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PNNL-SA-162451

Evaluate Synergies of Using Hydrothermal Liquification (HTL) and Anerobic Digestion (AD) Treatment Technologies for Wastewater Resource Recovery Facilities (WRRFs)

CRADA 516 (PNNL 73608)

June 2021

Daniel B Anderson

U.S. DEPARTMENT OF ENERGY

Prepared for the U.S. Department of Energy
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Abstract

PNNL has developed Hydrothermal Liquefaction (HTL) technology, which can directly convert sewage sludge to a biocrude oil that can be refined into renewable diesel fuel and provide a significant reduction in the volume of biosolids produced as ash with far less potential environmental impacts associated with disposal. HTL also produces an aqueous byproduct stream that requires treatment before it can be returned to the headworks of the Wastewater Resource Recovery Facilities (WRRF). The goal of this project is to evaluate synergies of using HTL and advanced AD to enable the treatment and recycle of HTL aqueous phase. This CRADA will; 1) formalize and strengthen the working relationship between PNNL and GLWA, 2) jointly evaluate HTL and AD scenarios for WRRFs and 3) help enable the implementation of HTL/AD technology at GLWA and other WRRFs.

Pacific Northwest National Laboratory

902 Battelle Boulevard
P.O. Box 999
Richland, WA 99354
1-888-375-PNNL (7665)

www.pnnl.gov