



**Appendix 2 of this report is confidential under Access to Information Procedure Rule 10.4.3**

**Report of the Director of City Development**

**Executive Board**

**Date: 27 July 2011**

**Subject: Solar Photovoltaic Panels Initiative – Corporate Buildings**

**Electoral Wards Affected:**

All

Ward Members consulted  
(referred to in report)

**Specific Implications For:**

Equality and Diversity

Community Cohesion

Narrowing the Gap

Eligible for Call In

Not Eligible for Call In  
(Details contained in the report)

**NOTE ON EXEMPT INFORMATION**

The Access To Information Procedure Rules allow exclusion of certain categories of information (exempt information). Paragraph 10.4.3 refers to a category covering information relating to the financial or business affairs of a person (including the Council). A condition of the exemption is that in all of the circumstances the public interest in exempting should outweigh the public interest in disclosing. In the Council's judgment, the commercial information relating to this proposal should not be disclosed for two reasons. The interests of potential bidders could be prejudiced if these financial terms became available to them. Therefore, the financial information is contained within Exempt Appendix 2

**EXECUTIVE SUMMARY**

1. The Government Feed In Tariff incentive now provides a significant opportunity for the Council to generate an income stream from installing renewables, particularly solar photovoltaic systems.
2. To approve the commitment for the procurement and installation of up to £3m of photovoltaic systems with a 12 year payback period to Council buildings including schools before March 2012.

3. It also recommended that Executive Board grants delegated powers to the Director of Resources to give authority to spend up to any value on a scheme by scheme basis up to a total of £3.01m and to the Director of City Development to approve the award of the contract and building selection.

## **1.0 Purpose of this report**

- 1.1 To seek endorsement from Executive Board to develop a scheme to install a maximum of £3m of investment in solar photovoltaic systems on Council buildings including schools, which will generate an income over 25 years.

## **2.0 Background information**

- 2.1 The Council signed up in December 2009 to reduce carbon emissions of both the Council and the whole City by 40% by 2021.
- 2.2 On 30th March 2011 the Carbon and Water Management Plan was endorsed by Executive Board. Within the plan, one of the stated objectives is to produce renewable energy, replacing fossil fuel to support reduction in CO2 emissions with an identified outcome of an increase in renewable energy production to 14,320 mWh by 2021.
- 2.3 The Government is currently offering a scheme that provides an incentive for both the public and private sector to install renewable technologies, known as Feed in Tariffs (FITs). The government pays a set tariff per kWh depending on the size and type of installation. For photovoltaic panels this rate ranges from 30.7p to 43.3p per kWh. As long as the photovoltaic has been installed by a registered company, FITs is received for every kWh produced regardless of whether it is used on site, sold back to the grid or a combination of the two. If the electricity is used on site, a further 7.6p/kWh is saved. Any electricity that is exported to the grid is sold at 3p/kWh. FITs is designed to ensure a payback period of approximately 10 to 12 years. However, FITs continues to be paid for 25 years from the date of installation and is index linked.
- 2.4 In order to obtain maximum benefit from the FITs scheme, the Council needs to install photovoltaic across its Estate by March 2012. After this date, it is anticipated that the FITs rate for photovoltaic will reduce, extending the payback periods for photovoltaic schemes.
- 2.5 This project will assist in future proofing the Council against energy price increases and ensure the financial benefits of the scheme improve over the years.
- 2.6 The objectives of the project are to:
  - increase the amount of electricity generated by renewable sources by Leeds City Council;
  - raise the profile of renewables and foster a greater understanding and awareness of the need and the opportunities to pursue renewables via the corporate sites;
  - protect nominated sites from future increases in electricity prices; and
  - reduce overall carbon emissions from the Council.

