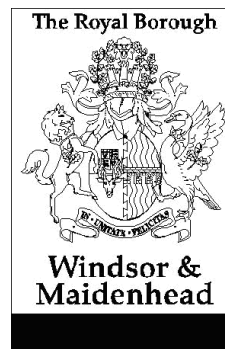


Report for:
ACTION

Item Number: 7



Contains Confidential or Exempt Information	NO - PART I – MAIN REPORT YES – PART II – APPENDIX 1 - Not for publication by virtue of paragraph 3 of Part 1 of Schedule 12A of the Local Government Act 1972
Title	Fitting of Solar Panels to Council-owned Properties
Responsible Officer(s)	Andrew Elkington, Head of Policy and Performance
Contact officer, job title and phone number	Michael Potter, Energy Reduction Manager, 01628 682949
Member reporting	Cllr Coppinger, Adult Services and Health including Sustainability
For Consideration By	Cabinet
Date to be Considered	30 October 2014
Implementation Date if Not Called In	Immediately
Affected Wards	n/a
Keywords/Index	Solar Panelling Business Case Town Hall

Report Summary

1. This report highlights the opportunity of installing solar panels on the Maidenhead Town Hall roof and presents the business case.
2. It recommends that Cabinet approves the business case and allows the use of an existing budget for energy saving initiatives to carry out the project.
3. These recommendations are being made because solar panels will reduce the Council's revenue expenditure, grid energy usage and carbon emissions. It will also increase income as well as demonstrate the Council's commitment to the Corporate Plan, Annual Plan and the Sustainability Strategy.
4. If adopted, the key financial implications for the Council are an estimated capital cost between £90k - £110k. Maintenance of the panels is likely to cost up to £2k per annum. A combination of the income and savings generated will provide a payback of roughly 7 years and an internal rate of return of roughly 15%.
5. The proposal to install solar panels on the Maidenhead Town Hall roof was considered by the Sustainability Panel at its meeting on 16 September 2014. The panel was unanimously in favour of the project.

6. The report also proposes that consideration be given to fitting solar panels on other Council-owned properties.

If recommendations are adopted, how will residents benefit?

Benefits to residents and reasons why they will benefit	Date
<ol style="list-style-type: none"> 1. By installing solar panels and therefore reducing revenue expenditure on electricity, the Borough will provide better value for money to its residents. 2. Installing solar panels will generate funding for the Council for the next 20 years which can be used to improve the Council's value for money even further. 3. Installing solar panels demonstrates to residents the Council's commitment to the Corporate Plan, Annual Plan and the Sustainability Strategy. 4. Installing solar panels will reduce the Council's carbon emissions and therefore help to preserve the environment for residents. 	April 2015

1 Details of Recommendations

- i. **Cabinet is asked to approve the Town Hall solar panel business case.**
- ii. **Cabinet is asked to approve the use of existing budget currently allocated to energy saving initiatives (CY03).**
- iii. **That an additional revenue budget of £2k is added to the Medium Term Financial Plan for 2015/16 for ongoing maintenance costs.**
- iv. **Cabinet is asked to support the proposal to explore the fitting of solar panels to other Council-owned properties, where possible and appropriate to do so.**
- v. **That delegated authority is given to the Lead Member for Adult Services and Health including Sustainability and the Head of Policy and Performance to progress other business cases for the installation of solar panelling on Council buildings and to contract with suppliers as appropriate for their installation.**

2. Reason for Recommendation(s) and Options Considered

Option	Comments
(a) The Council does not install solar panels on the Town Hall roof and does not explore other Council buildings for this purpose	(a) Failing to install solar panels would mean the Council would not drive down energy costs in the Town Hall or in other buildings, would not bring money into the Council and would not be working towards an action on the Sustainability Strategy.
(b) The Council installs solar panels on the Town Hall roof.	(b) The Council will be able to work towards delivering actions relating to

