



# NEWS RELEASE

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## TENTH DISTRICT ENERGY ACTIVITY EXPANDS SLIGHTLY

*Federal Reserve Bank of Kansas City Releases Second Quarter Energy Survey*

KANSAS CITY, Mo. –The Federal Reserve Bank of Kansas City released the second quarter Energy Survey today. According to Chad Wilkerson, Oklahoma City Branch executive and economist at the Federal Reserve Bank of Kansas City, the survey revealed that Tenth District energy activity expanded slightly, while expectations for future activity declined.

“Firms in our region expect oil prices to remain profitable in coming years, but just marginally so,” said Wilkerson. “Meanwhile, low natural gas prices are expected to persist. As such, future drilling plans have eased somewhat.”

The Kansas City Fed's quarterly Tenth District Energy Survey provides information on current and expected activity among energy firms in the Tenth District. The survey monitors oil and gas-related firms located and/or headquartered in the Tenth District, with results based on total firm activity. Survey results reveal changes in several indicators of energy activity, including drilling, capital spending, and employment. Firms also indicate projections for oil and gas prices. All results are diffusion indexes – the percentage of firms indicating increases minus the percentage of firms indicating decreases. A summary of the first quarter survey is attached. Results from past surveys and release dates for future surveys can be found at <https://www.kansascityfed.org/research/indicatorsdata/energy>.

The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, encompassing the western third of Missouri; all of Kansas, Colorado, Nebraska, Oklahoma and Wyoming; and the northern half of New Mexico. As part of the nation's central bank, the Bank participates in setting national monetary policy, supervising and regulating numerous commercial banks and bank holding companies, and providing financial services to depository institutions. More information is available online at [www.kansascityfed.org](http://www.kansascityfed.org).

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# TENTH DISTRICT ENERGY SUMMARY

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*Second quarter energy survey results revealed Tenth District energy activity expanded slightly, while expectations for future activity declined. Firms reported that oil prices needed to be on average \$66 per barrel for substantial increases in drilling to occur, up slightly from six months ago and higher than both current prices and prices expected over the next two years.*

## Summary of Quarterly Indicators

Tenth District energy activity expanded slightly in the second quarter of 2019, as indicated by firms contacted between June 17<sup>th</sup> and June 28<sup>th</sup>, 2019 (Tables 1 & 2). The drilling and business activity index increased from 0 to 7, indicating a modest expansion following flat activity in Q1 2019 (Chart 1). The delivery time index rose and the wages and benefits index also remained positive. However, the employment index was flat, and the revenues, profits, and access to credit indexes decreased.

Most year-over-year indexes decreased moderately. The year-over-year drilling and business activity index fell from 17 to -11. Indexes for revenues, profits, and access to credit also dropped into negative territory. Year-over-year indexes for capital expenditures and delivery time inched up, while the pace of expansion for the employment, employee hours, and wages and benefits indexes eased.

Expectation indexes fell, with the future drilling and business activity index dropping from 17 to -26, the lowest level since Q1 2016. The future revenues, capital expenditures, profits, employee hours, and access to credit indexes were negative. On the other hand, the future employment index was flat, while the delivery time and wages and benefits indexes remained positive. The oil price expectations index slowed from 34 to 15, and the natural gas price expectations index rose from 3 to 10.

## Summary of Special Questions

This quarter firms were asked what oil and natural gas prices were needed on average for a substantial increase in drilling to occur (in alternate quarters they are asked what price they need to be profitable on average across the fields in which they are active). The average oil price needed was \$66 per barrel, with a range of \$50 to \$75 (Chart 2). This average was up slightly from \$63 in the fourth quarter of 2018, but below the price reported in the second quarter of 2018. The average natural gas price needed was \$3.40 per million Btu, with responses ranging from \$2.25 to \$5.00.

Firms were again asked what they expected oil and natural gas prices to be in six months, one year, two years, and five years. Expected oil prices dipped since the last quarter, but were higher than price expectations from Q4 2018. The average expected WTI prices were \$57, \$60, \$63, and \$70 per barrel, respectively. Expectations for natural gas prices continued to decline. The average expected Henry Hub natural gas prices were \$2.52, \$2.59, \$2.79, and \$3.16 per million Btu, respectively.

