

Subject:	Home Energy Efficiency Update: Procurement of Solar Photovoltaic Arrays for Housing Revenue Account Property		
Date of Meeting:	18 July 2013 19 June 2013 – Housing Committee		
Report of:	Executive Director Environment, Development & Housing		
Contact Officer:	Name:	Martin Reid / Alex Fox	Tel: 293321 / 290773
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Ward(s) affected:	All		

FOR GENERAL RELEASE.**1. SUMMARY AND POLICY CONTEXT:**

- 1.1 Tackling inequality and creating a more sustainable city are key priorities in the Council's Corporate Plan aligned to One Planet Living commitments. The Council is committed to improving the energy efficiency of the City's housing, reducing the cost of living at a time when energy prices continue to rise. The aim is to help households to access affordable energy efficiency measures, in particular people on low incomes. This will assist in tackling fuel poverty and contribute to reducing the City's carbon dioxide (CO₂) emissions. In addition, the Council is committed to contributing to the development of the One Planet approach to ensure Brighton & Hove will improve energy security, become more resilient to shortages and price increases in energy and other resources and take opportunities for growth in environmental sector jobs.
- 1.2 The Council has a strong track record of significant investment to increase the energy efficiency of the City's council housing stock. The Housing Investment Capital Programme 2013-2016 (approved by February 2013 Policy & Resources Committee) identifies £1.555m Housing Revenue Account capital budget over the next 3 years to be allocated to the installation of Solar Photovoltaic Arrays (Solar PV). It is estimated that this will achieve over 240 installations. In addition, we are committed to updating our business modelling to inform a review of proposals for installing Solar PV to the full 1600 potential council (HRA) properties identified in our original Solar PV options appraisal (2010-11).
- 1.3 This report sets out an update to the original Solar PV modelling for a large scale installation project as requested by Members of this Committee.
- 1.4. In addition this report seeks approval to tender a contract for the supply and installation of a small number of Solar Photovoltaic Arrays to Housing Revenue Account ('HRA') owned dwellings included in the 3 year HRA capital programme.
- 1.5 Further to the report presented to Policy and Resources in January 2013, this report also offers a brief update on progress with the West Sussex County

Council led procurement of a Green Deal provider for Sussex through the Sussex Energy Saving Programme.

2. RECOMMENDATIONS:

2.1 That Housing Committee –

- (1) Notes an update of the option appraisal for a large scale installation of Solar PV's to housing stock.
- (2) Approves the procurement of a contract for the supply and installation of Solar Photovoltaic Arrays to HRA owned dwellings for up to 12 months with two extensions of up to 12 months each if required, subject to satisfactory performance of the contractor.
- (3) Grants delegated authority to the Executive Director Environment, Development & Housing, in consultation with Director of Finance & Resources, to award the contract for up to 12 months following the recommendations of the evaluation panel, and approve two extensions to the contract of up to 12 months each if required, subject to satisfactory performance of the contractor.

3. RELEVANT BACKGROUND INFORMATION

3.1 One of the key strategic priorities outlined in the City-wide Housing Strategy 2009-14 is to improve housing quality; to make sure that residents are able to live in decent homes suitable to their needs. Our strategic goals under this priority include, reducing fuel poverty, minimising CO2 emissions and improving tenants' homes, ensuring they are of high quality and well maintained.

3.2 Brighton & Hove faces a number of challenges in increasing the energy efficiency of its housing stock:

- Homes contribute the most significant source of carbon dioxide in the City at 42% of Brighton & Hove's measured carbon footprint, or 514,000 tonnes per year, compared to 31% nationally;
- Domestic emissions in the City (including Council homes) account for around 57% of the city's total emissions from buildings;
- Fuel poverty rose to 13.5% in Brighton & Hove in 2010, higher than the South East average;
- The Joint Strategic Needs Assessment identifies the relationship between poor housing and poor health outcomes, in particular fuel poverty and poor thermal comfort. Director of Public Health Annual Report has identified good quality housing as important for building wellbeing and resilience and housing in the City as an area representing a particular vulnerability.

3.3 Where considering the energy efficiency of the city's housing stock there are also wider national energy challenges that need to be reflected, including:

- Rising energy costs - prices expected to double by 2030;
- Rising energy demand - expected to double by 2050 due to electrification of transport and population growth;
- De-carbonisation - 5% renewable energy within 8 years, 30% by 2030; 80% all energy 'de-carbonised' by 2050;

- Energy security - UK has only 14 days power reserves compared to France and Germany with >80 days, a 5% drop in imports could lead to 'sustained blackouts within weeks'.

