

MINUS 3% PROJECT IS MAJOR PLUS FOR ENERGY EFFICIENCY

The MINUS 3% project aims to help local authorities improve their energy efficiency. Dublin City Council, one of the partners in the initiative, aims to reduce energy consumption by three per cent per year with an overall target of 33 per cent by 2020.

New proposals from the European Commission will place even more emphasis on local authorities to achieve the highest levels of energy efficiency as Ireland works towards a low-carbon economy.

In June, the Irish-born director of the Directorate-General for Energy, Marie Donnelly, visited Dublin to give details on a new Energy Efficiency Directive towards an energy-smart Europe.

These new proposals aim to step up energy-saving efforts and to create a genuine low-carbon economy by 2050. The new energy efficiency plan will focus on mandatory measures rather than mandatory targets per member state. The directive would make it a legal obligation for the public sector to reduce energy consumption in at least three per cent of public buildings every year.

Dublin's sustainable energy agency Codema has welcomed these new proposals as it complements the work that it has already been doing to help Dublin City Council improve its energy efficiency through the Minus 3% project.

The project is a three-year European initiative led by Codema with the aim of saving three per cent of the city authority's energy consumption per year.

Due to finish later this year, the project has achieved a number of successes for Dublin City Council, most notably a nine per cent energy reduction in its Civic Offices building in 2010, compared to the previous year.

'SWITCH OFF' CAMPAIGN

Some of the actions carried out in Dublin City Council under the Minus 3% project included a 'Switch Off' campaign, an



Pictured at the 'Minus 3% All-Island Conference' on 25 November 2010 (l-r): Dublin city manager John Tierney; Codema director Gerry Wardell and former Lord Mayor of Dublin Gerry Breen. (Pic: Jason Clarke Photography)

eco-driving campaign, virtualisation of IT servers and the upgrading of the lighting system in Civic Offices.

The 'Switch Off' campaign focused on the behavioural element of energy-saving and encouraged staff to switch off lights and appliances such as computers, photocopiers and printers when not in use. The campaign achieved observational energy savings of 23 per cent (the equivalent to saving over €11,000 annually) and earned Codema a nomination for the ManagEnergy Local Energy Action Award during EU Sustainable Energy Week earlier this year.

The attitude among staff towards saving energy appears very healthy; a survey carried out by Codema showed that 97 per cent of staff members agreed that the 'Switch Off' campaign has had a positive effect in

raising energy-awareness throughout the local authority.

This behavioural strand has also had similarly positive results within the council's fleet services – Codema worked with Mick Kinahan from DCC's fleet management department on an eco-driving campaign in late 2009.

The aim was to get all of the fleet staff to adopt more eco-friendly methods into their everyday driving, such as gentle braking and checking tyre pressure. The campaign showed that a three per cent reduction in the carbon footprint of fleet drivers could save 280 tonnes of CO₂ each year, the equivalent to €91,000 annually.

SERVER VIRTUALISATION

However, it's not just the behavioural

campaigns that are having an impact. In the last three years, Dublin City Council's Information Services Department has been working to virtualise its servers to great success.

Server virtualisation reduces the amount of physical servers needed, which in turn reduces the amount of energy and cooling required. Approximately fifty per cent of computers in Civic Offices now operate from virtual desktops which use only one tenth of the energy of normal desktop PCs.

This is an ongoing process which has so far reduced power usage by 40 per cent and saved 260 tonnes of CO₂ per year. Upgrades to the lighting system in Civic Offices have also been made, with the replacement of 850 100-watt bulbs with low-energy lighting. Each light that has been replaced has saved 85 watts, which is a saving of almost 160,000 kilowatt hours annually or 96 tonnes of CO₂.

"The MINUS 3% project is about austerity in energy use, in little three per cent steps," says Codema's director Gerry Wardell. "East step is relatively painless but adds up over the years into really big savings for the local authority."

Along with Dublin, there are five other cities involved in the project; Derry, Graz (Austria), Malacky (Slovakia), Maribor (Slovenia) and Teruel (Spain). Despite the many successes achieved over the last three years, the project has not been without its challenges.

All of the partner cities found it difficult to get accurate historical energy consumption data to establish a baseline, particularly where services were outsourced. Even though a generous grant was awarded by the European Commission to carry out low-cost measures through the Intelligent Energy Europe programme, high-cost investment is still needed to achieve energy-savings in the medium to long-term.

LEADING BY EXAMPLE

However, the knowledge that Codema has gained as the project leader over the last three years will be invaluable to Dublin City Council long after the project draws to a close this September.

It has also laid a solid foundation for Dublin City Council to lead by example. To meet these binding measures set out in the new Directive, Minus 3% has given



Codema's Aine McCarthy explains the 'Pedal Power' concept to Dublin City Council staff member Paul Heffernan, pictured on Codema's energy bike as part of the Energy Day in Civic Offices in April 2011.

Codema the opportunity to develop a much better understanding of where energy is being consumed, which will in turn make it easier to identify cost and energy savings in the future.

It has also helped to prioritise energy-saving projects in Dublin City Council and to build on energy awareness among staff

that will hopefully have a trickle-down effect in the home.

The creation of ESCOs (Energy Service Performance Contracting) may also provide business and employment opportunities, achieve better energy efficiency and may also provide a solution for cities to invest in energy-saving projects where money is not



A live energy screen, launched in Dublin City Council's Civic Offices earlier this year, will be further developed to give staff more of an insight into the energy consumption of the building.

I Need To
Save My Energy.
Switch Me Off.

Switch
off

Equipment costs thousands of
Euro every year if not switched off.

Save Money • Save Energy • Switch Off

available.

Currently Codema is in the process of working on a number of activities that will help to boost energy efficiency in Dublin City Council even further. It is currently carrying out audits of council buildings such as fire stations and libraries, along with an extensive audit of the council's fleet vehicles. A live energy screen, launched in Civic Offices, earlier this year will be further developed to give staff more of an insight into the energy consumption of the building.

LIVE ENERGY SCREEN

The screen currently shows live electricity consumption of the building using 3D graphics that react to real-time information. Over the coming months this data will expand to include gas and water, along with graphs that will show a weekly comparison and allow staff to easily identify whether energy consumption has risen or fallen in the building.

Codema hopes that the screen will help staff to make the connection between their own individual energy use and the

overall energy demand of the building. The success of the energy screen will be hugely dependent on the interest of the council staff, so Codema carried out research recently to see how staff could be easily engaged.

The feedback indicated an overwhelming desire for information on a floor-by-floor or department basis, so that staff could be aware of how much energy their own office is consuming. Codema plans to develop the screen on this basis; ideally with sub-metering of departments and to create an energy 'league-table', therefore creating a healthy rivalry among staff when it comes to saving energy.

GREENOV PROJECT

As one European project finishes for Codema, another is in full flourish and offers equally good benefits to the local authorities and the green economy in general.

The Greenov project, funded through the INTERREG IVB programme, will focus on job creation for Irish SMEs in the area of sustainable renovation. It will help companies to understand the public procurement process better and to tender for energy efficiency works.

As the new Directive will make energy efficiency a condition of all goods and services the public sector buys, Greenov creates a win-win situation for both the local authority and the supplier.

"The GREENOV project is about jobs in the energy area. Codema plays its role in supporting the national job creation effort while also improving the energy rating of Dublin's buildings," explains Wardell.

The final conference of the Minus 3% project will take place on 21 September in Maribor, Slovenia. Funding was awarded for the project by the European Commission through the Intelligent Energy Europe programme. Visit www.minus3.org for more details. Codema acts as adviser to Dublin's four local authorities. For more information visit www.codema.ie