Firms were also asked about any initiatives regarding water use/management (Chart 3). While 37 percent of surveyed firms reported they hadn't undertaken any initiatives related to water management, 30 percent reported they've invested in water infrastructure. 30 percent of firms indicated they've begun initiatives to recycle/reuse water and 20 percent of contacts noted they have worked with landowners or local governments to deal with water management issues.

Finally, respondents were asked about expenditures on software, application development and related personnel. About 60 percent of firms reported they have increased these expenditures over the past two years, and 60 percent also expect to increase these expenditures over the next two years (Chart 4).

## Selected Energy Comments

“There are fewer independent oil & gas exploration companies operating in the mid-continent. The emphasis is on horizontal/lateral harvesting by the larger independents with little or no room for the E&P’s who drilled or explored for new production.”

“Natural gas is extraordinarily weak. We are likely to net less than \$1.00 after transportation/marketing. While gas price should rebound, any length to this recent downturn will have serious impacts on future activity.”

“There has been a drastic reduction in new well starts.”

“We continue to drive [business] costs down through engineering innovation and efficiencies.”

“I believe demand for crude oil will increase slightly each year, along with US production stabilizing in the next couple of years (i.e. likely increasing at a lower rate than we’ve seen in the past few years).”

“There is a current oversupply of natural gas, and I do not see this getting resolved in the next few years. We need additional pipelines, and other infrastructure, and to convert more vehicles, etc. to natural gas.”

“Gas is oversupplied but additional export capacity supports modest price increases.”

“Steel tariffs have caused increases in drilling costs.”

“Indirectly trade tariffs have affected us. The projected use of oil is lower and this has caused the price of oil to go down. We have had two contracts cancelled recently, which really hurt. Companies have had to revise downward their budgets for 2019 and they cut training.”

“Tariffs have not significantly affected our business.”

