

Subject:	Housing Revenue Account Solar Photovoltaic installation programme 2020-2023		
Date of Meeting:	17 June 2020		
Report of:	Executive Director, Housing Neighbourhoods & Communities		
Contact Officer:	Name:	Dan Goodchild	Tel: x0486
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Ward(s) affected:	All wards		

FOR GENERAL RELEASE**1. PURPOSE OF REPORT AND POLICY CONTEXT**

- 1.1 In the context of Brighton & Hove City Council's declaration of a climate emergency and ambition to be net zero carbon by 2030, this report seeks approval for the council to commence a new Solar Photovoltaic (PV) installation programme on domestic council houses, for the period 2020-2023.
- 1.2 The proposed programme cost is £1.875m. An initial budget allocation of £100k was approved at Budget Council on 27 February 2020. This will be used to initiate the programme with the majority of installations to be carried out in the financial years 2021-22 and 2022-23 if approved.
- 1.3 As part of the above budget allocation 1.2 full time equivalent (FTE) posts will be appointed in order to deliver the work to a high quality.

2. RECOMMENDATIONS:

That Housing Committee;

- 2.1 Delegates authority to the Executive Director, Housing Neighbourhoods & Communities to take all steps necessary to:
 - 2.1.1 procure and award a contract for the installation of up to 500 domestic solar PV arrays for the period 2020-2023;
 - 2.1.2 increase this up to 1500 installations by 2026 subject to further Committee approval of budget allocation and additional installs.
- 2.2 Recommend to Policy & Resources Committee to allocate the following additional budget to allow for the delivery of 500 domestic solar PV arrays for the period 2020-23:
 - 2021/22: £875k;
 - 2022/23: £875k.

3. CONTEXT/ BACKGROUND INFORMATION

- 3.1 The Council has declared a climate emergency, with a target to become a net zero carbon city by 2030. Emissions from housing make up approximately 40% of the city's total emissions and it is estimated that the Councils own housing stock currently emits 45,192tCO₂e per annum.
- 3.2 The Council's [Fuel Poverty & Affordable Warmth Strategy](#) was agreed at the Health & Wellbeing Board in September 2016. The strategy committed the council to 'Support residents struggling to pay their energy bills' and to 'Increase effective targeting of vulnerable fuel poor households and those most at risk of the health impacts of cold homes'.
- 3.3 Solar PV installations on houses are directly connected to the property's distribution (fuse) board. When the panels are generating electricity, any electricity demand required by that property is met firstly by the solar panels – for which there is no cost or carbon emitted – with any remaining demand met by grid-purchased electricity. When the demand for electricity is lower than the generation, electricity is exported to the national grid.
- 3.4 In June 2013¹, a programme of solar PV installations on Housing Revenue Account (HRA) assets was approved, based on the council generating a commercial return through the availability of a favourable Feed-in-Tariff (FiT) at the time. Properties were selected based on roof orientation and ease of installation in order to maximise the FiT payments to the council. 340 installations were completed before the FiT reduction made the continuation of the project non-economic. These installs generate approximately £150,000 of FiT income per annum to the HRA.
- 3.5 Since this last major programme further solar PV arrays have been installed on new build properties in order to meet Planning and Building Regulation requirements, but there has been no major retrofit programme in this period.
- 3.6 In total the HRA currently maintains 400 solar PV arrays, totalling 1100kWp (1.1MWp). In 2019, these arrays avoided 145tCO₂e being emitted from HRA assets.
- 3.7 363 (832kWp) of these arrays are on houses. Tenants within these properties benefit from being able to use this electricity for free. If it is not consumed, it is exported to the grid. There is no financial implication for doing this.

4. PROPOSED NEW PROGRAMME

- 4.1 The HRA currently has approximately 4000 tenanted houses within its portfolio. It is believed the majority of these would be technically capable of receiving a solar

¹ <http://present.brighton-hove.gov.uk/documents/s60736/Procurement%20of%20Solar%20Photovoltaic%20Arrays%20for%20BHCC%20HRA%20Property.pdf>

PV install². It is these properties that would be the focus of the programme. Options for tenants and leaseholders to benefit from installations on communal roofs are currently being explored through the EU funded SOLARISE project.

