

Case Study:

A Regional Development Agency

Company Overview: A Regional Development Agency (RDA) which combines an economic development role with community, cultural and Language-development activities. The RDA sponsors hundreds of companies that employ approximately 9,000 people.

It is estimated that the RDA building stock of approximately 300 buildings, comprising 300,000 m² of floor area, has CO₂ emissions of 44,089 tonnes/yr and energy costs of €12.5 million/yr. The buildings are mostly on the Atlantic seaboard and are occupied by RDA staff, community organisations or companies.

The Project

In 2008, a three-year pilot project with Enerit software was implemented, involving five buildings occupied by agency staff, and 10 buildings occupied by community organisations or SMEs.

Project targets aimed to reduce energy consumption and carbon dioxide emissions for these 15 buildings by 4% consecutively each year, i.e. **12% by Year 3**.

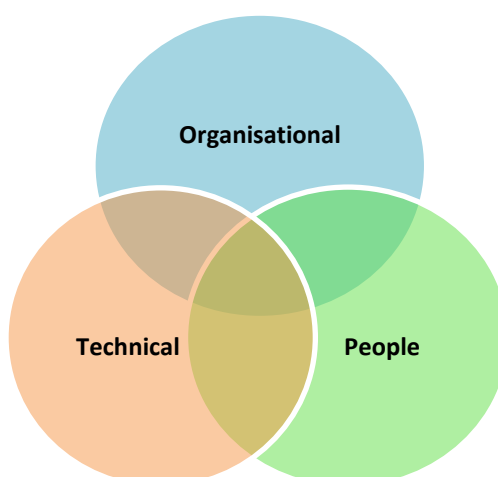
The Challenges

The unique challenges in dealing with the RDA are:

- The Buildings are widely dispersed across a wide geographic area.
- Many buildings and units are small, and it is not economically justifiable to have local energy expertise employed at each location.
- Expensive to have energy consultants make on-site visits due to the location of sites.
- Problems in converting obsolete factory buildings to comfortable and energy-efficient offices.

The team set out to overcome these challenges by demonstrating how a systematic energy management approach combined with advanced web based IT systems can be used.

Key elements of energy management



This case study details the actions and the energy saving results in all buildings over the initial 2.5 years of the implementation. The results of which clearly show the long term energy efficiencies and cost savings that can be made using Enerit software.

The properties were built between 1970 and 2008. All the office buildings are a combination of open plan areas, private offices, training facilities and meeting rooms.

Based on 2007 costs electricity comprised 63% of total costs.

Work carried out- A systemised set of actions were taken, involving the following steps:

1. Identified the lead manager, local energy champion and key energy staff at the building.
2. Local energy champion and key energy staff completed energy consultant's pre-audit questionnaire.
3. Energy bills were collated for previous three years to identify energy consumption trends.
4. Energy Bureau Portal configured with the building details and usernames and passwords set up for the energy champion and key staff.
5. Energy audit conducted and energy awareness training provided for all staff by energy consultant – customised to energy requirements and operation of each building.
6. Energy consultant initiation meeting with energy champion and key staff, initial action list based on feedback from audit and from energy awareness training.
7. Energy analysis, energy audit report and action plan completed by energy consultant.
8. Follow-up meeting with energy consultant to agree further actions, responsibilities and target dates
9. Training on use of system, during which gathered data is also entered.
10. Use of the action management tracking system to drive actions and workflow through email alerts, automated reminders and alarms, management.
11. Using the Energy Bureau Portal reports are displayed on the intranet.

Technical Matters- sample energy-saving actions:

- ✔ Removing or disabling light fittings in areas with excessive lighting
- ✔ Replacing incandescent and halogen lights with more energy-efficient CFLs
- ✔ Installing 7-day timers on office equipment (photocopiers, printers)
- ✔ Installing 7 day time clocks on water boilers
- ✔ Installing motion sensors or daylight sensors in toilets and other appropriate areas
- ✔ Modifying settings on hot water heating immersion coil controls
- ✔ Ground source heat pumps for under-floor heating system: adjusting time clock settings
- ✔ Switching off immersion electric heating to allow the oil heating to take over domestic water heating
- ✔ Reducing heating in unoccupied offices.



Installing 7 day time clocks on office equipment

Human Behaviour Change- Sample energy saving actions:

- ✔ Awareness training for all staff
- ✔ Access to Enerit system's energy-saving reports for staff motivation
- ✔ League tables on intranet showing energy performance of buildings
- ✔ Eliminating electric space heaters which were informally introduced to the building
- ✔ Switching lights off in areas at times when sunlight is sufficient
- ✔ Switching off banks of light in zones of open space areas as each zone empties
- ✔ Switching lights off when employees depart, i.e. not leaving them on for the cleaners
- ✔ Audit checks of PCs and monitors left on at night and weekends
- ✔ Follow-up instruction to staff groupings who are "switching off" less
- ✔ Labelling light switch panels to encourage staff to only switch on lights that are required
- ✔ Staff competition, automated suggestion scheme on intranet, energy saving posters etc.
- ✔ Email reminders to staff to switch off computers, monitors and other equipment.



Labelling light switch panels to encourage staff to only switch lights on that are required

Organisational Improvement and Action management

In the first 2.5 years of the project, 487 energy saving actions were identified. **450 actions** were already **completed** across all 15 sites with 54 people involved in taking energy saving actions.

Overall results

Between 2007 and 2009, electricity consumption for the entire building stock had dropped by **18%**. This was well beyond expectations – the original target was to achieve this reduction over four years.

Electrical energy reduction across individual buildings ranged from **10%** to **29%**.

The use of Enerit software is helping this agency meet its energy saving targets.

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