**Table 1**  
**Summary of Tenth District Energy Conditions, Quarter 2, 2019**

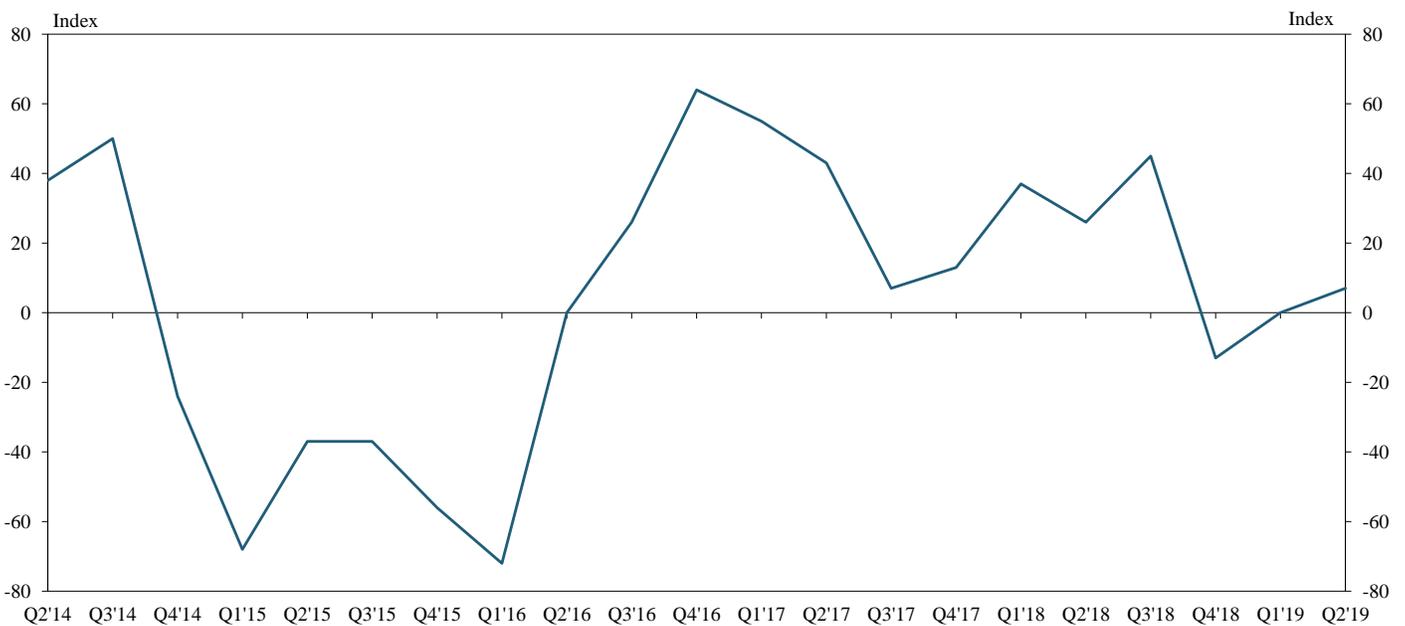
|                                     | Quarter 2 vs. Quarter 1<br>(percent)* |        |          |                    | Quarter 2 vs. Year Ago<br>(percent)* |        |          |                    | Expected in Six Months<br>(percent)* |        |          |                    |
|-------------------------------------|---------------------------------------|--------|----------|--------------------|--------------------------------------|--------|----------|--------------------|--------------------------------------|--------|----------|--------------------|
|                                     | No                                    |        |          | Diff               | No                                   |        |          | Diff               | No                                   |        |          | Diff               |
| Energy Company Indicators           | Increase                              | Change | Decrease | Index <sup>^</sup> | Increase                             | Change | Decrease | Index <sup>^</sup> | Increase                             | Change | Decrease | Index <sup>^</sup> |
| Drilling/Business Activity          | 32                                    | 43     | 25       | 7                  | 26                                   | 37     | 37       | -11                | 7                                    | 59     | 33       | -26                |
| Total Revenues                      | 34                                    | 17     | 48       | -14                | 33                                   | 11     | 56       | -22                | 29                                   | 39     | 32       | -4                 |
| Capital Expenditures                |                                       |        |          |                    | 37                                   | 30     | 33       | 4                  | 19                                   | 59     | 22       | -4                 |
| Supplier Delivery Time              | 7                                     | 93     | 0        | 7                  | 14                                   | 79     | 7        | 7                  | 14                                   | 86     | 0        | 14                 |
| Total Profits                       | 29                                    | 25     | 46       | -18                | 28                                   | 21     | 52       | -24                | 28                                   | 38     | 34       | -7                 |
| Number of Employees                 | 15                                    | 70     | 15       | 0                  | 25                                   | 54     | 21       | 4                  | 14                                   | 71     | 14       | 0                  |
| Employee Hours                      | 14                                    | 71     | 14       | 0                  | 21                                   | 62     | 17       | 3                  | 7                                    | 82     | 11       | -4                 |
| Wages and Benefits                  | 22                                    | 70     | 7        | 15                 | 57                                   | 29     | 14       | 43                 | 22                                   | 70     | 7        | 15                 |
| Access to Credit                    | 0                                     | 93     | 7        | -7                 | 7                                    | 79     | 14       | -7                 | 3                                    | 90     | 7        | -3                 |
| Expected Oil Prices                 |                                       |        |          |                    |                                      |        |          |                    | 33                                   | 48     | 19       | 15                 |
| Expected Natural Gas Prices         |                                       |        |          |                    |                                      |        |          |                    | 23                                   | 63     | 13       | 10                 |
| Expected Natural Gas Liquids Prices |                                       |        |          |                    |                                      |        |          |                    | 14                                   | 66     | 21       | -7                 |

\*Percentage may not add to 100 due to rounding.

<sup>^</sup>Diffusion Index. The diffusion index is calculated as the percentage of total respondents reporting increases minus the percentage reporting declines.

Note: The second quarter survey ran from June 17 to June 28, 2019 and included 30 responses from firms in Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and western Missouri.

