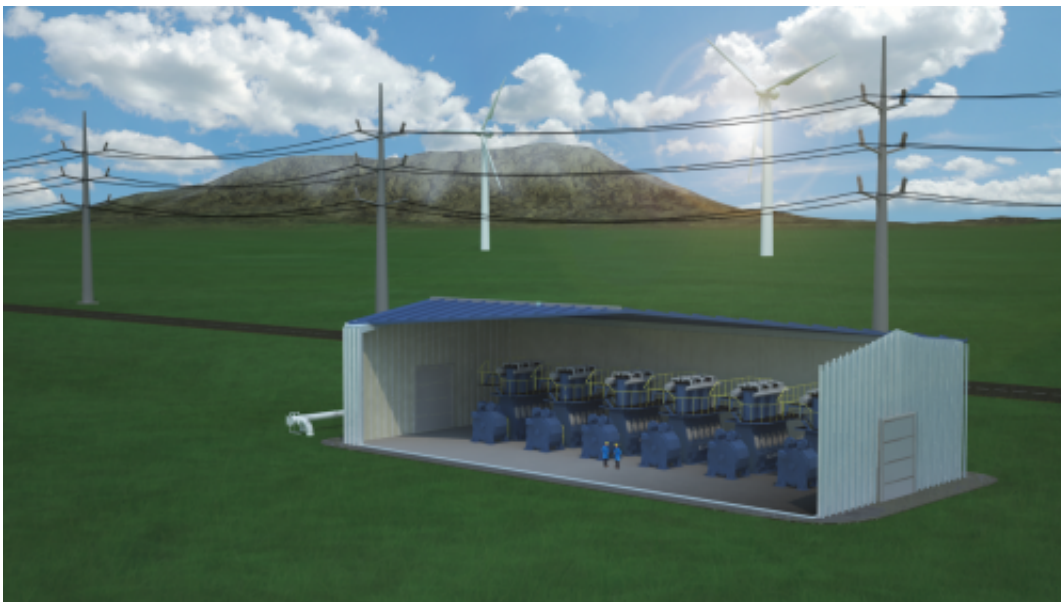


SustainX builds 1.5 MW isotherm compressed air energy storage system

September 17 2013, by Bob Yirka



(Phys.org) —Energy storage solution provider SustainX has announced that it has built an isotherm compressed air energy storage (ICAES) system in New Hampshire. The purpose of the system is to provide energy companies with a cleaner way to store energy produced by alternative energy sources such as solar and wind. SustainX reportedly received \$5.4 million from the U.S. Department of Energy to help build the demonstration system.

People have known for hundreds of years that it's possible to store energy using simple methods—pumping water up a hill and then allowing the [force of gravity](#) to turn cogs on its way down later to recoup energy, for example, or on a bigger scale, pumping air into a cavern then using its force at a later time to drive a [turbine](#), is another. Until recently, however, such methods of [energy storage](#) have not been able to compete with batteries—at least on a large scale. That might be about to change, however, as the new ICAES system in New Hampshire demonstrates.

Currently, the new plant pulls in electricity from the grid and uses it to compress air which is stored in big tanks. Electricity can be created at a later time by releasing the air to drive a turbine. The long term plan is for utilities to use such technology to store electricity generated using non-continuous sources, such as from wind or the sun.

Researchers have looked into using compressed air as a [battery](#) before, what's new this time is the proprietary design created by the team at SustainX—its more efficient and is done at a much larger scale (it's capable of producing 1.6 MW of power when releasing the compressed air) than ever before. Also, they have developed a technique of spraying water into air filled cylinder chambers which allows for capture of heat generated by the compression process.

SustainX says its ICAES systems are better than other methods of energy storage because they can be sited virtually anywhere (no need for a cavern), because they are flexible (easily scaled), because of the low installation and ongoing costs, and because installations will last for 20 years. It's also far cleaner than batteries or other systems that store [compressed air](#) but require natural gas to retrieve the energy from them.

SustainX is now in the process of using its newly built plant as a demonstration system to entice buyers.

More information: www.sustainx.com/

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