Case Study

Solar Thermal
Air Conditioning & Refrigeration

Solar thermal assisted compression technologies providing effective and efficient process cooling.

SolX Energy's ThermX system has considerably increased the overall energy efficiency of this Costcutter convenience store in Barrow upon Humber, UK. This was achieved through the installation of the innovative, combined technology designed to harvest the free energy from the sun, thus creating thermal energy to better assist the refrigerant compression process.

Customer Situation

Over recent years energy prices have continued to rise at a rate in excess of 8% per annum.

This is having a detrimental impact on overall site profitability, with electricity now responsible the second largest overhead in this multisite business.

Solution

To provide a high class refit to reduce the overall energy consumption within the store.

Challenge: any additional capital expenditure involved in the whole installation, must have a Return on Investment for the Ebor group of no more than 3-years

Benefits

*Reduced electricity costs
*Extended lifespan of equipment
*Reduced ongoing equipment maintenance costs
*Reduced CO2 production levels

Costcutter
Always more to offer

Air conditioning and refrigeration costs constitute to two of the largest overheads facing a vast variety of businesses today, regardless of location and industry.

Reducing CO2 production is also high on the agenda with the recent emission reductions outlined in European Parliament. SolX Energy Ltd. has effectively reduced the production of CO2 in many businesses with Costcutter being no exception.

With every other refrigeration system on the planet, the sun is the enemy…with ThermX however, the hotter it gets, the more efficient it becomes; reducing overall energy consumption by up to 60% when the sun is in the sky.

> *"The UK benefits from between 1,700 and 1,900hrs of unbroken sunshine every year, at such a small comparative additional cost there are no reasons why any business would not take advantage of this free energy on their cooling & heating systems".* **- Chris Micallef, Technical Director, SolX Energy Ltd..**

Energy earns, or simply burns

...the choice is yours

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The existing electrical consumption in this site prior to installation was on average 388kWh per day.

During the 9 weeks post installation of SolX Energy technology, electricity readings were taken and recorded at an average daily usage of 255kWh. Therefore the overall site has achieved savings of **34.2%.**.

However, the site also increased the refrigerated space by 23%. Therefore, if we add the consumption of the addition space back into the electricity costs, the site is actually saving **43%.**

The initial cost of installation was as expected above the cost of a standard installation.

However, it is important to note, that with savings as substantial as these the **ROI will be complete in just 14 months**.

Project Partners

- Ebor Group
- Modern Refrigeration UK Ltd
- SolX Energy Ltd.
- Costcutter
- Enviroglow Ltd

"Having reduced the energy usage in numerous independent Costcutter sites, we needed to implement the system into a company owned site. This project was the perfect opportunity to see what could be achieved first hand." - **Antony Downing, Costcutter.**

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To find out more...

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