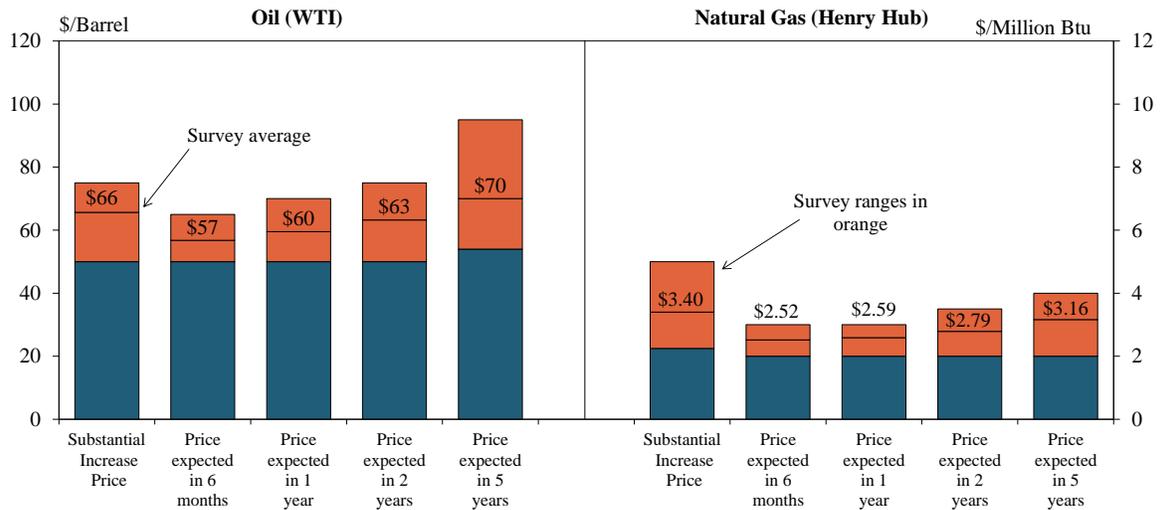
**Chart 1. Drilling/Business Activity Index vs. a Quarter Ago**



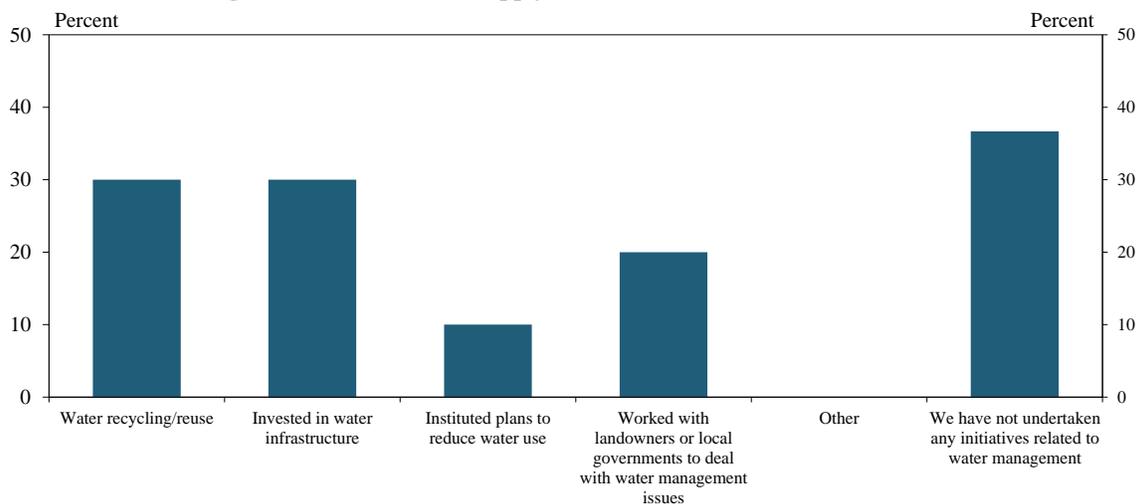
**Table 2**  
**Historical Energy Survey Indexes**

