

Water treatment flexibility

With Demand Side Response, Vivaqua has been able to reduce power demand by up to 5 MW during demand response events, saving 4,000 tonnes of carbon emissions every year.



Minimising contributions to climate change

Vivaqua is a major player in the water and sewage treatment business, serving more than two million domestic and business customers.

Sustainable development is a top priority at Vivaqua. The company works hard to minimise the contribution of its operations to climate change through energy management investments, improvements in pumping systems and a comprehensive energy management programme at its corporate headquarters.

Unlikely candidate for Demand Side Response

Vivaqua's primary objective is to deliver excellent service reliability to its customers. This requires constant pressure across its 5,000+ kilometre distribution pipeline network to minimise leakages and avoid water impurities in the delivery process. Initially this process seemed like an unlikely candidate for Demand Side Response (DSR).

Vivaqua's Head of Operations had assessed a range of options for engagement with DSR from several suppliers. However, at the final stage of the assessment, Vivaqua decided to partner with Centrica Business Solutions, encouraged by the usability of its automated DSR technology platform, FlexPond™. This enabled pumps and motors between reservoirs at the Treatment Plant to participate in DSR programmes.

The results

The organisation enrolled in DSR to offer tertiary reserves to the grid operator. Centrica Business Solutions delivered a fully automated DSR solution via the FlexPond™ platform by reducing power demand from the upstream pumping stations and other equipment.

This created a reduction in load of 5 MW, available in less than three minutes, with no effect on water throughput or pipeline pressure. The control room operators retained 100% control over the industrial process as its Flextract™ unit ensured that on-site industrial boundary constraints, such as water or pressure levels, were always met.

4,000

TONNES

Carbon emissions reduced annually

5

MW

Reduction in load

100

PER CENT

Control over industrial processes

“

Operators can fully concentrate on the core business, as the Demand Side Response process is entirely automated.”

Pierre Granville, Technical Director, Vivaqua

Why Centrica Business Solutions?

- Technology to react in seconds with no human intervention required
- Facilitates the further development of renewable energy
- Lowers industry's carbon footprint and helps to curb global climate change
- Shields from the risk of penalties when ongoing operations mean power flexibility is not available. There is no impact on production