



Using every drop in the most efficient way.

Improving energy efficiency and reducing waste at Thames Water with CORTIX™

Project Overview

Thames Water is UK's largest water and wastewater service provider. It supplies 2.7 billion liters of high-quality drinking water across London and the Thames Valley and treats 4.4 billion liters of water per day. A significant amount of energy use occurs at Thames Water's water and wastewater treatment facilities with pumps, motors, and other equipment operating 24 hours a day, 7 days a week.

With the UK government aiming to achieve emission reduction of 18% by 2020 from 2008 level, and a company mandate to protect the environment, it is imperative for Thames Water to operate with the highest possible level of energy efficiency, whilst maintaining operational performance.

CUSTOMER NEEDS



Reduced energy consumption across water systems



Integrated and streamlined approach to data management



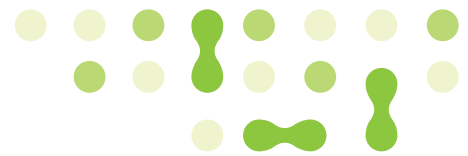
Fast-paced troubleshooting with diagnostic information available to the facilities teams



Compliance risk and asset availability analysis



A smart solution to ensure the efficient running of the plant and resilience of the network



Solutions and Benefits

After identifying improvement areas in data and water management, EcoEnergy Insights deployed dual solutions across the system, addressing energy and operational efficiency. Its IoT platform – CORTIX™ – was deployed across 26 Thames Water waste and clean water sites.

CORTIX™ contextualized, correlated and analyzed data, which amounted to c.0.5 mn records per month to identify inefficiency points across the system. **This resulted in the saving of 17,044,784 kWh in energy across the set of sites in 4 years.**

The AI-driven analysis enabled EcoEnergy Insights to set out an ‘ideal’ process for the treatment facilities, using targeted step points. These step points were supported and maintained through integrated monitoring. This allowed energy savings to be constantly assessed and enabled the facilities team to quickly identify any operational deviation across the water cycle. The efficiency performance of the water and wastewater treatment plant is maintained through regular health checks that ensure the most efficient and reliable plant items run most frequently.

The Online Process Evaluation and Risk Analysis (OPERA) solution was also rolled out across 22 Thames Water sites, creating rapid and interactive risk assessment of hydraulic and biological headroom at a process element level. OPERA enabled the staff to predict the site's likely treatment performance when unplanned breakdowns or even planned maintenance cause process elements to be taken out of service, directly increasing efficiency and streamlining performance.

Customer Speak

Mark Lewington, Head of Wastewater Non-Infrastructure Strategy at Thames Water said: “Thames Water provides high-quality water and wastewater services to over 15 million people every day. It is vital that we balance rising customer demand with protecting the environment, and that we reduce the impact of energy price volatility on our operational costs. EcoEnergy Insight's robust processes and their solutions, which leverage their CORTIX™ platform, enabled us to significantly improve energy efficiency and reduce waste across the water treatment process. This, in turn, helps us to better serve our customers.”



Write to us at info.ecoenergy@carrier.com and elevate your business now.

About EcoEnergy Insights - EcoEnergy Insights is a leading provider of outcome-based services to some of the world's largest enterprises in industries such as restaurants, retail, hospitality, banking and water utilities. Its CORTIX™ technology platform leverages a combination of advanced software and expert human analytics to uncover insights and use them to achieve results across sites, multiple industries and a range of geographies. EcoEnergy Insights is a part of Carrier, a leading global provider of innovative HVAC, refrigeration, fire, security and building automation technologies.

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