

Scottish Water cuts energy by 60% with Flygt Concertor intelligent pump system.

Smart pumping and real-time monitoring accelerate progress toward net-zero operations.

The background

Scottish Water partnered with Xylem to upgrade hundreds of pumping stations with innovative, energy-efficient technology, as part of its commitment to reaching net-zero emissions.

As Scotland's publicly owned water provider, Scottish Water delivers essential services to more than 2.6 million households and 150,000 businesses. In 2019, the utility committed to achieving net zero by 2040.

Because pumping wastewater is one of the most energy and carbon-intensive parts of its operations, Scottish Water identified pumping stations as a key focus for innovation.

The challenge

Scottish Water's wastewater operational teams faced several challenges on its net-zero journey:

- High energy consumption at pumping stations.
- Frequent unplanned maintenance.
- Limited visibility into station health, leading to reactive callouts and vehicle emissions.

Scottish Water needed a solution that would both optimise energy efficiency, streamline operational processes and reduce reactive visits.

The solution

In 2019 Scottish Water partnered with Xylem to trial the Flygt Concertor, the world's first wastewater pumping system with integrated intelligence.

Flygt Concertor has built-in sump and pipe cleaning, as well as Xylem's Adaptive N-technology to detect and resolve clogging. The pump can automatically adapt its performance to changing flow rates, and it has a Super Premium IE4 equivalent motor, all of which can reduce energy use by up to 70%.



Xylem's technology supports Scottish Water's emission reduction journey.

Client

Scottish Water

Xylem's role

Xylem partnered with Scottish Water to deploy advanced pumping and digital tools that cut energy use and maintenance.

At the initial pilot sites, the Flygt Concertor reduced unplanned maintenance by 99.8% and cut energy use by up to 60%. This success led to more trials and eventually wider adoption with around 300 Concertor pumps installed across Scotland.

Scottish Water saw an additional opportunity to make its operations more efficient, with the launch in 2020 of Xylem Vue Secure Connect, formerly known as Avensor, Xylem's digital monitoring solution for pump stations.

The Secure Connect application collects, analyses and transmits pumping station data through the cloud, giving operators remote access to real-time performance insights. The system has been installed in more than 90 Scottish Water pumping stations.

The results

Through the deployment of Xylem's Flygt Concertor pumps and Secure Connect, Scottish Water has combined high-efficiency pumps with advanced digital technologies.

This integrated approach has cut energy use by up to 60%, significantly reducing emissions and helping the utility stay on track to achieve its 2040 net zero target.

The utility now has real-time visibility and control across its network. Remote monitoring has enabled the Scottish Water team to replace weekly callouts with monthly inspections.

As a result, the utility saved more than 400,000 miles of reactive travel and 37,000 litres in diesel consumption, reducing its annual carbon output by 160 tCO₂e.

“The visibility that [Secure Connect] gives us is brilliant. It's a proactive tool that enables us to respond to something at the right time, instead of just hoping to catch it through a routine visit. We use the app to view a pump station's performance before we go to the site and if everything is going well, we might not even need to go there at all.”

Nathan Wield, Wastwater Operations West Manager,
Scottish Water



Xylem Vue Secure Connect collects, analyses, and transmits pump station data through the cloud, giving operators real-time performance insights.

As part of its commitment to reaching net-zero emissions by 2040, Scottish Water partnered with Xylem to upgrade hundreds of pumping stations with sustainable technology. Learn more about this journey in our video:

