

Overview

Buckinghamshire County Council (BCC) has a target to reduce carbon emissions by 10 per cent by 2017* to deliver improvements to its key public buildings. The project demonstrates the Council's commitment to energy efficiency and achieving value for money for the public sector.

BCC has used the National Re:fit Programme to deliver an ambitious programme for energy efficiency across its estates. This flagship project launches the delivery of the Buckinghamshire Energy Strategy. While the Council has already made strong progress towards its carbon targets, Re:fit has allowed it to achieve economies of scale and bring improved efficiency to its smallest buildings under a guaranteed savings programme.

The Council, supported by Local Partnerships, ran a mini-competition under the Re:fit programme and Engie was identified as preferred bidder in February 2015. Engie completed Investment Grade Proposals for the first phase of 18 selected buildings at the end of summer 2015 and installation is planned for spring 2016.

Local Partnerships' team assisted throughout the process, providing a review of technical and commercial documentation to help gain approval to install the selected measures

One of the buildings identified for improvements in spring 2016 is the Aylesbury Highways Depot, which supports the Council's highways division. It's a parking and storage area for council vehicles and support equipment.

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| Project: | Aylesbury Highways Depot | |
| Savings: | £1,978 energy spend reduction per annum (7.9%) Energy savings of 37,121kWh (10.3%) | Around 12.8 tonnes of CO ₂ per annum saved |
| Value: | £13,385 investment of retrofit works | Simple payback of 6.8 years |
| Timescale: | Installation commencing in spring 2016 | |



"Local Partnerships' professional support has helped Buckinghamshire County Council through the project's internal approval stages to deliver a tailored approach. It has provided technical expertise to review the differing approaches offered for energy reduction and to select the most appropriate service provider for the Council."

Rachel Toresen-Owuor, Energy Manager

*2011-12 baseline in the BCC Carbon Management Plan

Summary of Energy Conservation Measures (ECMs)

The Council's Aylesbury Highways Depot project encompasses a number of energy-efficiency measures. These are listed below.

Building Management System (BMS) optimisation and monitoring

Issues were identified with the setup of the existing systems and strategy scripts. The building will be set up to operate at optimum energy efficiency and that these optimum conditions persist throughout the payback period.

Cofely will monitor ongoing energy performance through their Remote Intelligence Bureau. This ECM is a great way to ensure that buildings operate as efficiently as possible throughout their lifetime and that any issues are identified and actioned quickly.

Time clocks

Installing time clocks in electrical "point-of-use" water heaters is an effective way to reduce energy and a number of these units will be installed across the site. This will save energy by reducing electricity used to overcome standing losses when the buildings are unoccupied.

Lighting replacement and control upgrade

The installation of high-efficiency LED lighting will ensure that savings can be made as cost effective as possible by maximising the lifetime of the existing assets.

The proposed LED products have been specified as suitable alternatives to the existing lighting to ensure energy savings and payback criteria are met. This will also ensure that lighting levels are maintained or improved. The lighting installations have been specified on a like-for-like replacement basis.

New passive infrared sensor (PIR) detection lighting controls are being fitted in common and circulation areas, such as toilets, stairwells and corridors. The lighting controls will operate luminaires on an on/off basis only.

Energy efficiency and financial savings through Re:fit

Re:fit is a procurement framework and support service available to all public sector organisations in the UK. Since 2009 it has been helping organisations to deliver "spend-to-save" environmental retrofit projects that both improve their buildings and, importantly, make substantial guaranteed financial savings.

For further information

For more information about the National Re:fit Programme, contact robert.mckinnon@local.gov.uk or phone 07920 702 297.