



Energy Survey

Tenth District Energy Activity Increased Steadily

by:

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Second quarter energy survey results revealed that Tenth District energy activity continued to increase steadily, with revenues and profits increasing at a faster pace. Activity continued to outpace the previous year, and expectations remained at solid levels. Firms reported that oil prices needed to be on average \$72 per barrel for a substantial increase in drilling to occur, while natural gas prices needed to be \$3.82 per Btu.

Summary of Quarterly Indicators

Tenth District energy activity continued to increase steadily in the second quarter of 2021 and also outpaced year ago levels, as indicated by firms contacted between June 14th and June 30st, 2021 (Tables 1 & 2). The drilling and business activity index remained mostly unchanged at 33 (Chart 1). Total revenues and profits indexes posted their highest levels since the survey began in 2014. In addition, employment, employee hours, access to credit, and wages and benefits indexes increased from the previous quarter.

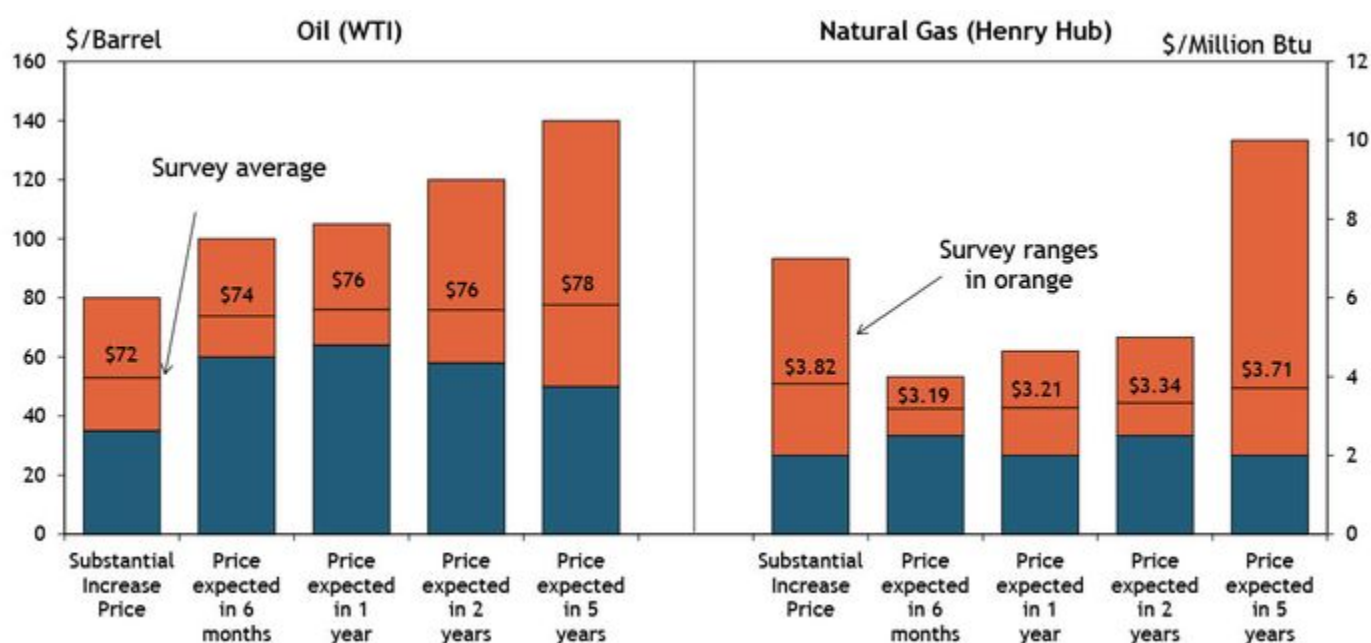
Year-over-year indexes continued to increase from the previous survey. The year-over-year drilling and business activity index moved from 10 to 59. Nearly all other indexes were also higher than the previous reading, with the exception of supplier delivery time, which decreased from 7 to 3.

Most expectations indexes continued to increase in Q2 2021. The future drilling and business activity index, at 41, was up from 40 in Q1 and 26 in Q4 2020, indicating slightly more firms expected energy activity to expand. The revenues and profits indexes rose substantially, and expectations for employment, supplier delivery time, and access to credit also expanded. Price expectations for oil, natural gas, and natural gas liquids expanded at a moderately faster pace.

