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**Tenth District Energy Activity Stabilized Somewhat but Job Cuts Continued**
***Federal Reserve Bank of Kansas City Releases Third Quarter Energy Survey***

**KANSAS CITY**, Mo. –The Federal Reserve Bank of Kansas City released the third 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 stabilized somewhat, but job cuts continued.

"District drilling and business activity rose slightly in Q3 from historic lows earlier this year, but revenues, employment, and capital expenditures continued to decline," said Wilkerson. "Over a quarter of firms surveyed expected global oil demand to return to Pre-COVID levels by Q2 2021, but the majority of contacts don't expect oil demand to rebound fully until 2022 or 2023."

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 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.

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# TENTH DISTRICT ENERGY SUMMARY

*Third quarter energy survey results revealed Tenth District energy activity stabilized somewhat and future activity was expected to remain largely unchanged. Firms reported that oil prices needed to be on average $49 per barrel for drilling to be profitable.*

## Summary of Quarterly Indicators

Tenth District energy activity stabilized somewhat in the third quarter of 2020 after sharply declining earlier in the year, as indicated by firms contacted between September 15th and September 30th, 2020 (Tables 1 & 2). The drilling and business activity index rebounded significantly, from -61 to 4 (Chart 1). However, all the other quarterly indexes continued to decrease, though at slower paces than in Q2 2020.

Year-over-year indexes remained significantly negative in Q3 2020. The year-over-year drilling and business activity index, at -71, was slightly lower than -70 in Q2. Indexes for total revenues, employee hours, and wages and benefits declined at a faster rate in Q3. However, the indexes for capital expenditures, delivery time, profits, employment, and access to credit were less negative than last quarter.

Expectations indexes improved somewhat overall, but future energy activity was expected to remain largely unchanged. The future drilling and business activity index was 0 again in Q3 2020, indicating as many firms expected increases as expected decreases in activity. The future employment and wages and benefits indexes decreased further in Q3 2020. The future revenues, capital expenditures, profits employee hours, and access to credit indexes also remained negative but declined less sharply compared to the previous quarter. On the other hand, the future supplier delivery time index expanded. Price expectations for oil, natural gas, and natural gas liquids were positive, but not up as much as in Q2 2020.

## Summary of Special Questions

This quarter firms were asked what oil and natural gas prices were needed to be profitable on average across the fields in which they are active (in alternate quarters they are asked what prices are needed for a substantial increase in drilling to occur). The average oil price needed was $49 per barrel, with a range of $35 to $65 (Chart 2). This average was below the profitable prices reported in 2019, but higher than $47 per barrel reported in Q1 2020. The average natural gas price needed was $3.12 per million Btu, with responses ranging from $1.75 to $4.00.

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 for the near term were higher than price expectations from Q2 2020, but longer-term projections were steady. The average expected WTI prices were $43, $47, $53, and $60 per barrel, respectively. Expectations for natural gas prices rose moderately from last quarter. The average expected Henry Hub natural gas prices were $2.62, $2.71, $2.84, and $3.28 per million Btu, respectively.

Firms were also asked about expectations for future global oil demand (Chart 3). Around 27% of firms expected global oil demand to return to pre-COVID levels by Q2 2021. However, nearly 60% of contacts didn't expect global oil demand to return to pre-COVID levels until 2022 or 2023. Over 55% of firms anticipated a large increase in both mergers and acquisitions as well as defaults and bankruptcies for the energy sector through 2021. Another third of firms expected more defaults and bankruptcies with little change in mergers and acquisitions through 2021.

Additionally, firms were again asked about their primary goals over the next six months (Chart 4). For 24% of firms, maintaining production is the highest priority, and 21% of firms are focused on reducing debt. Only 14% said acquiring assets is their primary goal.

## Selected Energy Comments

“Without a doubt this is the most difficult cycle I've experienced in my 30-year career.”

“M&A is difficult due to number of companies with high leverage on buyers’ side.”

“Bankrupt companies are just restructuring and there is very little new capital available.”

“Large debt load and expiring hedge positions over the next 12 months.”

“The longer it takes for economy to recover, people to get out and start spending, the more difficult it will be for companies to survive.”

“[COVID] will keep demand down for the next year, return to normal demand in year 2 and constrained drilling should drive prices higher. Capital is scarce in the shale plays as the return is marginal and the capital need is so high to maintain production levels.

