

## Energy Saving Projects in Chippenham

The following are examples of energy projects in Chippenham. The Carbon Management Plan has enabled investment across the county in a range of projects on the council's own buildings and estate. As part of this large programme the following 'invest to save' projects have been implemented.

### **Invest to save projects**

#### Olympiad Leisure Centre - combined heat and power (CHP)

This project installed technology to generate both electrical power and heat for the leisure centre. The CHP unit is situated in the main plant room of the building. It has dramatically reduced the cost of running the leisure centre by generating electricity for use on site, instead of drawing it from the National Grid. Heat is a side product of this process and is used to heat the pool water. This installation has saved approximately £85,000 over the past three years of operation. This is significant when compared to a current total annual energy bill of approximately £152,117.

#### Olympiad Leisure Centre - lighting upgrades

A series of lighting upgrades have been implemented at the Olympiad Leisure Centre. These include replacing lighting in the pool with modern and more energy efficient equivalents. The new lights have the benefit of reducing glare and provide a brighter environment with reduced energy consumption.

In some areas occupancy sensor controls have also been installed to ensure that lights are not left on in unoccupied spaces.

#### Chippenham History Centre - voltage optimisation

Voltage optimisation reduces the electricity voltage as it comes into the site from the grid. This provides a slightly lower output voltage that is in the range needed by electrical appliances and allows them to run more efficiently. As a result of installing this technology electrical consumption at the history centre has been reduced.

<b>Project</b>	<b>Annual saving (£)</b>	<b>Annual CO<sub>2</sub> saving</b>	<b>Year completed</b>	<b>*Total savings to date (£)</b>
Chippenham Olympiad Leisure Centre – combined heat and power	£28,454	119 tonnes	2012	£85,362
Chippenham Olympiad Leisure Centre – pool lighting upgrade	£1,207	7 tonnes	2014	£1,207
Chippenham Olympiad Leisure Centre – variable speed drive on pool pump	£1,165	7 tonnes	2013	£2,330
Chippenham Monkton Park – solar PV installation	£10,954	36 tonnes	2014	£10,954
Chippenham Emery Gate Multi Story Car	£7,088	38 tonnes	2011	£28,353

Park– lighting upgrade				
Chippenham History Centre – voltage optimisation	£6,115	40 tonnes	2012	£18,345
Chippenham Ivy Lane Primary – lighting upgrade & sensors	£165	1 tonne	2012	£495
Chippenham Ivy Lane Primary – insulation and hall lighting upgrade	£707	6 tonnes	2012	£1,414
Chippenham Ivy Lane Primary – replacement doors	£400	1 tonne	2013	£800
Kington St Michael Primary School – boiler optimisation control	£200	0.5 tonne	2013	£400

\*Represent estimated full year savings since completion

In addition, a solar photovoltaic installation at the History Centre in Chippenham is nearing completion.

#### Biomass boiler installation programme

Between 2013 and 2014 the council invested in an ambitious programme of biomass boiler installations. These have predominantly taken place in schools which were previously heated by oil. In total thirteen boilers have been converted.

Hardenhuish School in Chippenham was among the schools to benefit. The new boiler runs on wood fuel pellets. This fuel is sustainably sourced in the UK, thereby contributing to local energy resilience and carbon reduction.

The installation is also generating income through the government's 'Renewable Heat Incentive' which pays a tariff back to the council for the next 20 years of operation.

Stanton St. Quintin Primary School was the first school in the county to utilise biomass when it converted its oil heating to a biomass system in 2008. The school has shared its experience in a case study to help other schools understand their heating fuel options and how they could benefit from converting to biomass.

[www.wiltshire.gov.uk/get-biomass-boiler-case-study-ssq.pdf](http://www.wiltshire.gov.uk/get-biomass-boiler-case-study-ssq.pdf)

#### **Other projects**

##### Schools programme

Through the EU funded SEACS (sustainable energy across the common space) programme, an energy ambassador was employed by Wiltshire Council to work with schools for 18 months, from late 2012 to early 2014.

Hardenhuish School was one of nine schools that received support from the SEACS ambassador. Pupils starred in a film which explained how to keep track of energy usage and keep costs down. The school has progressed work on its energy use for a number of years

(installing solar PV and a wind turbine in 2008) and has been awarded the ECO-Schools Green Flag Award in recognition of its sustainability projects.

In 2011 the school began work with Wiltshire Council and the Severn Wye Energy Agency on the YEP (Young Energy People) project. This saw the formation of a student led energy management team. These pupils have audited the site and presented their findings, making recommendations to the school's governors. A number of heating and lighting measures have been implemented as a result.

St Peter's Academy also participated in the SEACS project. Pupils at the school joined others in Wiltshire to make posters reminding people to switch things off; as part of their campaign of awareness raising and energy reduction.

#### Collaborative low carbon schools service

The Collaborative Low Carbon Schools Service was a programme developed by the Carbon Trust to support local authorities and schools to work together to achieve effective school carbon management. Wiltshire Council worked in partnership with ten local schools to help reduce their carbon emissions and energy costs.

Stanton St. Quintin Community Primary School was among those selected to work on a pilot project in 2011/12. The school had an energy audit undertaken and implemented a number of behavioural changes to reduce energy use. Simple measures such as labelling and switching off lights and equipment were shown to be successful in reducing energy use and got the whole school involved.

#### Electric vehicle charging points

Last year Wiltshire Council successfully bid for a £225,000 grant from the Office of Low Emission Vehicles (OLEV) to install rapid charging units at key sites around the county. Chippenham was one of the strategic sites selected. The charge point is located in Gladstone Road Car Park and can provide a 20-30 minute recharge for an electric vehicle. Charging point locations throughout the county can be found at [www.openchargemap.org](http://www.openchargemap.org).

### **Other local initiatives and groups**

#### Chippenham and Villages Environmentalists (CAVE)

CAVE is a group of volunteers with an interest in protecting the environment and improving the local area. Over a number of years they have delivered projects and supported the environmental objectives of the Chippenham & Villages Area Partnership community plan. These have included a Plastic Bag Amnesty, a campaign to help Chippenham get Fairtrade Town Status and a thermal imaging project offering targeted areas the opportunity to have a thermal image taken of their home, with follow up advice on energy saving measures.

[www.chap-partnership.co.uk/chippenham-wiltshire-environment/](http://www.chap-partnership.co.uk/chippenham-wiltshire-environment/)