



**Haringey** Council

Agenda item:

**[No.]**

**Cabinet**

**On 19<sup>th</sup> July 2011**

**Report Title: Solar Photovoltaic Programme on Corporate and Social Housing Buildings**

**Report of The Director of Place and Sustainability**

Signed :

MARC NORTHMAN 13/7/11  
for Lyn Gannon

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**Wards(s) affected: All**

**Report for: Key Decision**

**1. Purpose of the report (That is, the decision required)**

- 1.1. To request Cabinet approval to the adoption of a solar photovoltaic programme for Council buildings, schools and council-owned residential assets.

**2. Introduction by Cabinet Member (if necessary)**

- 2.1. I welcome this report as it enables us to address several different challenges facing the Council at the same time.
- 2.2. The investment being proposed will help to achieve the Councils 40% CO2 reduction for 2015 (for Council buildings), will create an income stream that can be used to finance work at a borough wide level to achieve the 40% CO2 reduction target and also has the potential to address fuel poverty and deliver economic regeneration in the borough.
- 2.3. In the long term it is likely that the Council will need to install solar panels where



viable in order to protect itself from rising fuel prices and reduce the amount it is liable to pay under the Government's Carbon Reduction Commitment which is now effectively a plain tax.

- 2.4. However, if the Council invests now it can benefit from the highest rate of Feed in Tariff available, which is likely to be reduced from March 2012 as a result of the popularity of this scheme. Solar panels represent a low risk, high return on investment option. For this reason numerous profit making companies, housing associations and other local authorities are investing in solar panels.
- 2.5. The financial modelling has been based on a conservative estimate of fuel price increases over the next 25 years which, in addition to the Feed In Tariff revenue, would create fuel cost savings for the Council, Homes for Haringey residents and Schools of up to £270k per annum. The opportunity to provide apprenticeships for young people as part of this contract procurement will be sought, and overall the programme constitutes up to £16m of investment in the sector which is a significant step in developing the green economy here in Haringey. The Council's programme potentially represents an investment larger than the current total installed capacity across the whole of London.
- 2.6. I am also happy that we will be setting up a board to review each installation on a case by case basis to ensure we manage any risk. The investment profile has been developed so as not to crowd out by even one penny any of our expenditure in the revenue budget.

### **3. State link(s) with Council Plan Priorities and actions and /or other Strategies:**

- 3.1. This programme delivers against the 'Environmentally Sustainable Future' objective of the HSP's Sustainable Community Strategy by providing green energy to reduce carbon emissions in the borough.
- 3.2. This programme delivers against the 'Economic vitality and prosperity shared by all' objective of the HSP's Sustainable Community Strategy by providing opportunities for apprenticeships in the installation and maintenance of the solar panels.
- 3.3. This programme supports implementation of the two delivery vehicles that sit under the Sustainable Community Strategy – the Council's 40:20 ambition and the Council's Carbon Management Plan – strategies to deliver carbon reduction in the borough as a whole, and within the Council respectively.

### **4. Recommendations**

- 4.1 For Cabinet to approve the adoption of a Solar PV installation programme, to contribute to the Council's carbon reduction targets and generate revenue to support frontline services. An optimal combination of the contracting and roof rental solutions, both in terms of income and risk, would help the Council to meet



its political objectives within tight timescales, whilst also ensuring risks were minimised.