<p>RECOMMENDED</p> <p>(c) Cabinet approves the use of existing budget for the solar panel installation. RECOMMENDED</p> <p>(d) Cabinet supports the proposal to consider fitting solar panels to other Council-owned properties RECOMMENDED</p>	<p>sustainability in the Corporate Strategy, Annual Plan and the Sustainability Strategy. It would also help improve the environment and provide value for money for residents.</p> <p>(c) There will be budget available in code CY03 Energy Saving Initiatives due to variations in the RE:FIT project.</p> <p>(d) Considering fitting solar panels to other Council-owned properties will continue to help improve the environment and provide value for money for residents. It will also support the ongoing commitment to sustainability, as outlined in the Corporate and Sustainability Strategies.</p>
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3. Key Implications

Defined Outcomes	Unmet	Met	Exceeded	Significantly Exceeded	Date they should be delivered by
Overall annual reduction of grid supplied electricity at the Town Hall after solar panels have been installed.	Below 4%	4.0 – 4.5%	4.5 – 5.0%	Above 5%	31 st March 2016

4. Financial Details

a) Financial impact on the budget (mandatory)

Current CY03 budget contains surplus funding for 14/15. These were funds initially approved for RE:FIT but the energy efficiency works have now been completed and are close to being fully invoiced. The removal of certain projects from the RE:FIT

contract has meant that not all of the budget has been utilised although almost all payments have been made. MITIE have stated that there are no further significant invoices outstanding. This means that there will be sufficient funding available to install the solar panels held within CY03. The budget is held within Policy and Performance.

The project would require further revenue funding of:

Example	Year1 (2014/2015)	Year2 (2015/2016)	Year3 (2016/2017)
	* Revenue £000	Revenue £000	Revenue £000
Addition	0	2	2
Reduction			

This is required for ongoing maintenance of the installed solar panel system.

5. Legal Implications

In accordance with the s.11 of the Local Government (Miscellaneous Provisions) Act 1976 Local Authorities were prohibited from selling electricity produced other than in “association with heat”.

However, the situation changed with the introduction of The Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 which entitles local authorities to sell electricity produced from the following sources:

- (a) wind;
- (b) solar;
- (c) aerothermal;
- (d) geothermal;
- (e) hydrothermal and ocean energy;
- (f) hydropower;
- (g) biomass;
- (h) landfill gas;
- (i) sewage treatment plant gas; and
- (j) biogases.

There are, however, the following legal matters that would need to be dealt with in further detail:

- 1) A licence will be required to install solar panels on the roof above the Job Centre.
- 2) A contract with the approved solar panel installer will need to be checked and signed. Appropriate legal advice will therefore be obtained on the process as required.

It should be noted that installing solar PV on non-domestic buildings comes under permitted development as long as certain criteria are met.

6. Value For Money

Value for money will be assessed through the following method:

Revenue budget savings would be calculated by comparing the energy generated by any energy exported to the grid. This would leave the total amount of energy that the solar panels have displaced from the grid and can be multiplied by the Town Hall's electrical unit rate. This will provide the total energy bill saving for the year.

The total amount of energy that the solar panel system has generated over the year will be compared to the expected generation. The expected generation would be based upon the solar industry standard generation calculations. The expected generation of the solar panel system would be provided during the tender process. A comparison of the expected against the actual output will indicate the system performance. Comparison to the expected generation will be carried out on an annual basis. Further to these calculations the system would be automatically monitored to show any deviations from the expected. Alarms would be raised by the monitoring system if there is a fault and the problem would be rectified.

The feed in tariff income generated by the panels is worked out in two ways. The feed in tariff provides funding for the total energy generated as well as the amount of energy that is exported back to the grid. The total energy generated is simply multiplied by the generation tariff rate and the amount exported is multiplied by the export tariff rate. The feed in tariff is paid by the Council's chosen energy supplier when meter readings are submitted. The two feed in tariff rates (generation and export) will be added together to provide the final feed in tariff income for the year.

7. Sustainability Impact Appraisal

This project ensures the Council's use of low carbon energy which improves the sustainability of the Council by reducing its impact on the environment.

