



Tenth District Energy Activity Fell at a Steady Pace

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Fourth quarter energy survey results revealed that Tenth District energy activity fell at a steady pace while expectations rose. Firms reported that oil prices needed to be on average \$62 per barrel for drilling to be profitable, and \$84 per barrel for a substantial increase in drilling to occur. Natural gas prices needed to be \$3.69 per million Btu for drilling to be profitable on average, and \$4.66 per million Btu for drilling to increase substantially.

Summary of Quarterly Indicators

Tenth District energy activity declined further in the fourth quarter of 2024, as indicated by firms contacted between December 16th, 2024, and January 2nd, 2025 (Tables 1 & 2). The quarter-over-quarter drilling and business activity index was -13 in Q4, unchanged from the previous quarter (Chart 1). Employment and employee hours continued to increase even as revenues and profits declined further, falling to -16 and -23, respectively.

Drilling activity also remained down from this time last year, with the year-over-year drilling and business activity index at -16. Annual revenues decreased substantially at a reading of -39. However, employment and capital expenditures grew moderately, each posting readings of 13.

Firms anticipate a rebound in activity in the next six months, with the drilling expectations index rising from -3 in Q3 to 13 in Q4. However, revenues and profits are still expected to decline further in the coming months.

Summary of Special Questions

Firms were asked what oil and natural gas prices were needed on average for drilling to be profitable across the fields in which they are active. The average oil price needed was \$62 per barrel (Chart 2), while the average natural gas price needed was \$3.69 per million Btu (Chart 3). Firms were also asked what prices were needed for a substantial increase in drilling to occur across the fields in which they are active. The average oil price needed was \$84 per barrel (Chart 2), and the average natural gas price needed was \$4.66 per million Btu (Chart 3).

Firms reported what they expected oil and natural gas prices to be in six months, one year, two years, and five years. The average expected WTI prices were \$70, \$71, \$75, and \$81 per barrel, respectively. The average expected Henry Hub natural gas prices were \$3.09, \$3.36, \$3.67, and \$3.98 per million Btu, respectively.

Firms were asked about their plans for employment and capital expenditures in 2025 vs. 2024 (Chart 4). Most firms plan to keep employment levels mostly unchanged (43%) or increase them slightly (40%). Another 10% of firms plan to increase employment significantly, and only 7% plan to decrease employment slightly. Plans for capital expenditures were more mixed. Many firms plan to increase capital expenditures slightly (43%), while 17% plan to increase them significantly, 13% remain unchanged, 17%, decrease slightly, and 10% decrease significantly.

Contacts were also asked about other future plans (Chart 5). 52% of firms plan to reduce methane emissions, 35% plan to reduce flaring, 32% plan to recycle/reuse water, 26% plan to reduce CO2 emissions, and 10% plan to invest in renewables, while 32% have none of the above planned.

Chart 2. Special Question: What price is currently needed for a drilling to be profitable and for a substantial increase in drilling to occur for oil? What do you expect WTI prices to be in six months, one year, two years, and five years?