- 4.2 Since the withdrawal of the FiT in March 2019, the financial incentives to landlords to install solar PV have been negligible. Financial returns to the Council have therefore not been considered as an incentive for the creation of this programme of work – the focus is instead on carbon savings for the city and bill savings for tenants.
- 4.3 As with the existing systems, all new installations would be directly wired into a property's distribution board, giving the householder access to free electricity generated by the panels. The amount of solar electricity available for tenants will vary depending on system size, pitch and orientation. Savings will also depend on the lifestyle/energy behaviour of the resident.
- 4.4 It is proposed to install an average system size of 8 panels (approx. 2.4kW), which is similar to our current system sizes. Panels come with a performance guarantee that ensures they will operate at a minimum of 80% after 20 years, although almost all systems are outperforming this guarantee to date. Panels would be expected to continue to generate electricity after twenty years.
- 4.5 It is expected that tenants will save up to £150 and 0.6tCO₂e per annum depending on their consumption habits. This represents a total lifetime saving from the panels of £2.48m on tenants' energy bills and a year one carbon saving of 300tCO₂e.
- 4.6 To manage the installation programme, it is proposed to appoint the following posts and capitalise the salary costs, estimated at £124,500 for the lifetime of the project, as part of the project:
 - 1.0FTE – Technical project manager. This post will provide technical oversight of the procurement specification, lead the procurement process and contract manage the installation phase including quality assurance;
 - 0.2 FTE – Admin. This post will provide support to the Technical project manager posts, in particular tenant and installer liaison.
- 4.7 It is proposed to filter and prioritise properties for installation based on the reasoning set out in Appendix 1.
- 4.8 Tenants will be able to opt out of the programme by informing the council in writing and reverse this decision in the same manner.
- 4.9 There would be an additional cost of £25.80per installation per year for remote monitoring. This is considered essential for the Council to monitor system performance and would be included in future years' budgets.

² Previous feasibility studies required installations to generate a financial return for the Council in order to be considered viable. Without this restriction, only roof condition and grid capacity are likely to restrict the number of installs.

Procurement

- 4.10 Solar PV installation is a specialist area of work which the Council does not have the relevant skills and experience (beyond contract management) to deliver in-house at the proposed scale. Installation of solar PV at this scale requires supply chains that the council does not have access to. Further, it would also require the resource and buying power of a specialist contractor working regionally, nationally and internationally across a larger portfolio of projects.
- 4.11 It is proposed to procure the installations through an existing framework. Several suitable frameworks have been identified:
- Fusion21, Energy Efficiency Framework - Lot 4 - Domestic Solar PV and Battery Storage;
 - Eastern Shires Procurement Organisation (ESPO) Renewable Energy Solutions Lot 1 - The supply and installation of Solar PV systems;
 - Procurement for Housing (PfH) The Renewables & Energy Efficiency Works and Associated Consultancy Services framework Lot 1A – Solar PV.
- 4.12 Further analysis of these frameworks (and any others) will be conducted, including assessing the social value and community wealth building benefits each would deliver to the City. This analysis will be presented to the Executive Director for Housing Neighbourhoods and Communities to agree which framework will be used.
- 4.13 It would be possible for the Council to run a compliant procurement in accordance with the Public Contract Regulations 2015, in-house, however this would be more resource intensive and take longer to procure.
- 4.14 The Council will be exploring the option of carrying out the future maintenance and repair of solar PV systems through its own in-house electrical team when the installations are complete on the proposed programme. The existing solar PV servicing and maintenance contract comes to an end in 2021.
- 4.15 It is proposed to procure a contract for 500 installs, with an option to increase this total in increments of 250 up to a total of 1500. This would allow for continuity of the installation programme should the programme be extended and subject to contractor performance. In this instance, a further Committee Report will be brought to Housing Committee in order to obtain appropriate budgetary authority and allow members to grant approval for the extension of the programme.
- 4.16 In order to balance the need for effective tenant engagement and the capability of the market to act, it is proposed to run the programme over three years, with the following breakdown per year:

2020/21	£125k
2021/22	£875k
2022/23	£875k

- 4.17 If the project is approved, then it is expected that the following timelines would apply:

July	Budget approval sought from Policy & Resources Committee
Aug – Nov	Procurement exercise
Aug – Nov	Early sift of possible properties
Dec – Jan	Mobilisation of successful contractor and more detailed analysis of properties
Feb 2021	Tenant engagement letters sent
Mar 2021	Installs begin
Mar 2021 – Dec 2022	Installation period. Approximately 1 per working day.
Spring 2022	Budgetary approval could be sought for additional funding to continue programme

Options to scale up the programme

- 4.18 The proposed programme size outlined in the recommendations has been based on feedback from the market, the risks outlined in section 5 and the capacity of the Housing team to deliver the programme.
- 4.19 A high-level analysis of alternative programme sizes has been carried out. To increase the programme to 1000 installs the estimated capital cost (including additional resource to deliver the programme) is approximately £3.5M. This does not include any borrowing costs outlined in 7.2.
- 4.20 In addition to resource to deliver the programme and budget availability, there are two other main considerations that would affect how deliverable a larger programme might be;

Grid Capacity

The local electricity District Network Operator, UK Power Networks, considers almost all of Brighton & Hove to be a ‘constrained’ area. This means there is relatively little capacity to connect new ‘distributed generation assets’ to the electricity grid. As set out in Appendix 1, where a grid connection agreement is refused by UKPN, properties will be unable to receive solar PV until the local distribution network is upgraded, the Council has no control over this.

It is highly likely that installing 1000 new solar PV systems would mean some grid connection agreements are refused. This will mean that potentially significant areas of the city are unable to receive solar PV within the programme period. This also has the potential to restrict new development which relies on this capacity for new connections.

