

New Technologies Enhancing Field Work; ESG Protocols in Place

Companies: ABB, BKR, NBR, NJDCY, VLTA, XPRO

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Research Question:

Are there any new green power or oilfield technologies being tested that will enhance productivity in the field?

Highlights

- Demand is growing for geothermal drilling, autonomous operations, and certain auxiliary equipment to help electrically powered operations, according to attendees at a November drilling event in Houston discussing new technologies being tested or tried at the field level in fossil fuel and green-power applications.
- Baker-Hughes Co. (BKR) was said to have a new noteworthy geothermal drilling technology.
- Volta Inc. (VLTA) was mentioned as a key manufacturer of electric charging stations for field operations.
- ABB Ltd. (ABB) was mentioned as a solid producer of lightning protection systems.
- Kato Engineering Inc. (NJDCY) is a leading generator manufacturer for super-spec electrically powered drilling rigs.
- Meanwhile, conferees at an ESG event generally agreed that most oilfield and green-power companies now have sufficient ESG protocols in place for compliance reasons.

Editor's Note:

Blueshift Research had the opportunity to visit industry representatives at two events held in Houston in November. One of the events, sponsored by the American Association of Drilling Engineers (AADE), provided a venue for one-on-one discussions with representatives showcasing or exhibiting technologies aimed at the fossil fuel and green-energy markets. The second event, the Energy ESG Conference, provided a forum where speakers discussed key compliance issues surrounding ESG initiatives.

American Association of Drilling Engineers Event Recap

Key Technologies to Watch (ABB, BKR, NBR, NJDCY, VLTA, XPRO)

New technologies to either help move toward more green power or lessen the effects of emissions from fossil fuels are undergoing growth.

- **Growth in Geothermal Drilling (BKR)**
Several attendees remarked that new revenue opportunities are becoming available in the drilling of geothermal wells. A few remarked that the investment community seemed to be interested in funding new companies slated to harness the power of geothermal wells.
 - "There is a lot of startup [companies] in the geothermal market in areas of the U.S. that historically have not been in oil and gas plays. – Equipment vendor
 - "Baker Hughes seems to be leading the pack in a next level of geothermal drilling technology. They are doing some very innovative things." – Attendee
- **Growth in Autonomous Oil and Gas Operations (NBR, XPRO)**
Exhibitors and attendees alike generally acknowledged that autonomous technologies use less personnel in well operations, provide a safer environment to work, and can lessen the use of diesel engines. However, a few raised questions concerning the cost-effectiveness of autonomous operations.
 - "Nabors' [Industries Ltd./NBR] robotic drilling rig is interesting, but E&P companies are still looking for the best bang for the buck to drill a well. That Nabors rig goes for about \$30,000 a day, but super-spec traditional rigs go for about \$20,000 a day." – Key driller
 - "There are more and more technologies utilizing less people and more remote and intelligent solutions these days. Now we are seeing it in the well service market." – Sales engineer, wellsite maintenance company
 - "While we recognize that robotic operations are safer for people, and we can save labor costs in the long run, we have to remember that there are training costs, maintenance costs, testing costs, and initial capital investments to make all this run smoothly." – Business development manager, well completions company

- **Growth in Electrically Powered Operations Spurring Growth in Auxiliary Equipment (ABB, NJDCY, VLTA)**

Three attendees mentioned that the use of electricity to power operations both in drilling and well completion/fracing activity is increasing demand for auxiliary equipment. Sources mentioned three equipment types that are garnering more attention at the field level—including electric charging stations, such as those manufactured by Volta. In addition, the use of generators in AC-powered drilling rig applications—such as those manufactured by Kato, a division of Nidec Corp.—were growing as more super-spec rigs return to work. Finally, lightning protection systems, such as those produced by ABB, were becoming more important in and around drilling, fracing, and oil and gas storage operations.

 - “Our e-frac [electrically powered] fracing units are being placed in areas now where there is no grid power, so we are relying more on electric charging stations in the field to charge our units.” – Operations engineer
 - “Lightning protection systems in the field are very important both in electrically powered drilling or fracing operations to protect equipment from getting hit by lightning that would halt operations. Also, these systems really help in places like the Permian Basin, where there are a lot of tanks holding raw crude awaiting transport. You do not want these tanks to catch on fire from a lightning strike.”

Energy ESG Conference Recap

- **Compliance with ESG regulations is a must in today's fossil fuel and green-power markets.**

Attendees agreed that ESG compliance is being undertaken in nearly all facets of company operations, and full compliance at most publicly traded major E&P and drilling companies is near at hand. Attendees said investors, lenders, and C-suite officers must be satisfied that ESG protocols are being strictly followed and enforced in co-operations, with several conferees agreeing that full compliance is intact. One speaker mentioned that the SEC formed an enforcement task force to oversee compliance and that ESG protocols must be addressed in certain 10-K reports.

 - “ESG is manageable. We have educated E&P clients through all the steps necessary for compliance from December 2019 to now. One client, when signing with us to establish ESG protocols for compliance, asked us, ‘What is it?’ ” – ESG consultant
 - “Major E&P companies now are asking drilling companies to put their ESG protocols in their bids.” – Operations manager, E&P company
 - “Charitable giving is now becoming a focus in certain ESG plans.” – Compliance officer, midsize E&P company

Areas to Watch: Labor Topic Voiced at Both Events

The topic of both white- and blue-collar labor was discussed at both events—the same as it was in [Blueshift's August 23 Oil Patch report](#). In white-collar ranks, especially in ESG circles, an abundance of would-be professional candidates seem ready to be hired to fill newly created positions overseeing compliance. However, in blue-collar drilling ranks, at least two sources voiced concern that companies were trying to replace older workers with younger ones. “You would think they would rehire someone quickly like me with 40-plus years of rig experience, but they seem to want young folks these days. It took me awhile to get hired,” said a sales engineer with a well service company.

Background

Blueshift Research had the opportunity to visit numerous industry representatives at the American Association of Drilling Engineers (AADE) event and the Energy ESG event in November in Houston.

Next Step

In its next Energy Trends, Blueshift Research will interview a U.S.-based industry specialist and field representatives to check on 2022 capital plans, new technology, and field activity.

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)

Energy Trends

- Well services (BAS, RNGR)
- Onshore drilling (HP, NBR, PTEN)
- Fracking materials (CRR, FTK, HCLP, SLCA)

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