



Wind-Harnessing Clean Tech Company Aims To Solve Renewable Energy's Greatest Challenge Using Autodesk Software

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Digital Prototyping Software Key to Helping General Compression Effectively Communicate Its Green Vision and Mission to Investors and Customers

SAN RAFAEL, Calif., Apr 28, 2011 (BUSINESS WIRE) --

General Compression, a Massachusetts-based developer of clean energy solutions, is successfully using digital prototyping software from [Autodesk, Inc.](#) (NASDAQ:ADSK), to design an energy storage technology that enables wind generators to store and dispatch electricity to customers on demand.

Intermittency is a major challenge for wind power and remains a key hurdle to the widespread deployment of renewable energy on the grid. To address this issue, General Compression has developed technology specifically designed to deliver renewable resource-based electricity to customers when they want it and not just when the wind blows. The General Compression Advanced Energy Storage (GCAES) system takes intermittent electricity from conventional wind farms and stores that energy in the form of high-pressure air in underground geologic formations such as salt caverns. Electricity is created on demand when air is released from storage, powering the system in reverse and sending scheduled electricity back to the grid. This method of creating dispatchable wind power helps increase the value of wind, making wind energy a more viable, cost effective and friendly option to customers on the grid.

The Autodesk [Clean Tech Partner Program](#)-- which provides software to emerging clean tech companies in North America, Europe and Japan -- supplied General Compression with licenses of [Digital Prototyping](#) software to develop and market the GCAES. Autodesk Gold Partner M2 Technologies provided General Compression with comprehensive training.

Autodesk Digital Prototyping Software at Major Stages of Product Development

General Compression's engineers used [Autodesk Inventor](#) software to go from simple sketches to extremely complex assemblies -- all within one software program -- while developing a working prototype of the GCAES. Rapid iteration was possible through easily updated 3D models, enabling the company to stick to a tight development timeline.

Once the prototype was complete, General Compression used [Autodesk Maya](#) software to create near realistic 3D animations of how the machine would work and to more accurately explain the complex concept of "dispatchable wind power." By more effectively sharing its vision with investors, partners and funding agencies through visual storytelling, General Compression has secured more than \$38 million in investments and government grants to date. In addition to Maya and Inventor, the General Compression team uses [AutoCAD P&ID](#) software for piping and instrumentation diagrams, as well as [AutoCAD Plant 3D](#) software to determine placement for pipes and hydraulic lines around the GCAES machine.

"Having the ability to go from simple sketches to extremely complex assemblies and to easily update models all in one software program is just part of what makes Inventor so powerful," said Ian Lawson, vice president of development at General Compression. "In this business, you also need to make sure that people can quickly understand your technology, and Autodesk Maya has been a crucial tool for explaining how our compression and expansion process works during pitches and presentations."

General Compression has rallied significant support for its vision of dispatchable wind power and is scheduled to deploy a GCAES prototype in the field in late 2011 as part of a demonstration project with ConocoPhillips.

"As our requirements have grown from visual animations to 3D mechanical detailed designs to finite element analysis to computation fluid dynamics simulations, the advanced capabilities of Autodesk solutions for Digital Prototyping helped our design team to achieve the very high level of productivity that a start-up demands," said Eric Ingersoll, CEO at General Compression.

"General Compression is taking a unique approach to energy storage and helping to get renewable energy sources on the grid," said [Robert "Buzz" Kross](#), senior vice president, Autodesk Manufacturing Industry Group. "By helping General Compression to tell its story more effectively, Autodesk software is helping to keep the firm one step ahead in this dynamic field."

About the Clean Tech Partner Program

The Autodesk Clean Tech Partner Program supports the efforts, innovations and environmental advancements of clean technology pioneers, providing world-class software to design, visualize, and simulate their ideas through [Digital Prototyping](#). Clean tech companies in North America, Europe and Japan are invited to apply to receive up to \$150,000* worth of software for only \$50. Access to a collection of Autodesk industry-leading software includes up to five licenses of [Autodesk Product Design Suite Ultimate](#), [AutoCAD Revit Architecture Suite](#), [Autodesk Simulation Mechanical](#), [Autodesk Inventor Publisher](#) and [Autodesk Vault Professional](#) software. For additional information, visit <http://www.autodesk.com/cleantech>.

About General Compression, Inc.

Founded in 2006, General Compression, Inc., has made patent-pending advancements in the fields of isothermal compression and expansion to enable utility-scale storage projects for both renewable and conventional electricity sources. For additional information, visit www.generalcompression.com.

About M2 Technologies

M2 Technologies is the leading manufacturing design solutions provider with more than 1,000 manufacturing companies as customers. M2's success has made it one of only eight Autodesk Gold Partners for Manufacturing in the United States. For more information, visit www.m2t.com.

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 16 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.

**Value is based on up to five commercial licenses of each application.*

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