

FOR IMMEDIATE RELEASE

POWER-GEN 2011 Booth #7527

***Concepts NREC Exhibiting at
POWER-GEN International 2011***

Company representatives will discuss several innovative and award-winning power generation turbomachinery engineering and design projects.

White River Junction, Vt. and Las Vegas – December 5, 2011 – [Concepts NREC \(CN\)](#), a world leader in turbomachinery-focused design and development, CAD/CAM software and manufacturing services, today announces that it will exhibit in Booth #7527 at the POWER-GEN International 2011 show, December 13 through 15, in Las Vegas, NV. CN representatives will present information about several of the company's turbomachinery engineering and design projects, including a U.S. Navy Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) project for onboard power generation and a geothermal pumps efficiency project that earned U.S. Department of Engineering (DOE) funding. Turbomachinery engineers, designers, and manufacturers will benefit from CN's expertise.

Another area of focus for CN during the show will be how the company is assisting manufacturers in meeting new pump requirements for European Conformity/Conformité Européenne (CE) approval. As pumps are part of power generation equipment, the CN team is prepared to discuss ways in which they can assist customers in meeting CE requirements by achieving higher efficiencies and power savings.

"CN is proud of the contributions we make in proving concept viability, which makes it possible for customers to secure funding or carry designs through to production," says Fred Becker, Director of Sales, Engineering Services, for Concepts NREC. "We have the expertise to assist customers in meeting and, most often, exceeding worldwide standards requirements."

In early 2011, CN was awarded a Phase I Small Business Innovative Research (SBIR) grant from the U.S. Navy to improve the power efficiency of its gas turbine prime movers used for ship propulsion. This project also won an honorable mention in *Pumps & Systems*' 2011 Product Innovation of the Year contest. The Navy's request for proposal (RFP) required that the power recovery system improve the power output of the prime mover by at least 20 percent. Considerations included the effects that transient power demand from the prime mover would have on the waste heat flow rate and temperature, which could consequently affect the fatigue integrity of the heat exchangers and stability of the turbomachinery subsystems. CN's winning proposal

suggested the use of a Brayton cycle-based, supercritical carbon dioxide (S-CO₂) system to recover waste heat from a Rolls-Royce MT-30 gas turbine, a prime mover used in marine applications.

More recently, CN assisted with a green energy project for GeoTek Energy, LLC (GeoTek) in improving its Gravity Head Energy System (GHES) design, for which GeoTek was chosen to receive \$450,000 for the initial design and up to \$2.4 million in additional funding for design validation and further development as part of the U.S. Department of Energy (DOE) Geothermal Technologies Program (GTP) to advance innovative geothermal technologies. CN's role was to work with GeoTek in the early stages to prove the GHES concept viability for technical and commercial success by providing engineering and mechanical design support.

CN's Navy SBIR and GeoTek projects were part of the company's overall TurboGreen™ offerings for improving turbomachinery efficiency and developing renewable energy technologies, which include projects like wind turbine compressors for more efficient wind energy conversion, centrifugal compressors for hydrogen fuel transportation, advanced water power technology developments for tidal and wave energy conversion, and organic rankine cycle pumps and turbines for recovering geothermal energy.

POWER-GEN International 2011 show attendees looking for turbomachinery engineering, design, and manufacturing services for power generation projects are welcome to come to CN Booth #7527 and speak with one of the company's representatives.

About Concepts NREC

Concepts NREC is a leading worldwide organization providing turbomachinery design, engineering, manufacturing and CAE/CAM software, with a staff of 100+ professionals at its facilities in Wilder, Vt., and Woburn, Mass. For over half a century, Concepts NREC has provided manufacturers, users, government agencies, and the engineering community with technology tools, services, and products that have met their needs, helped achieve their goals, and aided in development and production of some of the world's most advanced products. Concepts NREC is headquartered at 217 Billings Farm Road, White River Junction, VT, 05001-9486. Telephone: 802-296-2321. Facsimile: 802-296-2325. For more information, go to: www.ConceptsNREC.com.

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