

**DERBYSHIRE COUNTY COUNCIL**

**CABINET MEETING**

**16<sup>th</sup> April 2013**

**Report of the Director of Property**

**UPDATE ON THE PROVISION OF SOLAR PV FOR  
CORPORATE AND SCHOOL BUILDINGS  
(Technology & Recycling)**

**1. Purpose of the Report**

To update Cabinet on the provision of solar PV on Council buildings and outline recent changes in national legislation regarding the Feed in Tariff.

**2. Information and Analysis**

At Cabinet on 12<sup>th</sup> July 2011, approval was given for the allocation of £500,000 from the 2011/12 Corporate Capital Programme to install solar PV on corporate and school buildings, with £300,000 to be invested in schools and £200,000 to be invested in the following corporate buildings;

- County Hall
- Doveholes Depot
- Eco Centre
- Chesterfield Library
- Denby Depot

However, initial feasibility work found that Denby Depot's roof is not sufficiently structurally sound to accommodate solar PV. Subsequently, the visitor centre at Shipley Country Park was identified as a suitable alternative corporate building. As this location is visited by the public and also used as for educational purposes, the installation of solar PV at Shipley Country Park will clearly demonstrate Derbyshire County Council's commitment to carbon reduction. The installation of a real-time display showing how much energy is being generated and how much carbon is being saved, providing an educational resource that compliments the purpose and ethos of the Country Park and visitor centre.

Cabinet gave approval for projects below £20,000 to be authorised by the Director of Property. So far, solar PV has been installed at Doveholes Depot and feasibility and design work is currently being finalised for the Eco Centre and County Hall. The provision and installation of solar PV at Chesterfield Library and Shipley Country Park has also recently been tendered through the framework contract.

It is anticipated that from the £300,000 allocated to solar PV installation at schools, approximately 20 schools may benefit. 33 schools expressed an interest in solar PV and feasibility work is underway on assessing the suitability of these. As with Denby Depot, some school roofs have been found to not be sufficiently structurally suitable for solar PV and will therefore not be considered further. Business cases will be undertaken for each structurally suitable school to assess the most appropriate schools to pursue.

### **3. Financial Considerations**

The July 2011 Cabinet report proposed that the Feed in Tariff (FiT) income would re-pay the capital borrowing, including interest charges, and any required maintenance costs. Since then, the Government has reduced the FiT rate, which has increased projected payback periods. Although this was highlighted in a further Cabinet report on 3<sup>rd</sup> July 2012 subsequent changes to the FiT have occurred as follows;

- FiTs are now payable for a period of 20 years, not 25 years.
- The FiT rate is reviewed every quarter and may be reduced depending on the installation rates of solar PV within the previous quarter.
- There are now 3 FiT rates<sup>1</sup>;
  - High rate (15.44p / kWh) – where the building has an Energy Performance Certificate level A-D (n.b. this is only applicable to corporate buildings. Schools are not required to meet the energy efficiency requirement, although an EPC must be submitted with the FiT application, the higher FiT rate will apply regardless of the level)
  - Middle rate (13.90p / kWh) – where the generator has more than 25 solar PV installations
  - Low rate (7.10p / kWh) – where the building has an Energy Performance Certificate level D-G (n.b. this is only applicable to corporate buildings)

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<sup>1</sup> FiT rates provided for a 4kWp solar PV installation as of 1<sup>st</sup> February 2013.

The current FiT rates as detailed above, when compared to the original FiT rate of 39p / kWh, are considerably lower. As a result of the reduced FiT rate and duration of payment, it is now unlikely that the income generated from the FiT will be able to re-pay capital borrowing, including interest charges and maintenance costs as previously proposed.

However, the business case for the solar PV installation at Doveholes Depot indicates that the estimated FiT income along with estimated electricity cost savings demonstrate that the installation of solar PV can still achieve significant cost and carbon savings and will re-pay the capital borrowing, excluding interest charges, as summarised below<sup>2</sup>,

Installation cost (including planning and fees)	£11,247
Estimated annual generation	2,245kWh
Income and savings over 20 years (FiT payment duration)	£14,999
Income and savings over 25 years (Solar PV panel expectancy)	£18,285
Profit (20 years)	£3,752
Profit (25 years)	£7,038
Average income per annum	£731
Payback on capital outlay (years)	15.8 years
Carbon savings (25 years)	30 tonnes / CO <sub>2</sub>
N.b. the above calculations include an estimated 5% annual increase in electricity prices.	

#### 4. Environmental Considerations

Within Derbyshire's Sustainable Community Strategy and Council Plan, there is a strong commitment to reduce the impact of climate change through reducing carbon emissions and supporting schools to become more energy efficient and exploring renewable energy technologies. This commitment was reinforced in October 2011 when Cabinet adopted an ambitious target to reduce carbon emissions by 25% by 31<sup>st</sup> March 2015 (based on 2010/11 baseline) from Council operations. The investment in solar PV across the Council's estate will not only contribute to the carbon reduction target but demonstrates Council leadership and commitment to the county wide strategic objectives to mitigate against climate change.

Particularly within schools, the installation of solar PV will provide an invaluable learning resource that can be embedded into the curriculum

<sup>2</sup> See attached excel spreadsheet for more detailed information.

to enable pupils to learn more about energy, low and zero carbon technologies and climate change.

## **5. Legal Considerations**

Each participating school is required to enter into an agreement with the County Council to ensure that the FiT income is retained by the Council up until the point that the capital investment is recouped at which point the school will receive the FiT.

## **6. Considerations**

In preparing this report the relevance of the following factors has been considered; prevention of crime and disorder, equality and diversity, human resources, health and transport considerations.

## **7. Key Decision** **NO**

## **8. Call-in**

Is it required that call-in be waived for any decision on this report? **NO**

## **9. Background Papers**

- Carbon Reduction, Provision of Solar Panels for Corporate and School Buildings – 12<sup>th</sup> July 2011
- Approval of Contractors for Solar Panels Framework – 3<sup>rd</sup> July 2012 Cabinet Report.

## **10. OFFICER RECOMMENDATION**

That Cabinet notes:

1. The progress made to date on the provision of solar PV on corporate and school buildings.
2. The recent changes to the Feed in Tariffs.
3. That the FiT income will now repay the majority of capital borrowing but not the associated interest charges.
4. That the Director of Property will continue to look at the business case for the installation of Solar PV on a site by site basis.

**JEREMY GOACHER**  
Director of Property