

Report for Resolution

Report to Cabinet
27 October 2010

Report of Head of neighbourhood and strategic housing

Subject 'PV for free' – Installing photovoltaic solar electricity systems in council homes

5

Purpose

This report seeks authority to go out to tender for an external contractor to fund and deliver a 'PV for free' scheme, installing photovoltaic (PV) systems in up to 5,000 council-owned properties at no cost to the council, utilising the recent feed-in tariff (FIT) legislation.

This report requires no financial commitment from the Cabinet.

Recommendations

1. To authorise the Director of Regeneration and Development to take the necessary next steps to procure the services of a contractor to deliver the scheme and specifically for the council's strategic contracts manager to invite possible partners to tender.
2. To authorise the proposed general outline for the delivery of a 'PV for free' scheme and the suggested methods for ensuring that so far as is reasonably practicable, the project will be equitable in delivering benefits for all council tenants.

Financial consequences

The financial consequences of this report are:

1. Commitment to the use of the time of the council's Asset Management Project Surveyor and Home Energy Specialist in the development and delivery of the scheme.
2. Commitment to the surrendering of the primary financial element of the feed-in tariffs for all systems installed to the contractor in exchange for the provision of the equipment, installation and maintenance at no cost.

Risk assessment

There are several risks that have been identified, including:

1. FIT legislation (Energy Act 2008) is repealed or amended. The parties forming the new coalition Government demonstrated support for FITs whilst in opposition and the Government has already advised that it has no plans to scrap feed-in tariffs. Confirmation is expected as part of the Comprehensive Spending Review.
2. FIT generation payments are reduced in year 3 (2012/13). Although this wouldn't affect existing installations, a partner organisation may be forced to re-

evaluate their business plan at this point, and this could lead to the cessation of any new installations.

3. At a set number of installations or cost threshold FITs are scrapped for new installations. There has been no indication that a maximum number or cost clause exists, either in the original legislation or the business plan of those possible partners we have spoken with to date.

4. The council's contractor doesn't or isn't able to deliver on their commitment. This risk is inherent with any contract or partnership. To ensure that the risk is minimised, legal services have been engaged from an early stage of the scheme development and procurement have drafted an invitation to tender that will be advertised once approval has been received.

Under the corporate project management guidance the size and duration of the project make it a 'major' project. As a result the appropriate project management procedures have been, and will be, carried out in accordance with the corporate policy.

Strategic Priority and Outcome/Service Priorities

The report helps to meet the strategic priority OFA 3 in the council's Corporate Plan for 2010-12; 'achieve at least a 6 per cent reduction per year in the city council's carbon footprint' and features in both the Housing Property Services Strategic Priority Plan (2010-12) and Housing Property Services Property and Asset Management Operational Delivery Plan (2010-12). It is also referenced within the Neighbourhood and Strategic Housing Services Continuous Service Improvement Plan (CSIP.)

Consultation

Legal Services and Finance have both been consulted on the contents of the report and have no comment to make.

Cabinet Member: Councillor Brenda Arthur - Housing

Ward: University

Contact Officers

Abbie Brook	Home Energy Specialist	01603 212544
-------------	------------------------	--------------

Justin Warnes	Investment Team Leader	01603 213164
---------------	------------------------	--------------

Background Documents

Draft copy of the 'general requirements of the council' document, to form part of the invitation to tender for potential partners.

Report

Development of a 'PV for free' scheme

Background

1. The council has developed a proposal for a 'PV for free' project, which would potentially deliver installations of photovoltaic (PV) solar electricity systems in thousands of (predominantly council-owned) homes across the city, at no cost to the council.
2. This would involve establishing a partnership with an energy services company to carry out the works and all maintenance for free in exchange for the receipt of the majority of any monies generated by the system under the Government's 'feed-in tariff' initiative. This project would allow the council to continue investment in its own stock above and beyond the planned energy efficiency improvement programmes, would help to deliver carbon savings from council assets (as per item OFA 3 In the Corporate Plan 2010-12) and would provide council tenants with significantly reduced electricity bills; helping to alleviate fuel poverty in some of our most vulnerable households.