### 3.0 Main issues

- 3.1 **Procurement:** a full EU Procurement will be required for this scheme, which may add a significant amount of time to the programme pre installation adding to the time pressures for installation prior to the tariff changes in March 2012.
- 3.2 Where the project includes Secondary schools the Local Education Partnership (LEP) exclusivity rights will need to be considered. Where this exclusivity applies the LEP will be offered first right of refusal for the secondary school estate photovoltaic installations but the rest of the programme will be traditionally procured. However we will use the corporately let contract to benchmark the offering from the LEP to ensure value for money. It is likely that any large installation would exceed the £100k exclusivity clause as a 50kw array has been budgeted at approximately £250k.
- 3.3 An outline financial model has been set up to understand the likely benefits of various properties. Full and summary of the survey details are shown in Appendix 1.
- 3.4 However, it must be noted that under all scenarios, the payment varies and is not guaranteed until the outcome of the procurement process is known. It is reliant on each system operating to the design parameters and having very few periods when it is not exporting electricity. Good design, selection of roofs and monitoring should minimise the risk of underperformance.
- 3.5 Additionally, operating a scheme such as this will require the Council to develop a range of skills, so a partnership with a charitable organisation Community Energy Saving (CES) associated with the housing photovoltaic scheme allows the Council to gain experience and develop skills and assess lessons to be transferred across to this scheme.
- 3.6 **Technical:** properties can only benefit from solar photovoltaic systems if they meet some basic technical pre-conditions. These relate to the pitch of the roof, the orientation of the property, the condition of the roof, the condition of the wiring and the type of electricity meter.
- 3.7 Solar photovoltaic systems are now classified as permitted development, except in conservation areas or on listed buildings, forming another pre-condition. The Council will work in partnership with the successful bidder to minimise the costs of any planning applications.
- 3.8 Ideally, to learn about the relative benefits to different property types, the initiative would be deployed in a number of property types including museums, schools, office buildings, children's homes, libraries and leisure centres.
- 3.9 At this stage the potential buildings that will be included in this first phase of photovoltaic have not been identified. A technical feasibility study is currently underway that will assess the potential of a number of buildings, including but not limited to:
- St George House
  - Apex House

- Torre Road Depot
- Westerton Primary School
- Enterprise House
- John Charles Leisure Centre
- John Smeaton Leisure Centre
- Morley Newlands Primary School
- Manston St James C of E Primary School
- Thorne C of E Secondary School
- Temple Moor Secondary School
- Armley Children Home
- Otley Library
- Horsforth Library

- 3.10 Details of the sites and outcomes of the feasibility study will be provided in Appendix 1.
- 3.11 Schools will be considered for inclusion in this scheme as many of the schools are some of the biggest energy users in the city and therefore to achieve the city wide carbon reductions that the Council has signed up to, the schools need to be included.
- 3.12 In order to make it attractive for schools to participate via the Council scheme rather than via any number of the independent companies that are currently approaching our schools individually, it is recommended that the scheme may operate differently for schools. By extending the payback period for the schools that participate, they will be able to benefit from a proportion of free electricity from the date of installation and the loan will be paid back in its entirety by the FITs. Due to the high proportion of the loan that is repaid by FITS, this should only extend the payback period by 2 to 3 years.
- 3.13 The schools will receive a consistent approach to solar panel installation within this programme of works. The programme will yield the most benefit to the Council and the schools in comparison to other less economical offers currently being advertised in the open market.
- 3.14 In the event of a change of status of a school, the City Council will need to safeguard its financial commitment and return. Accordingly, the Council will have to enter into a formal agreement with the Governing Body prior to the installation of any photovoltaic. The agreement would state that that in the event of the school changing status the internal loan would either need to be repaid in full on conversion or novated/ transferred to the Academy Trust. On conversion the loan would need to be shown on the transfer of balances and be documented as a loan. On conversion it will be the Academy that will benefit from any energy savings.
- 3.15 Initial analysis of potential sites shows that there are a large number of sites that have an expected lifespan of 25 years or more bearing in mind the scheme will only require approximately 50 sites to achieve the financial costs identified. This will be refined to include the other pre-conditions, but indicates that there is significant potential.
- 3.16 Timescales associated with the utility companies and the potential connection costs are yet to be fully established. Considering the flexibility of the installations and the large number of potential sites available this issue can be minimised.

