

**Report of the Director of Environment and Housing**

**Report to Executive Board**

**Date: 18<sup>th</sup> March 2015**

**Subject: Solar PV installations for Council Housing**

Are specific electoral Wards affected?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If relevant, name(s) of Ward(s): Armley, Beeston and Holbeck, Bramley and Stanningley, Burmantofts and Richmond Hill, Chapel Allerton, City and Hunslet, Farnley and Wortley, Garforth and Swillington, Guiseley and Rawdon, Harewood, Killingbeck and Seacroft, Kirkstall, Middleton Park, Moortown, Morley North, Morley South, Otley and Yeadon, Pudsey, Rothwell, Roundhay, Weetwood,		
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the decision eligible for Call-In?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, Access to Information Procedure Rule number:		

**Summary of main issues**

1. This report seeks endorsement from Executive Board to install solar photovoltaic (PV) systems on 1000 council homes.
2. There is a solid business case to install solar PV on council homes. We expect that a capital outlay of £3.8m will generate revenues to the council of £6.4m over 20 years. In addition, we expect tenants to save over £4.4m in electricity costs over 20 years.
3. The capital funding has been injected as part of the Housing Leeds refurbishment programme and will be repaid by the income received from the Feed in Tariff (FIT) and the export tariff.
4. Installing solar PV to council homes contributes to numerous city wide priorities and is a specific action within the Low Carbon breakthrough project. Carbon emissions will reduce by c862 tonnes pa, equivalent to taking approximately 452 cars off the road. Tenants will be on average £136 per year better off, helping to address fuel poverty.
5. The new Better Homes Yorkshire call off contract will be used to deliver the works, giving impetus to this important new contract and ensuring that Housing Leeds will benefit from a cost effective and high quality contractor.

## **Recommendations**

Executive Board are requested to:

1. To approve the installation of photovoltaic systems on approximately 1000 council homes.
2. Note that subject to availability of funding and the business case remaining viable that the Director of Environment and Housing can consider and approve a further £3.8m within the Housing Leeds refurbishment programme to install solar PV systems on a second tranche of 1000 properties.
3. Note the appointment of Better Homes Yorkshire to undertake the installation programme via the recently procured call off contract, subject to finalisation of commercial terms.

### **1 Purpose of this report**

- 1.1 This report seeks approval from Executive Board to install solar PV on approximately 1000 council homes. This will be delivered via the Better Homes Yorkshire call off contract.
- 1.2 The report also seeks endorsement of a second tranche of 1000 properties, subject to availability of funding and the business case remaining viable. If so, the Director of Environment and Housing will consider and approve a further £3.8m within the Housing Leeds refurbishment programme.

### **2 Background information**

- 2.1 In December 2010, Executive Board agreed to install solar PV systems on at least 1,000 council homes at no cost to the council. This was via a partnership with Empower and funded by the government's Feed in Tariff (FIT).
- 2.2 However, the unexpected announcement in December 2011 to cut the FIT rates rendered this unaffordable. In December 2011 Executive Board agreed to put the project on hold and to investigate other options to deliver a revenue neutral solar PV initiative.
- 2.3 Despite running a tender exercise in 2012, no viable alternative was found.
- 2.4 However, the cost of solar PV systems has reduced by around 60% since then and we have now established that a revenue neutral scheme can be delivered.
- 2.5 FITs are paid for every unit of electricity generated, with the rate varying according to the size and type of technology used. Domestic scale solar PV (less than 4kWp) receives 12.05p per unit of electricity generated, regardless of whether it is used on site or exported to the grid, with payments index linked and guaranteed for 20 years. In addition, it is assumed that 50% of electricity generated by domestic scale solar PV is exported to the grid, so an additional index linked payment of 4.85p per unit is made on 50% of the generation.

- 2.6 A clause in the legislation allows people to voluntarily assign FIT payments to a third party. This allows the Council to pay the capital cost of installing renewable energy in homes, in the knowledge that we will receive FIT payments over 20 years to recoup our capital investment. Any organisation that owns more than 25 solar PV systems only receives 90% of the FIT rate for the 26<sup>th</sup> and subsequent installations. This will apply to us and has been included in the financial model.
- 2.7 FIT rates decrease quarterly through a mechanism called depression in order to limit the long term costs of FITs. This allows government to set pre-determined trigger points related to the scale of PV installed in the previous quarter. When these trigger points are reached, the FIT rate drops, with the level of decrease related to the level of installation. Rates have dropped by c10% pa over the last couple of years. However, installation rates are picking up again so we can expect greater decreases over the next 12 months.
- 2.8 Importantly, once a solar PV system has been installed and registered, the FIT rate for that system is locked in and is not affected by any future depression.

