

Case Study 3

Innovative Monitoring and Targeting Project

Introduction

Since the launch of the first Carbon Management Plan (CMP) in 2002, a large local authority in the central belt has been committed towards being an increasingly sustainable organisation, through consistently reducing its carbon footprint.

In 2014, following on from the successes and challenges of the previous two CMPs, the Council's Carbon Management Plan 2014/15 – 2019/20 was launched; setting out an ambitious target for the Council to reduce its energy consumption and carbon emissions over its 5-year span.

In meeting this increasingly ambitious target, the Council's Energy Management Unit (EMU) were required to maximise savings and demonstrate best value through a best practice approach to carbon management. One of the key components of this was the development of an innovative Monitoring and Targeting (M&T) System.

The Council have long utilised an M&T system to provide the EMU with an understanding of energy consumption in its 260 plus public buildings. However, the M&T system was developed to set the 2012/13 baseline year as a reference point to compare future energy consumption, on a site-by-site basis, against.

In order to meet the CMP target and follow its objective to create a culture of awareness across the organisation, The Energy Management Unit introduced individual consumption targets for gas and electricity within its public buildings. These targets were tailored to each property; based on previous year's energy data and adjusted to reflect any building improvements which had been made. As targets were individual and bespoke, building energy consumption should, theoretically, have always been less than or equal to the target.

To ensure that a measured reduction in energy consumption was achieved, energy performance data against these targets was regularly communicated from the Energy Management Unit to Head Teachers,

Building Managers and Janitorial Staff. This proactive approach to using behaviour change to support energy savings was realised in the form of an Energy Officer conducting formal twice-yearly meetings. This was followed up with supplementary ad-hoc visits to each public building to discuss and explain consumption performance against their targets; identify energy saving measures and provide help and advice to enable individual properties meet their targets.

What was the challenge to be addressed?

Energy use in buildings is by far the most significant source of the Council's carbon emissions. Therefore, achieving a carbon reduction in-line with the CMP target necessitated a significant decrease in total energy consumption within council buildings.

What were the key drivers?

One of the headline figures of the third CMP was a carbon reduction target, related to energy and water use in its public buildings, of 15% of the 2012/13 financial year's emissions by 2019/20. The carbon emissions in the 2012/13 baseline year were 29,114 tonnes CO₂e, meaning that annual carbon emissions in 2019/20 would need to fall in line with, or below, 24,755 tonnes CO₂e.

Education and behaviour change: the understanding and buy-in of staff across the Council were seen as critical to the success of the Carbon Management Plan.

A potentially low/no cost intervention which, if successful, could result in significant savings.

What was achieved?

- > Carbon savings – CMP target achieved and surpassed – 21.4t CO₂
- > Head Teachers and Building Managers were able to see a reduction in on-site energy consumption.

Key lessons learned for sharing?

Meeting regularly with Head Teachers, Building Managers and Janitors etc. provided very useful “anecdotal” information which would likely have been missed otherwise. This included information on both poor performing sites and exemplar sites.

Having a consistent point of contact from the EMU meant that schools and other public buildings were more likely to reach out and highlight energy management issues in a timely manner, outside of the 6 monthly scheduled visits.

Bespoke energy consumption targets, against which to compare their energy performance, gave public building management and staff a tangible and achievable point to strive against for in energy reduction. Regular follow up meetings to discuss whether, or not, reduction against this target had been achieved also proved useful.

A consistent comment from these meetings, was that if the EMU were to be successful in achieving a reduction in energy consumption across the public building estate, this would need to be incentivised – either in the form of financial reimbursement from the savings made as a result of reduced energy use, or through competition with other public buildings.