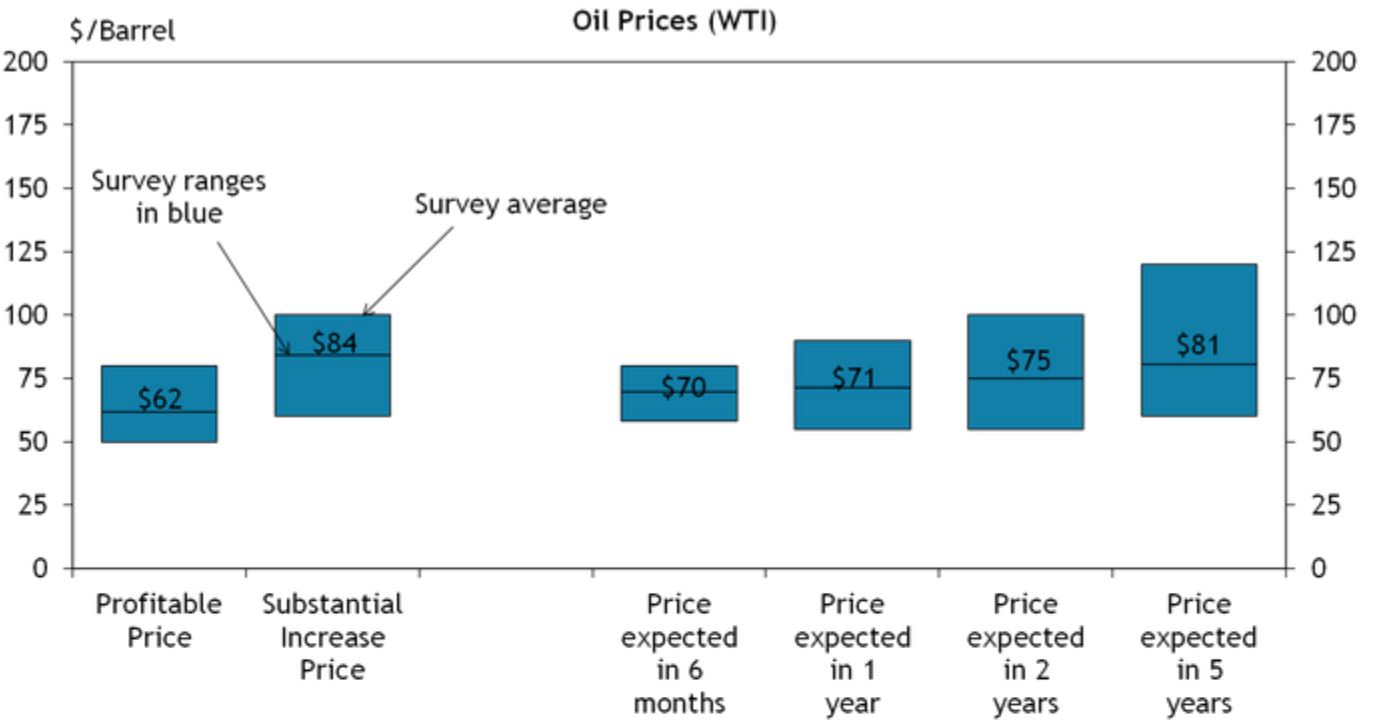


Chart 3. Special Question: What price is currently needed for a drilling to be profitable and for a substantial increase in drilling to occur for natural gas? What do you expect Henry Hub prices to be in six months, one year, two years, and five years?