“Near term: time to work through higher inventories due to lower demand growth limits price upside. Long term: flat production while demand is increasing should have prices start to firm up 2021+.”

“Demand weak through Q1 next year. Not enough drilling going on and we will need investment. Public companies have to pay dividends.”

“LNG picking up. We need more rigs drilling for natural gas. Associated gas won't grow and if anything will shrink.”

“Severe lack of capital being deployed in energy sector. Positive macro factors: significant decline rates, reduced supplies from Canada, improved LNG market.”

“Reduced DUCs, production declines everywhere will be 15-20%.”

“Current and projected cash flow does not provide a good opportunity to grow production… we either tread water/grow slowly or identify new sources of capital.”

**Table 1**
**Summary of Tenth District Energy Conditions, Quarter 3, 2020**

| | Quarter 3 vs. Quarter 2 (percent)* | | | | Quarter 3 vs. Year Ago (percent)* | | | | Expected in Six Months (percent)* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Company Indicators | Increase | No Change | Decrease | Diff Index^ | Increase | No Change | Decrease | Diff Index^ | Increase | No Change | Decrease | Diff Index^ |
| Drilling/Business Activity | 25 | 54 | 21 | 4 | 7 | 14 | 79 | -71 | 32 | 36 | 32 | 0 |
| Total Revenues | 38 | 17 | 45 | -7 | 10 | 0 | 90 | -79 | 38 | 17 | 45 | -7 |
| Capital Expenditures | | | | | 7 | 21 | 72 | -66 | 31 | 24 | 45 | -14 |
| Supplier Delivery Time | 7 | 66 | 28 | -21 | 17 | 55 | 28 | -10 | 14 | 76 | 10 | 3 |
| Total Profits | 28 | 21 | 52 | -24 | 7 | 3 | 90 | -83 | 38 | 21 | 41 | -3 |
| Number of Employees | 4 | 54 | 43 | -39 | 7 | 28 | 66 | -59 | 14 | 34 | 52 | -38 |
| Employee Hours | 7 | 48 | 45 | -38 | 7 | 24 | 69 | -62 | 14 | 41 | 45 | -31 |
| Wages and Benefits | 10 | 62 | 28 | -17 | 21 | 34 | 45 | -24 | 10 | 52 | 38 | -28 |
| Access to Credit | 3 | 66 | 31 | -28 | 7 | 59 | 34 | -28 | 10 | 69 | 21 | -10 |
| Expected Oil Prices | | | | | | | | | 41 | 45 | 14 | 28 |
| Expected Natural Gas Prices | | | | | | | | | 41 | 52 | 7 | 34 |
| Expected Natural Gas Liquids Prices | | | | | | | | | 41 | 48 | 10 | 31 |

*Percentage may not add to 100 due to rounding.
^Diffusion Index. The diffusion index is calculated as the percentage of total respondents reporting increases minus the percentage reporting declines.

Note: The third quarter survey ran from September 15 to September 30, 2020 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**