3.17 The key risks for this project are highlighted in Appendix 3.

#### **4.0 Implications for Council Policy and Governance**

4.1 This programme of work will help to support the Council's sustainability policies

4.2 The project will contribute to many of the council's and our partners' local priorities. These include directly contributing to improvement priorities in the Leeds Strategic Plan and Climate Change Strategy as follows:

- Reducing emissions from public sector buildings, operations and service delivery, and encourage others to do so – photovoltaic panels will provide clean, renewable electricity for use in council housing stock;
- Low Carbon Energy Infrastructure – photovoltaic panels will provide clean, local energy generation.

#### **5.0 Legal and Resource Implications**

5.1 **Legal:** although the current proposals are to follow the EU procurement rules a number of Councils have explored alternative routes. This will be assessed through the initiation stage of the scheme to establish the most appropriate way forward considering the deadline of March 2012.

5.2 **Resource:** in order to effectively run either scenario, a small project team will be assembled. The following would be required for the period from decision to proceed (July 2011) to completion of installations (March 2012):

- A project manager to coordinate activity between all parties, quality assure the project and report to a project board;
- Technical manager to coordinate and complete the feasibility study of the properties;
- Some advice from other services, to cover legal, financial and technical aspects.

5.3 An allowance has been made for detailed support to manage the EU procurement process, which it has been assumed to cost £70k. The resource will be provided from the PPPU and costs have been incorporated into the financial model in exempt Appendix 2 and will be taken from the savings achieved.

5.4 **Financial:** the FIT's guidance documentation suggests a scheme which is within the technical tolerances identified in 3.6 can attract a payback period of approximately 12 years. The figures are based on the following assumptions:

- Availability of sunlight is factored into the calculations as per the location factor based on anticipated weather forecasts;
- 10 – 50kw schemes is achievable at the sites;
- The FITS rates payable (as currently declared) are 32.9p/kWh;
- Maintenance costs – The technology generally has a life of up to 25 years;
- Orientation of the building is assumed as South facing;
- Assumed no shading (any shading reduced the electricity generation to approx 80% reducing the success of the panel to an uneconomical level);

- Assume 50% of electricity generated is exported to the grid;
- Assume 50% of electricity generated is used on site;
- Cost of Electricity assumed at 13p per Kwh;
- The tariff costs remain guaranteed and index linked for up to 25 years; and
- The calculations have assumed no shading as it will impact on the efficiency although a 20% reduction has been applied for energy losses in power generation.

5.5 Executive Board are asked to approve in principle the Authority to Spend for up to £3 million of unsupported borrowing for this scheme. The cost of capital and the revenue profile over the 25 years is included in exempt Appendix 2

5.6 The savings have been calculated on today's energy prices although it is believed that prices will significantly increase over the next seven years. This would result in additional savings to the Council that have not been included in the financial appraisal. The impact of this will significantly improve the financial viability of the project by also reducing the payback period.

## **6.0 Conclusions**

6.1 This scheme shows significant financial benefits over the full 25 year term.

6.2 The requirement to complete all installations by March 2012 means investing resource into an efficient procurement process and robust feasibility study ultimately generating greater benefit to the Council and residents.

## **7.0 Recommendations**

7.1 Executive Board is asked to:

1. approve the project proposal for installing photovoltaic in corporate building including schools;
2. approve the injection of £3.01m into the Capital Programme to be fully funded by Unsupported Borrowing;
3. authorise delegated powers to the Director of Resources to give authority to spend up to any value on a scheme by scheme basis up to a total of £3.01m. This will be subject to a prior approval by Director of Resources of a Business Case for each site;
4. delegate authority to the Director of City Development to approve the award of the contract and building selection.

## **Appendices**

**Appendix 1 – Feasibility Study Outcomes**

**Appendix 2 – Financial Summary (Confidential)**

**Appendix 3 – Risk Summary**

**Background Papers - None**