|  | Q2'16  | Q3'16  | Q4'16  | Q1'17  | Q2'17  | Q3'17  | Q4'17  | Q1'18  | Q2'18  | Q3'18  | Q4'18  | Q1'19  | Q2'19  |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <i>Versus a Quarter Ago</i>                          |        |        |        |        |        |        |        |        |        |        |        |        |        |
| (not seasonally adjusted)                            |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Drilling/Business Activity                           | 0      | 26     | 64     | 55     | 43     | 7      | 13     | 37     | 26     | 45     | -13    | 0      | 7      |
| Total Revenues                                       | -31    | 5      | 62     | 52     | 20     | 23     | 39     | 50     | 53     | 50     | 6      | 13     | -14    |
| Capital Expenditures                                 | n/a    |
| Supplier Delivery Time                               | -3     | -8     | -7     | 4      | 11     | -10    | -4     | 19     | 16     | 7      | 0      | 3      | 7      |
| Total Profits  | -22    | -10    | 42     | 41     | 3      | 21     | 29     | 50     | 53     | 37     | -18    | 6      | -18    |
| Number of Employees                                  | -59    | -11    | 26     | 31     | 23     | 17     | 19     | 20     | 29     | 23     | 9      | 3      | 0      |
| Employee Hours                                       | -52    | -10    | 20     | 16     | 20     | 0      | 19     | 24     | 24     | 23     | 6      | 6      | 0      |
| Wages and Benefits                                   | -37    | -22    | 17     | 13     | 20     | 7      | 16     | 34     | 39     | 33     | 30     | 28     | 15     |
| Access to Credit                                     | -17    | -5     | 0      | 3      | -3     | 13     | 0      | 3      | 15     | 10     | -19    | -10    | -7     |
| <i>Versus a Year Ago</i>                             |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Drilling/Business Activity                           | -65    | -21    | 41     | 59     | 70     | 44     | 54     | 54     | 41     | 57     | 17     | 17     | -11    |
| Total Revenues                                       | -69    | -31    | 15     | 52     | 62     | 37     | 56     | 68     | 56     | 61     | 50     | 23     | -22    |
| Capital Expenditures                                 | -84    | -58    | 14     | 43     | 59     | 50     | 50     | 68     | 58     | 62     | 27     | 3      | 4      |
| Supplier Delivery Time                               | -14    | -11    | -14    | -4     | 11     | -14    | -7     | 19     | 16     | 10     | 3      | 3      | 7      |
| Total Profits  | -71    | -49    | 23     | 55     | 59     | 21     | 38     | 53     | 50     | 47     | 42     | 6      | -24    |
| Number of Employees                                  | -67    | -50    | -7     | 13     | 31     | 23     | 40     | 31     | 36     | 27     | 27     | 24     | 4      |
| Employee Hours                                       | -48    | -37    | 3      | 0      | 28     | 10     | 27     | 30     | 34     | 31     | 19     | 16     | 3      |
| Wages and Benefits                                   | -42    | -33    | 17     | 9      | 31     | 37     | 34     | 48     | 69     | 67     | 55     | 47     | 43     |
| Access to Credit                                     | -47    | -30    | -17    | 13     | -3     | 20     | 7      | 0      | 15     | 25     | 9      | 3      | -7     |
| <i>Expected in Six Months</i>                        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| (not seasonally adjusted)                            |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Drilling/Business Activity                           | 39     | 21     | 73     | 57     | 26     | 30     | 33     | 50     | 61     | 50     | -19    | 17     | -26    |
| Total Revenues                                       | 26     | 6      | 67     | 52     | 18     | 44     | 44     | 52     | 50     | 56     | -23    | 47     | -4     |
| Capital Expenditures                                 | 17     | 9      | 79     | 37     | 19     | 37     | 43     | 56     | 48     | 43     | -13    | 19     | -4     |
| Supplier Delivery Time                               | -3     | -8     | -7     | 11     | 4      | -11    | -11    | 15     | 17     | -4     | 9      | 14     | 14     |