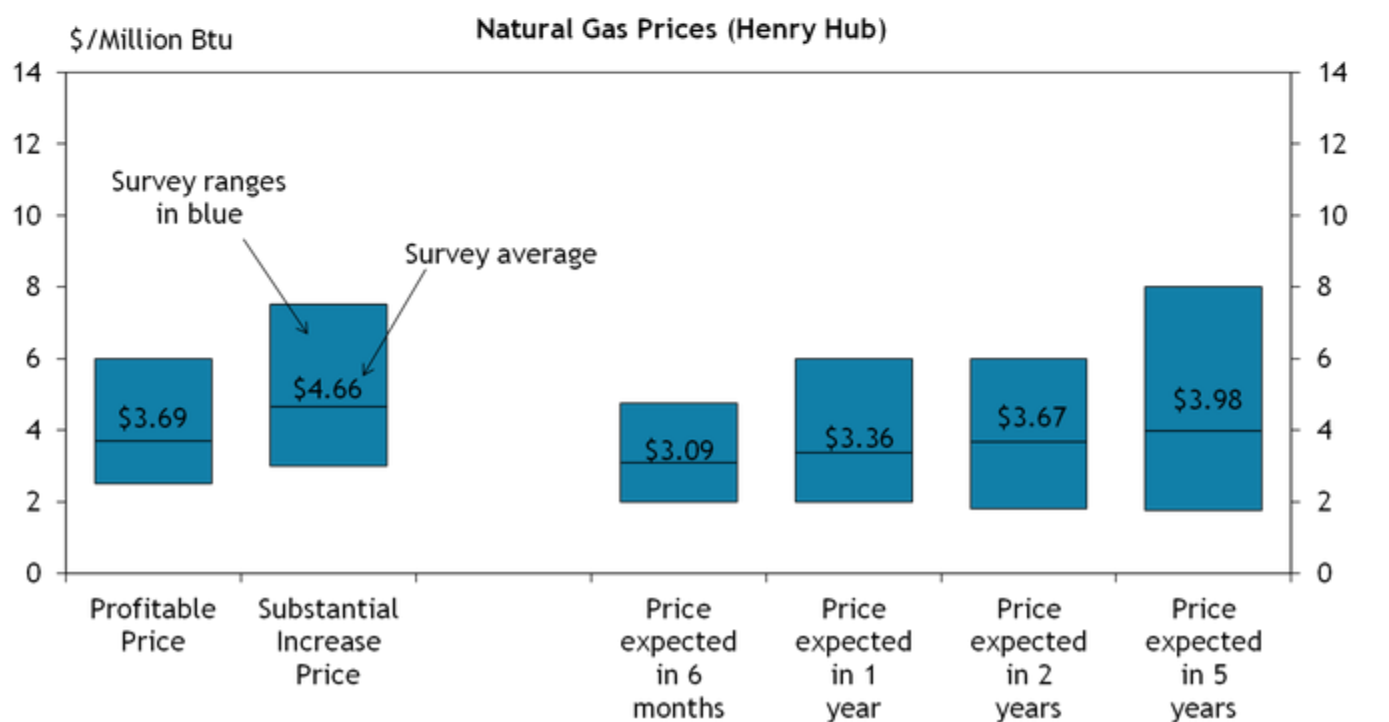


Table 1
Summary of Tenth District Energy Conditions, Quarter 4, 2024

| | Quarter 4 vs. Quarter 3 (percent)* | | | | Quarter 4 vs. Year Ago (percent)* | | | | Expected in Six Months (percent)* | | | |
|-------------------------------------|---------------------------------------|--------|----------|--------------------|--------------------------------------|--------|----------|--------------------|--------------------------------------|--------|----------|--------------------|
| | No | | Diff | | No | | Diff | | No | | Diff | |
| Energy Company Indicators | Increase | Change | Decrease | Index [^] | Increase | Change | Decrease | Index [^] | Increase | Change | Decrease | Index [^] |
| Drilling/Business Activity | 13 | 61 | 26 | -13 | 16 | 52 | 32 | -16 | 32 | 48 | 19 | 13 |
| Total Revenues | 29 | 26 | 45 | -16 | 19 | 23 | 58 | -39 | 29 | 39 | 32 | -3 |
| Capital Expenditures | | | | | 39 | 35 | 26 | 13 | 32 | 39 | 29 | 3 |
| Supplier Delivery Time | 3 | 84 | 13 | -10 | 6 | 71 | 23 | -16 | 10 | 81 | 10 | 0 |
| Total Profits | 19 | 39 | 42 | -23 | 29 | 23 | 48 | -19 | 29 | 32 | 39 | -10 |
| Number of Employees | 32 | 55 | 13 | 19 | 32 | 48 | 19 | 13 | 29 | 61 | 10 | 19 |
| Employee Hours | 26 | 61 | 13 | 13 | 23 | 65 | 13 | 10 | 19 | 71 | 10 | 10 |
| Wages and Benefits | 45 | 48 | 6 | 39 | 77 | 13 | 10 | 68 | 55 | 35 | 10 | 45 |
| Access to Credit | 6 | 90 | 3 | 3 | 19 | 71 | 10 | 10 | 19 | 77 | 3 | 16 |
| Expected Oil Prices | | | | | | | | | 6 | 55 | 39 | -32 |
| Expected Natural Gas Prices | | | | | | | | | 48 | 41 | 10 | 38 |
| Expected Natural Gas Liquids Prices | | | | | | | | | 20 | 73 | 7 | 13 |

*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 fourth quarter survey ran from December 16, 2024 to January 2, 2025 and included 31 responses from firms in Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and western Missouri.

