

Background Papers, if any, are specified at the end of the Report

**REVIEW OF OUTCOME OF SOLAR PHOTOVOLTAIC
INSTALLATIONS**

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RECOMMENDATIONS

Cabinet note:

- 1) the large scale Solar Photovoltaic (PV) projects have been successfully installed at King George V House, Chesham Leisure Centre and Amersham Multi-storey car park.**
- 2) all sites are operating as planned with no operational issues to date.**
- 3) the installations are now providing stable financial income to the Council in addition to reducing the Council's carbon emissions.**
- 4) year 1 financial income of £31,000 substantiates the original business cases with estimated payback of just over 6 years.**

Relationship to Council Objectives

Objective 3 Conserve the environment and promote sustainability

Implications

- (i) Not a key decision.*
- (ii) Within the policy and budgetary framework.*

Financial Implications

None directly associated with this report

Risk Implications

None directly associated with this report

Equalities Implications

None directly associated with this report

Sustainability Implications

This project directly supports the aims of the adopted Chiltern Climate

Change Strategy. It will directly reduce carbon emissions from the day to day activities of the Council on an ongoing basis. It also directly contributes to the ongoing requirement (Previously NI 185, now the Green House Gas Report) for Councils to report on their progress in reducing their own impacts on the Environment. Having signed the Chiltern Climate Change Declaration, this will also demonstrate to the public significant 'leadership' in reducing our own energy use. When assessed against the baseline of today's energy consumption and costs all three aspects of this report contribute to ongoing and significant financial and carbon savings.

Report

- 1 On 14 June 2011 (Minute 11) Cabinet approved installation of Solar Photovoltaic electricity generation system at King George V House.
- 2 On 14 September 2011 (Minute 43) Cabinet further approved the installation of Solar Photovoltaic electricity generation system at Chesham Leisure centre funded from the annual leisure capital investment programme.
- 3 In addition to the carbon savings for the Council and demonstrating environmental leadership, the installation of the two recommended systems was predicted to generate a combined annual output of 76,472kWp. This was expected to equate to approximately £30,000 revenue/savings per year.
- 4 Authority was delegated in both instances to the Interim Director in consultation with the Portfolio Holder for Environmental Management and Engineering to award the contract and commission the works, subject to suitable terms from the tendering process.
- 5 Planning approval was required and obtained to install Photovoltaic panels to all south facing roof aspects of both King George V House (KGVH) and Chesham Leisure Centre (CLC).
- 6 The maximum size of system sought at each site was 50 kWp as this was calculated as the optimum size with the Feed in Tariff (FIT) scheme rates dropping dramatically on anything larger.
- 7 If all south facing roof aspects at KGVH and CLC were covered 500 kWp could potentially be generated. However, at the time of project development, the overall financial business case for PV would have been adversely affected.
- 8 Following Cabinet approval expressions of interest were placed in trade journals and the local press. The Pre qualification questionnaires that followed identified suitable companies for tendering. Request for proposals were received in October 2011 with installation to be completed in advance of financial year Feed in Tariff cut off date of 31

March 2011 set by the Department of Energy and Climate Change (DECC).

- 9 Three completed tenders were received. The successful tender selected on the basis of the most economically advantageous and technically competent and in compliance with the requirements as set out in the Tender documents. The chosen company was Instafoam and Fibre Ltd.
- 10 Instafoam and Fibre Ltd were awarded the contract with the tendered sum for King George V House (101,563) and Chesham Leisure Centre (104,956 as a combined work package with total value of £206,519). The combined payback period of both systems was predicted at just over 6 years.
- 11 Having awarded the contracts on the 01 November 2011, the Department of Energy and Climate Change (DECC), without notice, announced the Feed in Tariff rates would reduce substantially from 12 December 2011 from 34.5p per kWp.
- 12 The proposals from Instafoam and Fibre Ltd were still in line with the agreed business case so were considered worthwhile as a long term investment. However, it now had a revised payback calculation of 12 years.
- 13 The changes announced by DECC put a high demand on equipment such as shortage of brackets that hold the panels as companies and households tried to install and obtain the original FIT rate before the rate reduced. This created a significant risk to the project.
- 14 Nevertheless, works began on both sites with tight project management to reduce delays where possible. Following legal challenge on the Government, a new date for the changes to reduce the Feed In Tariff was set for March 2012.
- 15 Both sites were completed on schedule and therefore met this revised deadline for qualification of the higher rate in March 2012.
- 16 The total generation to date for King George V Road and Chesham Leisure Centre has been;

Site	Rate Pence per KW	Total Solar generation to 08-07-13(KW)	Monitory Value (£)	Carbon Saved (Tonnes)
King George V House	34.50	57,338	19,781	24.66
Chesham Leisure Centre	34.50	63,006	21,737	27.09

- 17 Income to date (approx. 1 full year) has been £31,000. With an install cost of £206,519 the original payback of just over 6 years looks to be accurate and therefore should be achieved.
- 18 It should not be forgotten that the FIT tariff provides this guaranteed additional income for a period of 25 years. Tariffs are also index-linked to RPI. The Council will therefore once payback has been achieved receive tariff payments for a further 19 years (panels are expected to last 50 years; however output does decrease slightly over this time)
- 19 Due to the success of the two schemes a smaller 10 kWp system was installed at Amersham Multi-storey Car Park and registered for November 2013 at the lower rate of 13.99p per kWp. Full year figures for this will be provided in next year's annual energy spending report. The continuing income from the 2 established PV projects will also be amalgamated into the next spending reports.
- 20 In conclusion, the large scale Solar Photovoltaic (PV) projects have been successfully concluded at King George V House, Chesham Leisure Centre and Amersham Multi-storey car park. All sites are operating slightly better than planned with no operational issues to date. The installations are now providing significant financial income to the Council, which will continue to do so moving forward.
- 21 Over the next 12 months and supported by the Deputy Leader and the Corporate Asset Management Group and noted by the Performance and Resources overview Committee, Officers will be looking for further opportunities to install renewable technologies.

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