3.4 Identifying funding and investment opportunities for home energy efficiency improvements to maintain the high standards of the previous programmes is a challenge we must face. With less central government funding available we are looking to access alternative funding streams to finance energy efficiency programmes for private sector housing and council housing in the City, these include:

- HRA capital programme;
- The 'Green Deal' and Energy Company Obligation;
- Feed In Tariffs – (Feed-in Tariffs (FITs) became available in Great Britain on 1st April 2010. Under this scheme energy suppliers have to make regular payments to householders and communities who generate their own electricity from renewable or low carbon sources such as solar electricity panels (PV) or wind turbines).

3.5 **HRA capital programme**

Significant investment has been made to increase the energy efficiency of the City's own housing stock through both the planned capital works programme and CERT & CESP funded schemes. The Brighton & Hove HRA capital programme for 2013-16 supports the action plan commitments set out as part of the One Planet Living plan, to reduce annual Carbon Emissions associated with energy use in council owned properties.

3.6 Against the background of rising fuel costs, we recognise that it is imperative that we reduce energy wastage by ensuring homes have modern heating systems and are well insulated to minimise the number of households suffering from fuel poverty. £10.1 million is included over the next three years to replace and upgrade a number of the communally heated systems alongside individual domestic replacements and improvements. Where practicable, renewable energy is being incorporated within these projects, for example, in 2012/13 Walter May House received a communal solar hot water system along with new high efficiency boilers. It is intended to undertake more of these types of project, subject to feasibility surveys that are now being undertaken.

3.7 Insulated over cladding provides an additional protective layer to our buildings this has a number of benefits including energy efficiency. The programme also includes survey and installation of cavity wall insulation and loft insulation top ups to 270mm, where construction types and location allow it. In addition it is proposed to fund the completion of ongoing major projects at Essex Place and Hereford Court, as well as starting Phase 2 improvements at the Bristol Estate (subject to further studies and required permissions).

3.8 We have installed 29 Solar PV installations on council housing stock. These serve 76 tenant dwellings and 26 leasehold flats.

3.9 Over the next 3 years £1.555 million has been allocated to the installation of Solar PV in Housing Revenue Account capital budget, it is estimated that this will achieve over 240 installations. This will allow the procurement of a separate

contract, which will scale-up delivery over the next 3 years, to enable the installation of Solar PV panels, integrated with appropriate projects, where possible, to take advantage of economies of scale and other identified stand-alone building improvement opportunities. It is recognised that insulation and other improvements to properties may be required in order to meet minimum energy performance requirements.

- 3.10 This small installation will help reduce fuel poverty, assist in meeting the Council's long-term carbon emissions reduction targets and provide accurate pricing for solar panels should the council wish to pursue a larger installation programme. It is envisaged at this time that the tender will take place via an existing framework agreement available to the Council.
- 3.11 As at the end of December 2012 the average SAP rating (using rdSAP09) across the council housing stock was 61.9.

3.12 **Green Deal Update**

Further to the report presented to Policy and Resources in January 2013 we can update on progress with the West Sussex County Council led procurement of a Green Deal provider for Sussex through the Sussex Energy Saving Programme. An opportunity for a Green Deal provider for Sussex was advertised through an OJEU notice in March 2013 with Brighton & Hove identified as a potential partner in a Sussex wide scheme. This procurement activity is ongoing with three bidders being taken forward to the dialogue stage, a significant focus of the procurement dialogue is on how the scheme can support the local economy through the use of local businesses, developing skills through education and apprenticeships and ultimately creating local jobs. A supplier is expected to be awarded a contract towards the end of 2013. A further report outlining the options available to Brighton & Hove to participate and potentially invest in this scheme will be presented to relevant committees over the coming months.

3.13 **Home Energy Conservation Act (HECA) requirements**

Guidance under the Home Energy Conservation Act 1995 (HECA) to English local authorities with housing responsibilities was published on 26 July 2012. It sets out requirements for those authorities to report on the measures they propose to take to significantly improve the energy efficiency of all the residential accommodation in their areas. The guidance links with the delivery of the Green Deal by local authorities. The HECA report should identify: practicable and cost-effective measures to significantly improve the energy efficiency of all residential accommodation in their area and the progress made in implementing the measures. HECA aims to focus the attention of local authorities more closely on the energy efficiency of all residential accommodation and on developing an integrated approach to their housing and energy efficiency strategies. There is a requirement for the Council to complete and submit an annual HECA report.

