

OPTIMEDAR: REDUCING ENERGY AND IMPROVING EFFLUENT IN WASTEWATER TREATMENT

CHALLENGE

Changing customer expectations and increasing regulatory action have led Wessex Water to incorporate protection and improvement of the environment as a major element of its corporate strategy.

Implementing the strategy has included a focus upon energy conservation and efficiency in wastewater treatment because the energy required for treatment is usually one of the largest components of overall energy use for companies like Wessex Water.

A major component of this energy consumption is the aeration of the biological reactor because aeration engines are usually not designed to take into consideration a measure of the amount of contamination in the tanks.



Optimedar® increases energy efficiency and improves effluent quality.

ADASA'S SOLUTION

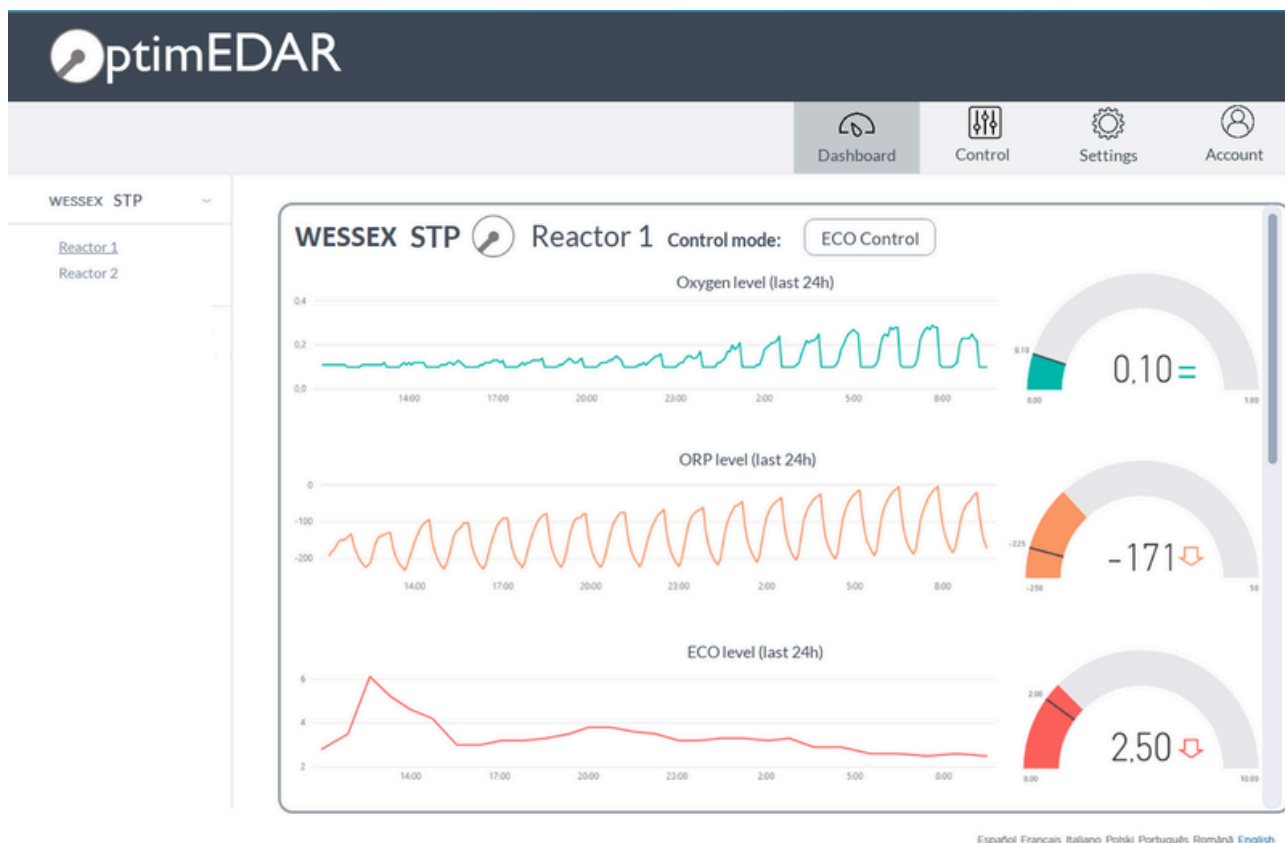
Adasa applied a **brand-new technology to improve Wessex Water's treatment plant's efficiency levels.**

This new technology called Optimedar®, not only increases the energy efficiency but also **improves the quality of effluent** in activated sludge treatment plants.

Optimedar® is based on an **innovative online monitoring of the aeration process** in the biological reactor.

It **optimises the operation of the bioreactor** by taking into consideration influent and environmental conditions in order to achieve proper regulation of the process by automatic corrections and adjustments.

It requires **a low level of investment with a minimum cost** of maintenance, and minor changes in the current control system with a simple and straightforward installation and minor disruption to ongoing operations.



Optimedar® enables wastewater treatment plants to manage the aeration process in line and obtain higher quality treated water.

RESULT

Our solution **allows wastewater treatment plants to manage the aeration process on-line** deriving higher quality treated water (less reactant and chemical by-products) and less energy consumption, meaning an increased productivity of the whole system and a faster water quality control loop.

Optimedar® **has resulted in a 30% reduction in energy consumption in the aeration system**, and additional benefits including up to 20% less nitrogen and reduction of phosphate, and 15% reduction in the production of sludge.

CLIENT

Wessex Water provides drinking water and sewerage services to 2.8 million customers across the south west of England.

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