Busnes Cymdeithasol Cymru
Social Business Wales

Case Study: Promo Cymru / Ebbw Vale Institute

Llywodraeth Cymru
Welsh Government

Age of building: Over 150 years

Construction: Brick walls, slate roof

Key features: LED lighting retrofit, renovated roofs circa 2006, ground source heat pump heating system

Measures Installed	Benefits and Savings
LED lighting retrofit	£1,500 annual saving
Motion sensors installed in toilets, corridors, stairways	10,529 kWh annual electricity saving
£5,000 installation cost- ~3 year return on investment	5.3 tCO_2e (tonnes of carbon dioxide equivalent) annual saving

About the client

PromoCymru operate the Ebbw Vale Institute (EVI), an arts and cultural hub in the centre of Ebbw Vale. The institute was renovated after several years standing empty and now houses an office, café, and studios for dance, multimedia and music recording. A performance hall hosts regular live shows and music events.

After reaching out to Welsh Government for help with identifying potential energy savings, EVI were issued with a free report detailing which projects may be suitable for them and what the savings could be.

The key opportunity highlighted was to upgrade from old inefficient lighting to high efficiency LEDs in key areas (see next page), and a number of other options were also provided. The institute chose to insulate pipework to reduce heat losses, carry out measures to reduce water usage, and carry out a behaviour campaign to encourage staff and visitors to reduce their energy use.

It was also highlighted that there is potential for renewable power generation on site. Although the report revealed that the roof structure was not deemed to be suitable for supporting solar panels, there are early stage plans in place to look at installing solar panels on a new pagoda to be built external to the building. This could provide up to a third of the electricity needed for the site!

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What they did – LED Lighting

It was estimated that the cost of installing LEDs at the Ebbw Vale Institute would payback within three years, through energy bill savings. This allowed the building manager to make a sound business case to senior management to secure the installation costs as an investment.

The picture below highlights some of the 58W (Watt) 5ft T8 fluorescent tubes previously used, but these have since been replaced with 25W LED T8 tubes. The picture on the previous page shows interior café lighting (40W incandescent lamps) which have been changed to 8W LED lamps.

In addition to the lamp changes, motion sensor controls have been added to corridors, toilets and stairways. This has further reduced running costs for the organisation by turning lights off when they are not needed.

For more information about how you can save energy at your organisation go to:

www.wcva.org.uk/environetcymru

or

www.carbontrust.com

What is LED lighting?

LED stands for 'Light Emitting Diode' – a semiconductor device that converts electricity into light.
They are highly energy efficient and long-lasting compared to other types of light such as fluorescents or halogens, and typically use up to 80% less energy.
Their long life also means that maintenance savings can be made as the lamps don't have to be changed as often.
Most LEDs last up to 50,000 hours (nearly 6 years continuously on) but some products can last even longer than this.
LEDs now come in a range of colour temperatures from cool blue tones to warm oranges so can be designed to work well in many different areas.
Lots of traditional bulbs can be very simply replaced with LED alternatives.

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