



Tesco PLC

Case Study

Exceptional energy savings for leading supermarket

VES, the ventilation solutions provider, has helped a leading supermarket identify and implement exceptional energy savings by upgrading fan technology across their retail estate.

VES surveyed each site involved to identify possible energy saving initiatives and produced a robust business case, helping the supermarket chain reduce energy consumption and meet carbon reduction commitments.

Client	Tesco PLC
Sector	Supermarkets
Challenge	Reduce energy consumption and meet carbon reduction commitments
Success	Upgrading fan technology across 150 stores. Verification of energy savings by an independent assessor

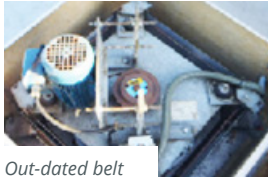


Challenge

Leading UK supermarket chain Tesco has the ever growing pressures of adhering to their energy saving commitments by reducing energy and carbon consumption, whilst providing comfortable conditions for customers and colleagues alike.



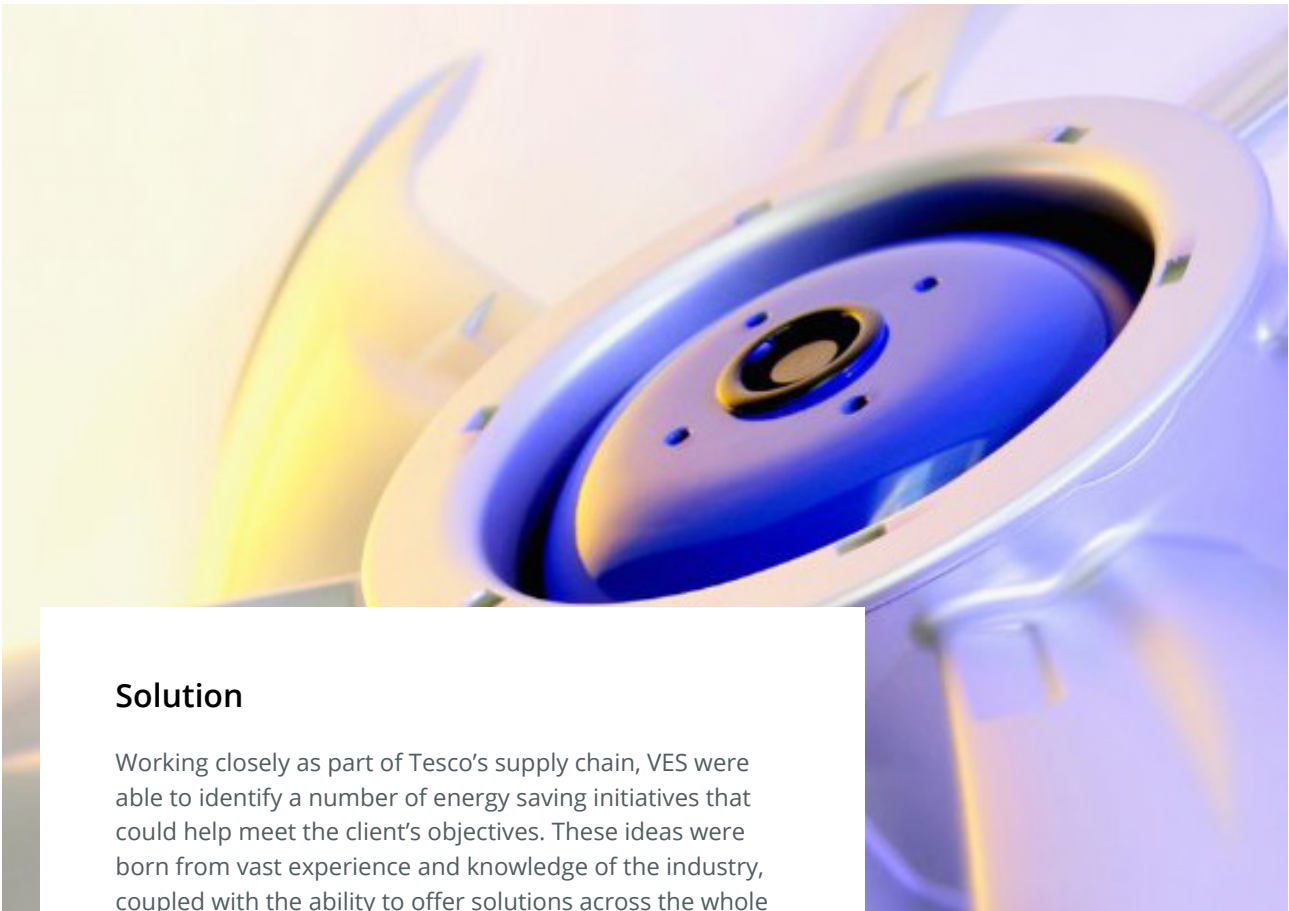
Out-dated roof extract unit



Out-dated belt driven motor

With a large retail estate and varying store layouts, Tesco have an on-going challenge to maintain the effectiveness of their ventilation system, as well as ensuring they are energy efficient, particularly due to escalating energy supply costs.

The main challenge for improving Tesco's ventilation systems was their out-dated extract equipment, that was slowly going into disrepair with the fan components being the main issue. This was due to out-dated belt driven motor technology. Tesco were experiencing clear energy losses of up to 20%. This was an ambitious project and as a result required the help of a specialist ventilation supplier, to provide solutions that achieved both of these objectives.



Solution

Working closely as part of Tesco's supply chain, VES were able to identify a number of energy saving initiatives that could help meet the client's objectives. These ideas were born from vast experience and knowledge of the industry, coupled with the ability to offer solutions across the whole spectrum of Heating Ventilation and Air Conditioning (HVAC) using the latest technology.

VES developed a roof extract fan replacement with state of the art Electronically Commutated (EC) motor technology to provide a solution that answered the energy reduction needs and delivered a number of additional benefits:

- The motor and fan technology provided energy savings in excess of 80%
- In built protection system
- Direct drive motor, removing the need to check and replace belts on a yearly basis
- Low noise transmission due to modern fan technology
- Designed for future proof integration to any control system
- Commissioned to Tesco's exact specification, including a customised colour



*New roof
extract unit*



Working with VES has definitely made a positive contribution to Tesco's goal to improve energy efficiency. Not only did VES provide a full business case for their proposed solution, they also delivered the solution smoothly and efficiently. Most importantly, the potential savings they identified have been achieved and, in some cases, exceeded.

Project Director [Tesco](#)

Results

VES' dedicated energy division replaced up to 13 extract units a day, enabling Tesco to benefit immediately from energy reduction. Each fan replacement was subjected to a before and after calibrated energy consumption reading to meet the strict validation and verification guidelines. The readings taken were also verified by an independent assessor.

The documented results to finalise the business case delivery detailed a 3.9 GW energy saving across the project, which equates to 2,713 tonnes of CO₂. Equivalent to 248 homes' energy use or 2,224 acres of forest for one year.