

DRAFT for Tenant Services Management Board

13th January 2011

Please note the following report is work in progress and is presented to the Tenant Services Management Board for input.

Taunton Deane Borough Council

Community Scrutiny Committee – 8th February 2011

Installation of Solar PV Panels on the Housing Stock

Report of the Strategic Director

(This matter is the responsibility of Executive Councillors Jean Court Stenning and Ken Hayward)

1. Executive Summary

This report considers the options available for the installation of solar PV on appropriate properties within the Housing Stock.

The report recommends following a consortium path for the procurement and installation of solar PV.

2. Background

- 2.1 The Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 (SI 2010/1910), came into force on 18 August 2010. The Regulations remove a restriction in place since 1989 and allow local authorities in England and Wales to sell electricity generated from renewable, as well as combined heat and power, sources.
- 2.2 Under the Regulations, LAs which sponsor renewable energy developments may now benefit not only from lower energy bills for their own consumption, but also from central government financial incentives such as Feed in Tariffs (FIT) (applicable to electricity generation projects up to 5MW) and the Renewables Obligation (generally applicable to larger scale electricity generation projects), both for generating renewable electricity and for exporting it to the national grid for sale.
- 2.3 In particular, this has opened the way for LA's and tenants to benefit from the installation of renewable energy generation equipment on the Council's housing stock through the Feed in Tariff scheme

- 2.4 The Feed in Tariff scheme (FITs) was introduced on 1st April 2010. Through this scheme individuals, organisations and businesses in England, Wales and Scotland can claim cash back for electricity they produce from eligible renewable and low carbon sources.
- 2.5 The scheme provides a fixed payment for the electricity generated, called the “generation tariff”. It also pays for any unused electricity that is exported to the grid, the “export tariff”.
- 2.6 Small-scale low-carbon electricity technologies eligible for FITs are:
 - Wind
 - Solar photovoltaics (PV);
 - Hydro;
 - Anaerobic digestion; and
 - Domestic scale microCHP
- 2.7 Realistically, in relation to the housing stock, we are looking at solar PV as the most viable option for a large number of our properties.

3. The Requirements for Solar PV

- 3.1 Solar PVs – typically solar panels installed on roofs – generate energy in the form of direct current from sunlight. This energy is then converted to alternating current so that it can be used.
- 3.2 The South West is generally seen as the most advantageous part of the UK for benefiting from solar PV installations.
- 3.3 Solar PV needs to be installed on south facing roofs to be at its most effective although 30 degrees either side of south (ie almost south east and south west facing roofs) are normally considered to be viable. Solar PV on east and west facing roofs is considered to be operating at around 85% capacity. TDBC has 4421 traditionally-built properties of which:

1493 are south orientated
986 are south east orientated, and
1094 are south west orientated.

Therefore, there are a total of 3573 properties which may benefit for the installation of solar PV. A detailed analysis of each property is likely to be required to consider the structural integrity of the roofs. There may need to be additional investment to deal with any roofing problems that come to light as a result of the installation program. This may increase the cost to the Authority as the repairs would need to be carried out during the programme rather than as they come to light through surveys or tenant reports as is current practice. It would also be good practise to review the insulation in the proposed properties at the same time; this again may have an additional cost that would not have otherwise been considered. Although both of these points seem to have an initial negative impact on costs, once completed you would have a housing stock in a much better condition for the Authority and for the tenants.

- 3.4 A typical family home will require approximately 2.2kWh of solar PV to be installed. With this size installation, a householder can expect a reduction in electricity bills of £108 per year. In addition the generation tariff will produce an income of £371 per year. An installation of this size can be expected to cost in the region of £12k.
- 3.5 With a potentially suitable stock of 3573 this would represent a significant investment in the housing stock of almost £43m and could create income of around £72m over 25 years.
- 3.6 The generation tariff is currently 41.3 pence per kWh of energy generated. This rate is set to decrease to 37.8 pence per kWh in April 2012. During 2012 the Government expects to review the rates, and all expectations are that the rates will reduce further – as has been seen in other countries. This means that realistically there is a very small window of opportunity for Councils and homeowners to benefit from the maximum tariffs.

4. **Options**

- 4.1 There are three basic options which TDBC could pursue to install solar PV on appropriate properties within the housing stock:
 - a) arrange for a contractor(s) to install solar PV at no cost to TDBC. In this scenario one or more contractors would be sought to install solar PV. TDBC would effectively be allowing the contractor to use the roof space. The contractor(s) would be expected to bear all the costs of installation and maintenance, and in return would receive the appropriate FiTs. The tenant gains an amount of free electricity, and TDBC gains positive PR.
 - b) procurement - arrange for solar PV to be installed by the DLO and/or contractors, paid for by TDBC. In this scenario contractors (who might include the DLO) are procured to install solar PV on behalf of TDBC. TDBC would expect to bear all the costs of installation and maintenance, and in return would receive the appropriate FiTs. The tenant gains an amount of free electricity. Short term investment funding will be significant.
 - c) join a consortium which will appoint a provider to install solar PV, with the option of TDBC contributing capital funding. In this scenario TDBC joins an existing consortium, such as Advantage South West, who are already procuring contractors to install solar PV on social housing. The consortium establishes an organisation to manage the installation. TDBC can decide whether or not to invest any capital. The tenant gains an amount of free electricity. TDBC and the consortium share income gained from the Generation Tariff.
- 4.2 A detailed analysis of each option is attached as appendix A.
- 4.3 In each scenario there are a number of questions that will need to be addressed before final decisions are made including:

- Where does TDBC fund any investment from – GF, HRA?
- Where does any generation tariff received from TDBC go – again GF or HRA?
- Do individual tenants receive free electricity or is there a way of pooling the value of free electricity so that it can be equitably spread across all tenants?
- What happens to the equipment and its ongoing maintenance at the end of 25 years?

