

WWTP - Northmore Gordon

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WWTP

WWTP stands for Wastewater Treatment Plants. These facilities are critical infrastructure that must maintain reliable operations while managing energy costs, asset constraints and emissions. We recognize WWTPs as a key service area within water and wastewater operations, where energy performance directly affects treatment outcomes and operational viability.

Related guidance

Carbon advisory

Scope 1, 2 and 3 emissions

Certificates

Government schemes

Certificate trading

Measurement and verification

What does WWTP stand for?

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How does energy use relate to wastewater treatment performance?

Energy use in aeration and wastewater treatment relates directly to the load being processed and the quality performance required. Treatment performance is the key service outcome that must be maintained while managing energy costs, asset constraints and emissions. Efficiency opportunities should be evaluated within these operational constraints rather than from energy consumption alone. Understanding the relationship between energy, load and treatment performance is essential for identifying credible improvement opportunities.

What key operational areas should be assessed when examining WWTP energy performance?

We recommend assessing six key operational areas: pumping and distribution (flow, pressure, duty and pump scheduling); aeration and wastewater treatment (energy use relative to load and treatment performance); biogas and biomethane utilization; renewable energy and storage integration; multi-site management and data reliability; and reporting and governance boundaries. These assessment questions should be tailored to the specific utility's operating requirements rather than treated as universal prescriptions.

What information should a WWTP prepare before engaging Northmore Gordon for an energy assessment?

We recommend preparing a site and asset register, electricity and fuel bills with interval data, operating records, available SCADA or submeter data, operational constraints, current energy contracts and existing emissions or energy plans. Also flag data gaps, planned capital works and site reliability requirements. This evidence enables Northmore Gordon to scope an appropriate assessment and identify the most material opportunities for improvement.

How can measurement and verification support WWTP energy projects?

Measurement and verification (M&V;) establishes the actual effect of equipment changes by comparing pre- and post-upgrade conditions under comparable operating scenarios. For WWTPs, M&V; determines what energy use would have been without the intervention and calculates savings as the difference. This prevents attributing bill changes from weather, production shifts or operating hours changes to equipment improvements, creating credible evidence for investment decisions and certificate eligibility.

What is Northmore Gordon's approach to water and wastewater service delivery?

We describe an operationally focused offer spanning pumping, treatment, energy management, carbon advice, implementation support and funding assessment. We use a six-stage approach: Assess (identify opportunities and missing evidence), Build the Case (develop viable options), Capture Value (identify funding and certificate pathways), Deliver (implement and verify), Procure (manage energy and environmental attributes) and Perform (sustain outcomes and guide future direction). Each stage connects technical assessment with commercial decisions and operational performance.

How should a WWTP approach energy efficiency without compromising operational requirements?

Define the service outcome that must be maintained—treatment performance, pumping duty, operating windows, asset availability and resilience requirements—before evaluating efficiency opportunities. Assessment should focus on understanding how current operations meet these requirements, then identifying improvements within those constraints. This prevents pursuing energy reductions that could compromise water quality, reliability or public health outcomes. Equipment changes and operational adjustments should be sequenced to maintain continuous service.

What role do environmental certificates play in WWTP energy project funding?

Environmental certificates can provide financial support for WWTP improvements, but eligibility depends on specific activities, premises conditions and scheme requirements. We advise against assuming certificates will fund whole projects or that proposed certificate proceeds are committed until scheme-specific eligibility and commercial terms are established. Certificate assessment should be conducted separately from energy assessment, with qualified specialists confirming applicable activity, method and timing for any given project.

How can data and monitoring support WWTP energy management?

Reliable data collection, interval metering and monitoring enable WWTPs to identify opportunities and track performance. Our energy management framework emphasizes maintaining an opportunity register, reviewing key performance indicators aligned to operational decisions, and establishing routines for data quality checks and performance review. For multi-site utilities, consistent data systems and monitoring approaches support cross-facility comparison and prioritization while accommodating site-specific operating conditions.