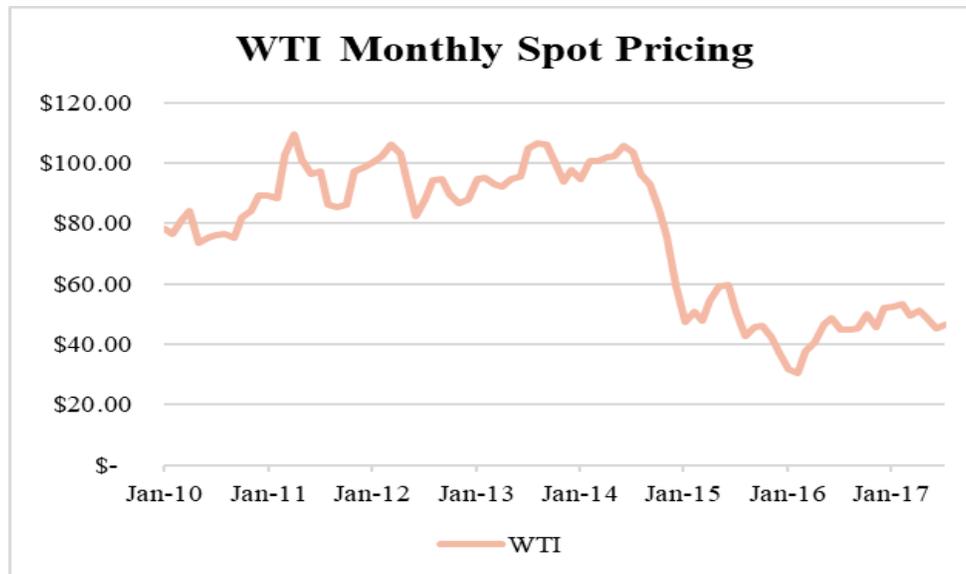


o Ultra-Low Sulfur Diesel



o US Petroleum Refining at a Glance





- [EIA](#)

o Key External Drivers

- o **World price of crude oil**
 - <http://www.nasdaq.com/article/crude-oil-futures-and-how-theyre-used-in-the-world-economy-cm842262>
- o **Demand from gasoline and petroleum bulk stations**
 - <https://www.usnews.com/news/world/articles/2017-09-06/florida-stations-face-fuel-shortages-delays-ahead-of-irma>
- o **GDP of mainland China**
- o **Trade-weighted index**
 - <https://seekingalpha.com/article/4102493-dollars-drop-still-bullish-oil>
- o **Total vehicle miles**
 - <http://www.talkmarkets.com/content/transportation/vehicle-miles-traveled-another-look-at-our-behavior?post=147713>