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 across the fields in which they are active (in alternate quarters they are asked what prices are needed for drilling to be profitable). The average oil price needed was \$72 per barrel, with a range of \$35 to \$80 (Chart 2). This average was considerably higher than prices needed to substantially increase drilling the past few years. The average natural gas price needed was \$3.82 per million Btu, with responses ranging from \$2.00 to \$7.00.

Chart 2. Special Question - What price is currently needed to substantially increase drilling 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?



Firms were again asked what they expected oil and natural gas prices to be in six months, one year, two years, and five years.

Overall, expected oil and natural gas prices were higher than previous price expectations in 2020. The average expected WTI prices were \$74, \$76, \$76, and \$78 per barrel, respectively. The average expected Henry Hub natural gas prices were \$3.19, \$3.21, \$3.34, and \$3.71 per million Btu, respectively.

Firms were also asked about growth constraints (Chart 3). Around 36% of firms indicated uncertainty about the future of oil and gas prices, with 13% of firms reporting issues finding workers, supply chain disruptions, and lack of access to capital as reasons for limited growth.

Additionally, firms were asked about investment in labor saving technology (Chart 4). Approximately 10% of firms reported investments at a faster pace than in the past, with 32% indicating similar investments as in previous years. Around 10% of businesses said they were investing at a slower pace than before, and 48% had not planned any investment in labor saving technology.

Table 1
Summary of Tenth District Energy Conditions, Quarter 2, 2021

	Quarter 2 vs. Quarter 1 (percent)*				Quarter 2 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	37	60	3	33	72	16	13	59	44	53	3	41
Total Revenues	82	18	0	82	91	6	3	88	82	12	6	76
Capital Expenditures					39	52	9	30	42	48	9	33
Supplier Delivery Time	18	61	21	-3	33	36	30	3	39	39	21	18
Total Profits	73	24	3	70	91	9	0	91	79	21	0	79
Number of Employees	25	75	0	25	33	45	21	12	33	64	3	30
Employee Hours	42	58	0	42	42	45	12	30	33	61	6	27
Wages and Benefits	39	61	0	39	52	42	6	45	39	58	3	36
Access to Credit	18	73	9	9	36	52	12	24	21	70	9	12
Expected Oil Prices									64	27	9	55
Expected Natural Gas Prices									63	34	3	59
Expected Natural Gas Liquids Prices									66	31	3	63

*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 second quarter survey ran from June 15 to June 30, 2021 and included 33 responses from firms in Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and western Missouri.