Market Capacity

Feedback from soft market testing indicated that suppliers could meet the requirement to install 5 arrays per week. A second team would be required to install 10 a week and this would increase the likelihood of work being subcontracted. Additional quality checks and costs would therefore be required to ensure the work was up to a satisfactory standard.

5 RISKS

- 5.1 The key risks to the project's deliverability are:
- Contractor longevity
 - Extreme weather
 - Grid capacity
 - Covid-19 pandemic restrictions
- 5.2 The first two risks can be mitigated through the procurement process and project delivery. The primary unknown risk is around grid capacity, which would mean that a household in a specific area would be unable to get any solar PV. There is nothing the Council can do to mitigate this risk as it is the responsibility of the district network operator. More information on risks is included in the eligibility criteria listing at Appendix 1.
- 5.3 The council will continue to monitor the situation regarding the Covid-19 pandemic and it is possible that delays will be incurred as a result of tenants self-isolating, additional measures or requirements put on contractors or further restrictions on works projects of this nature.

6 COMMUNITY ENGAGEMENT & CONSULTATION

- 6.1 Residents have expressed an interest in the Council's plans to reduce carbon emissions and what support can be provided to help residents reduce their fuel bills further, as outlined throughout the report the deployment of solar PV would contribute to both of these outcomes.
- 6.2 The proposals were discussed at Home Group on 4 March 2020 and attendees were supportive of the project. Further information regarding the project will be discussed with Home Group if approval to proceed is given and once the programme has commenced.
- 6.3 Should specific areas or estates be identified by early analysis as being particularly suitable, then further targeted engagement with tenant groups in these areas would be conducted throughout the delivery phase.
- 6.4 The Procurement Advisory Board was consulted in relation to the HRA Solar PV installs 2020-2023 on the 11 May 2020 and provided the recommendations that have been reflected in this report.

CONCLUSION

- 6.5 The installation of solar PV systems on council houses presents a simple, low-risk and effective way of reducing carbon emissions from housing in the city and helping residents with their fuel bills.

7. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications:

- 7.1 A budget of £0.100m was approved as part of the 2020/21 HRA Capital Programme to commence a new Solar PV programme. The additional £0.025m required for this financial year will be reported and managed as part of the capital budget monitoring process.

- 7.2 The additional capital budget requirement of £0.875m per annum could be met from within the yearly direct revenue funding allocation (being the revenue surplus within the HRA budget). However, this would depend on other priorities at budget setting time. If not met from DRF, the HRA would be able to borrow to fund this expenditure at an estimated annual cost of £0.140m per year. The costs of borrowing (if required) together with the costs of remote monitoring required for the new installations (£25.80 per install), as well as any further maintenance costs would need to be built into future revenue budgets.
- 7.3 The report describes an option to scale up the programme to 1000 panels at a capital cost of £3.5m, (an additional £1.750m) and outlines the risks associated with this in paragraph 4.20. If the HRA were to borrow in order to fund a further £1.750m, this would cost a further £0.140m per year for the HRA, so £0.280m per year in total. However, if sufficient revenue funds are available at the time then no borrowing would be required.
- 7.4 Any decision to commit to installing solar PV panels will of course reduce the resources available for the HRA to fund other priorities such as building or buying of new council homes or repairs and maintenance of current homes.

Finance Officer Consulted: Monica Brooks

Date: 04/06/2020

Legal Implications:

- 7.5 The procurement of the contract for the supply and installation of Solar PV must comply with the council's Contract Standing Orders and, where applicable, EU and UK public procurement obligations.

Lawyer Consulted:

Wendy McRae-Smith

Date: 29/5/2020

Equalities Implications:

- 7.6 An Equalities Impact Assessment has been carried out and is included at Appendix 2.

Sustainability Implications:

- 7.7 Undertaking this project would significantly improve the sustainability of the council's Housing stock, reducing carbon emissions by approximately 305tCO₂e per annum. Alongside other renewable energy-based projects and plans to improve the energy efficiency of homes this will contribute towards the Council's ambition to be net zero carbon by 2030.

Any Other Significant Implications:

- 7.8 Public Health

Strategically addressing cold homes and fuel poverty in vulnerable groups will contribute to the prevention of ill health and excess winter deaths, reduce health and social inequalities, and improve wellbeing and quality of life. Supporting and

enabling residents to pay less for their energy can contribute to tackling fuel poverty and cold homes.

8. Appendices

Appendix 1. Prioritisation of properties

Appendix 2. Equalities Impact Assessment

Glossary

tCO₂e: tonnes equivalent of carbon dioxide emitted - a commonly used metric to measure carbon emissions

kWp: kilowatt peak – the peak power of the system

MWp: Megawatt peak (1MW = 1000kW) – in this instance the total installed capacity

Housing Committee

Agenda Item 8

Brighton & Hove City Council