5. Finance Comments

6. Legal Comments

7. Links to Corporate Aims

- 7.1 This initiative will have a major impact on the Council's climate change objectives, particularly in relation to reducing the areas carbon footprint. It is also likely to benefit a number of tenants living in fuel poverty, thus contributing towards the Council's deprivation objectives.

8. Environmental and Community Safety Implications

- 8.1 The installation of solar PV on domestic property is normally considered to be permitted development and does not require planning consent. There is a risk that installations could become the targets for vandalism.

9. Equalities Impact

- 9.1 The provision of solar PV will be dependent upon the location of each property. As a result there is unlikely to be any discrimination. It is anticipated that the works carried out on appropriate properties will benefit all types tenants, including assisting with relieving fuel poverty.
- 9.2 Where the option selected involves a financial contribution from TDBC inevitably a choice will have to be made to direct budgets to this scheme and thus potentially away from other projects/services which support vulnerable people in our communities. This could pose a risk to some protected groups. However the overall impact on the community in a positive way is likely to outweigh this risk. Full impact assessments will be carried out.

10. Risk Management

- 10.1 Please see Appendix A for an overview of the risks associated with each option.

11. Partnership Implications

- 11.1 There are significant potential health benefits in progressing with the installation of solar PV, which would suggest that discussions to explore partnership contributions from the PCT, or other partners may be worthwhile. By its' very nature the consortium approach is a partnership.

12. Conclusions

Whilst the use of contractors to fund and install solar PV presents the least risk to TDBC, it also provides the least benefit and does not enable TDBC to make any use of the funding available from electricity generation.

The funding of installation by TDBC is the highest risk option, with all risks and benefits being borne by the Council. At worst, should the FiTs become no longer available during the 25 year period TDBC could find itself in a position of having significant loans with no income to pay them off. At best, TDBC will have a steady income over 25 years as a return on its' investment.

The final option of joining with a consortium in principle appears to offer TDBC low risks with some return. Whilst the returns will not be as great as from option 2, there is a key advantage in that the programme will be managed through the consortium.

13. Recommendations

The recommendation will be to pursue the consortium option, with a view to:

- Officer's gaining full details of the offer available and seeking to minimise risks to TDBC
- Financial options being fully explored
- Final approval to be made by the Executive once the above have been completed.

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Appendix A

Analysis of options for the installation of solar PV on appropriate housing stock

Issue	Contractor Only	DLO/Contractor	Consortium
Cost to TDBC of 3500 solar PV installations	£0	c£42m	The consortium would expect to reap significant economies of scale, thus reducing the cost of each installation to substantially below that obtainable by TDBC on its own. At present the consortium is anticipating installations on a minimum of 27,000 roofs (compared to 3,500 in TDBC alone).
Funding arrangements	The contractor will fund.	TDBC will need to fund, largely through borrowing.	The provider appointed by the consortium will be required to fund the installation and maintenance/replacement of solar PV. Member organisations will have the opportunity to invest in the provider, and thus gain greater returns.
The generation tariff over 25 years will produce £71.5m.	Entirely retained by the contractor	Entirely retained by TDBC. Gives an income stream of 29.5m over the 25 years	The provider appointed by the consortium will retain the FITs, but will pay an agreed amount to each member of the consortium for each kWh. Proportions currently unknown.
Maintenance, repairs and	Liability rests with the contractor	Liability rests with TDBC	Liability rests with the provider

replacements	appointed		appointed.
Installers used	Contractors	DLO and/or contractors. In practice, if teams were employed and trained by the DLO this could provide a new commercial activity, boosting local employment opportunities. It is very unlikely that the DLO would be able to create sufficient capacity to undertake 3500 installations in the short timescale required to maximise income from the generation tariff. A mix of DLO and private contractors is therefore the most likely approach.	The consortium will appoint a range of contractors to undertake the installations – including any DLO's amongst its members that are able to carry out the work.
Administration of Tariffs	Contractor	TDBC	Provider appointed
Identification of potentially suitable properties	TDBC	TDBC	TDBC
Timescale	Procurement could commence early in the new year. The scale of the contract will require full OJEU procedures to be followed. Work could commence around late summer 2011.	Procurement could commence early in the new year. The scale of the contract will require full OJEU procedures to be followed. Work could commence around late summer 2011.	Procurement by the consortium has already commenced and an OJEU notice published. The contract is expected to be awarded in early March 2011. The consortium expect to complete the majority of installations (a minimum of 20,000 – 25,000) by March 2012, ie before the first decrease in the generation tariff, with the remainder being completed by the end of March 2013.

