

REPORT OF DIRECTOR OF PLANNING

SUBJECT:
PCNPA AND PROGRESS ON RENEWABLE ENERGY INSTALLATIONS

Purpose of Report

To provide members with an overview as to how the provision of renewable energy installations is progressing on the Authority's land and buildings, also to demonstrate consideration of the installation of renewable energy on Park property as a potential income generator.

Background

The European and statutory UK 2050 target set the wider context for the decarbonisation of our economy – with both committing to a reduction in overall greenhouse gas emissions by at least 80% by 2050. This means that there is now a clear roadmap in place for decarbonisation, with energy efficiency being a key driver for this, and with European interim targets for 2020 and 2030 to guide planning towards the aim of decreasing emissions by at least 80% by 2050 (below 1990 levels).

On 23 February 2016 the Natural Resources Minister: Carl Sargeant announced a [new energy efficiency strategy](#) setting out a clear direction for the next 10 years (2016 – 2026) and outlines how we can support action across all sectors

Launching the strategy Carl Sargeant said:

“The energy market is undergoing major transformation both within Wales and further afield. Ensuring that all sectors, households, businesses and our public sector use less energy is fundamental in our ability to respond to these changes.

“The strategy acknowledges that different approaches are appropriate for different groups and seeks to ensure that a range of financial support mechanisms are available.

“This strategy sets out the actions that we all need to pursue to deliver real benefits for our society, our economy and our environment. It is critical for the long term well-being of people in Wales, and will confirm Wales as a beacon of best practice in sustainable development.”

Supporting the launch of the energy efficiency strategy, the Finance Minister Jane Hutt has announced the creation of a new Invest to Save Green Growth Fund with over £9m being invested in projects to help reduce carbon emissions. The new national initiative will build on the success of the 'Invest to Save' scheme and offer repayable grants for the Welsh public sector to generate energy and cash efficiencies

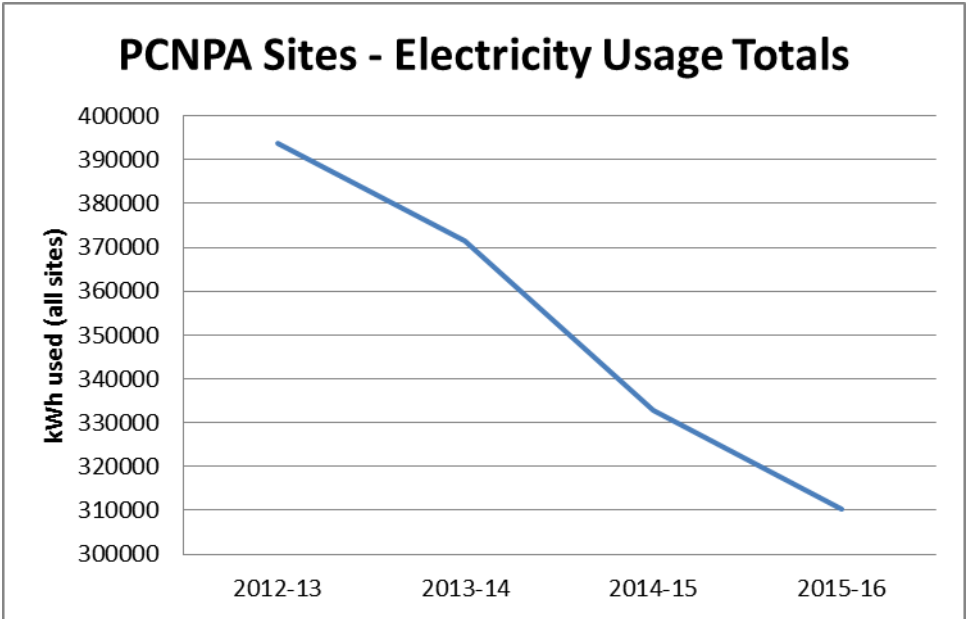
The Authority is committed to minimising negative impacts on the environment and encouraging those working with us to do the same. In carrying out its duties the Authority strives to foster the principles of sustainable development by monitoring and reducing our energy usage and using renewable forms of heat and power where when opportunity arises.

In view of our responsibility to deliver energy efficient building and to meet targets the “Greening up of Park Buildings” programme was launched c. 4 years ago, this follows a three stage approach :-

- 1) “Efficiency First” – Establish a sound monitoring system of energy usage to establish baseline data. Carry out Environmental Audits on each of our buildings to highlight areas of high energy use and investigate improvements / reduction measures.
- 2) “Quick wins” – Lamp replacement, controls adjustment, staff awareness etc.
- 3) Installation of Renewable Energy Technologies – Feasibility into the installation of Biomass, PV, Solar, Wind etc.