Feed-in tariffs (FITs)

4. On April 1st 2010 the Government introduced 'feed-in tariffs' (FITs); a 25-year guaranteed incentive project that has been used (with much success) in other EU countries to increase the level of renewable energy generation in the UK. FITs are available to individuals, businesses, schools, local authorities and community groups who install electricity-generating renewable energy systems.
5. The 3 components/benefits of the FITs are:
 - The generation tariff – This is a guaranteed payment to the owner of the system for every kW of energy produced over the next 25 years. For all installations completed by March 31st 2012, this will be fixed at 41.3p per unit for the remaining lifetime of the FIT.
 - The export tariff – This is a guaranteed payment (currently 3p per unit) for every unit of electricity that is generated but not used by the household and thus is exported back to the grid. At present this cannot be measured accurately and a figure of 50% of all generated electricity is used.
 - Free electricity – The average household could save between £100 and £200 a year on their energy bills as a result of having a PV system installed.
6. As a response to FITs, several energy service companies are developing 'PV for free' models. These are based on the installation of PV equipment in stock belonging to local authorities and housing associations at no cost to the landlord and in exchange, the FIT payments are passed (partly or in full) over to the 'PV for free' operator. These projects would usually operate on a street-by-street

basis, and would be optional for the tenant. The partner would take on responsibility for all installation costs, maintenance and insurance.

7. Delivering a project of this type would have many benefits, including:

- Long-term reduction in energy bills for tenants and a reduction in the number of households in fuel poverty.
- Improvement in the energy rating of council assets at no cost to the council.
- Early start on ensuring compliance with the new Warm Homes Standard, due to be adopted for social housing as part of the Government's Home Energy Management Strategy.
- Creation of local jobs.
- Possible financial incentive paid to the council, affording the establishment of an additional post.
- The ability to offer free installations to private sector homes in the areas targeted, or the option for them to purchase the system at a reduced price and benefit from the FITs themselves.

8. The scheme would support the council's work to improve energy efficiency in both its own stock and private sector homes and to reduce levels of fuel poverty in Norwich. It will also contribute to progress against both National Indicators 186 and 187.

Options for council investment

9. If the council were able to provide funds for investment, it could install the equipment itself and benefit from the full return from the FIT (generating a return of approximately 8% on the investment). However, the proposed maximum number of installations (5,000 systems) would require an investment of approximately £40 million plus an annual maintenance budget for a minimum of 20 years and is therefore not believed to be a viable option at this time.

10. Although it is not currently possible for the council to provide the investment required to reap the financial benefits of the feed-in tariffs, using the initial investment, capacity and expertise of an external partner will allow the council to assess the viability of a scheme of this type, with a view to potential future investment opportunities should either sufficient funding become available or greater provision of services 'in-house' be established.

11. The recommended option is, therefore, to partner with an external organisation to deliver a 'PV for free project'.

Restrictions on eligible properties

12. PV can only be installed on properties meeting certain physical requirements; specifically those with a sufficiently large area of South, South-East or South-West facing roof with the correct tilt and free from shading. These constraints mean that only a proportion of the council's housing stock will be suitable for the possible installation of a PV system, and therefore not all tenants will be able to benefit from the free electricity generated.

13. To try and ensure that the maximum number of households possible can benefit from the scheme, HPS have agreed that where properties require certain basic adaptations (under the control of the council) to facilitate the installation of PV, these will be offered.
14. HPS anticipate three main factors that could potentially prevent assets from benefitting from the proposed scheme. These are:
 - Inadequate electrical systems
 - Roof shading, specifically by trees
 - Required roof repair/renewal
15. After the initial desktop survey to ascertain the assets most likely to be able to benefit from the project, housing property services will cross-reference the asset list against data held within the housing asset database. This process will identify assets that could potentially require either roofing or electrical works. It is proposed that future capital investment programmes will then see the assets requiring works included, ensuring any budgetary requirements are also met. Assets where roof shading is a factor will be identified and referred for investigation, as required, to the council's Arboricultural Officer.

