



SUSTAINABLE DEVELOPMENT ADVISORY PANEL – 25TH FEBRUARY 2016

SUBJECT: GELLIGAER SOLAR SCHOOLS PROJECT

REPORT BY: CORPORATE DIRECTOR - COMMUNITIES

1. PURPOSE OF REPORT

- 1.1 To provide the members of the Sustainable Development Advisory Panel with an update of the Gelligaer Solar Schools Project.

2. SUMMARY

- 2.1 The Gelligaer Solar Schools Project supports CCBC's actions identified in the Carbon Reduction Strategy to reduce the authority's carbon emissions by 2019.
- 2.2 The project involves securing £31,600 funding from the Gelligaer Community Council to install solar photovoltaic panels on up to four schools and structural and asbestos surveys on up to an additional three schools in the Gelligaer ward area.
- 2.3 There is unspent area forum budget for the Glan-y-Nant and Tir-Y-Berth partnership within the Gelligaer community Council area, which could be used to support the Gelligaer Solar Schools project.
- 2.4 There are unspent area forum budgets for certain partnerships, which could be used to fund solar photovoltaic panels on schools in the areas with sufficient funds available.
- 2.5 Any feed in tariff (FIT) payments received for the installations will be paid directly to the schools with the installations.

3. LINKS TO STRATEGY

- 3.1 The Gelligaer Solar Schools Project supports the following strategies and priorities:
- Climate Change Strategy for Wales. Welsh Government (2010)
 - One Wales, One Planet (2009), the Sustainable Development Strategy for Wales
 - Wales Environment Strategy (2006)
 - Caerphilly Delivers - Caerphilly Single Integrated Plan, 2013 – 2017
 - Caerphilly Climate Change Strategy (2009)
 - Caerphilly Carbon Reduction Strategy
 - Living Better, Using Less, the Sustainable Development Strategy (2008)

4. THE REPORT

4.1 Background

4.1.1 Caerphilly Schools Project (Phase 1 and 2)

In January 2009 the Sustainable Development Team and United Welsh Housing Association (UWHA) developed the concept and proposal for the Solar Schools project to take advantage of the Heads of the Valley under spend at the end of the 2008/09 financial year. £315,000 was secured from the Heads of the Valley Regeneration Fund to install solar photovoltaic systems on sixteen schools and one education centre in the Heads of the Valley area of the Caerphilly County Borough. UWHA commissioned the contractors to undertake the installations and the Sustainable Development Team managed the project. Educational resources were also developed for all primary and secondary schools in the county borough as part of the project.

4.1.2 In July 2015 the Sustainable Development Team gave a presentation to the Gelligaer Community Council on areas of the work undertaken by the team. The Gelligaer Community Council has received a one off community benefit fund payment for 2015/16 of £40,000 from a developer who has installed a solar farm in their area. They were keen to use the funding to support environmental projects in their area and following an update on the Caerphilly Solar Schools Project, were keen on the idea of a solar schools programme.

4.1.3 A desk top study was undertaken on the nine schools in the Gelligaer ward area to determine the initial suitability of each site, including orientation, possible asbestos issues and if any of the schools had been identified by the authority as suitable for a solar PV installation. The nine schools in the Gelligaer Community Council Ward area are:

- Glyngaer Primary School
- Derwen Deg Primary School
- Tir-Y-Berth Primary School
- Ysgol Penallta
- Hengoed Primary School
- Ystrad Mynach Primary School
- Ysgol Gymraeg Bro Alta
- Lewis Girls School
- Trinity Fields School and Resource Centre

4.1.4 Estimated prices were provided to the Gelligaer Community Council for solar PV installations, structural and asbestos surveys and EPC ratings so they could decide what to fund.

4.2 The Gelligaer Solar School Project

4.2.1 The Gelligaer Community Council agreed to offer £31,600 to fund the following:

- Structural and/or asbestos surveys to be undertaken on six schools. Installation of solar PV systems on three schools and Energy Performance Certificates for three schools.
- The 3 schools to be installed with solar systems in the first instance for 2015/16 are:
 - (i) Glyngaer Primary School
 - (ii) Hengoed Primary School
 - (iii) YGG Bro Allta
- Structural and/or Asbestos surveys to be undertaken at a further 3 schools in 2015/16:
 - (iv) Ystrad Mynach Primary School
 - (v) YGG Penalltau
 - (vi) Derwen Deg Primary School
- Investigate the feasibility of solar panels on the canteen building at Tir-Y-Berth Primary School.

- 4.2.2 The Solar PV installations will be gifted to the schools and the schools can claim the feed-in tariff's (FIT's) to spend on environmental projects.
- 4.2.3 The solar panels installed are <4Kw systems costing £7,525 each (not including asbestos surveys), with an estimated electricity generation of 3,196Kwh per year and a CO₂ saving of 1.836 tonnes per school.
- 4.2.4 Following a tender process with Procurement using the ESPO Framework 2838 for renewable energy solutions, only one company replied to the tender, who have since been awarded the contract. These are Campbell and Kennedy, based in Glasgow with additional offices in Bracknell, Aberdeen and Ireland. They have undergone first phase vetting by Corporate Health & Safety and their insurance documentation has been approved by the Corporate Finance Department.
- 4.2.5 The breakdown of costs is:
- Site survey £125 per site
 - Structural survey £250 per site
 - Asbestos survey £1,000 (approximate, depends on level of survey)
 - Solar PV installation £6,650 per site
 - EPC Certificate £500 per site
- 4.2.6 To cover the requirements of the Gelligaer Community Council, the costs would be:
- 6 site surveys £750
 - 6 structural surveys £1,500
 - 3 EPC Certificates £1,500
 - 3 Installations £19,950
 - 3 Asbestos surveys £3,000
 - Total cost of £26,700
- 4.2.7 To undertake an additional installation, and install solar PV systems on four schools, with Tir-Y-Berth Primary being the fourth school, there would be an additional cost of £8,525 (£125m for site survey, £250 for structural survey, £500 for EPC certificate, £6,650 for the installation and £1,000 for an asbestos survey), bringing the total project cost to £35,225. With £31,600 funding provided from the Gelligaer Community Council, the Sustainable Development Team would need to seek £3,625 funding to make up the shortfall.