8. Risk Management

Risks	Uncontrolled Risk	Controls	Controlled Risk
The Solar Panels are not installed to budget	High	By providing updates at each sustainability panel meeting, Members will be able to keep track of overall progress to ensure the solar panels are delivered to budget.	Low

The feed in tariff changes leading to a reduced revenue stream to the Council and a longer capital pay back period	High	Although the Government is likely to alter the feed in tariff in March of next year, bringing this paper to Cabinet for their consideration in October will allow for a timetable for installation – should approval be given – to be met that ensures the Council will benefit from a higher tariff	Medium
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9. Links to Strategic Objectives

The business case meets the following strategic priorities of the Council:

Residents First

- Improve the Environment, Economy and Transport

Value for Money

- Improve the use of technology
- Invest in the future

Equipping Ourselves for the Future

- Developing Our systems and Structures
- Changing Our Culture

10. Equalities, Human Rights and Community Cohesion

There are no direct equalities implications arising from this report.

11. Staffing/Workforce and Accommodation implications:

Some project management input maybe required by building services.

12. Property and Assets

The installation will have implications relating to the roof of the Town Hall. The roof covering will be replaced in the next ten years and the lightening protection system in the next 2-3 years. Moving of solar PV systems for roof covering replacements is a standard exercise for solar contractors. This exercise would be carried out beyond the system payback period. The solar PV system will be positioned where possible to allow full access to the lightening protection system.

The structural integrity of the roof will be tested before the panels are installed.

An energy performance certificate will be required for the Town Hall.

Any potential further installations may have property or other implications. These would be assessed in detail for each individual project that is to be considered.

13. Any other implications:

None

14. Consultation

The business case was unanimously approved by the Sustainability Panel on 16 September 2014.

15. Timetable for Implementation

The following key milestones are in relation to the fitting of solar panelling on the Town Hall roof:

Key Milestone	Date
Business case approved by Sustainability Panel	16/09/14
Business case approved and funding allocated by Cabinet	30/10/14
Go out to tender for solar panel installer	31/10/14
Bids returned	22/11/14
Works commence	02/03/15

16. Appendices

CPO Business Case for the installation of Solar Panels (PART 2)

17. Town Hall Solar Panel Business Case

This report provides an overview of the solar panel business case at the Town Hall. Appendix 1 (PART 2) provides a more detailed Corporate Programme Office (CPO) business case based upon a recent feasibility study.

17.1 Background

The solar industry has been booming over the last few years thanks to the cost of solar panels dropping and the government subsidy (feed in tariff) for renewable technologies remaining in place. This has led to most Councils in the country installing solar panels on their roofs. In the past solar panels were investigated by the Council and a proposal was put together for installations on the Council's

corporate estate (including on the Town Hall). Unfortunately none of the proposed systems were installed and the Council's corporate estate still remains without any solar panels. However, a number of RBWM schools now have systems installed.

The Energy Reduction Manager has revisited the case for installing solar panels on the Town Hall roof. Initial desktop surveys were carried out by several solar installers and those initial results were briefly highlighted in the Sustainability Panel's Energy Managers update in May. Following discussion and agreement of the Panel to progress the scheme further, an initial feasibility study was carried out to better inform the business case.

17.2 Why have Solar Panels at the Town Hall?

Solar panels, in simple terms, will provide the following benefits:

- 1) They save revenue expenditure by lowering electricity bills.
- 2) They bring income into the Council from the feed in tariff.
- 3) They reduce the Council's energy/ carbon/ greenhouse gas footprint and therefore help to improve the environment.
- 4) They show the Council's commitment to the Corporate Strategy, Annual Plan and Sustainability Strategy.
- 5) They show a leadership approach to energy and carbon reduction in the borough.
- 6) They can help the Council to support local business by using a local solar company.
- 7) They will mean that the Council will be able to generate its own energy.