- 3.14 Progress on Solar PV will contribute toward our local authority Home Energy Conservation Act (HECA) requirement to report on measures we propose to take to significantly improve the energy efficiency of all residential accommodation in their areas. Recent HECA guidance also links this with delivery of the Green Deal by local authorities.

3.15 OPTIONS APPRAISAL FOR LARGE SCALE SOLAR PV INSTALLATION

Background

In 2010, an options appraisal identified that a large Solar PV installation project of approximately 1,600 installations on the council's housing stock would result in an overall positive return (that is net income to Housing) on the original capital investment and maintenance. This was mainly because at that time the Government was providing a significant income stream by guaranteeing to pay a high Feed in Tariff scheme for electricity generated and returned to the grid. A HRA capital scheme was then approved by Cabinet in September 2011 for installation of solar panels to 1,600 properties at a cost of £15 million fully financed by borrowing. This scheme was forecast to fund borrowing through net annual income streams and result in a net Net Present Value (NPV) surplus of c£9million over 25 years.

- 3.16 However, a major review of the Feed in Tariff scheme was then announced by the Government in December 2011, which meant it was no longer financially viable to proceed with a large scale scheme as in all scenarios the NPV returns became a deficit (cost), ranging from £2 to £8 million over 25 years. Further to this, the reduced tariffs meant that surpluses were not generated until year 17, which is when the borrowing costs would have been repaid. Therefore on these assumptions, there was an annual deficit which would need to be funded from the revenue budget over 16 years which ranged from £0.300 million to £0.600 million per annum. The HRA Capital Programme 2012-2015 report to Cabinet in February 2012, said that should circumstances change and positive revisions be made to the FIT tariffs or a very substantial reduction in the installation costs emerge that the business case for large scale installation would be revisited.
- 3.17 Since the Government reductions to the FIT scheme, and due to improvements in technology and manufacturing, the installation costs for Solar PVs have been reducing resulting in further changes to options appraisals.
- 3.18 **Updated Options Appraisal**
Our existing energy efficiency managing partner, Climate Consulting (who carried out the original options appraisal) and Officers, have now completed an updated options appraisal based on the current situation. Since the original appraisal the number of potential installations have reduced from 1,600 to 1,463, (of which 1,100 are houses) due to technical changes in panel sizing.
- 3.19 The options appraisal has been completed using two different assumptions for unit installation costs:
- 1 Climate Consulting estimated installation costs of £1,500 per Kwp inclusive of costs of planning, building control and DNO liaison and other project set up costs.
 - 2 Installation rates of £1,900 per Kwp plus initial project set up costs of £0.500 million as estimated by officers.
- 3.20 Table 1 compares the results of the two assumptions which provide Capital investment costs of between £6.7 and £8.5 million with a NPV return on investment, over 20 years of between a small surplus of £0.107 million and a

cost (negative NPV) of £2.8 million for unit installation rates of £1,500 and £1,900 per Kwp respectively.

- 3.21 The Climate consulting rates of £1,500 per Kwp achieving a surplus are lower than the current installation rates achieved at Brighton and Hove and are therefore currently untested. Current rates are at £1,900 per Kwp which would require capital investment by the Council. The procurement via the framework for small scale installations proposed in this report will provide officers with the current installation rates achievable in the City and therefore provide some cost certainty before procuring a larger installation scheme.
- 3.22 Table 1. Financial Appraisal of large scale Solar PV installation on Housing Stock

Scenario Modelled on 1,463 installations	Average Install cost per KWp£	Capital Cost	NPV Surplus/ (Deficit) over 20 Years
		£'000	£'000
Current BHCC install rates achievable.	1,900	8,455	(2,839)
Consultant assumed install rates.	1,500	6,675	107

- 3.23 There is a financial benefit to residents through savings in electricity bills of which the majority of savings would be to tenants in houses (1,100 installations), with some savings in costs for communal electricity on blocks of flats. It is difficult to accurately quantify the level of savings to residents as this would be dependant on electricity prices, resident usage behaviour and the amount of electricity generated but is likely to be in the region of £80 to £150 per annum for those in houses.
- 3.24 **PROCUREMENT OF FRAMEWORK FOR SMALL SCALE INSTALLATIONS 2013-2016**
- 3.25 The Housing Investment Programme 2013-16 supports our action plan commitments as set out in the One Planet Living plan, to reduce annual Carbon Emissions associated with energy use in council owned properties. The programme included funding totalling £1.555 million over the next 3 years to allow the procurement of a separate contract to enable the installation of Solar PV panels, integrated with appropriate projects, where possible, to take advantage of economies of scale and other identified stand-alone building improvement opportunities.
- 3.26 The Council is seeking to procure a contract for the supply, installation and FIT (Feed in Tariff) administration of Solar PV for a small number of HRA owned properties, including dwellings, where possible prioritising dwellings within the following criteria:

- That they be fitted to Sheltered Accommodation and/or;
- Dwellings in Lower Super Output Areas (LSOA's);
- That systems do not exceed 4kWh and;
- With EPC ratings of band D, or above and;
- That such buildings are suitable to receive PV;
- Other buildings where clear opportunities are identified.

