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## Liquid Air Energy Storage Animation Explains How to Store Energy the Clean and Cool Way

***Designers and developers of Liquid Air Energy Storage (LAES), Highview Power Storage, have commissioned a new video animation explaining the large scale, long duration LAES technology and the applications it can work with.***

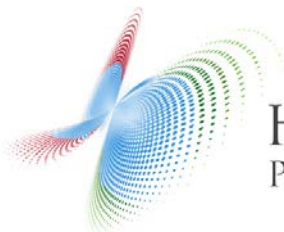
The new video animation explains how LAES technology works and its key benefits as Highview is preparing to start operating its new 5MW LAES technology Pre-Commercial Demonstrator, which is currently being commissioned in Greater Manchester. LAES is an innovative large scale, long duration energy storage solution which uses liquid air or liquid nitrogen as the storage medium to deliver between, 5MW to 200MWs+ of power for utility and distributed power systems.

The animation explains the LAES process whilst showing the scalability and the different applications it can be integrated with. It begins with a 20MW LAES plant and scales up to the GigaPlant, a 200MW/1.2GWh conceptual plant demonstrating the modular capability, as based on our developments with GE and other key suppliers. Large scale LAES plants are a very competitive energy storage solution and offer some great benefits over other large scale technologies such as pumped hydro or compressed air. LAES has no geographical constraints as it does not require mountains or caverns to operate, meaning it can be located at the point of demand e.g. by a wind farm or power plant. Highview's CEO, Gareth Brett says,

*"Our new LAES video animation is a great way of explaining the technology and showing people how our new 5MW pre-commercial demonstrator will operate. The scalability of LAES makes it a flexible solution and scaling up to the conceptual GigaPlant can provide a compelling solution based on 10 years of development and 5 years of operation of small systems. It is believed Highview's LAES systems will be the cheapest, cleanest, and lowest environmental impact GWh scale, locatable storage systems available."*

Highview's LAES systems are made up of 'off the shelf' components from a well-established global supply chain, with thousands of hours of run time, resulting in a low technology risk. As one of the key benefits shown in the animation, LAES has the ability to integrate industrial low grade waste heat and waste cold to increase the round trip efficiency of the system by co-locating with industrial plants and LNG terminals. If integrated with renewables, LAES can help maintain green credentials, as it gives off no harmful emissions, uses no scarce materials and requires no complex recycling.

In 2014, Highview and project partners, leading UK recycling and renewable energy company Viridor, were awarded more than £8 million from the UK Government Department of Energy & Climate Change (DECC) to build a LAES technology plant. The funding is supporting the design, build and testing of the 5MW Pre-Commercial Demonstrator at Viridor's Pilsworth landfill gas site in Bury, Greater Manchester. In addition to providing energy storage, the LAES technology plant will convert low-grade waste heat from the onsite landfill gas engines to electrical power. This is the first LAES plant of this size in the world, the only other being the 350kW/2.5MWh Pilot Plant which was also built and operated by Highview, and is now the centre piece at the University of Birmingham's new Centre for Cryogenic Energy Storage.



Construction of the pre-commercial demonstrator is complete and it is currently being commissioned. Bad weather and flooding last year caused delays to the project, but it is now due to be operational this summer. The project will operate and be tested for at least one year and will demonstrate LAES servicing a number of grid balancing services including: reserve; secondary frequency response; capacity provision; and winter peak lopping as well as testing compliance for market regulation in one of the regional US markets.

**Ends**

**Note for Editors**

**Highview Power Storage** is a privately owned, award-winning technology company located in Central London, England. Highview has developed and owns the Intellectual Property to its proprietary, large scale long duration Liquid Air Energy Storage (LAES) system. The system can simultaneously convert low grade waste heat into power during the discharge cycle, further increasing the overall efficiency by producing additional power.

At the end of 2013 Highview signed a global licencing and technology collaboration agreement, with GE Oil & Gas, to develop the integration of Highview's LAES technology into its peaker plant offering.

For more information, please visit: [www.highview-power.com](http://www.highview-power.com)

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