- 4.2 For Cabinet to approve the use of a contracting model for all properties out of which the Council operates, including schools, granting access to a maximum loan of £8,658,000 through prudential borrowing to generate income of up to £162k per annum allocated to the Council's general fund, and cost avoidance of circa £155k per annum in energy and, potentially, CRC budgets, spread across the Council and schools.
- 4.3 For Cabinet to approve the inclusion of the Solar Photovoltaic Programme in the Council's Capital programme 2011/12 in a sum of up to £8.658m, subject to the Chief Financial Officer's satisfaction on the outcomes of the due diligence process referred to in paragraph 8.11.
- 4.4 For Cabinet to approve the use of a 'rent-a-roof' model for installations on housing stock, where no capital expenditure will be required, and the installations will result in potential income for the Council of up to £91k per annum allocated with the Council's general fund and avoidance of £115k per annum in energy costs for residents.
- 4.5 For Cabinet to approve the use of two procurement routes to deliver the contract. This solution will split installation across two existing supply agreement and supply chains – Birmingham City Council for contracting and a request for quotation process for Rent-a-Roof.
- 4.6 For Cabinet to authorise the creation of an investment board to critically review the financial projects of installations on a case-by-case basis.
- 4.7 For Cabinet to nominate a Councillor with delegated authority to approve recommendations made by the investment board.
- 4.8 For Cabinet to note the time criticality of the FiT opportunity in its current form and endorse the immediate commencement of the programme to derive maximum benefit from FiTs.
- 4.9 For Cabinet to note that a revised programme for outstanding installations may have to be submitted if the full programme is unable to be completed by April 2012, or asset disposals disrupt installation plans. This may mean the full £8,658,000 is not required and revenue generation will reduce in line with the proportion of installations achieved.

## **5. Reason for recommendation(s)**

- 5.1. In November 2009, at a Full Council meeting, Haringey signed up to the Friends of the Earth "Get Serious About CO2 Campaign", pledging to cut borough wide carbon emissions by 40% by 2020.



- 5.2. To ensure the Council demonstrated leadership in cutting carbon emissions, in March 2010 Cabinet agreed a 40% carbon reduction target against 2006/7 levels by 2014/15, and a Carbon Management Plan which outlined delivery options to achieve this target.
- 5.3. In support of organisations and individuals' desire to reduce carbon emissions whilst improving their financial situation, in April 2010 the government introduced Feed-in-Tariffs (FITs). This scheme provides financial incentives for parties interested in generating their own electricity through microgeneration options such as small scale solar arrays or urban wind turbines.
- 5.4. Whilst previously the returns on microgeneration were prohibitively small, the feed-in-tariff ensures installations have a return on investment of approximately 12 years (depending on the type of installation). The FiT rate ranges greatly from around 4.7p/kWh to 43.3p/kWh generated and tariff rates are adjusted annually by the percentage increase or decrease in the Retail Price Index over the 12 month period ending on 31 December of the previous year.
- 5.5. Of the microgenerating technologies covered by FITs, solar photovoltaic (solar PV) panels offer the best FiT range, with the top rate at 43.3p/kWh. Furthermore, whilst other technologies are guaranteed FiTs over a 20 year life cycle, solar PV is deemed to have a 25 year life, meaning the Council could benefit from FiTs for a further 5 years over other options.
- 5.6. The Department for Energy and Climate Change is currently undertaking a comprehensive review of the FiT programme, which is expected to be completed by the end of 2011. This is in response to market changes that mean the tariff is no longer representative of the cost of solar panels, which have come down significantly in the last year. Tariff levels and degradation rates, as well as the types of technology are subject to the review. There is a risk in delaying installations beyond April 2012, when the findings of the review will be implemented, as tariffs could be substantially reduced and income generation opportunity lost.
- 5.7. In order to meet our carbon reduction targets, purchasing and installing Solar Panels on the roofs of our buildings will provide, potentially, a carbon saving of 2,266 tonnes in the borough, of which 861 tonnes would relate to the Council estate (approximately a 2% reduction contribution against the 2006/7 baseline).
- 5.8. However, the key objective of such a programme is to unlock investment in roof-mounted solar photovoltaic (PV) and generate revenue which could be employed to support action on the 40:20 Commission and/or other frontline services. The financial implications of solar photovoltaic installation are such that the Council could generate annual revenues of £253k which could be employed to support action on the 40:20 Commission and/or other frontline services.
- 5.9. The benefactors of the solar installations (residents, schools and the Council) could also avoid electricity costs of approximately £270k per annum between



them. In the case of residents, this would be felt through service charge cost reductions for communal supply, which feeds stairwell and security lighting, lift shafts and door entry systems.

