Electric Fracs Reduce Emissions, Costs During Completions

To further reduce the company's environmental footprint and help meet our climate-related goals, Chesapeake partnered with Halliburton and VoltaGrid LLC to pilot electric fracturing technology. The results from the first deployment in the Marcellus Shale were impressive — the system cut Chesapeake's on-site emissions by 32% and leveraged Chesapeake's local field gas network for 25 megawatts of power generation.

Chesapeake first used the electric fracturing system in August 2021 as part of a multi-year contract with Halliburton and VoltaGrid. The technology combines Halliburton's all-electric fracturing spread — including a 5,000-horsepower electric pumping unit known as Zeus™ — with VoltaGrid's advanced power generation system.

This electric power replaces the diesel fuel traditionally used during hydraulic fracturing, reducing both emissions and fuel costs. Aspects of the electric technology design also make the completions process more efficient. For example, the Zeus pumping unit delivers 40% higher performance than conventional pumps.

"By safely reducing our emissions profile without impacting the reliability and performance of our operations, this partnership has exceeded our expectations and further demonstrates our commitment to leading a responsible energy future as we continue on our path towards achieving net zero direct emissions," said Patrick Finney, Chesapeake Vice President – Completions.

Using VoltaGrid's emissions portal, Chesapeake can track and analyze real-time emissions and carbon intensity throughout the completions operation. Chesapeake is the first operator to use the VoltaGrid system on an electric fracturing operation or "e-frac."

Chesapeake continues to use "e-fracs" throughout the Marcellus with plans to expand usage to other operating areas in 2022.