

Bringing pumping efficiency beyond par

The energy-efficient Flygt N-pumps reduce operational cost

England's Northumbrian Water Ltd (NWL) serves roughly 2.5 million people with water and sewerage services. To better assess its predicted results, the company implemented an Asset Management System. Validating this system, NWL undertook a project to measure how much the installation of Flygt N-pumps had reduced costly reactive maintenance. The result? A remarkable 58% reduction. Better still, it again proved the energy efficiency of the N-Pump line. At one pumping station the energy cost was reduced by 25% on a yearly basis.

Unrivalled efficiency

Just as any other water supply company, NWL is committed to reducing its carbon emissions by designing and procuring energy-efficient systems and equipment. But as is often the case, good intentions are one thing, closing the gap between theoretical expectations of savings and the actual outcome is another.

"The before and after analysis clearly demonstrated an increase in efficiency and decrease in unplanned maintenance activity."

To assess more accurately if they were achieving their predicted results, NWL introduced a state-of-the-art Asset Management System. To prove its benefits, the company initiated a project to measure how much the installation of Flygt N-pumps had reduced costly reactive maintenance. NWL was among the first British utility companies to see the benefits of the self-cleaning Flygt N-technology compared to traditional impeller design. The N-pumps are designed to ensure efficient, reliable and trouble-free pumping over long duty periods. This means lower energy consumption and less running problems—even under the worst conditions.



CUSTOMER: Northumbrian Water Ltd, UK
CHALLENGE: Improving pump station efficiency and reliability
SOLUTION: Installing Flygt N-pumps
BENEFITS: Lower energy consumption and thus costs, reduced costly unplanned maintenance, less equipment failures, reduced maintenance vehicle mileage.

Positive results from several comprehensive trials on highly demanding sites convinced NWL.

Unplanned maintenance dropped 58%

The project involved seven pumping stations with relatively new pumps. All of the stations had, however, a history of high maintenance costs. The project covered the maintenance over a 12-month period before installing the N-pump as well as at least six months after the installation.

“The results are impressive.”

The before/after data of NWL’s project clearly shows the reliability of Flygt N-pumps. After installing N-pumps at the participating sites, the unplanned maintenance dropped an amazing 58%. And this is for the total attendance hours at the station, not only those linked to pump problems.

25% efficiency increase

Reducing unplanned maintenance brings substantial savings. The benefits include reduced tankering, pump rental and crane hire costs as well as less premature mechanical and electrical equipment failures. Fewer unplanned visits mean fewer miles driven. This significantly reduces maintenance vehicle emissions, which contributes to shrinking NWL’s carbon footprint. As does the energy efficiency of the Flygt N-pumps. During the project their pumping efficiency—regardless of running conditions—was proven yet again. At one pumping station, where a Flygt N3202 was installed, there was a 25% reduction of energy costs on a yearly basis. Both the user and the environment benefit from this.

Commenting on the results NWL company maintenance manager Ray Baldwin says: “The results are impressive - the before and after analysis we undertook clearly demonstrated an increase in efficiency and decrease in unplanned maintenance activity.”



NWL’s maintenance project involved seven pumping stations.



Extensive N-pump trials convinced NWL.