

FEATURES | FLOW MEASUREMENT


TRENDS IN A RECOVERING FLOWMETER MARKET

Expect a strong 2018 as oil prices level out.

JESSE YODER — DECEMBER 11, 2017

SHARE ON: [f](#) [t](#) [g+](#) [in](#) [✉](#)



 songqiuju/iStock

It is difficult to correctly analyze the 2017 flowmeter market without taking into account the effects of lower oil prices. All types of flowmeters are used in the oil and gas industry, though some are used more than others. Even so, the drop in oil prices from mid-2014 until the end of 2016 resulted in the cancellation or delay of oil and gas projects, especially in the upstream sector. Probably the most affected types of flowmeters were Coriolis, ultrasonic, turbine and differential pressure, but even magnetic flowmeters were not immune. Many manufacturers reduced personnel and budgets.

What caused the drop in oil prices, and how does the oil market look today? Beginning in August 2014, oil prices began a steady decline from the \$100 level down to the range of \$30 per barrel in early 2016. While some fluctuations in prices were caused by the Arab Spring uprising, hurricanes in Louisiana and other events, the most fundamental reason has to do with supply and demand. When oil demand exceeds oil supply, prices are higher. On the other hand, when supply exceeds demand, it has a depressing effect.

Worldwide oil demand in early 2017 was about 96 million barrels per day. On average, oil demand increases each year by about 1.3 million barrels per day. Prior to August 2014, world oil demand exceeded world oil supply. Beginning in August 2014, world oil supply began to exceed world oil demand. This drove down oil prices to the low they achieved in early February 2016.

SPONSORED: [How Diagnostics Make It Easier to Maintain Flow Meter Accuracy](#)

The role of OPEC

The Organization of Petroleum Exporting Countries (OPEC) was formed in September 1960. Founding members were Iran, Iraq, Kuwait, Venezuela and Saudi Arabia. Eight other countries, including Nigeria and Algeria, joined OPEC at later times. One purpose of OPEC in the past was to influence oil prices by controlling production to keep prices at a desirable level. This has changed recently, beginning in November 2014 when OPEC declined to cut production to prevent oil prices from coming down further after they began declining in August 2014. Many analysts believe this was a way to respond to the potential market threat posed by U.S. shale production.

Despite OPEC's stance on U.S. shale production, it reversed course at a meeting on Nov. 30, 2016. At this meeting, OPEC members agreed, with Russia, to cut oil production by almost 1.8 million barrels per day. This put at least a temporary floor of \$50 per barrel on the price of West Texas Intermediate (WTI) oil. However, in June 2017, prices of WTI dropped down to the \$45 per barrel range. While analysts differ on the future direction of oil prices, chances are high that oil will stay in the \$45 to \$55 range for much of 2018.

How oil prices affect flowmeter markets

Ultrasonic flowmeters are used in upstream applications for allocation metering, measuring gas and oil from test and production separators, check metering and other applications. A major use of ultrasonic flowmeters is in the midstream segment for natural gas custody transfer. Here ultrasonic meters compete with turbine and differential pressure flowmeters. With reduced oil prices, many exploration and production projects were put on hold or cancelled. This was especially true of subsea projects, which are typically the most expensive production projects. The reduction in projects had a rippling effect throughout the flowmeter industry, especially ultrasonic, Coriolis, turbine and differential pressure flowmeters. As a result, the ultrasonic flowmeter market experienced a modest decline in 2015 and 2016. In 2017, confidence appears to be returning to the market, although a six- to nine-month time lag occurs from when projects resume until companies begin ordering instrumentation again.

SPONSORED: [INFOGRAPHIC: 5 Key Applications for Thermal Flow Meters](#)

The refining and downstream sectors are less affected by lower oil prices. Refineries will continue to process crude oil into refined fuel, whether it comes from a new oil well or a storage tank. Demand for refined petroleum products does not seem to decline when oil prices are low. If anything, it may increase because prices are lower.

In 2015, the Coriolis flowmeter market declined modestly compared to its performance in 2014. Slumping oil prices influenced upstream oil and gas more than downstream, since exploration and production were most affected. 2015 was only the second year since 2005 that the Coriolis flowmeter market declined; the only other year was 2009. In the other years since 2005, the Coriolis market has been among the fastest growing of any of the flowmeter markets.

Of the new-technology flowmeter markets, the magnetic flowmeter market is the only one that increased in 2015, although it was the smallest increase since 2005. Magnetic flowmeters cannot be used to measure hydrocarbon liquids or gas, although they are used to measure liquids reinjected into wells. The oil and gas industry accounts for a small percentage of magnetic flowmeter revenues worldwide.

The ultrasonic flowmeter market declined less than the Coriolis market in 2015. The oil and gas industry accounts for a substantial portion of worldwide ultrasonic flowmeter revenues, especially for inline flowmeters. One of the main applications for ultrasonic flowmeters is for the custody transfer of natural gas. Ultrasonic flowmeters are used in the upstream, midstream and downstream segments. One of the main reasons that ultrasonic flowmeters nearly held their own in 2015 is because of the continued expansion in the sale of multipath ultrasonic flowmeters. Suppliers have also actively introduced new products for liquid and gas applications.

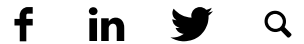
2016 & 2017: Years of recovery

The flowmeter markets in 2016 and 2017 are best understood in the context of the downturn they experienced in 2015. As oil prices have recovered from their lows and have achieved more stability, the flowmeter markets have responded in kind. In 2016, however, projects were still cancelled or postponed, and oil prices did not stabilize near the \$50 per barrel level until OPEC reached its agreement to cut production on Nov. 30, 2016. Some new-technology flowmeter markets ended their decline in 2016, and some showed a modest increase. In 2017, new-technology flowmeter markets continued their upward momentum as upstream and midstream activity began returning to a more normal level.

Despite the decline in activity in the upstream and midstream oil and gas markets, activity in the downstream sector has remained fairly constant. This is because the demand for refined petroleum products has not wavered during this period. Oil refineries have continued to produce gasoline and other petroleum products, and they all need to be measured and distributed. Wherever a refinery gets

its oil, it is still able to refine the oil into needed petroleum products. This especially favors positive displacement and Coriolis flowmeters, which are widely used to measure downstream refined petroleum products. It also benefits turbine flowmeters.

Other major industries such as chemical, food and beverage, power, and water and wastewater have not been affected majorly by the downturn in oil prices. For this reason, sales in these industries have helped make up for some of the reduction in sales in the oil and gas industry. Some flowmeter companies that have traditionally focused on the oil and gas industry have improved their bottom lines by shifting their sales attention to some of the non-petroleum industries.



2018 likely to be strong year

To summarize, 2015 was a down year for many flowmeter markets because of lower oil prices. In 2016, flowmeter markets began to stabilize, and some saw modest gains. In 2017, the upward momentum continued and grew stronger throughout the year. This sets up the flowmeter markets to be strong in 2018. Oil prices have been relatively stable throughout 2017, and the trend for oil prices is up. This is based on increasing demand in the face of constant or potentially declining supply. Other key industries, especially chemical, food and beverage, power, and water and wastewater are likely to continue expansion. The demand in these industries is driven by population growth and increased industrialization.

Jesse Yoder, Ph.D., is president of Flow Research Inc. He has 30 years of experience as an analyst and writer in instrumentation. He holds two U.S. patents on a dual-tube meter design and is the author of The Tao of Measurement, published by ISA. Yoder may be reached at jesse@flowresearch.com.

TAGS:

DECEMBER 2017

PREVIOUS POST

Oil and Gas News: US sees largest supply surge in history

NEXT POST

Movers and Shakers: Hexagon Manufacturing Intelligence supports Workshops for Warriors, MCAA elects board members