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United Utilities opts for energy-efficient aeration technology

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United Utilities, the UK's largest listed water company supplying around 7 million homes in the North West of England, is the latest water utility to discover the merits of floating fine bubble aeration technology.

Announcing the installation of Mapal Green Energy's Floating Fine Bubble Aeration (FFBA) system at its Horwich activated sludge plant, United Utilities said that it is upgrading its current installation with new equipment which is expected to be significantly more energy efficient.

The current plant comprises two biological reactors with a capacity of 3900 litres/hr. The existing installation of fixed mechanical aerators will be replaced with 16 floating fine bubble units.

Initial forecasts suggests that Mapal's FFBA system is expected to deliver the same or improved process performance at up to 40% less power than is currently consumed, saving a possible 308 MWh of electricity per year. The project also includes new dissolved oxygen controls.

Dale Walker Senior Area Engineering Manager, United Utilities commented:

"The system will provide a number of benefits in addition to attractive power savings and may provide a financially viable lower cost solution compared to traditional FBDA installations for small to medium sized surface aeration plants. The system can be retrofitted to existing plants and installed without requiring major shutdowns of the existing plant. The equipment is also readily accessible for maintenance purposes".

The UU project team has worked closely with Mapal Green Energy's engineers over the last few months to finalise the design and secure funding. The system is due to go live in August – the water firm will work with Mapal to maximise the benefits from the new plant.

Horwich will be the largest FFBA installation in the UK – Mapal said the FFBA units have been extensively tested. The supplier is confident the technology will deliver important energy savings and easier maintenance – the installation has no moving parts in the wastewater processing tank.

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