4.3 The Feed-In Tariffs

- 4.3.1 The feed-in tariffs (FITs), which came into affect on April 1st 2010, are financial rewards for generating renewable energy in the form of generation and export tariff. The FIT's have reduced significantly over the past few years as the popularity of renewable technology has increased. For <4Kw solar photovoltaic systems installed on or after 8th February 2016 and before 31st March 2016, the feed-in tariff's are:
- Higher Rate: 4.39 pence per kilowatt hour
 - Middle Rate: 3.95 pence per kilowatt hour
 - Lower Rate: 0.87 pence per kilowatt hour
- 4.3.2 The higher, middle and lower rates depend on the buildings ECP rating (Energy Efficiency) and multiple ownership of FIT registered PV systems.
- The lower rate is payable if the system provides power to a building and the building does not have an EPC certificate showing it's energy efficiency in bands A to D
 - The medium rate is payable for multiple ownership, where the system owner has a total of 25 FIT registered PV installations.
 - The higher rate is payable if neither of the above two conditions apply

4.4 Maintenance

- 4.4.1 The solar photovoltaic panels have no moving parts, and are largely maintenance free and are guaranteed by the manufacturer for 10 years. The 10-year warranty is handed over to the school after the PV cells have been installed. The installation includes a 1-year warranty.
- 4.4.2 The only other major component of the system is the inverter, which is guaranteed for 10 years. If the inverter needs replacing in future years, the current cost of an inverter is £1,000, although this is expected to fall over time. The typical life of an inverter is approximately 15 years.

4.5 Installations

- 4.5.1 The installations will take place during February and March 2016. Each installation is expected to take between 3 to 4 days, with minimal disruption to the school. All contractors working on site will be DBS checked and, if required for any asbestos requirements, CAT B trained.

4.6 Area Forum Budgets to support additional installations

- 4.6.1 There is a substantial underspend in certain area forum budgets, some of which could potentially be used to fund additional solar PV systems on schools in the respective areas. The Sustainable Development Team are proposing to work with the partnerships with significant underspend to investigate installing solar PV systems on schools in their areas.
- 4.6.2 Within the Gelligaer Community Council ward area, there is an under spend of £1,028 for the Glan-y-Nant and Tir-Y-Berth partnership. This could potentially be added to the £31,600 funding from the Gelligaer Community Council to make up some of the shortfall so we can undertake installations on four schools in the Gelligaer Community Council ward area.
- 4.6.3 There are also large underspends in the following partnerships, which could potentially be used to fund solar PV systems on schools in the relevant areas:
 - Penyrheol £15,950 (Cwm Ifor Primary School)
 - Crumlin £6,563 (Crumlin Primary School)
 - Pontllanfraith £11,417 (Pontllanfraith Primary School, Bryn Primary School, Penllwyn Primary School)

5. EQUALITIES IMPLICATIONS

- 5.1 No Equalities Impact Assessment has been done on this report, however Sustainable Development and Equalities interact on many levels and work done in one area often supports the other. Creating sustainable communities, employment and transport for example, is of benefit to all the residents of Caerphilly county borough, regardless of their individual circumstances or backgrounds.

6. FINANCIAL IMPLICATIONS

- 6.1 The total funding secured from the Gelligaer Community Council is £31,600. This will cover the cost of structural and asbestos surveys on six schools and installations on three schools, provided that there are no unexpected costs identified in the asbestos or structural surveys.
- 6.2 To complete installations on four schools, the total cost would be £35,225, leaving a shortfall of £3,625. Additional funding will need to be secured to complete installations on four schools.
- 6.3 The unspent area forum budgets for the partnerships in the Gelligaer Ward (Glan-y-Nant/ Tir-Y-Berth) could be used to increase the budget to help cover the cost of solar PV installations on four schools.

- 6.4 If we are unable to secure any funding from the partnerships in the Gelligaer Ward area, the Sustainable Development Team will seek to secure funding to make up the shortfall to undertake four installations.
- 6.5 The unspent Area Forum Budgets for other partnerships within the county borough could also potentially be used to fund solar PV installations on schools in their areas.

7. PERSONNEL IMPLICATIONS

- 7.1 There are no initial personnel implications associated with this report.

8. CONSULTATIONS

- 8.1 See list below.

9. RECOMMENDATIONS

- 9.1 It is recommended that the Members of SDAP note that £31,600 has been secured to undertake installations of solar photovoltaic systems on schools in the Gelligaer Community Council ward area.

10. REASONS FOR THE RECOMMENDATIONS

- 10.1 For the reasons set out in the report.

11. STATUTORY POWER

- 11.1 There are no statutory powers.

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