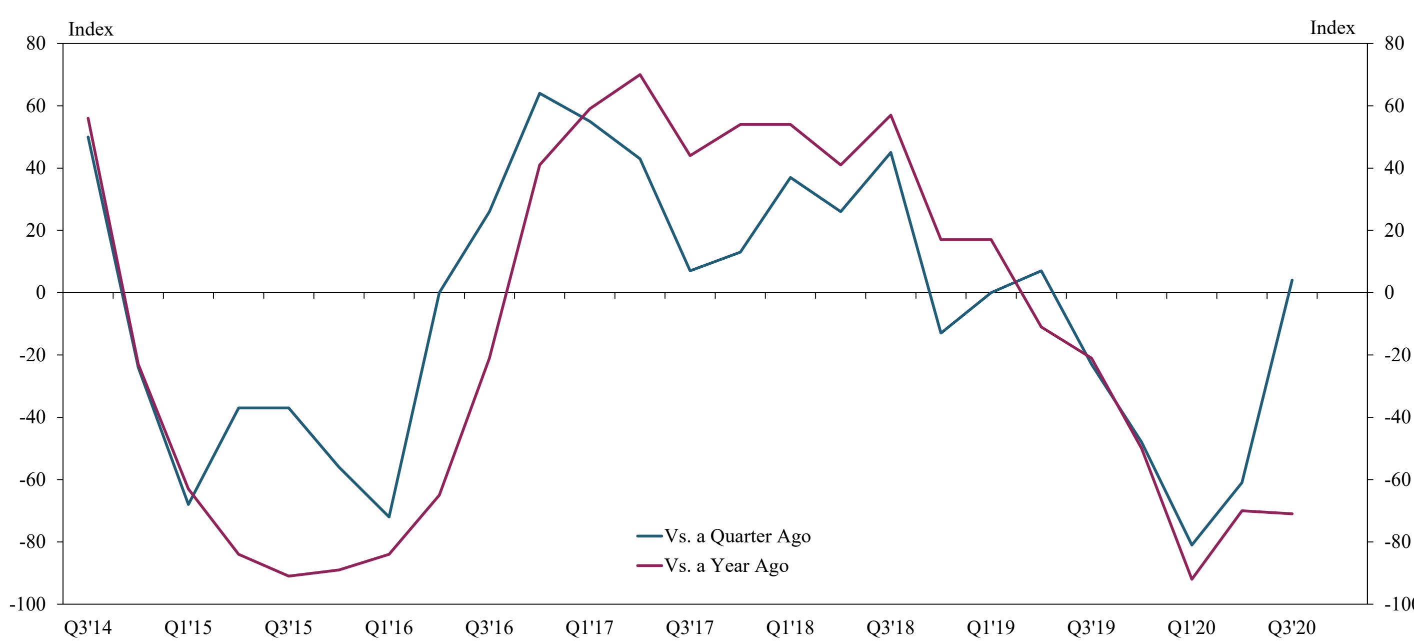

**Table 2**
**Historical Energy Survey Indexes**

| | Q3'17 | Q4'17 | Q1'18 | Q2'18 | Q3'18 | Q4'18 | Q1'19 | Q2'19 | Q3'19 | Q4'19 | Q1'20 | Q2'20 | Q3'20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Versus a Quarter Ago* | | | | | | | | | | | | | |
| (not seasonally adjusted) | | | | | | | | | | | | | |
| Drilling/Business Activity | 7 | 13 | 37 | 26 | 45 | -13 | 0 | 7 | -23 | -48 | -81 | -61 | 4 |
| Total Revenues | 23 | 39 | 50 | 53 | 50 | 6 | 13 | -14 | -10 | 6 | -73 | -78 | -7 |
| Capital Expenditures | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Supplier Delivery Time | -10 | -4 | 19 | 16 | 7 | 0 | 3 | 7 | -7 | -6 | -24 | -13 | -21 |
| Total Profits | 21 | 29 | 50 | 53 | 37 | -18 | 6 | -18 | -23 | -21 | -81 | -88 | -24 |
| Number of Employees | 17 | 19 | 20 | 29 | 23 | 9 | 3 | 0 | -10 | 0 | -54 | -56 | -39 |
| Employee Hours | 0 | 19 | 24 | 24 | 23 | 6 | 6 | 0 | 0 | -12 | -54 | -55 | -38 |
| Wages and Benefits | 7 | 16 | 34 | 39 | 33 | 30 | 28 | 15 | 10 | 9 | -24 | -38 | -17 |
| Access to Credit | 13 | 0 | 3 | 15 | 10 | -19 | -10 | -7 | -6 | -21 | -32 | -31 | -28 |
| *Versus a Year Ago* | | | | | | | | | | | | | |
| Drilling/Business Activity | 44 | 54 | 54 | 41 | 57 | 17 | 17 | -11 | -21 | -50 | -92 | -70 | -71 |
| Total Revenues | 37 | 56 | 68 | 56 | 61 | 50 | 23 | -22 | -7 | -19 | -81 | -74 | -79 |
| Capital Expenditures | 50 | 50 | 68 | 58 | 62 | 27 | 3 | 4 | -10 | -13 | -68 | -69 | -66 |
| Supplier Delivery Time | -14 | -7 | 19 | 16 | 10 | 3 | 3 | 7 | -21 | -13 | -22 | -26 | -10 |
| Total Profits | 21 | 38 | 53 | 50 | 47 | 42 | 6 | -24 | -13 | -30 | -83 | -84 | -83 |
| Number of Employees | 23 | 40 | 31 | 36 | 27 | 27 | 24 | 4 | -13 | -18 | -62 | -61 | -59 |
| Employee Hours | 10 | 27 | 30 | 34 | 31 | 19 | 16 | 3 | -17 | -18 | -62 | -53 | -62 |
| Wages and Benefits | 37 | 34 | 48 | 69 | 67 | 55 | 47 | 43 | 33 | 3 | -30 | -16 | -24 |
| Access to Credit | 20 | 7 | 0 | 15 | 25 | 9 | 3 | -7 | 0 | -16 | -44 | -35 | -28 |
| *Expected in Six Months* | | | | | | | | | | | | | |
| (not seasonally adjusted) | | | | | | | | | | | | | |
| Drilling/Business Activity | 30 | 33 | 50 | 61 | 50 | -19 | 17 | -26 | -21 | -16 | -78 | 0 | 0 |
| Total Revenues | 44 | 44 | 52 | 50 | 56 | -23 | 47 | -4 | 4 | 13 | -78 | -16 | -7 |
| Capital Expenditures | 37 | 43 | 56 | 48 | 43 | -13 | 19 | -4 | -17 | -13 | -73 | -35 | -14 |
