# Energy storage regulations sanaa

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There are currently four operational pumped hydro storage projects in the UK with a combined capacity of over 2.8 GW, the last of which was commissioned in the 1980s. These projects principally provide for time-shifted electricity supply capacity and spinning reserve capacity and, whilst originally developed by the then state-owned electricity company, are now owned by commercial companies.

More recently, industry participants have been turning their attention to battery storage technologies. One distribution network operator (“DNO”), UK Power Networks, commissioned a 6MW/10MWh lithium-ion battery storage project in Leighton Buzzard in October 2014, with the help of funding from the regulator, Ofgem, through the Low Carbon Networks Fund. This project has been pioneering in demonstrating that grid-scale battery storage is viable in the UK and has raised industry and public awareness of this storage technology.

AES’ 10MW battery array became operational in January 2016 and utilises the company’s Advancion technology. This battery storage project is co-located with the coal-fired Kilroot power station in order to optimise its efficient operation. This project is fully commercial and creates no additional cost for consumers.

Larger-scale standalone grid-scale battery storage is the “hot topic” in the UK currently, with lithium-ion technology being an area of focus. National Grid, the system operator, has very recently completed a tender for enhanced frequency response services (for details please see below) that is particularly well suited for battery technology. The initial tender awarded contracts to the following energy storage bidders and projects:

Co-location with generation (particularly renewables) is also high on the energy storage agenda. Earlier this year, Western Power Distribution, a DNO, signed a contract with RES (a renewable energy company) to deliver an energy storage system co-located with a 1.5MW solar farm. This project aims to demonstrate the network services “solar + storage” can provide behind-the-meter to the owner and operator of the solar farm and to DNOs. The project will be supported by Ofgem in its Network Innovation Allowance programme.

There are a number of pumped storage projects (ranging between 100 – 600MW) currently proposed by various utilities and developers. However, these projects face particular financing challenges, given the infrastructure-heavy nature of the technology.

Electricity storage is not separately defined in the GB legislative framework. For historical reasons, it is currently deemed to be generation for the purposes of licensing under the Electricity Act 1989. As a result, projects over 100MW (currently only the existing pumped-hydro developments fall into this category) must

hold a generation licence. Holding a generation licence places a number of obligations on the licensee, such as compliance with the Grid Code.