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Emergency drive hire avoids pollution risk for Anglian Water

ABB authorised value provider rescues Anglian Water pump station with loan of a variable speed drive.

A quick response from an ABB authorised value provider ensured that Anglian Water avoided the risk of a sewage leak by loaning a variable speed drive (VSD) at one of its pumping stations.

The utility hired a VSD from Gibbons Engineering Group to ensure that the pumping station was back in operation within a day.

Anglian Water operates the Great Stambridge pumping station near Rochford in Essex. The pumping station features three dry well submersible pumps, pumping sewage to the wastewater treatment works. Two ABB drives are used for two of the pumps. The remaining pump operates direct-on-line as an emergency standby. In a 24/7 operation, the VSDs operate the pump motors as the wastewater level rises, modulating the speed of the pumps to account for the level changes.

Depending on the level, a maximum flow is achieved from two of the pumps operating simultaneously. The two VSDs ensure the system pumps at a pre-set maximum flow rate of 300 litres per second, equivalent to a motor speed of 46 Hz. This flow rate is the maximum the treatment works can handle without overwhelming the screens used to trap rags, large solids and other debris.

Brad Colledge is Anglian Water's maintenance engineer responsible for the site: "An engineer reported that he could not access the drive's key pad to change its settings. For some reason the drive would not store the motor data in its memory.

"With the loss of one pump, our pumping capacity was seriously reduced. If we had lost another pump, we would have faced the risk of the incoming flow exceeding the outgoing flow, leading to a serious danger of a sewage overflow from the site that could contaminate local water courses."

Gibbons supplied a 110 kW drive as part of its hire scheme, which installs drives on a temporary basis to cover emergencies such as this or as part of a trial to prove the effectiveness of VSDs in saving energy.

The hire drive was in operation the next day and operated for three weeks while the regular drive was being repaired by Gibbons.

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Caption: A quick response from ABB authorised value provider Gibbons Engineering Group ensured that Anglian Water avoided the risk of a sewage leak.

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