### **3 Main issues**

- 3.1 A huge amount of work was undertaken during the development of the previous solar PV project in 2011 and this information has been revisited and reused during the development of this new project.

#### **Technical issues and property selection**

- 3.2 The benefit of PV systems are maximised if properties meet some basic technical pre-conditions. These include:
- The size, pitch and orientation of the roof. A large roof with a pitch of 35° and facing due south is ideal;
  - The roof being in good repair, with a life of at least 20 years;
  - Absence of shading from trees, lamp posts, other buildings, or roof-mounted obstructions (e.g. dormer windows, chimneys etc);
  - Minimal asbestos or structural issues;
  - Modern internal wiring, fuse boards and electricity meters.
- 3.3 Additionally, the Distribution Network Operator (DNO) must give approval for multi-site PV installations via a G83 application to ensure the electricity network is not overloaded.
- 3.4 Therefore, the PV installations will never be evenly distributed across the city or within an estate.
- 3.5 These preconditions were used previously by our partner, Empower, to assess the suitability of all of our letting areas for solar PV. This information was used to identify 39 letting areas, incorporating c6,500 properties, that had the best

potential for PV installations. G83 applications were made for all 39 letting areas but only c2,700 of the properties were approved out of 6,500.

- 3.6 Manor Farm and Boggart Hill have been selected for the first installations due to the high density of G83 approved properties, orientation of roofs and fuel poverty ranking.
- 3.7 Now that the DNO has more experience of how large scale solar PV actually affects the grid, there is potential for a small number of additional properties to be included. The council is currently negotiating the inclusion of additional properties with the DNO.

## **Procurement**

- 3.8 The council signed a call off contract with a consortium called Better Homes Yorkshire in December 2014 which aims to deliver energy efficiency and renewable solutions across Leeds City Region.
- 3.9 This contract allows the council to negotiate with the contractors to install energy efficiency and renewable energy improvements to council homes in a timely, cost effective and efficient manner. We are close to agreeing very good commercial terms for this large scale solar PV project with Better Homes Yorkshire.
- 3.10 This report seeks approval to install solar PV systems on 1000 properties. However, the ambition is to install solar PV systems to as many council homes as technically and financially viable. We believe that a second tranche of 1000 properties will be viable but need to assess the success of the scheme, the state of the market, prevailing FIT rates and availability of capital finance prior to the Director of Environment and Housing making a decision on this.

## **4 Corporate Considerations**

### **4.1 Consultation and Engagement**

- 4.1.1 The 2011 solar PV project undertook extensive tenant communication and consultation prior to the FIT rates changing. Although the project did not ultimately go ahead, the tenant feedback at face to face events, in housing offices and over the phone was overwhelmingly positive. All tenants were informed of the reason why the project was on hold and told that we would seek to start it again.
- 4.1.2 We have no reason to believe that tenants will not be positive this time too. Again, a suite of communication materials for tenants who may be eligible for PV installations is under development. We plan to use a range of engagement methods to allow residents to have face to face discussions with both council representatives and delivery contractors and will ensure that all Housing Offices are briefed.
- 4.1.3 Ward members for the initial rollout areas (Manor Farm & Boggart Hill) have been consulted with no objections received. Members of all the affected Wards will be consulted prior to roll out.

## 4.2 Equality and Diversity / Cohesion and Integration

- 4.2.1 An EDCI was carried out in February 2015. This concluded that a full impact assessment was not required as the decision as to whether to include particular homes is based entirely on technical property characteristics rather than any personal or group characteristics.
- 4.2.2 This is the same method used to decide whether to install cavity wall insulation, loft insulation, efficient boilers and other energy efficiency improvements.
- 4.2.3 The impact on tenants that receive solar PV systems will be overwhelmingly beneficial.

## 4.3 Council policies and City Priorities

- 4.3.1 The council made a long term commitment in the 2012 Climate Change Strategy to reduce carbon emissions from the Council by 40% between 2008 and 2021 and the city as a whole by 40% between 2005 and 2020.
- 4.3.2 Currently, approximately 11.6% (38,000) of Leeds households are estimated to be in fuel poverty, according to the new low income/high costs definition. A key aim of the Affordable Warmth Strategy is to reduce fuel costs across the whole housing stock to prevent any household from falling into fuel poverty.
- 4.3.3 This project will assist in delivering both these ambitions and is a key project within the Low Carbon breakthrough project.
- 4.3.4 The Vision for Leeds is supported by the City Priority Plan 2011 to 2015, which brings together a number of priorities/themes which will help us deliver the 2030 Vision. The most relevant of these are:
  - **Best city for Business** – Improve the environment through reduced carbon emissions.
  - **Best city to Live** – Improve housing conditions and energy efficiency.
  - **Best city for health and wellbeing** – Reducing the number of people in fuel poverty.
  - **Best Council Plan** – Developing a low carbon, resilient energy infrastructure for the city.