Table 2
Historical Energy Survey Indexes

| | Q4'21 | Q1'22 | Q2'22 | Q3'22 | Q4'22 | Q1'23 | Q2'23 | Q3'23 | Q4'23 | Q1'24 | Q2'24 | Q3'24 | Q4'24 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <i>Versus a Quarter Ago</i> (not seasonally adjusted) | | | | | | | | | | | | | |
| Drilling/Business Activity | 32 | 29 | 57 | 44 | 6 | -13 | -19 | -13 | -33 | -13 | -14 | -13 | -13 |
| Total Revenues | 63 | 38 | 87 | 25 | -8 | -42 | -42 | 13 | -13 | 0 | -10 | -13 | -16 |
| 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 | 6 | -9 | 10 | -3 | -11 | -3 | -21 | -10 | -3 | -16 | -13 | -3 | -10 |
| Total Profits | 34 | 44 | 68 | 29 | -17 | -26 | -39 | -3 | -19 | -6 | -13 | -6 | -23 |
| Number of Employees | 34 | 39 | 42 | 47 | 38 | 6 | 27 | 13 | 13 | 18 | 3 | 19 | 19 |
| Employee Hours | 28 | 41 | 39 | 37 | 41 | 6 | 18 | 6 | 0 | 3 | 13 | -3 | 13 |
| Wages and Benefits | 53 | 56 | 58 | 61 | 59 | 42 | 27 | 35 | 32 | 48 | 27 | 19 | 39 |
| Access to Credit | 10 | 25 | 16 | 6 | 6 | 0 | 3 | -3 | -6 | -3 | 13 | 6 | 3 |
| <i>Versus a Year Ago</i> | | | | | | | | | | | | | |
| Drilling/Business Activity | 74 | 52 | 77 | 78 | 56 | 17 | -16 | -23 | -33 | -26 | -25 | -29 | -16 |
| Total Revenues | 88 | 72 | 90 | 87 | 67 | -10 | -48 | -23 | -17 | -6 | -21 | -42 | -39 |
| Capital Expenditures | 59 | 63 | 71 | 71 | 65 | 26 | 0 | 6 | 6 | -21 | -20 | -9 | 13 |
| Supplier Delivery Time | 9 | -3 | 23 | 6 | -5 | 10 | -45 | -6 | -23 | -39 | -28 | -13 | -16 |
| Total Profits | 84 | 75 | 81 | 84 | 61 | 3 | -48 | -26 | -17 | -13 | -10 | -26 | -19 |
| Number of Employees | 32 | 66 | 55 | 61 | 56 | 26 | 39 | 23 | 43 | 34 | 24 | 26 | 13 |
| Employee Hours | 29 | 63 | 55 | 50 | 57 | 26 | 21 | 3 | 20 | 13 | 14 | -10 | 10 |
| Wages and Benefits | 77 | 84 | 77 | 87 | 89 | 77 | 58 | 77 | 73 | 69 | 72 | 71 | 68 |
| Access to Credit | 23 | 38 | 19 | 27 | 3 | 6 | 6 | -3 | 0 | 3 | 14 | 6 | 10 |
| <i>Expected in Six Months</i> (not seasonally adjusted) | | | | | | | | | | | | | |
| Drilling/Business Activity | 45 | 42 | 50 | 25 | 19 | -13 | -22 | 7 | 7 | -10 | 21 | -3 | 13 |
| Total Revenues | 50 | 53 | 55 | 27 | 11 | -26 | 3 | 42 | 23 | 13 | 28 | -3 | -3 |
| Capital Expenditures | 53 | 63 | 52 | 52 | 49 | -6 | -9 | 16 | 7 | -19 | 14 | 13 | 3 |
| Supplier Delivery Time | 9 | 9 | 16 | -10 | -19 | -23 | -42 | 0 | -13 | -13 | -4 | -6 | 0 |
| Total Profits | 44 | 38 | 35 | 39 | 6 | -23 | -3 | 23 | 3 | 3 | 24 | 29 | -10 |
| Number of Employees | 42 | 47 | 42 | 42 | 38 | 13 | 12 | 19 | 40 | 25 | 28 | 35 | 19 |
| Employee Hours | 23 | 41 | 32 | 27 | 30 | 13 | 3 | 3 | 27 | 13 | 14 | 10 | 10 |
| Wages and Benefits | 71 | 72 | 63 | 65 | 70 | 45 | 24 | 52 | 55 | 31 | 34 | 45 | 45 |
| Access to Credit | 6 | 19 | 6 | 7 | 3 | -6 | 3 | -3 | -3 | 10 | 0 | 10 | 16 |
| Expected Oil Prices | 34 | -16 | -6 | 20 | 62 | 29 | 42 | 32 | 32 | 31 | 14 | 16 | -32 |
| Expected Natural Gas Prices | 3 | 0 | 10 | -10 | -3 | 14 | 53 | 50 | -16 | 45 | 86 | 56 | 38 |
| Expected Natural Gas Liquids Prices | 13 | 19 | 0 | 21 | 22 | 20 | 31 | 37 | -7 | 16 | 41 | 45 | 13 |
| <i>Special Price Questions</i> (averages) | | | | | | | | | | | | | |
