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***Advanced Gasification Process Selected for Department of Energy R&D Funding***

- ***Project Goal: Reduce and Stabilize Industrial Sector Energy Costs (~\$47 billion/year for natural gas)***
- ***HydroMax<sup>®</sup> Advanced Gasification System Selected by DOE from among 1,300 Applications***
- ***Diversified Energy teamed with CertainTeed Gypsum, one of North America's leading Gypsum Wallboard Manufacturers, to Demonstrate the Capability of HydroMax<sup>®</sup> to Offset Their Dependence on Natural Gas***
- ***HydroMax<sup>®</sup> is Capable of Gasifying a Broad Range of Hydrocarbon Inputs (Including Coal, Biomass, Waste Products, etc.) to Satisfy the Demands of Users in the 5 – 100 MWe Range – Affordably and Reliably***
- ***Award Provides Further Validation of HydroMax<sup>®</sup>'s Broad Industrial Appeal – Reduces Dependence on High and Volatile Natural Gas Prices, and Provides for Stable Energy Costs for the U.S. Industrial Market***

**July 10, 2007 – Gilbert, AZ** – HydroMax<sup>®</sup>, an advanced gasification technology being developed by Diversified Energy Corporation (DEC) and licensed from Alchemix Corporation, was selected by the Department of Energy (DOE) from a pool of 1,318 applicants for research and technology transfer funding. The Small Business Innovation Research (SBIR) Phase I program is designed to provide funding for high-quality R&D on advanced concepts that are likely to lead to significant public benefit if the research is successful. DEC was selected for award under the “coal gasification and combustion technologies” topic area. Upon completion of Phase I, DEC will be eligible to compete for a Phase II follow-on award.

DEC teamed with CertainTeed Gypsum, one of North America's leading gypsum wallboard manufacturers, and a subsidiary of Compagnie de Saint-Gobain, for the project with the goal of reducing and stabilizing natural gas costs. DEC will conduct tests, design activities, and commercialization planning focused on utilizing HydroMax<sup>®</sup> to gasify coal for the production of synthetic gas for industrial applications. The U.S. industrial sector is the largest gas user segment accounting for more than 6.6 trillion cubic feet (~\$47 billion) of natural gas in 2006, with erratic pricing anywhere from \$5 - \$15 per million Btu. The project will expand upon previous test results by validating system performance across a broader range of coal types (e.g., low rank coal) at a scale appropriate to substantiate growth to commercial volumes. DEC will concentrate on the end-to-end architecture and requisite interfaces, performance analyses, and economic modeling specifically geared to the needs of CertainTeed Gypsum. Operating over 23 North American wallboard and finishing plants, all with substantive natural gas usage for process applications, CertainTeed Gypsum provides an excellent model for the typical needs of an industrial user.

The HydroMax<sup>®</sup> technology is based on a molten-metals reactor approach. It offers several critical advantages for industrial customers such as CertainTeed Gypsum, including scaling to the 5 – 100 MWe output range, a compact size for simple integration, hydrocarbon input

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Changing the Balance of Power

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flexibility, high reliability, substantive reductions in capital and O&M costs compared to traditional gasifiers, and high efficiencies. Previous technology development includes multiple bench-scale tests along with extensive analyses and modeling. The DOE SBIR Phase I program allows for the next logical step in the evolution of the HydroMax<sup>®</sup> technology.

Phillip Brown, President and CEO of Diversified Energy, commented on the award, “With wildly fluctuating natural gas prices and the associated economic impacts, the industrial sector can realize substantial benefit from energy cost stabilization. However, current gasification technologies don’t scale economically or are limited to certain feedstock types. With DOE funding for HydroMax<sup>®</sup> we’re solving these problems to provide the industrial sector with a clean alternative.” John College, Special Projects Manager for CertainTeed Gypsum remarked, “We are excited to be working with Diversified Energy. We need gasification technologies that are smaller in size, have reasonable material handling capacities, and can produce clean energy at the desired cost with stability. HydroMax<sup>®</sup> appears to be a perfect fit.”

#### About Diversified Energy Corporation:

Headquartered in Gilbert, Arizona (a suburb of Phoenix), 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 biofuels, gasification, and next-generation solar.

#### About CertainTeed

Through innovation and creative product design, CertainTeed has helped shape the building products industry for more than 100 years. Founded in 1904 as General Roofing Company, the firm made its slogan "Quality Made Certain, Satisfaction Guaranteed," which quickly inspired the name CertainTeed. Today, CertainTeed is North America’s leading brand of exterior and interior building products, including roofing, siding, windows, fence, decking, railing, trim, foundations, pipe, insulation, walls, ceilings and access covers.

Headquartered in Valley Forge, Pennsylvania, CertainTeed and its affiliates have approximately 9,000 employees and 70 manufacturing facilities throughout the United States and Canada. In 2006 the group had consolidated sales approaching \$4 billion. [www.certainteed.com](http://www.certainteed.com)

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