Energy Consumption

From 2012/13 the Authority has maintained a comprehensive monitoring regime (Efficiency first) set up to analyse usage trends and to monitor reduction targets. As an example Electricity use in the Authority’s buildings can be seen below :-



Measures introduced to the buildings have led to an electricity reduction of :-

2012/13 to 2013/14	5.69%
2013/14 to 2014/15	10.35%
2014/15 to 2015/16	6.85%

Total Electricity reduction over the period (4 years) = c. 21%

This reduction is due to the “efficiency” measures adopted including PV installation (Llanion), LED lamp replacement (Llanion Green room, Oriel Y Parc display cabinets), window replacement (Llanion) and raising staff awareness etc. Energy reduction continues to be rolled out across all of the Authority’s property to enable continued reductions.

Llanion Park H.Q. – Display Energy Certificate

In accordance with obligations that came into force for buildings occupied by a public authority where, from 9 July 2015, the total useful floor area of the building exceeds 250m² and which is frequently visited by the public. DEC’s were introduced to raise public awareness of energy use and to inform visitors to public buildings about the energy use of a building.

DECs provide an energy rating of the building from A to G (very much like the energy rating of a fridge), where A is very efficient and G is the least efficient and are based on the actual amount of metered energy used by the building over the last 12 months within the validity period of the DEC.

Efficiency measures and renewable technologies installed at Llanion have resulted in the following improvement over the last 7 years :-

2008	59	Rating C
2015	40	Rating B (current)

Typical rating for the property - 100

For a property built in the early 1900’s the rating far exceeds the expected rating for a property of this type and age. This is an important example of sympathetic retrofit of energy efficiency measures and technologies; the DEC is on display in Reception.

Sustainable Technologies

In addition to energy efficiency measures to our buildings the Authority looked at the feasibility of installation of sustainable technologies.

PV

In 2012 a study was commissioned to investigate the installation of PV to the Authority’s buildings and land. The report concluded that 3 sites had met the criteria (south facing, access to grid etc.) for further investigation these were :-

Small – Llanion HQ (Roof mounted)

Medium – Cilrhedyn Woodland Centre (Roof mounted)

Large – St. Davids Airfield (Ground mounted)

Llanion HQ – Following the report the project was approved and installed at Llanion H.Q. The installation benefits from the government “Feed in Tariff” (FIT) scheme and to date this installation has generated c. £1,728.28 of subsidy to date (payments guaranteed for 20 years). Based on average receipt of c £1,000 per annum the payback for the installation will be met in 9 years as predicted.

Cilrhedyn – The installation of PV panels to the roof of this building was put on hold until the future of Cilrhedyn was determined.

St. Davids Airfield - Due to the size of this proposal it was agreed to engage consultants to carry out a feasibility study of the site. The consultants proposed 3 schemes which were evaluated by CMT.

St Davids Airfield currently offers an extensive opportunity for walking and biodiversity. The area within PCNPA ownership has been extensively managed to allow for the juxtaposition of these two uses. Any PV scheme needed to be over a considerable area to be anywhere near economic. (At one point there was the possibility of some of the grid connection costs being shared with a similar proposal at Brawdy). Officers did extensive site visits and calculated that any proposal would be seen in long, medium and short range views. The long range view of the site would be particularly intrusive and significantly out of character with the landscape character. The necessary grouping of PVs not only on the runway also reduced the conservation quality of the area. It was therefore considered that at this time, the negative impacts of such a proposal would be detrimental to the Park’s objectives, and counter to its primary duties and therefore this scheme has not been progressed.

We also have operational PV's at Oriel Y Parc.

Biomass

A new biomass system has been installed at Llanion HQ at a cost of c. £60,000 to replace the former biomass boiler. The boiler provides heating to the HQ offices and NRW (now vacant) in the adjacent building. Although installed with only Authority capital the heat generated by the system is subsidised by the Government under the “Renewable Heat Incentive” (RHI) scheme, of which the payments are guaranteed for 20 years.

Since it's installation in July 2012, this Authority has received a total of £44,590 of subsidy for the heat generated by the system. Based on the average receipt of c. £9,000 per annum the payback for the installation will be met in just under 6 years as predicted.

More recently a new biomass boiler has been installed at Castell Henllys which has resulted in significant carbon and cost savings (c. £1,500 per annum) due to the removal of the former LPG gas fired heating system. RHI for this boiler is currently being investigated.

Wind power

Following an initial review of potential sites this technology has not been fully explored due to the impact and sensitivity of siting turbines within the National Park.

EV Points

An electric vehicle charging point has recently been installed at Oriel Y Parc. It was agreed that the Authority should provide access to electricity for charging vehicles at their main centres, the points will add to a growing network across Wales. A further charging point is planned to be installed at Llanion H.Q in the near future.

Conclusion

The Park Authority continues to make significant gains establishing renewal energy production within and on its own land and buildings and has also given a great deal of consideration to energy efficiency in accord with the aims and objectives of National and European legislation.

Recommendation

Members to note the report and confirm agreement with approach to date

Background Documents

None

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