

Press release

Rassau, October 21, 2020

Siemens Energy begins construction of GB grid stabilization project

- Siemens Energy to design, manufacture, install and commission grid stabilization technology in South Wales, Great Britain
- Site is due to be operational in autumn 2021

Work to construct one of Great Britain's first grid stabilization facilities has been started by Siemens Energy, who has been appointed to design, manufacture, install and commission the new site in South Wales, on behalf of independent power developer, Welsh Power.

The facility, located at Rassau, Ebbw Vale will see Siemens Energy's rotating grid stabilization technology installed at the site to manage grid stability, which is essential to achieve a net zero carbon energy system.

The technology, which consists of a synchronous condenser and flywheel provides inertia to strengthen the grid, short circuit power to ensure a reliable operation, and reactive power for voltage control.

Such technology is needed due to changes in the GB electricity system, which has seen a reduction in the number of large spinning generators, historically fossil-fueled power stations, connected to the grid, as the system moves towards renewable power.

Through the addition of a synchronous condenser, grid stability can be provided, without any power being generated, ultimately meaning more renewable power can be used on the network.

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In addition to providing the grid stabilization technology, Siemens Energy will also provide control and operating systems, the cooling system and auxiliary equipment as well as connecting the site to the grid, with a 132kV step up transformer equipped as Sensformer® unit. Fitted with connectivity and intelligence the Sensformer offers access to real-time digital data for optimized operation.

Siemens Energy will use local contractors and specialists during construction and commenced civil works to ready the site in September 2020.

Steve Scrimshaw, Vice President, Siemens Energy UK&I said: “This is a groundbreaking project for Wales and the rest of Great Britain, using innovative, world-class technology as well as local contractors and specialists. As we move through the energy transition, innovative ideas and thinking will be crucial to maintaining the stability and security of energy supplies, as well as reaching net zero.”

Hauke Jürgensen, Head of Large Transmission Solutions, Siemens Energy, said: “The transmission system in the UK is coming under pressure in the move to decarbonize and projects such as this will be vital to keeping the lights on. Through our transmission system know-how, we are delighted to see these innovative projects, using our proven and maintenance friendly technology, support grid stability in the GB electricity system.”

Once operational, the facility will be able to provide approximately one per cent of the inertia needed to operate National Grid securely, with zero emissions, within 15 minutes of an instruction.

Welsh Power was awarded a contract to provide stability services to National Grid Energy System Operator earlier this year and expects the new plant to be operational by autumn 2021.

Alastair Fraser, CEO Welsh Power said: “Both ourselves and our partner Quinbrook Infrastructure Partners are pleased to be working with a world class company such as Siemens Energy on this pioneering project. Welsh Power are

investing in the developing grid stability market in Great Britain and hope this is the first of a series of such projects.”

This press release and further material is available at <https://bit.ly/2FK2vW6>

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Siemens Energy is one of the world’s leading energy technology companies. The company works with its customers and partners on energy systems for the future, thus supporting the transition to a more sustainable world. With its portfolio of products, solutions and services, Siemens Energy covers almost the entire energy value chain – from power generation and transmission to storage. The portfolio includes conventional and renewable energy technology, such as gas and steam turbines, hybrid power plants operated with hydrogen, and power generators and transformers. More than 50 percent of the portfolio has already been decarbonized. A majority stake in the listed company Siemens Gamesa Renewable Energy (SGRE) makes Siemens Energy a global market leader for renewable energies. An estimated one-sixth of the electricity generated worldwide is based on technologies from Siemens Energy. Siemens Energy employs 91,000 people worldwide in more than 90 countries and generated revenue of around €29 billion in fiscal year 2019. www.siemens-energy.com.