Autodesk Software Aids Quest to Harness Energy from the Sea

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UK-Based IT Power Uses Digital Prototyping to Speed Development of Marine Energy Prototypes.

SAN RAFAEL, Calif., Apr 20, 2011 (BUSINESS WIRE) --

IT Power, an energy consultancy headquartered in the United Kingdom, is using 3D design software from Autodesk, Inc. (NASDAQ:ADSK) to develop innovative renewable energy devices for harnessing wave and tidal power.

IT Power is the lead company in an EU funded project to develop the innovative Pulse Tidal device. IT Power is providing engineering, design, management and project management services to the consortium.

The Pulse Tidal device uses oscillating horizontal hydrofoils in place of more traditional rotating blades to generate renewable energy. This pioneering approach offers many advantages over existing tidal stream technology by maximizing the area that can be swept -- and hence the power captured -- in a given depth of water. This makes the technology particularly suited to shallow tidal flows, while requiring smaller support structures and lower installation costs than many competing systems.

IT Power is also the lead engineer in the UK's Technology Strategy Board funded Offshore Wave Energy Limited (OWEL) Marine Demonstrator project. OWEL is developing an innovative wave energy device and the current project will produce and deploy a machine with a target output of 500-kilowatt at the wave hub facility in the UK.

The Autodesk Clean Tech Partner Program -- which provides software for emerging clean tech companies in North America and Europe -- enabled IT Power's Marine Group to use Digital Prototyping technology to accelerate design of the mechanical and structural elements of its energy capture systems.

Powerful Simulation with Autodesk Inventor

IT Power made extensive use of Autodesk Inventor software to simulate the Pulse Tidal device's transmission mechanism. Placing load data for the hydrofoils into a 3D model in Inventor and running a simulation enables the team to rapidly optimize the design of the mechanism and verify mathematical models of the system.

"Inventor has saved us time, effort and money," says Tim Twibell, senior marine engineer at IT Power. "In addition to running these kinds of calculations using complex mathematical models, we now have a compelling visual means of verifying accuracy, simply by running these simulations in Inventor."

Using Inventor has helped IT Power speed the development of a preproduction 1.2-megawatt prototype of the Pulse Tidal energy device. IT Power is also using Inventor to assist the mechanical and structural designs of the OWEL device.

"As the need for renewable energy grows, companies must continue to innovate and create the most efficient technologies," said Robert "Buzz" Kross, senior vice president, Autodesk Manufacturing Industry Group. "This is precisely what IT Power is doing by using Autodesk Inventor to test its designs quickly and cost-effectively. We're excited to help European clean tech companies like IT Power accelerate product design and development through the Autodesk Clean Tech Partner Program."

About the Clean Tech Partner Program

The Autodesk Clean Tech Partner Program supports early-stage clean technology companies by providing design and engineering software that accelerates their development of solutions to the world's most pressing environmental challenges. Clean tech companies in North America and Europe that can benefit from Autodesk solutions for Digital Prototyping are invited to apply to receive up to $150,000* worth of software for only $50. Access to a collection of industry-leading Autodesk software applications includes up to five licenses of AutoCAD Inventor Professional Suite, Autodesk Showcase, Autodesk Vault Professional, Autodesk Revit Architecture, Autodesk Alias Design, Autodesk Simulation and Autodesk Inventor Publisher software. For additional information, visit www.autodesk.com/cleantech.

About IT Power Ltd

IT Power is a leading international energy consultancy that specializes in sustainable energy technologies and policy, and related economic, financial, commercial and environmental work. For additional information, visit www.itpower.co.uk.

About Autodesk

Autodesk, Inc., is a leader in 3D design, engineering and entertainment software. Customers across the manufacturing, architecture, building, construction, and media and entertainment industries - including the last 15 Academy Award winners for Best Visual Effects - use Autodesk software to design, visualize, and simulate their ideas. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio of state-of-the-art software for global markets. For additional information about Autodesk, visit www.autodesk.com.

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SOURCE: Autodesk, Inc.

For Autodesk
Jennifer Ha, 415-547-2435
jennifer.ha@autodesk.com
Alyson Moses, 312-297-7430
alyson.moses@edelman.com