

## **REPORT TO SCRUTINY - RESOURCES**

**Date of Meeting: 16 September 2015**

**Report of: Corporate Manager Property**

**Title: An Energy Neutral Council – A Renewables and Energy Efficiency Programme Update**

### **Is this a Key Decision?**

No

### **Is this an Executive or Council Function?**

n/a

#### **1. What is the report about?**

This report provides an update on the Renewables and Energy Efficiency Programme work that has been undertaken following year one of the programme and since the previous report to Scrutiny Committee Resources on 18 March 2015.

#### **2. Recommendations:**

That Scrutiny Committee Resources note the progress made to date, the delivery of year two of the Renewables and Energy Efficiency Programme and feasibility work planned for year three.

#### **3. Reasons for the recommendation:**

This is an update report to Scrutiny Committee Resources

#### **4. What are the resource implications including non financial resources.**

The programme is delivered by the Energy Team, made up of two full-time posts and this level of resource continues to be supported.

All key projects are in delivery; the successful achievement of the programme has been a result of the team's commitment and support given by others in the Corporate Property service. Some projects have suffered delayed due to factor's outside of the team's control, such as the need to engage external services such as engineering and by the fact that the City Council's procurement function is not yet fully developed.

Development of an Energy Strategy, forward planning and further feasibility work, as well as to the day to day energy management work, has been impeded by the sheer volume of day to day project management and delivery of large projects. We are exploring the possibility of securing some additional resource to assist in addressing these capacity issues.

In terms of the financial benefits of the programme, actual performance of previous PV schemes and savings made as a result of the early work carried out by the Energy Team is set out in table format at the end of this report. The table also lists new savings that will be secured at the end of this financial year (31 March 2016). Income from energy savings and FIT payments/export to the grid, have exceeded expectation and the returns over the 20 year investment period are higher than projected. As new schemes within

the programme are rolled out, it is anticipated that they will continue to deliver similar energy savings and income generation.

**5. Section 151 Officer comments:**

The project continues to have a positive impact on the Council's budget position. The savings set out in the report have been included in the Council's budget and have reduced the need for savings that impact on frontline services.

**6. What are the legal aspects?**

There are no issues to raise on the content of this report.

**7. Monitoring Officer comments:**

There are no issues to raise on the content of this report

**8. Report details:**

The report to Scrutiny Committee Resources on 18 March September 2015 updated the Committee on the progress of year one elements of the Renewables and Energy Efficiency Programme. This report is intended to provide a summary of work completed in year one, work planned and projects currently underway in year two. A brief comment will be made on each individual project and further feasibility work planned for 2016/17:

LED Bulb replacement – Mary Arches, Harlequins and Cathedral & Quay Car Park

LED lighting is a proven energy saving tool, whilst at the same time providing a better standard of lighting, helping to improve safety in the car parks. The lights installed in three city centre car parks, have allowed the Council electricity savings of over £35,000 in the first year of operation, it is expected the same saving will be delivered in year two.

RAMM Solar PV System

Following a long drawn out feasibility process, with many difficult structural issues to overcome, a Solar PV scheme has been installed on the roof of the RAMM. The 26kW array will not only produce energy and carbon savings, but it also serves to ensure the museum will comply with its funding criteria required by the Arts Council.

Phoenix Art Centre Solar PV System

The feasibility of this project has been assessed and the final report advised that a Solar PV installation would not provide sufficient return to the Council.

Car Park Canopy Solar PV Scheme (Mary Arches and John Lewis car park)

Extensive structural engineering and canopy design work resulted in the project start being delayed. Nonetheless the project is now underway and due to complete in October. This scheme is a pioneering initiative and one that will attract much attention, as this is the first carport system of its type in the UK. The two car parks

comprise of 150kW systems each, which will provide for zero carbon car parks during the summer months and together they will deliver an income of over £50,000 per annum. Additionally, it is hoped the covered top decks, previously open, will provide a more attractive parking option, generating increased use and revenue for parking services.

#### Civic Centre LED Lights Replacement Programme

A programme of works began in earnest in October 2014, to combine where possible with planned office relocations, to minimise out of hours work and associated costs. All offices are now complete with only the lift lobbies, Phase II ground floor corridor, and meeting rooms outstanding. The LED lights have been well received, and improve the overall standard of office accommodation. The LED lights provide a more natural light and incorporate better controls; they dim and switch off completely when outside light levels are sufficient. The low wattage energy consumption reduces carbon emissions and will enable the council to cut the Civic Centre's electricity bill by over £32,000 per annum (including for reduced maintenance as a result of extended bulb life).