| Supplier Delivery Time | -11 | -11 | 15 | 17 | -4 | 9 | 14 | 14 | -14 | -23 | -32 | -19 | 3 |
| Total Profits | 28 | 43 | 53 | 48 | 59 | -27 | 35 | -7 | -10 | 0 | -81 | -10 | -3 |
| Number of Employees | 20 | 21 | 34 | 33 | 21 | 15 | 14 | 0 | -3 | -16 | -68 | -26 | -38 |
| Employee Hours | 17 | 27 | 43 | 31 | 17 | 3 | 13 | -4 | -10 | -18 | -59 | -33 | -31 |
| Wages and Benefits | 30 | 50 | 34 | 39 | 34 | 42 | 28 | 15 | 17 | -6 | -49 | -19 | -28 |
| Access to Credit | 10 | 14 | 3 | 6 | 30 | 3 | 0 | -3 | -10 | -9 | -44 | -13 | -10 |
| Expected Oil Prices | 54 | 50 | 31 | 12 | 48 | 29 | 34 | 15 | 32 | 28 | -19 | 28 | 28 |
| Expected Natural Gas Prices | 24 | 28 | 3 | 21 | 20 | -33 | 3 | 10 | 23 | -6 | 16 | 38 | 34 |
| Expected Natural Gas Liquids Prices | 38 | 30 | 7 | 27 | 32 | -3 | 18 | -7 | 13 | 10 | -8 | 45 | 31 |
| *Special Price Questions* | | | | | | | | | | | | | |
| (averages) | | | | | | | | | | | | | |
| Profitable WTI Oil Price (per barrel) | $51 | | $52 | | $55 | | $52 | | $55 | | $47 | | $49 |
| WTI Price to Substantially Increase Drilling | | $62 | | $69 | | $63 | | $66 | | $65 | | $51 | |
| WTI Price Expected in 6 Months | $52 | $58 | $63 | $67 | $71 | $54 | $60 | $57 | $58 | $60 | $33 | $41 | $43 |
| WTI Price Expected in 1 Year | $55 | $60 | $64 | $70 | $72 | $59 | $61 | $60 | $60 | $62 | $42 | $47 | $47 |
| WTI Price Expected in 2 Years | $58 | $62 | $66 | $73 | $73 | $61 | $65 | $63 | $63 | $65 | $50 | $53 | $53 |
| WTI Price Expected in 5 Years | $65 | $70 | $72 | $78 | $79 | $66 | $72 | $70 | $69 | $71 | $58 | $60 | $60 |
| Profitable Natural Gas Price (per million BTU) | $3.05 | | $2.92 | | $3.23 | | $3.02 | | $2.91 | | $2.65 | | $3.12 |
| Natural Gas Price to Substantially Increase Drilling | | $3.59 | | $3.60 | | $3.48 | | $3.40 | | $3.66 | | $2.88 | |
| Henry Hub Price Expected in 6 Months | $3.01 | $2.88 | $2.70 | $2.85 | $2.89 | $3.06 | $2.85 | $2.52 | $2.59 | $2.38 | $2.02 | $2.17 | $2.62 |
| Henry Hub Price Expected in 1 Year | $3.11 | $3.10 | $2.83 | $2.90 | $2.92 | $3.12 | $2.91 | $2.59 | $2.58 | $2.49 | $2.34 | $2.41 | $2.71 |
| Henry Hub Price Expected in 2 Years | $3.30 | $3.30 | $2.98 | $3.05 | $3.10 | $3.23 | $3.05 | $2.79 | $2.81 | $2.69 | $2.57 | $2.64 | $2.87 |
| Henry Hub Price Expected in 5 Years | $3.73 | $3.65 | $3.33 | $3.34 | $3.42 | $3.54 | $3.18 | $3.16 | $3.20 | $3.09 | $2.94 | $3.02 | $3.28 |

