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| Progressive energy reduction at the Bewley’s production facility | **36**  **1**  **109k**  **kg**  **€**  **23k** |

Summary

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| Company name: | Bewley’s Ltd |
| Sector: | Manufacturing |
| Project actions: | A combination of energy efficiency approaches |
| Dates of project: | September 2011 to December 2011 |
| Financial support: | €18,835 (35% grant from SEAI) |
| Project cost: | €53,815 |
| Payback time: | 2.4 years (or 1.6 years with grant) |
| Savings verification: | Meter reads and utilities bills | The project was motivated by a 14% rise in tea and coffee production volumes. |

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|  | Annual energy (kWh) | Annual costs (€) | Annual CO2 (kg) |
| Savings achieved  (% in parentheses) | 710,000 (5.4% saving) | €22,800 (7.8% saving) | 109,000 (6% saving) |

*“Our new lighting has contributed significantly to energy savings.” Eamonn Diver, Engineering Manager*

Background

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| This project was focused on the Bewley’s tea and coffee manufacturing facility in Northern Cross, Dublin, which produced approximately 2,500 tonnes of coffee and 700 tonnes of tea in 2011. The site, where 151 staff are employed, also includes warehousing, an equipment workshop and administration offices.  For a number of years, Bewley’s has been working to progressively reduce energy consumption through both capital expenditure and behavioural measures. In January 2011, it became the first company in Ireland to have its carbon footprint calculation accredited to ISO 14064.  In 2011, there was a 14% increase in manufacturing volumes. To minimise the additional energy costs and environmental impact arising from this increase in volume, a site-wide energy audit was undertaken. Based on the potential for savings identified, a number of investments were proposed, including more efficient lighting, rebalancing of the air handling unit (AHU), insulation of the AHU duct, improved insulation of a coffee roaster oven and improved metering of equipment with a high gas consumption profile. | C:\Users\kcostello\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\9F9JYJ6R\Warehouse Aisle.jpg |
| Bewley’s Northern Cross production  facility | |

\*Annual energy savings of 710,000 kWh have been achieved in this project, the equivalent to the annual energy use in 36 average-sized houses in Ireland. The project saved 109,000 kg of energy related CO2. Cost savings were calculated to be €22,800 per annum. The project supported 1 full-time equivalent job per year.

Project description

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| The project was initiated by Kathryn Costello, the Operations Director at Bewley’s, who leads the company’s Sustainability Team. Meanwhile, the project activities were managed by Eamonn Diver, the Engineering Manager, who leads the Bewley’s Green Team, a cross-functional unit responsible for environmental initiatives and carbon footprint reduction across the entire site.   Lighting efficiency was addressed by replacing high-bay, metal halide fittings and twin five-foot fluorescents with low-wattage, high-frequency induction fittings. Unlike the old metal halide fittings, the new induction fittings lend themselves to sensor control.   Measures to reduce thermal energy use included addressing efficiency issues within the air handling (AHU) by rebalancing the system and applying insulation to the AHU duct. In addition, the project addressed inadequate insulation on one of the roasters. Finally, gas in-line meters were installed in the plant room to monitor gas consumption of the hot water boilers and the central heating system. |

Benefits

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|  | Production has continued to increase at the Bewley’s manufacturing site, up 17% in 2012 on 2011 volumes, and the company continues to benefit from the energy efficiency measures implemented.  The projects described here yielded total energy savings of 5.4% in 2012, compared with 2011 levels. This translates to an annual financial saving of €22,800. Furthermore, the facility’s carbon dioxide emissions were reduced by 109,000 kg per year, providing additional savings in terms of carbon offsetting costs.  The installation of gas metering allows better monitoring and targeting of thermal energy use, promoting awareness of energy efficiency and motivation among staff, and allowing further potential projects to be identified.  As part of ongoing energy initiatives, during 2013 energy management software developed in-house was installed across the site with visible, real-time monitors. The company intends to harness the system to increase awareness of energy efficiency, and to provide clear and transparent reporting that will, in turn, ensure that energy efficiency-related performance targets are achieved. |
| The project addressed inadequate  insulation of one of the roasters |

*“Energy efficiency is integral to our environmental policy, as almost 50% of our carbon emissions are generated by energy consumption.” Kathryn Costello, Operations Director, Bewley’s Ltd.*

Client recommends…

**Client Light fittings Insulation supplier**

Bewley’s Ltd ACEC Hertel

Dublin Paul O’Connor Michael Ball

<http://bewleys.com> [www.acec.ie](http://www.acec.ie) [www.hertel.com/ie](http://www.hertel.com/ie)