3.27 Presently the Council has 29 PV systems on HRA property. This is comprised of 20 on individual houses (2 of which are now leased to BHSC) and 9 on flat blocks. In all, these serve a total of 78 HRA dwellings and 26 Leaseholders.

3.28 Indicative Property Lists:

Given the energy and cost savings to residents Solar PV provides, this report advises that the project targets areas of the City where the residents savings will be most effective. Paragraph 3.26 above indicates criteria that may frame prioritisation of homes. While seeking to address fuel poverty we are not proposing to *exclusively* target households in fuel poverty. By prioritising households in LSOA's and Sheltered Accommodation we are likely to both assist households that are fuel poor and also prevent fuel poverty that may arise among other residents. Other factors that will frame prioritisation of installations include cost effectiveness aligned to existing programmes of work and meeting technical criteria for optimisation of Solar PV installation in terms of suitability of the building. Therefore, from desk top studies only, Property & Investment has identified an initial potential batch of properties in LSOA's totalling over 400 dwellings and a large proportion of the Council's 23 Sheltered Accommodation blocks (which serve 850 dwellings). The need to clearly prioritise is required as the demand for Solar PV from residents is likely to be much greater than the number of installations that can be undertaken using the budgets available.

3.29 Project format:

The intention is to award the contract for the 2013/14 budget initially with two extensions subject to the performance of the contractor. The aim of this is to increase interest in the advertisement and tendering process and incentivise the successful contractor to be performance driven. It will also reduce the cost of further procurement through economies of scale. We currently model the cost of an average system at around £7000. Using that rate, the approximate values of the contract and extension are likely to be as follows:

- £300k in 2013-14 which should allow for the installation of around 42 PV systems.
- £500k in 2014-15 for an extension (at the Council's discretion) which should allow for the installation of around an additional 75 PV systems.
- £730k in 2015-16 for an extension (at the Council's discretion) which should allow for the installation of around an additional 130 PV systems.

3.30 The contract will be procured through an OJEU compliant Framework operated by Procurement for Housing (PfH). The Mini competition will be awarded on the basis of most economically advantageous tender based on the published evaluation criteria as follows:

- Commodity specific & whole life cost (Price) 60%

- Quality & Capacity (Quality) 20%
- Added value (Quality) 20%

4. COMMUNITY ENGAGEMENT AND CONSULTATION

- 4.1 Housing & Social Inclusion has a programme of continuous engagement with our residents through the various resident groups and representatives attend regular meetings with BHCC officers and contractors. Discussion and progress of the project will be incorporated into the relevant engagement groups, fully involving residents and their representatives in helping to deliver a successful project.
- 4.2 Leaseholder consultation will not be required.

5. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications:

- 5.1 The Housing Revenue Account Capital Programme 2013-16 report, approved by Policy & Resources Committee in February 2013, included funding of £0.309 million for 2013/14 for Solar PVs, with provisional further funding in the programme of £0.516 for 2014/15 and £0.730 million for 2015/16. Any Feed in Tariff income generated from the installation of solar panels will be included in the 2014/15 Budget Strategy and Medium Term Financial Strategy.
- 5.2 The procurement and installation of a large scale solar panel programme would need to be reported to Policy & Resources Committee for both budget and funding approval.

Finance Officer Consulted: Susie Allen Date: 28 March 2013

Legal Implications:

- 5.3 The authority of Housing Committee is required for matters with housing implications, such as the procurement of the supply and installation of Solar Photovoltaic Arrays to HRA owned dwellings for which the costs are likely to exceed £500,000. Accordingly the committee is entitled to agree the recommendations at section 2 above.
- 5.4 Further, the Council's contract standing orders require that authority to enter into a contract valued at £500,000 or more be obtained from the relevant committee.
- 5.5 The Council is entitled to make alterations and improvements including the installation of solar PV panels on HRA owned dwellings so long as these comply with the appropriate buildings regulations and fire safety requirements.
- 5.6 The tender of the contract is subject to compliance with the full application of applicable EU legislation together with the Public Contracts Regulations 2006, the Council's Contract Standing Orders and Financial Regulations.