Wider benefits and potential use of income

16. To try and address the fact that property type and orientation may prevent interested tenants from participating in the scheme, various options will be considered to try and ensure that a 'PV for free' scheme would have wider benefits for tenants living in non-eligible properties. Specifically, it is proposed that:
 - Any income generated through the project be used to assist those households who are unable to have a PV system installed through the establishment of dedicated post offering advice on reducing energy bills and managing/avoiding fuel debt.
 - Any households not suitable for PV are advised of any energy efficiency measures scheduled for installation under general council improvement programmes.
17. Table 1 shows the projected annual income that the project could generate for Norwich City Council, based only on receipt of the export tariff (this is the main financial incentive being offered). In the absence of the availability of export meters the amount of energy exported back to the grid is currently assumed to be 50%, which is likely to be a significant overestimate for the average council home. It is expected that after 2-3 years this proxy will be replaced by actual export meter readings. Providing that the payment per kWh does not change for exported electricity, this would mean that the annual income generated and available for use by the council would decrease.

Table 1 – Estimated total annual income from exported electricity

Number of installations	Estimated annual income years 2-3	Estimated annual income years 4 +
500	£13,000	£8,000
1,000	£25,000	£15,000
1,500	£38,000	£23,000
2,000	£51,000	£31,000
4,000	£102,000	£61,000
5,000	£127,000	£76,000

18. As Table 1 shows, even with the highest project number of installations (5,000) the annual income would be £127,000, falling to approximately £76,000 after year 3, although this could be reduced further. The possibility of using this funding to support the installation of further energy efficiency/renewable energy measures has been investigated. However, the average cost of renewable energy systems and solid wall installation is usually between £4,500 and £10,000, meaning that only a handful of additional households could be assisted.
19. The other option is that the funding be used to support the creation of a post or posts that would be dedicated to helping tenants reduce their energy bills through a combination of energy advice and assistance with fuel debt. This would aim to help reduce fuel poverty in all council homes and reduce tenants' energy bills, as well as identifying measures required in council homes to help inform the council's improvement programmes.
20. It is feasible that at least one post could be supported by the income from a 'PV for free' project. It is envisaged that this post would only be filled when a sufficient and sustainable income stream has been established. It is anticipated that this would be by year 2 of the project.

Procurement and compliance

21. The primary constraint is the timetable attached to the use of feed-in tariffs. From April 2010 there is a 2 year period where completed installations will qualify for the highest value generation tariff, guaranteed for the lifetime of the FIT. After this point, the scheme will be evaluated by the Government who are likely to reduce the value of the generation tariff for subsequent installations. In addition, as the FITs will only run until 2035, installations taking place in 2013 for example, will only generate a return for the remaining 22 years of the FIT meaning that there is a significant impetus on possible partners to install high volumes in the next 2 years.
22. This is likely to mean that there will be significant competition for funding opportunities within the 2 year window so it is realistic to assume that we would need to agree and implement a scheme this calendar year to be in a position to take advantage of this opportunity.
23. Legal services have been involved with this scheme from its inception. The council's solicitor has viewed and assisted with the development of a draft proposed agreement between the council and any potential contractor.

24. The council's procurement team have been heavily involved with the preparatory stages of this scheme. In conjunction with the home energy specialist and HPS a draft tender document has been produced and informal expressions of interest are being collated as directed by CMT.
25. Planning have been engaged from an early stage and have provided area-specific guidance and support.

