

United Wholesale Scotland: Cutting Costs and Carbon with Auditel and IES



As part of a two-phase decarbonisation and optimisation strategy, Auditel partnered with IES to develop a calibrated Digital Twin of the Queenslie site and integrate it with the IES Live platform, delivering a single-pane view of performance and actionable insights for the client.

United Wholesale Scotland (UWS) is Scotland's largest independent cash-and-carry and wholesale operator. At its Queenslie HQ on the outskirts of Glasgow, UWS is working with Auditel and IES to take control of its energy use, optimise operations, and reduce carbon emissions.

Within just 12 weeks, Phase 1 Energy Conservation Measures (ECMs), including LED screen optimisation, warehouse zoning, access door control, and solar PV performance improvement, identified £25k to £30k in annual savings, from 39% gas and 9% electricity reductions, with further Phase 2 opportunities under review.

Understanding the Challenge

The first phase of analysis confirmed that LED advertising screens within the main cash-and-carry space were a major contributor to electricity demand, accounting for 25% of total site electricity, an annual cost of over £77k.

The solar PV system was also identified as a major underperformer, generating 50% less than expected due to maintenance issues, and losing over £2k annually in Feed-in Tariff payments, altogether representing £5k in potential additional revenue for the site.

As electricity demand grew, UWS needed accurate, real-time data to guide investment, validate maintenance, and prevent performance drift. Auditel led the project with their energy expertise, supported by IES's technology to deliver the required data infrastructure

Applying IES Live

Working together, the Auditel and IES teams created a calibrated Digital Twin of Queenslie HQ to represent real energy flow across the site. This enabled the project team to visualise performance, diagnose inefficiencies, and test "what-if" scenarios to prioritise interventions.

Informed by the Digital Twin, Auditel and IES identified multiple "quick-win" opportunities for UWS:

LED Screen Optimisation

Digital Twin modelling showed that simple control strategies, such as dimming brightness or linking screens to daylight sensors, could save £11k to £14k annually and reduce additional costs from planned new advertising screens.

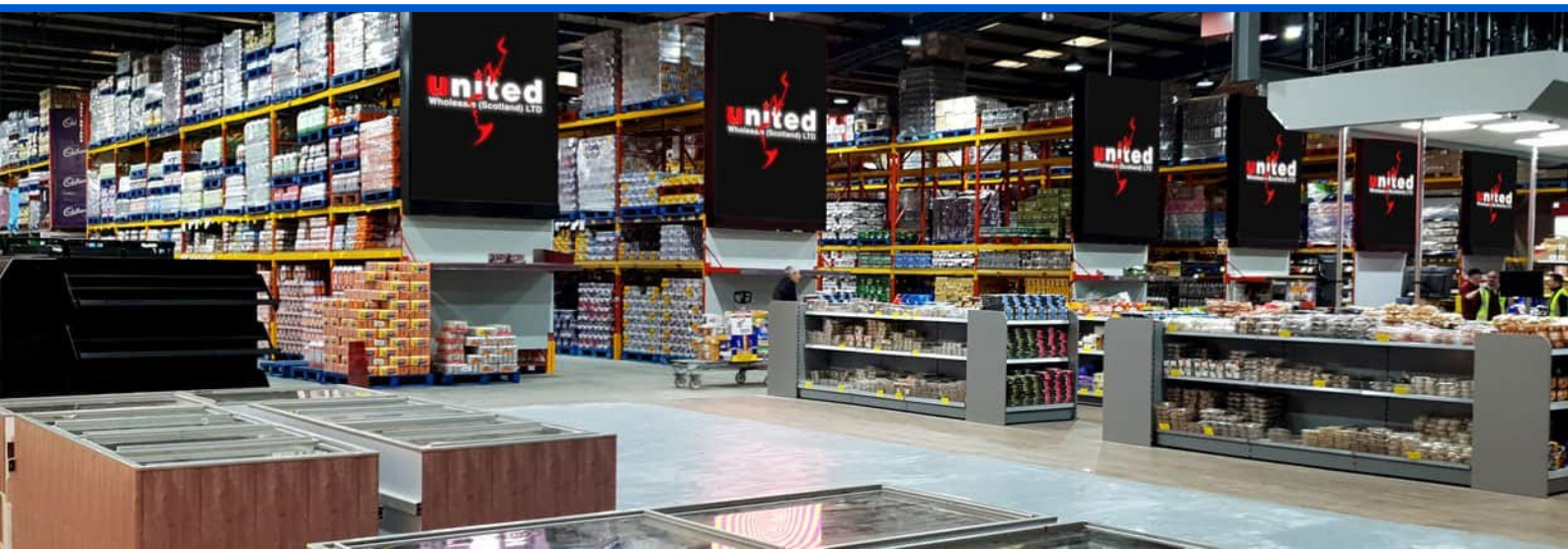
While UWS previously lacked the data required to quantify the financial yield of their advertising screens, the team is now using IES Live to assess how advertising revenues compare against operating costs, ensuring a strong financial return.

Solar PV Performance Validation

In addition to highlighting the maintenance issues causing existing PV panels to generate approximately 50% less energy than expected, directly impacting Feed-in Tariff revenue, the Auditel and IES teams identified that UWS could double the financial yield of their current PV system, offsetting site energy costs by up to £89k over the next 10 years.

Heating Efficiency

Real-time monitoring of warehouse temperatures and gas heater operation will help identify excessive run times and maintenance issues, supporting the potential 39% reduction in gas consumption identified in Phase 1 through optimised scheduling of the on-site heating system.



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Next Steps: The Power of Data

The Queenslie HQ project continues into Phase 2, with expanded IES Live metering to capture more granular data across the site. Planned upgrades include:

- Sub-metering of general lighting to assess future retrofit opportunities
- Automated PV meter readings for more accurate generation tracking
- API integration with LED screens for automated control and yield optimisation
- Monitoring of refrigeration, EV, and forklift charging to manage emerging electrical loads
- Tracking of indoor environmental conditions in warehouse zones

With Auditel's energy expertise and the IES Live platform, UWS can unlock up to £40k in annual operational and retrofit savings, driven by robust, continuously validated data.

Outcomes and Benefits

Identified Phase 1 Savings

- Annual cost savings: £25k to £30k
- Gas savings: 39%
- Electricity savings: 9%

Identified Opportunities

- LED screen optimisation: £11k to £14k per year
- PV maintenance optimisation: +£5k annual benefit
- Lighting controls: +£10k potential savings
- Total potential savings (Phase 2): up to £40k annually

A Smarter Path to Net Zero

Through the combined expertise of Auditel and the power of IES Live, United Wholesale Scotland is cutting costs, reducing carbon, and future-proofing operations, unlocking measurable, impactful improvements aligned with its net-zero ambitions, the progress of which can be live tracked in the platform.

David Milton, Finance Director at United Wholesale Scotland, comments, "The insights delivered through the Auditel and IES partnership have been transformational. Working closely with both teams, we have been able to pinpoint issues we simply couldn't see before and quickly uncover major savings, including optimising our LED screens and PV generation. Going forward, IES Live will continue to play a critical role in how we manage energy across multiple UWS sites and will help set us on track for even bigger gains."