| Total Profits  | 23     | 5      | 76     | 45     | 12     | 28     | 43     | 53     | 48     | 59     | -27    | 35     | -7     |
| Number of Employees                                  | 6      | -22    | 32     | 16     | 21     | 20     | 21     | 34     | 33     | 21     | 15     | 14     | 0      |
| Employee Hours                                       | 6      | -8     | 28     | 16     | 21     | 17     | 27     | 43     | 31     | 17     | 3      | 13     | -4     |
| Wages and Benefits                                   | -3     | 3      | 52     | 23     | 7      | 30     | 50     | 34     | 39     | 34     | 42     | 28     | 15     |
| Access to Credit                                     | 0      | -6     | 3      | 0      | 4      | 10     | 14     | 3      | 6      | 30     | 3      | 0      | -3     |
| Expected Oil Prices                                  | 58     | 49     | 72     | 3      | 4      | 54     | 50     | 31     | 12     | 48     | 29     | 34     | 15     |
| Expected Natural Gas Prices                          | 61     | 44     | 26     | 6      | 3      | 24     | 28     | 3      | 21     | 20     | -33    | 3      | 10     |
| Expected Natural Gas Liquids Prices                  | 59     | 31     | 64     | 14     | 21     | 38     | 30     | 7      | 27     | 32     | -3     | 18     | -7     |
| <i>Special Price Questions</i>                       |        |        |        |        |        |        |        |        |        |        |        |        |        |
| (averages)   |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Profitable WTI Oil Price (per barrel)                |        | \$53   |        | \$51   |        | \$51   |        | \$52   |        | \$55   |        | \$52   |        |
| WTI Price to Substantially Increase Drilling         | \$64   |        | \$60   |        | \$56   |        | \$62   |        | \$69   |        | \$63   |        | \$66   |
| WTI Price Expected in 6 Months                       |        |        |        | \$51   | \$47   | \$52   | \$58   | \$63   | \$67   | \$71   | \$54   | \$60   | \$57   |
| WTI Price Expected in 1 Year                         |        |        |        | \$54   | \$49   | \$55   | \$60   | \$64   | \$70   | \$72   | \$59   | \$61   | \$60   |
| WTI Price Expected in 2 Years                        |        |        |        | \$60   | \$54   | \$58   | \$62   | \$66   | \$73   | \$73   | \$61   | \$65   | \$63   |
| WTI Price Expected in 5 Years                        |        |        |        | \$69   | \$61   | \$65   | \$70   | \$72   | \$78   | \$79   | \$66   | \$72   | \$70   |
| Profitable Natural Gas Price (per million BTU)       |        | \$3.45 |        | \$3.38 |        | \$3.05 |        | \$2.92 |        | \$3.23 |        | \$3.02 |        |
| Natural Gas Price to Substantially Increase Drilling | \$3.65 |        | \$3.97 |        | \$3.65 |        | \$3.59 |        | \$3.60 |        | \$3.48 |        | \$3.40 |
| Henry Hub Price Expected in 6 Months                 |        |        |        | \$2.85 | \$3.05 | \$3.01 | \$2.88 | \$2.70 | \$2.85 | \$2.89 | \$3.06 | \$2.85 | \$2.52 |
| Henry Hub Price Expected in 1 Year                   |        |        |        | \$3.01 | \$3.06 | \$3.11 | \$3.10 | \$2.83 | \$2.90 | \$2.92 | \$3.12 | \$2.91 | \$2.59 |
| Henry Hub Price Expected in 2 Years                  |        |        |        | \$3.22 | \$3.25 | \$3.30 | \$3.30 | \$2.98 | \$3.05 | \$3.10 | \$3.23 | \$3.05 | \$2.79 |
| Henry Hub Price Expected in 5 Years                  |        |        |        | \$3.64 | \$3.51 | \$3.73 | \$3.65 | \$3.33 | \$3.34 | \$3.42 | \$3.54 | \$3.18 | \$3.16 |

**Chart 2. Special Question - What price is currently needed for a substantial increase in drilling to occur for oil and natural gas, and what do you expect the WTI and Henry Hub prices to be in six months, one year, two years, and five years?**



**Chart 3. Special Question - Has your company undertaken any initiatives regarding water use/management? (Check all that apply)**



**Chart 4. Special Question - How have your firm's expenditures on software, application development and related personnel changed over the last two years, and what is your firm's plan for these expenditures over the next two years?**