GENERAL REQUIREMENTS OF THE COUNCIL

1. The council requires the installation of free PV (photovoltaic) solar energy systems to council properties for the benefit for our residents, subject to the suitability of the properties due to roof size, orientation and structural soundness. It is a requirement that this offer is also afforded to all privately owned dwellings within targeted streets.
2. The project is to run for 25 years or when the feed-in tariff (FIT) ends to coincide with the legislation contained within the Energy Act 2008. At the termination the equipment will be removed or bequeathed to the council as per the request of individual householders or the council.
3. The selected installer will pay for all the installations and be fully responsible for the maintenance of each system installed through the scheme.
4. The process will be as follows:
 - Desktop survey of all the Council's properties to give an initial estimate of eligible properties using the spreadsheet provide by NCC.
 - Visual, on-site survey.
 - Resident consultation with contractors and Neighbourhood Housing Officers. Residents will be given free advice to ensure they maximise the free energy their system is creating. To ensure greater accessibility the installers are to allow for 'out of hours' visits.
 - Jointly branded letter sent to inform residents of offer, forthcoming phone call and structural survey. This letter has to be agreed with Norwich City Council Communications Team prior to mailing.
 - Once the survey is carried out the installer is to get the resident to sign a form allowing the works to proceed.
 - A plan and programme of works to be compiled in conjunction with the council prior to any works commencing. All data must be available in a Microsoft Excel format and copied to the council so that this can be integrated with the council's asset database.
 - The installer to advise on the likely duration of each installation.
5. The installer will monitor all the systems remotely to make sure all panels are working to maximum output and repair any faults that occur. Processes will be put in place with the Customer Contact Team to provide a direct telephone number for residents to contact the installers directly in the event of repairs being required.
6. The installers will also consult with the residents after installation for feedback on the savings and to give the council an estimate of what this is likely to be in percentage terms. This is to be linked to a customer satisfaction questionnaire.
7. The installer must supply the council with monthly reports on all the systems and their output and it is a requirement that this includes CO₂ data.

Furthermore such reports must be available electronically using Microsoft Excel.

8. All accreditations for the work go to the council.

9. The installers are to submit a bid as to how they will allocate the various elements of the FIT and what financial incentive they can offer the council in this respect. The council will expect to receive a proportion of the FIT or the export tariff until this ceases. Alternatively the offer must contain some other financial incentive to help support fuel poverty alleviation and prevention in those dwellings where PV is not appropriate to ensure there is equity among the council's residents.

10. The council will not be responsible for any damage to the equipment or to their properties resulting from installation and this risk must be borne by the installer. Properties owned by the council are not insured in this respect for any elements of the structure.

11. The council would also be looking for the installer to employ local resource on the schemes to encourage local job creation.

12. The installer will also consider possible installations at blocks of flats to provide lighting only for communal areas. It is only applicable to those blocks that are less than 3 storeys in height. In addition, the installer will consider options for installations on several smaller council buildings (e.g. Area Housing Offices) to act as 'showcases' for local residents.

13. The installer is to take account of any statutory requirements including CDM Regulations, Planning Consents and Building Regulation approvals.

14. Both the installers and the associated technology must be MCS (Microgeneration Certification Scheme) accredited.

15. Additional requirements:

- The installer is to submit their criteria for determining where any system will be installed.
- Examples are to be given of what the systems are comprised of with an accompanying technical specification, including estimated annual outputs in kW/kWh.
- It is essential that the installers submit their proposed resident consultation method with the council so that this can be approved by the Communications Team.
- A submission must be made outlining the offer/s to be made to private residents living in selected areas and an example or outline of any legal agreement that they will be expected to enter into.
- It is a requirement that the installers submit details of their ongoing customer service provision to include details of whether there is a dedicated team, where they are based, telephone helpline and email address. It is also necessary for the installer to explain how they can

link information and communication to council staff in terms of ongoing customer service.

- NCC will require full details of the installer's complaints procedure.
- Details of the installer's insurance provision are to be provided at the outset.
- The installer is to give an indication of the data they propose to gather during their surveys. NCC would require details of existing loft insulation and an indication of the condition of the roof. Any potential defects will need to be reported immediately to enable NCC surveyors to carry out inspections as required and arrange remedial works.
- Installers are to provide details of any quality assurance schemes and details of their working practices and procedures.
- It is essential that installers provide details of their recruitment plan and give an indication as to how many local jobs could potentially be created as a result of the project.
- Installers are to supply examples of their output results for scrutiny by NCC staff.
- The council requires the installer to provide an estimate of the likely annual financial incentive that would be received by the council, based on 1,000 installations.
- It is essential that the installers submit a full and comprehensive response to the evaluation matrix supplied with these requirements.