Table 2
Historical Energy Survey Indexes

	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q4'19	Q1'20	Q2'20	Q3'20	Q4'20	Q1'21	Q2'21
<i>Versus a Quarter Ago</i> (not seasonally adjusted)													
Drilling/Business Activity	26	45	-13	0	7	-23	-48	-81	-61	4	40	34	33
Total Revenues	53	50	6	13	-14	-10	6	-73	-78	-7	31	45	82
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	16	7	0	3	7	-7	-6	-24	-13	-21	0	5	-3
Total Profits	53	37	-18	6	-18	-23	-21	-81	-88	-24	14	33	70
Number of Employees	29	23	9	3	0	-10	0	-54	-56	-39	-14	12	25
Employee Hours	24	23	6	6	0	0	-12	-54	-55	-38	3	16	42
Wages and Benefits	39	33	30	28	15	10	9	-24	-38	-17	9	21	39
Access to Credit	15	10	-19	-10	-7	-6	-21	-32	-31	-28	-6	5	9
<i>Versus a Year Ago</i>													
Drilling/Business Activity	41	57	17	17	-11	-21	-50	-92	-70	-71	-60	10	59
Total Revenues	56	61	50	23	-22	-7	-19	-81	-74	-79	-77	17	88
Capital Expenditures	58	62	27	3	4	-10	-13	-68	-69	-66	-57	14	30
Supplier Delivery Time	16	10	3	3	7	-21	-13	-22	-26	-10	-9	7	3
Total Profits	50	47	42	6	-24	-13	-30	-83	-84	-83	-69	2	91
Number of Employees	36	27	27	24	4	-13	-18	-62	-61	-59	-60	-16	12
Employee Hours	34	31	19	16	3	-17	-18	-62	-53	-62	-46	-7	30
Wages and Benefits	69	67	55	47	43	33	3	-30	-16	-24	-32	0	45
Access to Credit	15	25	9	3	-7	0	-16	-44	-35	-28	-46	-14	24
<i>Expected in Six Months</i> (not seasonally adjusted)													
Drilling/Business Activity	61	50	-19	17	-26	-21	-16	-78	0	0	26	40	41
Total Revenues	50	56	-23	47	-4	4	13	-78	-16	-7	51	52	76
Capital Expenditures	48	43	-13	19	-4	-17	-13	-73	-35	-14	9	35	33
Supplier Delivery Time	17	-4	9	14	14	-14	-23	-32	-19	3	-3	12	18
Total Profits	48	59	-27	35	-7	-10	0	-81	-10	-3	51	38	79
Number of Employees	33	21	15	14	0	-3	-16	-68	-26	-38	-9	23	30
Employee Hours	31	17	3	13	-4	-10	-18	-59	-33	-31	-3	35	27
Wages and Benefits	39	34	42	28	15	17	-6	-49	-19	-28	12	37	36
Access to Credit	6	30	3	0	-3	-10	-9	-44	-13	-10	6	7	12
Expected Oil Prices	12	48	29	34	15	32	28	-19	28	28	51	23	55
Expected Natural Gas Prices	21	20	-33	3	10	23	-6	16	38	34	37	30	59
Expected Natural Gas Liquids Prices	27	32	-3	18	-7	13	10	-8	45	31	40	35	63
<i>Special Price Questions</i> (averages)													
Profitable WTI Oil Price (per barrel)		\$55		\$52		\$55		\$47		\$49		\$53	
WTI Price to Substantially Increase Drilling	\$69		\$63		\$66		\$65		\$51		\$56		\$72
WTI Price Expected in 6 Months	\$67	\$71	\$54	\$60	\$57	\$58	\$60	\$33	\$41	\$43	\$48	\$62	\$74
WTI Price Expected in 1 Year	\$70	\$72	\$59	\$61	\$60	\$60	\$62	\$42	\$47	\$47	\$52	\$65	\$76
WTI Price Expected in 2 Years	\$73	\$73	\$61	\$65	\$63	\$63	\$65	\$50	\$53	\$53	\$56	\$67	\$76
WTI Price Expected in 5 Years	\$78	\$79	\$66	\$72	\$70	\$69	\$71	\$58	\$60	\$60	\$61	\$70	\$78
Profitable Natural Gas Price (per million BTU)		\$3.23		\$3.02		\$2.91		\$2.65		\$3.12		\$2.94	
Natural Gas Price to Substantially Increase Drilling	\$3.60		\$3.48		\$3.40		\$3.66		\$2.88		\$3.28		\$3.82
Henry Hub Price Expected in 6 Months	\$2.85	\$2.89	\$3.06	\$2.85	\$2.52	\$2.59	\$2.38	\$2.02	\$2.17	\$2.62	\$2.68	\$2.72	\$3.19
Henry Hub Price Expected in 1 Year	\$2.90	\$2.92	\$3.12	\$2.91	\$2.59	\$2.58	\$2.49	\$2.34	\$2.41	\$2.71	\$2.88	\$2.94	\$3.21
Henry Hub Price Expected in 2 Years	\$3.05	\$3.10	\$3.23	\$3.05	\$2.79	\$2.81	\$2.69	\$2.57	\$2.64	\$2.87	\$3.03	\$3.14	\$3.34
Henry Hub Price Expected in 5 Years	\$3.34	\$3.42	\$3.54	\$3.18	\$3.16	\$3.20	\$3.09	\$2.94	\$3.02	\$3.28	\$3.23	\$3.50	\$3.71

Selected Energy Comments

“Demand growth should be sharper in the near-term than low long-term. Supply can keep up in the near term but may not keep up longer term.”

“Companies will respond to higher prices and subsequently prices will go down as more production comes online.”

“Capital constraints in the hydrocarbon production space will begin to have a negative effect on supply of crude and natural gas.”

“There will be a medium-term supply crunch, with improving demand. Slow reaction by producers to grow meaningfully. The long-term marginal supply will be like in the mid 50's.”

“It is possible we could see \$100/bbl in 6 months if travel on the road and in the air picks up globally. But those prices could also impact demand.”

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