

New Tech Benefiting Oilfield; More Offshore Wind Farms on Tap

Companies: BKR, DO, HP, LBRT, NBR, NE, NETI, NOV, PKDC, PSI.TO, PTEN, PUMP, RIG, ROC

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Research Question:

What new products, technologies, or services are seeing a change in demand in the oilfield or green-energy space?

Highlights

- The use of new and improved technologies has increased in the oilfield, helping improve drilling efficiencies. Key technologies include better downhole motors and better drill bits, as provided by Baker Hughes Co. (BKR), and improved downhole assemblies, as provided by Parker Drilling Co. (PKDC).
- Other improved drilling technologies mentioned by sources include Pason Systems Inc.'s (PSI.TO) drilling data intelligence and downhole rental tools from ROC Energy Acquisition Corp.'s (ROC) Drilling Tools International.
- E&P capex expectations for 2023 decreased slightly on lower natural gas prices.
- Patterson-UTI Energy Inc. (PTEN) gained a slight edge in land drilling over competitors Helmerich & Payne Inc. (HP) and Nabors Industries Ltd. (NBR) on repositioning of rig fleets.
- Liberty Energy Inc. (LBRT) remains the key pressure-pumping/fracking company, followed by ProPetro Holding Corp. (PUMP).
- Key early beneficiaries of the market for offshore wind farms include Eneti Inc. (NETI), NOV Inc. (NOV), and Transocean Ltd. (RIG).
- The offshore drilling market is poised to grow, benefiting Diamond Offshore Drilling Inc. (DO), Noble Corp. PLC (NE), and Transocean.

New Technologies Abound, Helping Drive Efficiencies in the Oilfield (BKR, DTI, PKDC, PSI.TO)

Sources said several new or improved technologies have emerged in the oilfield to help improve efficiency in the drilling and completion phases, causing sales of these technologies to increase on higher demand. "In simple terms, these efficiencies help shorten the time it takes to drill and complete a well, which helps bottom-line economics," a repeat E&P manager source said. The industry specialist said the major technologies improving efficiency include better downhole motors, better drill bits and more reliable bottomhole assemblies. When coupled with digitalization in directional steering, these make it possible to develop a better, longer wellbore while keeping the wellbore within the pay zone. "While there is nothing spectacularly new in terms of technology, the industry continues to demonstrate continued improvement," the source said. Some of the technologies or companies mentioned by E&P sources include Baker-Hughes' rotary steerable motors and PDC (polycrystalline diamond compact) drill bits; Pason Systems' drilling data intelligence; bottomhole assemblies provided by Parker Wellbore; and tools used in horizontal and directional drilling from Drilling Tools International, a rental-focused tool service provider.

Concerning some of the companies providing these technologies, sources said:

- "We find Pason Systems' drilling data intelligence quite productive."
- "Bottomhole assemblies manufactured by Parker Wellbore are superior."
- "PDC bits are much more efficient and can drill much faster. We use Baker-Hughes'."
- "Drilling Tools International has been a successful consolidator in the downhole tool business."

E&P Capex Expectations Lowered to Mid- to High Single Digits on Declining Natural Gas Prices

Capital expenditures in the U.S. oilfield are expected to increase in the mid- to high single digits year over year, down from earlier expectations of up 10% to 15%. Sources confirmed that the recent decline in natural gas prices is affecting E&P decisions at the field level, as first identified in Blueshift's [April 6 report](#). An industry specialist said no widespread downfall in the industry or rig count had occurred, because many rigs drilling in natural gas basins have been transferred to oily regions, such as the Permian Basin. Furthermore, a source working for a major land drilling contractor who attended a recent Houston networking event said, "We have transferred some rigs from the Haynesville gas region to the Permian to drill for oil, and the increase in drilling geothermal wells has taken up some of the slack."

Commenting on the low price of natural gas, the industry specialist expects prices to deteriorate further during the second half of the year, from a current average of \$2.91 per mcf to \$2.75. At that point, there could be an acceleration in switching from

coal-fired power generation to natural gas generation for economic and emission control reasons. “Longer term, natural gas prices will be under pressure until additional LNG [liquefied natural gas] export capacity comes online in 2025,” he said. “Oil prices are likely to remain range-bound between the mid-\$60s on the low end to the low \$80s on the high end.”

Large Drilling Contractors Continue to Benefit from Work in the Oilfield (HP, NBR, PTEN)

Large drilling contractors such as Helmerich & Payne, Nabors Industries, and Patterson-UTI Energy continue to benefit from drilling wells mainly in oily basins on long-term contracts at rig rates in the low to mid-\$30,000 range, similar to findings in Blueshift’s April report, though pricing may be topping out because of the near-term softening in natural gas drilling. In a change from the April report, the industry specialist said it now appears that Patterson-UTI Energy has a slight edge over Helmerich & Payne and Nabors Industries because it has successfully transitioned some of its gas-directed activity to oil-directed activity. “When it comes to rig class, Helmerich & Payne is down 13 high-end units; followed by Nabors, which is down 12,” he said. “But Patterson added four.”

Liberty Energy Remains in the Pole Position in Pressure Pumping (LBRT, PUMP)

Liberty Energy remains the key pressure-pumping/fracking company in the view of sources, similar to findings in Blueshift’s April report. Liberty continues to push efforts to generate fuel cost savings in fracking technology through a transition to more stimulation fleets powered by natural gas. This push includes the introduction of hybrid pump technology that uses built-in generators and battery systems to further electrify the completion process at the wellsite. “Frac markets remain tight in North America with little downward pricing pressure,” a source said. The industry specialist said ProPetro continues to incrementally transition its fleet to more environmentally friendly operations, which includes using natural gas engines and electric fleets to stimulate wells.

NOV and Transocean Step Up in Wind Farms (NETI, NOV, RIG)

Key rig manufacturer NOV and offshore driller Transocean were named as companies likely to benefit from more offshore wind-farm installations, two sources said in early May at the Offshore Technology Conference in Houston. Both sources expect the two companies to increase in visibility in the offshore wind markets in the near term. “NOV has already secured jackup rig orders that hold wind turbine generators for electricity production,” an equipment supplier said. Another source mentioned that Transocean would likely form a joint venture with Eneti in an effort to transport and install offshore wind foundations.

Areas to Watch:

Offshore Drilling Companies Poised for More Work (DO, NE, RIG)

While it is still early in the cycle for more offshore bids to come forth, three sources at the Offshore Technology Conference said they were paying close attention to more work possibilities in the U.S. Gulf of Mexico, Middle East, UK North Sea, and Brazil, which could benefit offshore drillers Diamond Offshore Drilling, Noble, and Transocean.

Background

Blueshift Research interviewed a U.S.-based industry specialist who is an expert on U.S. energy industry activities, seven repeat E&P field representatives, and seven sources attending May networking events in Houston, including the Offshore Technology Conference and an event sponsored by the American Association of Drilling Engineers.

Next Step

In its next Energy Trends, Blueshift Research will interview a U.S.-based industry specialist and field representatives to check on companies benefiting from any changes in E&P or green-energy capital spending for the remainder of 2023, preferred providers for products and services of E&P and green markets, and any new green or drilling efficiency technologies.

Report Coverage Areas and Companies

Blueshift Research has been reporting on the following oil patch areas since Jan. 27, 2015, including coverage of the following public companies:

- Well Stimulation (HAL, LBRT, NEX, SLB)
- Well Services (RNGR)

Energy Trends

- Onshore Drilling (HP, NBR, PDS, PTEN)
- Geophysical Services (DWSN)

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