| Profitable WTI Oil Price (per barrel) | | \$62 | \$65 | \$61 | \$64 | \$64 | \$63 | \$64 | \$64 | \$65 | \$64 | \$65 | \$62 |
| WTI Price to Substantially Increase Drilling | \$73 | \$86 | \$98 | \$102 | \$89 | \$86 | \$86 | \$90 | \$84 | \$90 | \$91 | \$89 | \$84 |
| WTI Price Expected in 6 Months | \$75 | \$96 | \$109 | \$88 | \$83 | \$75 | \$75 | \$91 | \$76 | \$81 | \$79 | \$73 | \$70 |
| WTI Price Expected in 1 Year | \$78 | \$89 | \$102 | \$89 | \$86 | \$81 | \$79 | \$88 | \$79 | \$83 | \$80 | \$77 | \$71 |
| WTI Price Expected in 2 Years | \$78 | \$83 | \$88 | \$90 | \$88 | \$86 | \$83 | \$88 | \$84 | \$85 | \$83 | \$80 | \$75 |
| WTI Price Expected in 5 Years | \$80 | \$84 | \$86 | \$93 | \$88 | \$90 | \$88 | \$93 | \$88 | \$90 | \$88 | \$86 | \$81 |
| Profitable Natural Gas Price (per million BTU) | | \$3.72 | \$4.64 | \$4.42 | \$4.32 | \$3.45 | \$3.49 | \$3.45 | \$3.12 | \$3.47 | \$3.47 | \$3.43 | \$3.69 |
| Natural Gas Price to Substantially Increase Drilling | \$4.27 | \$4.53 | \$6.34 | \$7.65 | \$6.13 | \$4.74 | \$4.67 | \$4.36 | \$4.04 | \$4.38 | \$4.68 | \$4.24 | \$4.66 |
| Henry Hub Price Expected in 6 Months | \$3.66 | \$4.45 | \$7.06 | \$7.46 | \$5.01 | \$2.82 | \$3.00 | \$3.06 | \$2.55 | \$2.16 | \$3.00 | \$2.73 | \$3.09 |
| Henry Hub Price Expected in 1 Year | \$3.92 | \$4.32 | \$6.65 | \$6.48 | \$5.52 | \$3.33 | \$3.33 | \$3.34 | \$3.04 | \$2.71 | \$3.10 | \$3.05 | \$3.36 |
| Henry Hub Price Expected in 2 Years | \$3.97 | \$4.29 | \$6.06 | \$6.16 | \$5.78 | \$4.04 | \$3.71 | \$3.97 | \$3.42 | \$3.01 | \$3.45 | \$3.33 | \$3.67 |
| Henry Hub Price Expected in 5 Years | \$4.29 | \$4.74 | \$5.77 | \$6.51 | \$6.19 | \$4.51 | \$3.98 | \$4.83 | \$3.96 | \$3.58 | \$3.86 | \$3.68 | \$3.98 |

Selected Energy Comments

“At this point, the high cost of capital along with inflation are our only significant concerns.”

“Commodity pricing and inflation will control activity. Activity levels are not hypersensitive to either but changing trends will impede or accelerate activity.”

Tenth District Energy Activity Fell at a Steady Pace

<https://www.kansascityfed.org/surveys/energy-survey/tenth-district-energy-activity-fell-at-a-steady-pace/>

“Long term, companies will not make the money they need at sub \$70 oil and therefore capex will fall off, leading to lower domestic and international production then to slightly increasing prices.”

“At sub \$3.25 Henry Hub, companies are not profitable enough to continue development.”

“Build-out of LNG is also supporting price recovery.”

“We can deliver as much gas as country needs at \$3.50 prices. LNG ramp up raises U.S. price and drops worldwide price.”

“Disassociated gas in west Texas trades for less than \$1.00/mcf.”

“Strong rig response from any price lift.”

“We are currently reusing produced water for frac water. We are increasing our methane monitoring.”

“Wind project is underway on some of our land holdings.”

Additional Resources

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Authors



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