U.S. Department of Energy announces selection of GE Vernova's Advanced Research for H2-LOCATE project as part of H2SENSE exploratory topic to enable the growth of hydrogen production

- Deployment of detection systems would facilitate hydrogen production and transportation
- Hydrogen is increasingly seen as a renewable energy source and decarbonization agent for industry and transportation
- Accurate and cost-effective measurements of hydrogen gas are essential for detecting and mitigating emissions, maximizing both the climate and economic benefits of hydrogen production and utilization

NISKAYUNA, New York. (November 18, 2024) – GE Vernova's Advanced Research business has been selected by The U.S. Department of Energy (DOE) Advanced Research Projects Agency-Energy (ARPA-E) to receive an award as part of their new H2SENSE Exploratory Topic, aimed at supporting innovative approaches for hydrogen gas detection and quantification across the hydrogen supply chain. The growth of the hydrogen economy is anticipated to play a crucial role in global decarbonization efforts, necessitating advanced atmospheric hydrogen sensing technologies to mitigate any potential near-term warming effects that could result from a larger hydrogen economy.

Hydrogen is a low carbon energy source and decarbonization agent for industry and transportation. Hydrogen, though not a direct greenhouse gas due to its inability to absorb infrared light, can indirectly extend the lifetime of greenhouse gases such as methane and ozone.

“The ability to detect and quantify hydrogen will enable the safe and economical expansion of the hydrogen economy while mitigating its climate impact,” said **ARPA-E Director Dr. Evelyn Wang**. “These highly sensitive and selective hydrogen sensors combined with quantitative modeling will enable industry to achieve these goals.”

“GE Vernova Advanced Research will deploy a high-fidelity and cost-effective gas sensing technology based on dielectric excitation of sensing materials and will couple it with physics enhanced analytics to detect and identify hydrogen leaks at industrial sites,” says **Radislav A. Potyrailo, Senior Principal Scientist with GE Vernova's Advanced Research** and the **Principal Investigator on the H2-LOCATE project**. “This technology will differentiate and rank multiple leaks with a spatial resolution of 10 meters with a detection sensitivity of 5-10 parts per billion of hydrogen in air. The cost-effective and simple deployment of these hydrogen leak monitors will support the evaluation of hydrogen sites across diverse geographic locations and climate conditions, ensuring safe, environmentally sound, and economically viable growth of the hydrogen industry.”

This $2,700,000 project, titled "H2-LOCATE: H2 Leak LOCAlization and QuanTification Using Physics-Enhanced Analytics and Fence-Line Monitoring," is being conducted at GE Vernova's Advanced Research Center in Niskayuna, NY.

The initiative underscores GE Vernova's commitment to advancing sustainable technologies and providing critical solutions to support the expanding hydrogen economy.

Access complete project descriptions for each of the projects selected for H2SENSE here.

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About GE Vernova
GE Vernova Inc. (NYSE: GEV) is a purpose-built global energy company that includes Power, Wind, and Electrification segments and is supported by its accelerator businesses. Building on over 130 years of experience tackling the

world’s challenges, GE Vernova is uniquely positioned to help lead the energy transition by continuing to electrify the world while simultaneously working to decarbonize it. GE Vernova helps customers power economies and deliver electricity that is vital to health, safety, security, and improved quality of life. GE Vernova is headquartered in Cambridge, Massachusetts, U.S., with approximately 75,000 employees across 100+ countries around the world. Supported by the Company’s purpose, The Energy to Change the World, GE Vernova technology helps deliver a more affordable, reliable, sustainable, and secure energy future. Learn more: GE Vernova and LinkedIn.

GE Vernova’s Advanced Research business is an innovation powerhouse, operating at the intersection of science and creativity to turn cutting edge research into impactful realities. Advanced Research collaborates with GE Vernova’s businesses across a broad range of technical disciplines to accelerate the energy transition.

Forward Looking Statements

This press release contains forward-looking statements – that is, statements related to future events that by their nature address matters that are, to different degrees, uncertain. These forward-looking statements often address GE Vernova’s expected future business and financial performance and financial condition, and the expected performance of its products, the impact of its services and the results they may generate or produce, and often contain words such as “expect,” “anticipate,” “intend,” “plan,” “believe,” “seek,” “see,” “will,” “would,” “estimate,” “forecast,” “target,” “preliminary,” or “range.” Forward-looking statements by their nature address matters that are, to different degrees, uncertain, such as statements about planned and potential transactions, investments or projects and their expected results and the impacts of macroeconomic and market conditions and volatility on the Company’s business operations, financial results and financial position and on the global supply chain and world economy.

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