

FOR IMMEDIATE RELEASE

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Tetramer Developing Environmentally Friendly Lubricants for use in Hydropower

\$1.15MM from the Department of Energy Water Power Technologies Office (WPTO)

(Pendleton, SC) Tetramer continues the development and commercialization of a new type of environmentally acceptable lubricant (EAL) designed for use in hydropower turbines under Phase IIB funding.

Lubricants are critical to the operation of turbines and other equipment in hydropower facilities. Currently, hydropower operators must rely on traditional petroleum-based lubricants that pose an environmental threat if released into the water. The DOE WPTO funded Tetramer to develop biodegradable, biobased and nontoxic lubricants expressly for use in the environmentally sensitive areas around hydropower facilities.



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Science

Through Phase I and Phase II of this work, Tetramer scientists developed the new lubricant, scaled to commercial production quantities, tested performance both internally and through third party testing, and achieved labeling certifying its biobased content, biodegradability, and non-toxicity. Initial rig testing was carried out by GE Renewable Energy's GE Hydro Solutions Global Center for Excellence in Switzerland which verified the exceptional lubricating performance of the oil under harsh conditions.

During this current Phase IIB program, additional viscosity grades are being developed and work will continue in a field trial to be carried out at the Porjus Hydroelectric Power Station in Sweden. The Porjus facility is Europe's preeminent hydropower research and development facility operated by Porjus Hydropower Centre Foundation, a joint collaboration between Andritz, GE Renewable Energy, and Vattenfall. Installations in US facilities are also forthcoming.

Hydropower offers clean power generation, but traditional petroleum-based lubricants pose an environmental risk. The development and subsequent adoption of an environmentally acceptable hydropower lubricant such as VBASE Hydro T-EL™ can make this clean energy producer even cleaner.

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Tetramer is an advanced materials company dedicated to the development of market-driven materials and transitioning those materials from the lab to the market or battlefield. With extensive R&D and manufacturing capabilities, Tetramer serves as both a research partner and a supplier of proprietary custom materials. We also provide analytical services to support manufacturers in solving their materials-related challenges. Our team includes scientists and engineers with backgrounds in organic, physical, polymer, and analytical chemistry, ceramic engineering, materials science, and chemical engineering.



A wholly owned subsidiary of Tetramer, VBASE[®] Oil Company produces high performance, proprietary synthetic ester base oils and lubricants that minimize impact on the environment. [VBASE[®] Hydro T-EL[™]](#) is a high-performance environmentally friendly hydropower turbine oil meeting EPA standards for Environmentally Acceptable Lubricants (EALs) according to the 2018 Vessel Incidental Discharge Act (VIDA). Hydro T-EL is formulated with a biobased, readily biodegradable, non-toxic, and non-bioaccumulating VBASE[®] base oil that has achieved USDA Biopreferred status, certified NSF HX-1, and on the EU Ecolabel LuSC-list. (vbaseoil.com)



