



***Diversified Energy Notified that Centia™ Advanced Biorefinery Process Selected for Department of Energy Award***

- Centia™ advanced biorefinery process selected as part of Arizona State University Biodesign Institute led team, focused on demonstration of cyanobacteria lipids to transportation fuels
- One of 37 awardees from 3,681 applications for Department of Energy Advanced Research Projects Agency – Energy award
- Centia™ process can accept multiple renewable oil inputs, produces fuels similar to petroleum, and is not based on techniques requiring large volumes of hydrogen
- Represents third Centia™ research and development award in last 18 months

**November 4, 2009** – Gilbert, AZ – Diversified Energy Corporation, an alternative and renewable energy technology development company, announced today that its advanced biorefinery technology, termed Centia™, had been selected for award by the Department of Energy (DOE) Advanced Research Projects Agency – Energy (ARPA-E). One of 37 awardees from an initial pool of 3,681 applicants, Diversified Energy and North Carolina State University are part of a team led by Arizona State University’s Biodesign Institute – the lead organization for the project. The 24-month, \$5.2M project is focused on utilizing sunlight, water, and carbon dioxide to cultivate fatty acids from cyanobacteria, which are then processed by Centia™ to produce fuels similar to petroleum-derived gasoline, diesel, and jet fuel.

Diversified Energy will support the project in three key areas: 1) systems engineering and conceptual design/analyses of an end-to-end, commercial scale cyanobacteria-to-Centia™ architecture, 2) economic modeling, and 3) commercialization planning. North Carolina State University will process cyanobacteria lipids generated by ASU through the Centia™ process and will focus on preprocessing, catalyst optimization, and biojet fuel production in compliance with Jet A-1/JP-8 specifications. Jeff Hassannia, Vice President of Business Development for Diversified Energy, commented, “The award by ARPA-E and the chance to work with Arizona State University and their front-end cyanobacteria system once again highlights the potential for Centia™. We are excited to show how petroleum-equivalent biofuels can be produced economically using basic inputs such as sunlight, non-potable water, and CO2.”

Based on technology exclusively licensed to Diversified Energy from North Carolina State University, the Centia™ process can use virtually any triglyceride feedstock (virgin oils, waste greases, animal fats, algal oils, among others) to produce fuels similar to petroleum-derived gasoline, diesel, and jet fuel. The fuels produced will closely match the chemical, kinetic, and combustion characteristics of petroleum, therefore allowing the fuels to be stored, distributed,

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and used in vehicle engines without infrastructure modifications. In fact, expectations are that cetane number (for diesel), octane number (for gasoline), and cold flow characteristics will be superior to petroleum fuels. The process is not based on traditional hydrotreating approaches and therefore results in a very low carbon footprint, little net hydrogen use, and the ability to economically build and operate distributed fuels production plants placed in close proximity to the sources of feedstock and fuel usage. Diversified Energy recently applied for patent protection in 55 countries around the world. The technology is also being privately funded and since 2008 has received grants from the Biofuels Center of North Carolina and recently from the National Science Foundation.

**About Diversified Energy Corporation:**

Headquartered in Gilbert, Arizona, Diversified Energy Corporation ([www.diversified-energy.com](http://www.diversified-energy.com)) is a privately held alternative and renewable energy company focused on maturing innovative technologies, developing commercial energy projects, and providing engineering services support to project developers. Principal areas of expertise include gasification, biofuels, next-generation feedstocks, and bioenergy-related economic modeling and commercialization planning.

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