17.3 Financial case

There are a number of factors that govern a solar panel business case but the most important are:

- 1) The size of the solar panel system
- 2) The orientation and position of the system
- 3) The feed in tariff rate
- 4) The cost of electricity being displaced.

The solar panel business case works by offsetting the initial capital cost by reducing annual revenue costs (energy bills) as well as earning income through the feed in tariff.

The feasibility study showed that a 75.25 kWp system could potentially be installed on the Town Hall roof. This is equivalent to just over 300 panels and would generate almost 70,000 kWh per annum (equivalent to about 15 homes). This was a little smaller than the initial desktop surveys that showed the Council could install a 90kWp system. This was due to the presence of unforeseen roof furniture and one of the roof levels not being usable for solar panels.

The system can be positioned very close to south facing (towards the train line from the Town Hall). The panels will be tilted to the optimum angle to capture sunlight using a solar panel flat roof framework. Some shading is present in certain areas which will need to be taken into account by the solar installer.

The current generation feed in tariff rate is 10.34 p/kWh and increases each year with RPI. The export tariff rate is 4.77 p/kWh and increases with RPI each year. These are the fixed rates until 31/12/14 – beyond this the rates are unknown. Normally any rate decrease would be minimal and will not definitely happen. The last time the rate decreased it reduced by 3.5%. This means the longer the Council waits to install a solar panel system the more likely the returns will reduce unless the initial cost of the panels also decreases.

The cost of energy is taken at the current rate for the first year and then increases by a pre-disclosed energy inflation amount. This usually ranges between 6 – 8% depending on how optimistic the business case is. The Energy Reduction Manager has taken a conservative approach and will use a 6% annual increase.

17.4 Payback/ Costs

Based upon current findings the solar panel system should achieve a payback of between 6 – 7.5 years. The capital cost of the system would be in the region of £90k – £110k including any internal staff costs. It should be noted that some system set ups may cost more but at the same time provide a better payback.

The system would need to be maintained – this is estimated to cost up to £2000 per annum.

17.5 Planning Permission

Planning permission is not required for non domestic solar panel installations. Non domestic installations, however, do need to follow the conditions set out for permitted development. These would be followed in any installation that the Council carries out.

17.6 Corporate Programme Office Business Case (PART 2)

Attached as appendix 1 is the current CPO business case for a solar panel system on the Maidenhead Town Hall. This is based upon a recent feasibility study. This forms the basis of the full business case.

17.6 Next steps

- 1) Funding is allocated to the scheme.
- 2) Tender exercise is carried out during November.
- 3) Work commences to install the solar panel system before 31/03/15.

18. Consultation (Mandatory)

Name of consultee	Post held and Department	Date sent	Date received	See comments in paragraph:
Internal				
Andrew Elkington	Head of Policy & Performance	30/09/14	30/09/14	Throughout report
Cllr Coppinger	Lead Member for Sustainability	02/10/14	02/10/14	Queried whether planning permission was required. Section added.
Maria Lucas	Head of Legal Services	09/10/14	17/10/14	Including the fact that solar PV on non domestic buildings is permitted development under legal implications section
Andrew Brooker	Head of Finance	09/10/14		
Cllr Burbage	Leader of the Council	10/10/14	10/10/14	Adjustment of value for 'met' in key implications
Mark Shepherd	Development & Property Manager	09/10/14	10/10/14	License for area above Job Centre should not be an issue
Gary Ellis	Management Surveyor – Property Services	09/10/14	10/10/14	License required for roof area above Job Centre
Con Georghiou	Corporate Programme Office - Team Leader	09/10/14	10/10/14	CPO docs used for cabinet although not an issue
Marcus Allen	Divisional Head of Project Management	09/10/14	10/10/14	Replacement of roof covering in next 10 years. Lightning conductor replacement in next 2-3 years. Installation and contractual info to be agreed.
Lyn Hitchinson	Procurement partner – Corporate Services	09/10/14		

Report History

Decision type:		Urgency item?
Non-Key		No
Full name of report author	Job title	Full contact no:
Michael Potter	Energy Reduction Manager	01628 682949