#### Corn Exchange Solar PV System

Until the long term future of this building is confirmed it is not possible to prepare a business case to support this long term renewable investment.

#### Civic Centre Boiler Replacement

The installation of new gas-fired boilers is in progress and will be complete by the end of September in time for the new heating season. Design work, procurement and specialist engineering advice required, is provided by North Somerset Council. The work also includes for removal of the oil tanks to the rear of the Civic, providing vacant space for alternative use. The efficient boilers and new pumps provide for an annual saving of £28,000, with the removal of oil delivering a significant carbon reduction.

#### Livestock Centre Solar PV Scheme

The project has had to be developed swiftly to ensure the WPD connection offer was not lost in light of the new grid connection restriction, as did the work required for the replacement of the dilapidated roof sheets. The PV array provides a sound business case and a return of £2 million over a twenty five year period. The proposed 1.5MW array is currently out to tender and installation is to be completed before 31 December 2015.

#### Quay Climbing Centre Solar PV System

Structural issues at the building have been overcome using a proposed specialist solar panel fixing system, and to date the installation is supported by the leaseholder. Further discussions are being held to agree a PPA agreement (Power Purchase Agreement) which provides electricity at a reduced price to the occupant and a fixed income for the Council. This will be our first PPA installation, allowing the Council to support local business, making for a stronger sustainable City. The proposed PPA is supported by a robust business case; so much so, payback would be achieved even if the PPA was severed due to termination of the lease.

### Feasibility - Solar PV Field

Feasibility work has been considerable and following an offer from a trusted solar field developer, a full commercial proposal for a 3.8MW array has endorsed the viability of this scheme. The Solar PV project is an opportunity to secure a substantial long term income stream and will take the authority closer to achieving its aspiration to be an Energy Neutral Council. Unfortunately, whilst a formal grid connection has been made by WPD, the connection offer cannot be authorised until the connection restraint is lifted. Earlier this year WPD advised that a critical 132 kV line, from Bridgwater to the Bristol docks area, has reached full capacity and as a consequence a delay of 3-6 years will be included in new connection offers for all generation projects seeking to connect to the grid requiring works at High Voltage (HV) level or above. The restrictions apply to all of the WPD south west region below Bristol and Bath.

As well as the network restriction, the government has announced a review of the FIT tariff, and further tariff cuts, which will significantly impact on the financial viability of the Solar Field. However, if the WPD restriction was to be lifted and solar PV be supported by other financial incentives, then the scheme could progress. A decision will need to be made as to whether preparatory work for this scheme should continue to be developed and planning permission sought, to allow speedy delivery should the above restrictions be removed.

### Parkwood Assets (Riverside Leisure Centre, Wonford Leisure Centre, Exeter Arena and ISCA Centre Solar PV Systems)

This opportunity will be explored when the long term future of the asset has been clarified as part of the Leisure Feasibility Review. However the condition of the roof at both the Riverside and Isca centre would have to be tackled prior to PV installation.

### Further LED Light Replacement

High electricity users such as the RAMM and other car parks will be surveyed in 2015/16.

### EV Chargepoint Project

Westerly BMW paid the final sponsorship imbursement in full in March 2015. This allowed a surplus of £3,000 which is to be can be used to provide a new EV Chargepoint when required, and a contingency sum to repair any vandalism to the charging stations.

The infrastructure serves to promote EV use and has the capacity to accommodate growth in this sector. Chargepoint usage is increasing slowly, the cost of energy used at all public Chargepoints during the first full year of operation is £204.04. For the Civic Centre and Oakwood House(pool cars) this makes a total of £335.06.

## **9. How does the decision contribute to the Council's Corporate Plan?**

The delivery of the programme is an essential part of the Council's capital programme over the next few years. The energy savings and income generated will assist us in our overall efficiency and income generating agenda as well as contributing to the reduction of our carbon footprint, making the city as a whole a more pleasant live and work.

**10. What risks are there and how can they be reduced?**

The programme has been approved and resourced in order to secure delivery of viable schemes. There will always be challenges to viability in this area as a result of changes in energy costs, the Feed in Tariff, structural building condition, etc. The mechanism we have put in place to approved business cases and their viability should ensure we do not embark on schemes that will not perform in accordance with our requirements.

