



Solutions for a changing planet

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## News Release from InnovaTek, Inc.

### InnovaTek Funded for Airport Fuel Cell Electric Vehicle

**Richland, WA, May 10, 2011** – Innovative technology to reduce the cost and environmental impact of air travel is getting support from the federal government. The Department of Energy has selected InnovaTek to receive a Phase I award under its Small Business Innovation Research Program for development of a Fuel Cell Range Extender for battery-powered airport ground support equipment. The \$150,000 Phase I award is to establish feasibility of the technology to meet the needs of airlines and ground handling companies to reduce emissions and fuel costs.

InnovaTek will collaborate with EnerFuel, a fuel cell developer, and JBT AeroTech, a ground service equipment (GSE) manufacturer, to develop a modular electric power system for an airport cargo loader that has an extended range of at least 10 hours operation. While their performance is similar to that of battery-powered equipment, GSE with InnovaTek's fuel cell range-extender will remain fully charged at all times by recharging the battery through an electro-chemical process that uses renewable bio-fuel. The Port of Benton will assist in the project by supporting demonstration of the technology at a local airport.

The project's objective is to develop a fuel cell power system that converts Bio-Jet fuel to electricity for on-board recharging of an electric vehicle's battery. "The technology will facilitate the replacement of fossil fuels with renewable fuels for airport ground service equipment thereby improving environmental conditions at airports and their locals as well as improving energy security and sustainability for airport operations", said Dr. Patricia Irving, InnovaTek's CEO and the Principal Investigator on the project. InnovaTek researchers have developed several generations of advanced chemical processing technologies including catalysts, microchannel reactors, heat exchangers, fuel injectors, and control systems, and this experience was utilized to develop the approach and core technology that converts renewable Bio-Jet fuel to hydrogen for a fuel cell.

Air quality is a major concern at airports, particularly in the ramp areas where a significant amount of baggage and cargo handling takes place. Emissions such as carbon monoxide, nitrogen oxides hydrocarbons, and particulates from combustion-powered vehicles can significantly reduce air quality in these environments and threaten the health and safety of employees working there. In addition, the expense of fuel and emission treatment systems represents a substantial percentage of airline and ground support costs and significantly impacts the price of air travel.

“Airlines and ground handling companies are facing ever increasing pressure to reduce the level of emissions and fuel consumption from their operations because of the environmental impacts and costs” said Nick Heemskerk, Global Product Development Manager at JBT AeroTech - GSE. “We are excited about the potential of an efficient battery electric power system for JBT’s equipment that has an extended range through integration with InnovaTek and EnerFuel’s technologies to meet these needs.”

The U.S. Department of Energy is interested in demonstrating alternative- fuel cell technologies that also feature the potential for radical improvements in fuel cell-powered GSE performance, durability, cost, fueling infrastructure, and/or manufacturing efficiencies. If the technology is proven to be feasible in Phase I InnovaTek and its team will be eligible for Phase II and Phase III grants to develop, demonstrate, and commercialize the product.

“When the development process is complete this technology will have applications throughout the transportation industry, particularly in battery-powered vehicles that are used over extended periods of time before they can be recharged,” explained Daniel Betts, Director of Business Affairs at EnerFuel.

A transition to efficient, renewable energy systems will contribute to U.S. economic growth by reducing our dependence on oil from volatile regions, by reducing our foreign trade balance, and by reducing the magnitude of oil price swings while at the same time increasing domestic economic activity.

### **About InnovaTek, Inc.**

InnovaTek, Inc. provides engineering solutions and creates products for sustainable power. The Company is a leader in fuel processing technology and advanced catalysts for hydrogen production from petroleum and renewable fuels. InnovaTek’s vision is to use advanced non-combustion catalytic technologies to move the world away from wasteful fossil fuel combustion and toward clean, efficient electrical energy generation from renewable, sustainable biofuels, providing a path for a better quality of life for future generations. The Company is developing integrated fuel cell products for electric vehicles, auxiliary power systems and distributed energy applications. Learn more about InnovaTek at [www.innovatek.com](http://www.innovatek.com)

### **About EnerFuel**

EnerFuel is a wholly owned subsidiary of Ener1, Inc., and is pioneering fully integrated electrochemical hybrid power systems. The Company has been developing high temperature PEM fuel cell stack and system technology since 2006. Their hybrid technology can be used for extended range electric vehicles (EREV) or to provide back-up power and point-of-use energy storage for homes and businesses. EnerFuel’s goal is to drastically increase the overall efficiency of global energy generation and usage, leading to decreased risk of energy interruptions and price fluctuations with products that enhance environmental and community stewardship. Visit [www.ener1.com](http://www.ener1.com)

### **About JBT AeroTech**

JBT AeroTech is a leading supplier of customized solutions and services for high value applications in air transportation. The Company designs, manufactures and services technologically-sophisticated ground support equipment for the airline industry that offers the lowest total cost of ownership. The product offerings include air cargo loaders, deicers, conventional and tow-bar-less tractors, mobile passenger steps, transporters and RampSnake bulk loaders for commercial air passenger and freight carriers and ground handlers. JBT AeroTech is committed to providing environmentally-friendly products that conform to green initiatives and continues to develop electric powered solutions for the ramp. The Company has a long history of developing and manufacturing alternative fuel GSE with particular expertise in electric powered vehicles. For more information, visit [www.jbtaerotech.com](http://www.jbtaerotech.com)