## 4.4 Resources and value for money

- 4.4.1 Joint responsibility for procurement and delivery of this project is shared by personnel from Property and Contracts (Housing) and the Public Private Partnership and Procurement Unity (PPP – PU).
- 4.4.2 Installing solar PV to council homes will help alleviate fuel poverty. Precise savings will vary according to the size of the PV installation and the behaviour of

the tenants but will typically be over £100pa and could be up to £200. We project an average saving in year one of £136 per property, accounting to a saving of £4.4m for tenants over 20 years.

- 4.4.3 A financial model has been developed to assess the likely 20 year costs and benefits of this installation. This analysis demonstrates that a capital outlay of £3.8m will generate revenues to the council of £6.4m over 20 years. When operational costs are factored in the project has an internal rate of return of (IRR) of 5.21% and a net present value of £1.04m over 20 years.
- 4.4.4 The first 1000 properties to have solar PV systems installed will be treated as a specific project and therefore different policies may apply to any future installations. Tenants in the first 1000 properties will be able to use the electricity generated by the solar panels free of charge. However, if the Council continues to develop and expand its portfolio of renewable energy technologies (including, but not limited to solar PV) a different charging model may be applied to future installations.
- 4.4.5 In order to obtain maximum benefit from the FITs scheme and mitigate the impact of the degression mechanism the Council needs to install photovoltaic systems across its housing portfolio by October 2015. Although impossible to predict, we expect the business case to become more marginal as the effect of progressive quarterly degressions reduce the value of FITs, thereby extending the payback periods for photovoltaic schemes.

#### **4.5 Legal Implications, Access to Information and Call In**

- 4.5.1 Recipients of solar PV installations will be required to sign a tenancy variation agreement. This variation allows the council to gain access to the property to maintain the systems and prevents tenants from taking actions that would affect the operation of the PV systems – e.g. growing a tree that would throw shade onto the solar panels.
- 4.5.2 The ‘Right to Buy’ process applies to all properties in scope for this project. Therefore, over time some of these properties may be lost from the council portfolio (see 4.6.1 below).
- 4.5.3 The decision is open for call-in.

#### **4.6 Risk Management**

- 4.6.1 A formal risk register has been drawn up and will continue to monitor and mitigate high risk areas. These are identified below:
- *Reduction in income* - FIT rates continue to reduce and the forthcoming general election brings with it political uncertainty. Therefore we need to install PV systems as soon as possible. *Mitigation* – a robust project plan has been developed and Better Homes Yorkshire has proven experience of installing solar PV systems in volume to tight deadlines.
  - *Tenant take up and access* - whilst we know that tenants are generally keen to have PV installed on their properties, they do have the right to refuse. A

physical survey of the properties is required to establish if the property is suitable for the systems and all participating tenants must sign a tenancy variation prior to installation. *Mitigation* – robust tenant liaison at all times is essential to ensure a successful uptake. Clear communications and customer engagement will be used throughout the process.

- *Tenant awareness and system use* – tenants will only get full benefits from the free electricity if they are aware of how the system operates and can change habits to maximise free electricity. Additionally, the PV system will not function if the pre-payment meter runs out of credit, presenting a risk to FIT claims. *Mitigation* - Clear communications and customer engagement will be used throughout the process, from initial survey to post installation communications. In addition, we will prioritise replacing pre-payment meters with smart meters in homes with solar PV.
- *Right to buy* – all tenants have the ‘Right to Buy’ their council home, this would mean the solar PV systems, FITs and export income would be lost to the council. *Mitigation* – The cost of the panels will be added to the value of the property at the point of sale. The loss of FITs and export income is currently under investigation by legal services to find an appropriate solution.

## **5 Recommendations**

Executive Board are requested to:

- 5.1 Executive Board to approve the installation of photovoltaic systems on approximately 1000 council homes.
- 5.2 Note that subject to availability of funding and the business case remaining viable that the Director of Environment and Housing can consider and approve a further £3.8m within the Housing Leeds refurbishment programme to install solar PV systems on a second tranche of 1000 properties.
- 5.3 Note the appointment of Better Homes Yorkshire to undertake the installation programme via the recently procured call off contract, subject to finalisation of commercial terms.

## **6 Background documents<sup>1</sup>**

- 6.1 Risk Register
- 6.2 Tenancy Variation

<sup>1</sup> The background documents listed in this section are available to download from the Council’s website, unless they contain confidential or exempt information. The list of background documents does not include published works.