Recent price changes in the energy market are noted, and to clarify what effect this may have on future and predicted savings of this work, an independent view is regularly sought from the Council's energy broker. The following updated guidance is given: Looking forward the average change in fully delivered electricity costs is an annual increase of between 6.5 and 9.5%, between 2 - 4% for Gas and Oil averaging at around 3% up to 2020. These figures remain reasonable and possibly 1% could be added to all. Going forward it is likely that we will see increases in what are described as the 'taxes and levies,' they now account for 20% of an average invoice. In addition new charges are on the horizon and the other industry costs, such as distribution and transmission costs are potentially changing and will bring with it a further increase.

**11. What is the impact of the decision on equality and diversity; health and wellbeing; safeguarding children, young people and vulnerable adults, community safety and the environment?**

No decision is sought, but it should be noted that the reduction in the City Council's carbon footprint does go some way to improving, or at least mitigating, our adverse impacts of energy use on the environment.

**12. Are there any other options?**

The nature of the programme appraisal and approval arrangements are that the Energy Team is constantly considering alternative approaches and other avenues of investment in this area.

**Michael Carson**  
**Corporate Manager Property**

**Local Government (Access to Information) Act 1972 (as amended)**

**Background papers used in compiling this report:**

None

Contact for enquires:  
Democratic Services (Committees)  
Room 2.3  
01392 265275

Financial Benefits - Savings 2012 - 2015

2012/2013	FIT Income	Gross Saving
<b>Water Saving Project</b>		
2012/13 Savings		£23,025
<b>TOTAL SAVING 2012/13</b>		<b>£23,025</b>
<b>2013/2014</b>		
<b>Water Saving Project</b>		
2013/14 Savings		£20,420
<b>PV Arrays (Civic, Ark, MRF, Oakwood, Belle Isle)</b>		
Income & Savings	£24,512	£47,984
<b>TOTAL SAVING 2013/14</b>		<b>£68,404</b>
<b>2014/2015</b>		
<b>Water Saving Project</b>		
2014/15 Savings		£21,000
<b>PV Arrays (Civic, Ark, MRF, Oakwood, Belle Isle)</b>		
Income & Savings	£24,325	£50,728*
<b>Civic Centre LED Project</b>		
Civic Centre (part)		£7,684
<b>Hand Dryer Project</b>		
Installation of efficient hand dryers & removal of paper towels		£5,200
<b>Car Park LED Project</b>		
LED bulb replacement - Cathedral & Quay Car Park		£14,720
LED bulb replacement - Harlequins Car Park		£5,450
LED light replacement - Mary Arches Car Park		£14,940
<b>Car Park Total</b>		<b>£35,110</b>
<b>TOTAL SAVING 2014/15</b>		<b>£119,722</b>

\*Greater than predicted

Financial Benefits - Projected Savings 2015/16

2015/2016	FIT Income	Gross Saving
<b>Water Saving Project</b>		
Savings		£21,000
<b>PV Arrays (Civic, Ark, MRF, Oakwood, Belle Isle)</b>		
Income & Savings	£24,811	£48,633
<b>Civic Centre LED Project</b>		
Civic Centre		£32,184
<b>Hand Dryer Project</b>		

<b>2015/2016 contd</b>	<b>FIT Income</b>	<b>Gross Saving</b>
Installation of efficient hand dryers & removal of paper towels		£5,200
<b>Car Park LED Project</b>		
LED bulb replacement - Cathedral & Quay Car Park		£14,720
LED bulb replacement - Harlequins Car Park		£5,450
LED light replacement - Mary Arches Car Park		£14,940
<b>Car Park Total</b>		<b>£35,110</b>
<b>NEW PROJECTS :</b>		
<b>Car Park Canopy PV (part estimated)</b>	<b>£8,600</b>	<b>£18,660</b>
<b>Civic Boiler Replacement</b>		<b>£28,000</b>
<b>RAMM PV (part estimated)</b>	<b>£1,302</b>	<b>£2,778</b>
<b>Livestock Centre PV (part estimated)</b>	<b>£10,164</b>	<b>£22,908</b>
<b>Quay Climb Centre (PPA to be agreed)</b>	-	-
<b>PROJECTED TOTAL SAVING 2015/16</b>	<b>£44,877</b>	<b>£214,473</b>