

CASE STUDY

PLENTY MORE SAVINGS IN STORE

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Trend building management systems have long been a key element of Sainsbury's highly successful energy savings programme. Twenty years after the first system was installed they are now found in over 400 of the company's UK supermarkets, providing control and monitoring of store lighting and HVAC services.

The wide-ranging service that Trend is providing includes 24hr emergency call-out, planned preventative maintenance visits, remote fault diagnosis and setpoint adjustment, controller upgrades, electrical load management and automatic identification of energy waste. Significantly, the Trend Bureau corrects 80% of reported faults remotely. Where a visit is required, the first-time fix rate exceeds 90%.

Thanks to the power and flexibility of Trend's '963', the Bureau can make estate-wide control adjustments with a minimum of manual input. Changes are also made by the Bureau to limit Sainsbury's power consumption during the periods of peak demand when the National Grid levies its 'Triad' transmission charges, which greatly increases the price per kWh. For the 2003/04 period, this load control routine saved Sainsbury's around £100,000 on Triad charges. It also cut

energy consumption, thus further reducing the company's electricity bill.

The Bureau also makes energy savings using its sophisticated iMAT software, which is based on an on-line monitoring and targeting package that was actually developed in collaboration with Sainsbury's. By analysing meter readings and other system monitored data, iMAT is able to highlight incidents of energy waste. For each store it constantly compares actual and expected energy usage profiles and generates exception reports for any deviation of more than a certain amount. The report, which is automatically e-mailed to the store manager within 24hrs, explains the probable cause of the exception and gives its monetary cost.

Problems identified have included lights left on in unoccupied areas, lighting levels too high during re-stocking, heating running 24hrs/day,

freezer room doors left open and bakery ovens switched on too early.

In the case of in-store bakeries, the energy consumption readings gathered by iMAT have a further purpose. Sainsbury's need the data to prove its entitlement to the Climate Change Levy rebate that it has negotiated with DEFRA. Under the company's CCL agreement, targets have been set for the bakeries to ensure a steady reduction in CO₂ emissions up to 2010.

Sainsbury's overall energy saving target for its supermarkets, which it is confident of achieving, equates to a 10% cut in CO₂/m² by 2005 (compared with 97/98). Bureau services such as iMAT have been playing their part and should help to bring about still greater reductions.

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