Lawyer Consulted: Isabella Sidoli

Date: 3 April 2013

Equalities Implications:

- 5.7 In targeting LSOA's installations will have direct affect on the quality of life for the Council tenants they serve. There will also be a wider positive impact socially and economically as the systems go some of the way towards tackling fuel poverty and the City's energy consumption. Importantly, systems installed on the sheltered schemes serve some of our elderly and most vulnerable residents.
- 5.8 Dependent on the model chosen there is the potential for a large energy efficiency retrofit programme in Brighton & Hove to address a number of issues faced by vulnerable residents in the City, and those at greater risk of fuel poverty and its impacts. A full Equalities Impact Assessment can be carried out if and when details of a preferred model and delivery route emerge.

Contractor Sustainability Implications:

- 5.9 The proposals outlined above would bring significant sustainability benefits in terms of climate change and energy use and promoting sustainable communities.
- 5.10 The procurement process shall ensure that all contractors will be assessed for their sustainability credentials, where relevant, in the following typical areas (please note the actual criteria for assessment is still to be formulated):
- Have policies in place that will improve energy efficiency and encourage awareness of energy issues in terms of their own operations.
 - Have a commitment to reducing waste, reusing and recycling resources used in the delivery of the service wherever possible, and aim to ultimately send a minimum amount of waste to landfill.
 - Have a commitment to reduce green house gas emissions to the atmosphere arising from its activities including operational and embedded CO₂ levels.
 - As part of this commitment the contractor should encourage low carbon modes of transport and fuel-efficient driving, as well as reducing the need to travel.
 - Have a commitment to sustainable procurement and consider the whole life cost of goods and services procured on behalf of the Council. All aspects of procurement should be assessed to help reduce significant environmental impacts, whilst also maintaining a balance between social and economic needs of the wider community.
 - Actively engage with and improve the performance and sustainability of its own supply chain.

Crime & Disorder Implications:

- 5.11 This project is not thought to have any specific crime and disorder implications.

Risk and Opportunity Management Implications:

- 5.12 Risks associated with this procurement will be managed using the corporate risk management methodology.

Public Health Implications:

- 5.13 As identified above and within the Joint Strategic Needs Assessment the impact of living in cold homes and fuel poverty is significant on health, particularly for vulnerable groups, including: children; older people; and people with disabilities and long term health conditions. The health risks of living in a cold home include breathing difficulties, heart and circulatory problems, mobility problems, increased risk of stroke and poor mental health.

Corporate / Citywide Implications:

- 5.14 The proposals outlined in this report support the following council priorities
- Tackling inequalities
 - Making Brighton & Hove a more sustainable city
- 5.15 The installation of solar PV systems will help demonstrate the Council's commitment to act on fuel poverty & climate change, and be seen to take a positive lead in the use of renewable technology.

6. EVALUATION OF ANY ALTERNATIVE OPTION(S)

- 6.1 Options available in relation to Home Energy Efficiency measures are outlined in the body of the report. .

7. REASONS FOR REPORT RECOMMENDATIONS

- 7.1 In tackling climate change this report recognises key national policies such as the Climate Change Act (2008) which sets out targets for reducing carbon emissions and the UK Renewable Energy Strategy (2009) which commits the UK to producing 15% of its energy from renewable sources by 2020. In tackling fuel poverty as well as climate change this report recognises Brighton & Hove's Housing Strategy 2009-14 which includes strategic goal no. 7 of reducing fuel poverty and minimising CO₂ emissions.
- 7.2 The delivery of Solar PV is part of Housing & Social Inclusion's One Planet Living Sustainability Action Plan, approved unanimously at P&R March 2013.

8. TIMESCALE

- 8.1 An indicative timetable for the procurement and the implementation of the contract is shown below.

	Start Date	End Date
Formulate Call off documentation	24 June 2013	12 July 2013
Issue mini Competition Documentation	15 th July 2013	15 July 2013
Site Visits	29 July 2013	2 August 2013
Tender Returned	12 August 2013	12 August 2013
Tender Evaluation	13 August 2013	30 August 2013
Issue Evaluation Report for approval	2 nd September 2013	6 th September 2013
Award / Rejection Letters	9 th September 2013	9 th September 2013
Contract Start Date	30 September 2013	tbc

