



FuelCell Energy

World Leader in Ultra-Clean Power

Thrust Area: Logistic Fuels R&D

Summary

The Logistic Fuels thrust area R&D aims to further develop ability to process logistic fuels such as JP-5, JP-8, and diesel fuel for use with DFC® power plants, and to develop other fuel cell power plants capable of operating on these high sulfur fuels. This development is mainly driven by Department of Defense (DoD) interest in high efficiency; clean fuel cell power plants that can operate on logistic fuels available world wide in various applications. Once developed, these power plants will also be available to provide clean power for civilian and commercial applications in remote locations, islands, environmentally sensitive areas, embassies and locations where other fuels are not available. Development of commercial DFC as well as SOFC and PEM power plants that operate on liquid fuels such as diesel or jet fuel is part of the broad objective of this thrust area

Following development efforts with DF-2 and JP-8 for the Army and DARPA, development of the Ship Service Fuel Cell for shipboard applications funded by the Navy culminated in a 500 kW demonstrator that was designed, built and tested at FCE before delivery to NAVSEA in Philadelphia for further operational testing. This power plant is the world's first carbonate fuel cell power plant that operates on high sulfur JP-5 logistic fuel and internally recovers water for fuel processing. Later this year, FCE will commence development of second-generation naval fuel cell technology aimed at reduction of size and weight of marine fuel cell power plants for shipboard use

Additional effort will in this thrust area will be focused on alternate technology options that can meet the size and weight requirements for various military mobile electric power (MEP) generator applications. This will include logistic fuel processing systems that operate with SOFC or PEM fuel cells in power plants output typically in the 3 to 100 kilowatt range. Commercial versions of these logistic fuel power plants are expected to evolve as a spin off from the DoD initiatives.