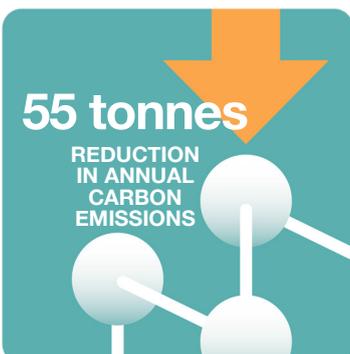
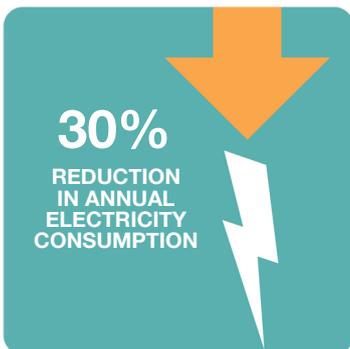
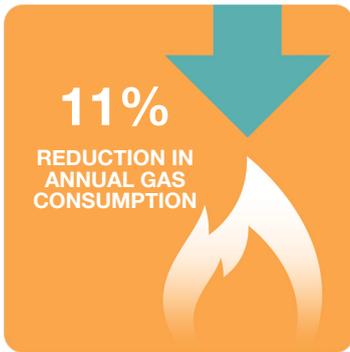


## Bro Ddyfi Leisure Centre Freedom Leisure Powys



Working with Leisure Energy, Freedom Leisure in partnership with Powys County Council, **reduced their annual gas and electricity consumption** at Bro Ddyfi Leisure Centre with a payback period of **5 years**.

### Facilities

- 25m Main Pool & Flume
- Sports Hall
- Bowls Hall
- Fitness Suite
- Spin Studio
- Meeting Rooms

### Our approach

Leisure Energy examined the whole life cost implications of the proposed improvements from the outset. This enabled us to demonstrate a return on investment to Freedom Leisure and Powys County Council – modelling the capital cost of improvements against maintenance.

### BRO DDYFI LEISURE CENTRE ENERGY AUDIT

- Established baseline utilities consumption
- Identified potential Energy Conservation Measures (ECMs)
- Quantified ECM annual energy and utility savings
- Prepared costed turnkey ECM proposals
- Reviewed and confirmed the investment criteria
- Full turnkey, project managed ECM installations
- Full training and handover



Project value  
**£195,226**

Annual savings  
**£39,348**

Annual electricity savings  
**106,714 kWh (30%)**

Annual gas savings  
**134,824 kWh (11%)**

Annual CO<sub>2</sub> savings  
**55 tonnes**



## Project summary

Leisure Energy's audit recommended that Bro Ddyfi Leisure Centre carry out a suite of interdependent works. These were completed for a total sum of £195,226 entailing a non-adjusted payback of 5 years.

### What we did

- Replaced air handling unit
- Installed low energy lighting
- Installed low flow showers

### Pool hall and changing room air handling unit (AHU)

The existing AHUs serving the Pool Hall and Pool Changing Rooms had reached the end of their useful lives. A new system was installed with a number of energy conservation features, including:

- Fan modulation based on pool occupancy
- Two-stage heat recovery (high efficiency plate heat exchanger recuperator and fully modulating, dynamic air mixing section)
- Minimal energy, unoccupied 'set back' operation mode

These resulted in reduced energy costs and improved operational control.

### Low Flow Showers

New high efficiency shower units were installed that deliver lower flow rates without comprising quality. They provide an optimal mix of water and air which is accelerated using a jet-type nozzle which creates a spray force that has 2.4 times the power of a standard mains pressured shower.

- Installed new pool cover
- New plant room insulation
- Reviewed BMS controls

### Low energy pool lighting and sensors

We installed specialist low energy lighting in the pool hall, sports and squash courts reducing installed electrical loads whilst improving existing illumination levels. 'Intelligent' lighting controls, such as daylight sensing, were used whenever possible.

### Automated pool cover

We installed 3 new, high quality, long life pool covers. These reduce pool water evaporation losses during non-occupied periods, easing the loading on boilers and protecting the building fabric from damaging condensation.

### Plant room insulation

Specialist insulation was added to exposed pipework in the plant room, reducing standing losses and preventing wasted thermal energy. The insulation is fully adjustable and allows for easy access for future maintenance works.

### Building management system (BMS) controls

We reviewed and reconfigured the existing BMS to optimise operational times and set points, thereby reducing periods of wasted energy consumption.

## Who we are

Leisure Energy is an energy saving consultancy, working with leisure companies and their facilities to understand their energy usage and manage it more efficiently. Our unique approach enables them to monitor, reduce and control consumption through both investment and energy saving measures.

We are now pleased to be able to offer a fully funded solution to our clients, which enables the installation cost to be spread over a fixed term period and paid for from the associated energy savings, rather than upfront CAPEX payments.

## Our client

Freedom Leisure, a not for profit leisure trust, manages leisure and cultural facilities on behalf of local authorities across the UK. Their key aims are to increase participation whilst reducing their carbon foot print combined with improving the centres environmental conditions.

## Contact us

For more information on how we can save you money, contact Neil Bland:

Email: [info@leisure-energy.com](mailto:info@leisure-energy.com)

Mob: 07741891711

Website: [leisure-energy.com](http://leisure-energy.com)