

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO: Council

21 July 2011

AUTHOR/S: Executive Director (Operational Services)

INSTALLATION OF PHOTOVOLTAIC PANELS AT SOUTH CAMBRIDGESHIRE HALL

Purpose

1. To seek approval of Council to use capital reserves to invest in the installation of photovoltaic panels at South Cambridgeshire Hall.
2. This is a key decision because
 - it is likely to result in the Council incurring expenditure which is, or the making of savings which are, significant having regard to the Council's budget for the service or function to which the decision relates; and
 - it is not in accordance with the revenue budget, capital programme or borrowing limits approved by the Council, subject to normal virement rules and it was first published in the July 2011 Forward Plan.

Recommendations and Reasons

3. That an increase in the capital programme of up to £190,000 be approved to fund the installation of an array of photovoltaic panels at South Cambridgeshire Hall.
4. That the necessary scheme design and contract award approvals be delegated to the Sustainability, Planning and Climate Change Portfolio Holder in consultation with the Climate Change Working Group.
5. Reasons:
 - (a) The rate of return on the investment made will be around 5.91%, higher than the 2% currently available through investment.
 - (b) The running costs of South Cambridgeshire Hall are expected to reduce by between £14,000 and £15,500 per year over the next 25 years.
 - (c) The installation will contribute to a reduction in CO₂ emissions of 12,855 kg per year for the next 25 years.

Background

6. The Feed in Tariff (FIT) scheme was introduced by Government in April 2010 to promote growth in the installation of solar electricity panels and other small scale generating renewable technology. A fixed rate fee will be paid for each unit of electricity generated plus the payment of a guaranteed rate for each unit of electricity that is exported back into the national grid.
7. One of the key Council actions for 2011/12 is, "E2 We will take advantage of the Government's Clean Energy Cash Back scheme to install appropriate renewable energy technologies within our housing stock and complete key projects from our Climate Change Action Plan to promote renewable energy generation tied to council assets and for the wider community."

8. A feasibility study was commissioned by the Council to evaluate the various options available to benefit from the Feed in Tariff scheme by the installation of solar panels on the property at South Cambridgeshire Hall. A number of suitable design consultants were identified and approached to confirm their suitability and willingness to prepare quotations for the work involved. Four consultants agreed to provide fee quotations and from the submissions made PRP Architects were selected and appointed to carry out the first phase of the project.
9. Their report has now been received and forms the basis of this recommendation.

Considerations

10. The rate of tariff available for installations below 50kWp¹ is set at 32.9p/kWh. The tariff available for those installations above 50kWp is set at 19.0p/kWh. The technical analysis shows that the return on higher levels of generation would not cover cost of the investment required. The optimum proposal is therefore one, which provides for generation at just below the 50kWp threshold.
11. The level of Feed In Tariff for installations below 50kWp is under review and it is expected to be reduced in April 2012 for future installations. However tariffs will be fixed for 25 years for projects that are completed by the end of March 2012. If Council wishes to benefit from the income available at the present tariff rates, approval is required now to allow the detailed design and procurement work to commence at the beginning of August 2011 to ensure that the installation can be carried out and fully commissioned by the end of March 2012.
12. The scheme design will be subject to necessary planning approval.

Options

13. The existing buildings and site conditions have been examined by PRP Architects and the availability of suitable locations for the required plant and equipment assessed. The solar resource for each area has been quantified to determine the potential solar radiation that would be received and the orientation and degree of over shadowing that would be experienced. The physical constraints of the existing buildings have also been examined to determine the full costs of the installation which will include any changes or modifications to the existing structure, fabric and building services required to integrate the equipment.
14. The two large roof areas of the main building on the Northern and Southern wings were found to be suitable and were included in the analysis. A further option of providing an array of panels mounted on a structure within the main car park was also found to be suitable.
15. The option of installing photovoltaic panels on the roof requires less upfront capital investment than the car park options and therefore produces a better rate of return for the Council with a shorter payback period. This option is therefore recommended.

¹ KiloWatt peak (kWp) is the international standard that measures the performance output of a photovoltaic cell or cells. It reflects the potential peak performance of the cell in optimum operating conditions. For comparison purposes, 1 Kilo Watt is the equivalent of the output from one bar of an electric fire.

Implications

16.	Financial	<p>The capital sum required is estimated to be between £168,000 and £190,000. This can be funded from an increase in the capital financing requirement with a charge to revenue in future years over the life of the asset. This financing charge will be offset by the income from the feed in tariff and the reduction in energy costs.</p> <p>The payback period is estimated to be 15 years and the internal rate of return is estimated to be between 5.68% to 5.91%. Based on a discount rate of 5% the net surplus is estimated to generate a net present value of between £14,274 and £16,774. The net surplus generated over 25 years is estimated to be between £184,000 and £200,000.</p> <p>The surplus is expected to be realised from reduced energy consumption and revenue generated from the feed in tariff and the export of surplus energy net of life cycle maintenance and replacement costs over a 25 year period.</p> <p>The annual saving on running costs for South Cambridgeshire Hall is estimated to be between £14,000 and £15,500.</p>
	Legal	<p>Planning approval and building control approval would be required for the proposed installation.</p> <p>Legal scrutiny will be required before any contract is entered into.</p>
	Staffing	None.
	Risk Management	<p>There is a risk that the procurement works will not be completed in time for the Council to benefit from the higher FIT rate. This can be mitigated by tight project management controls. A detailed Gantt chart has already been produced which identifies the key elements of the project to be delivered if a self funded route were to be followed.</p> <p>There is a risk that the Government may withdraw the FIT after the Council has committed its resources. This is a low risk, as any changes to the FIT are unlikely to be retrospective given the scale of the commitments already entered into by private companies, public bodies and individual households.</p>
	Equal Opportunities	None identified

Climate Change	The installation of the photovoltaic cells is estimated to reduce the Council's CO ₂ emissions by between 321,379 and 359,484 kg over 25 years (12,855 to 14,379 kg/year).
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Consultations

17. Consultations have been carried out with the Council's Planning section and Building Regulation section to determine the approvals that will be necessary.

Consultation with Children and Young People

18. None.

Effect on Strategic Aims

19. The adoption of the recommendations of this report will contribute to the Council's agreed Action Plan of reducing CO₂ emissions and will also contribute to the Council's desire to generate additional income and reduce operational costs.

Background Papers: the following background papers were used in the preparation of this report:

PRP Architects South Cambridgeshire District Council (SCDC) PV Feasibility Study, June 2011

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