**Chart 2. Special Question - What price is currently needed for drilling to be profitable 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?**

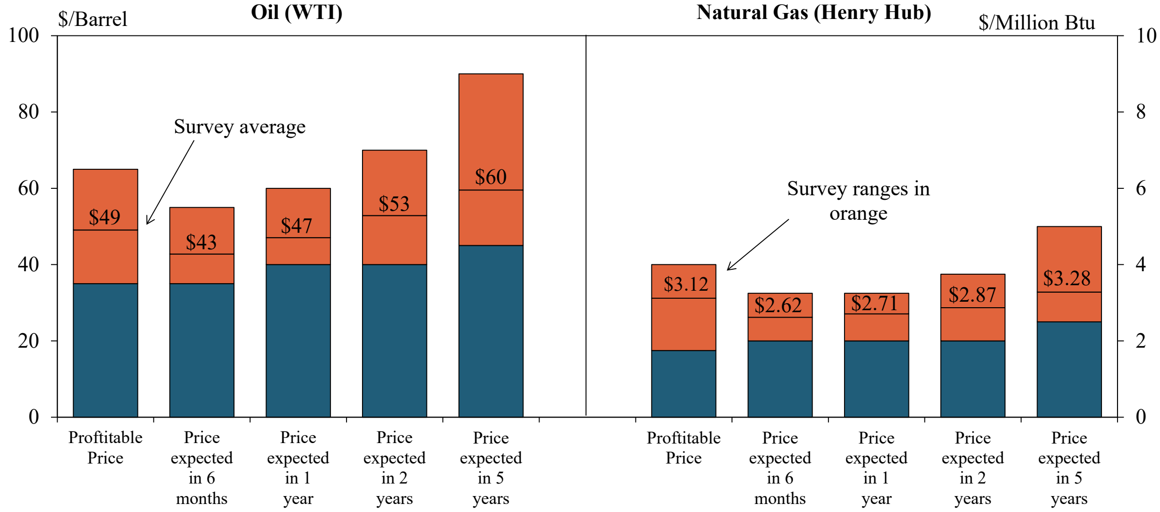


**Chart 3. Special Question - When does your firm expect global oil demand to return to pre-COVID levels?**

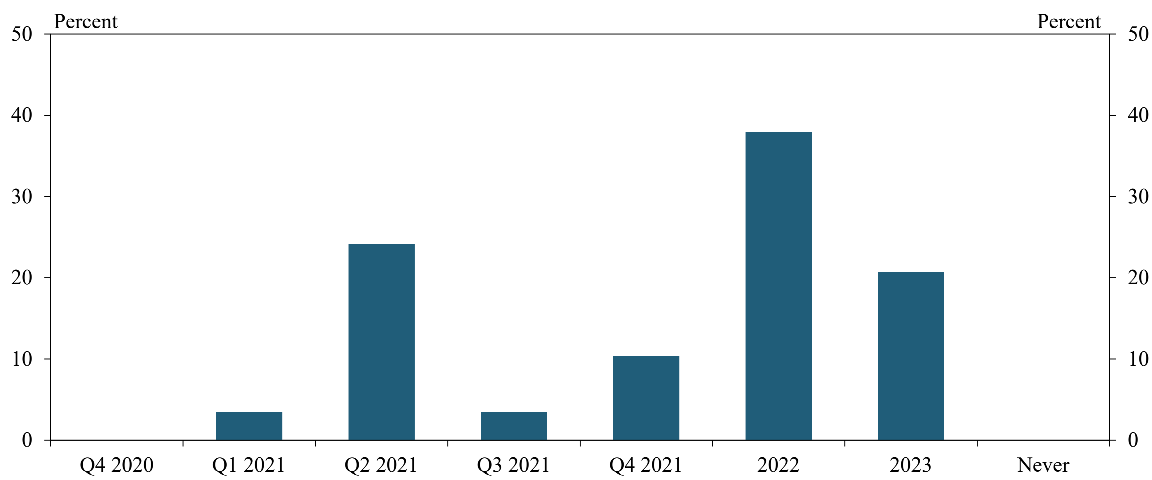


**Chart 4. Special Question - Which of the following is your firm's primary goal over the next six months?**