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Tetramer to Lead \$5MM Program Advancing Clean Hydrogen under US DOE Funding

Pendleton, SC — March 14, 2024 — Tetramer Technologies, LLC has been selected by the Department of Energy's Hydrogen and Fuel Cell Technologies Office through the Bipartisan Infrastructure Law (BIL) Funding Opportunity Announcement (No. DE-FOA-0002922) for the funding of a \$5 Million program aimed at reducing the cost of clean hydrogen generation. In collaboration with industry leaders Arkema, Nel Hydrogen, and the Georgia Institute of Technology, Tetramer seeks to advance its proprietary, high-performance membrane within an optimized electrolyzer system over the course of the three-year program.

Tetramer Membrane Technology

Proton exchange membranes (PEMs) are critical components in electrolyzers that are used to produce low-carbon, clean hydrogen fuel from water. Current commercial PEMs are not only expensive but also suffer from performance constraints and environmental drawbacks due to the use of materials with perfluorosulfonic acid (PFSA), a known environmental hazard. In this program, Tetramer's non-PFSA membranes will be further optimized for performance and durability while reducing costs through manufacturing improvements. The collaborative program focuses on the research and development, manufacturing, and demonstration of the Tetramer membranes through incorporation in commercial electrolyzers systems to help propel the nation toward a carbon-neutral future.

Economic and Community Benefits

This landmark program not only positions South Carolina as a significant player in the knowledge economy but also generates substantial economic benefits. The initiative promises job creation and synergies with the growing SC Hydrogen Economy, furthering the region's sustainable energy goals. As part of the Community Benefits Plan (CBP) portion of the program, Tetramer will establish a partnership with HBCUs for future collaboration and recruitment, develop outreach programs for local career centers, and host students through the Clemson Emerging Scholars and Georgia Tech Project ENGAGES programs. The team will also work with SC technical colleges to help define career training for future hydrogen-related jobs.

Anticipated Impact

The success of this program will further advance the development of a clean energy, carbonneutral economy by reducing the environmental and human health concerns associated with current commercial material, improving the supply chain that supports the hydrogen economy, and reducing hydrogen production costs toward the DOE target \$1/Kg by 2030.

Quotes



Dr. Jeff DiMaio, Tetramer CEO: "This program represents a significant step forward in demonstrating the performance and manufacturing of Tetramer's PFSA-free ionomer membranes in commercial electrolyzer systems. Success in this effort will further support the growth of the hydrogen economy with a stable supply chain of commercially-available ionomer membranes which have a reduced environmental impact and improved performance, ultimately leading to lower cost hydrogen."

"Aligning with our mission to drive innovation and collaboration within the clean energy sector, Tetramer has been able to join efforts with an impressive team from industry and academia that can advance the state of the art and allow all of us to support and accelerate the US transition to a hydrogen economy."

U.S. Senator Lindsey Graham (R-SC): "Congratulations to Tetramer Technologies on being selected for a Department of Energy grant that was authorized by the Infrastructure Investment and Jobs Act. South Carolina's workforce, university system, and entrepreneurial spirit have proven time and again that we are well-positioned to lead advancements in hydrogen technology."

Other References:

DOE Announcement 3/13/2024: <u>https://www.energy.gov/articles/biden-harris-administration-announces-750-million-support-americas-growing-hydrogen</u>

List of selected projects: <u>https://www.energy.gov/eere/fuelcells/bipartisan-infrastructure-law-clean-hydrogen-electrolysis-manufacturing-and-0</u>

Tetramer "Membranes" page with other programs detailed: https://tetramer.com/programs/productsindevelopment/

About Tetramer Technologies

Tetramer Technologies, based in Pendleton, SC, is an advanced materials company dedicated to developing market-driven materials and transitioning them from the lab to the market. With a multidisciplinary team of scientists and engineers, Tetramer specializes in materials design, synthesis, analytical characterization, and scale-up, driving innovation from molecule to manufacturing. <u>tetramer.com</u>



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