## 6. Other options considered

6.1 Camco – a leading environmental consultancy – undertook a comprehensive study which provides several options of available delivery models.

6.1.1 **PV for Free.** This solution is supplier led, with the supplier responsible for survey, install and maintenance of all arrays. The supplier retains all FiT revenue. This has been discounted as the Council will only receive free energy and hence no revenue generation.

6.1.2 **Roof Rental.** This solution is also supplier led, but with the supplier providing the Council with a small stipend per annum for the privilege of using Council assets to locate installations. The income is based on the maximum energy generation potential.

6.1.3 **Special Purpose Vehicle (SPV).** This requires the set up or identification of a legal entity separate to the Council to manage the installation and absorb risks on the Council's behalf. Whilst the Council would share in the Feed-in-Tariff benefit, the lead in time to implement this solution would fall outside of the window within which FiT values are guaranteed. As a result this has also been discounted, although could be revisited in the longer term.

6.1.4 **Contracting.** In this instance, the Council would contract with an organisation who would install PV arrays at a fixed cost. Ownership would lie with the Council, meaning maintenance arrangements would need to be considered. However, the Council would receive maximum FiT and free energy, as well as having the option to export all surplus energy to the grid, raising further revenue.

6.1.5 **In House.** This route would require the Council to undertake the install utilising existing internal specialists. Whilst the Council would receive maximum FiT, free energy and the option to export all surplus energy to the grid, the lack of expertise within the Council means that this is not feasible and is hence discounted.

6.2 Due to the issues with the PV for Free, SPV and In House options, the two most viable solutions to the Council are Roof Rental and Contracting. The pros and cons of each model are discussed in Appendix C. Financial implications of these two models can be found in Appendix B.

## 7. Summary

7.1. In 2012/13 and 2013/14, the Council is required to identify significant revenue budget savings due to the decisions taken as part of the Spending Review 2010



that resulted in a significant reduction to the Council's grant funding. The Feed-in-Tariff represents a revenue generation stream, which could be allocated to Council initiatives and hence protect front line services, such as the Haringey 40:20 Commission launched in June 2011.

- 7.2. The Council has undertaken a financial analysis of potential revenue generation from solar PV installations and wishes to fund a solar photovoltaic programme with up to £8,658,000 sourced through prudential borrowing. The financial analysis is provided in Appendix B and supports the recommendations of this report. The analysis has been undertaken within the following parameters:
  - 7.2.1 All identified installations are limited to a maximum of 50kWp in order to maximise overall returns under the FIT, rather than looking to generate the maximum amount of electricity.
  - 7.2.2 Sites included in the analysis have been prioritised based on the largest roof spaces and best orientation, and therefore represent the best economic potential.
  - 7.2.3 The proposed lifecycle of both solutions is 25 years, and both models use a discount rate of 6%, commensurate with the cost of capital for the Public Works Loan Board. The rate of inflation has been set at 2% and the rate of energy inflation, also at a very conservative 2%.
  - 7.2.4 It is expected that the Rent-a-Roof Model will require no capital expenditure.
  - 7.2.5 For the contracting model, capital costs have been assumed to be covered by borrowing and hence factor in an annual annuity which is subtracted from revenue generation potential to provide the actual income the Council could achieve.
- 7.3. The Council intends to set up a new investment board, comprising officers from Place and Sustainability and Corporate Resources, ensuring installation proposals are reviewed on a site-by-site basis, and more profitable installations prioritised. The assessment will include consideration of financial opportunity as well as estate renewal implications. Recommendations will be provided to a Cabinet Member with delegated authority for approval.
- 7.4. The roof rental scheme for social housing will be prioritised to coincide with the Decent Homes programme, to ensure that future scaffolding requirements are minimised, creating economies of scale and minimising disruption to residents where possible. Prioritisation will also take into account future roof renewal requirements, and installations on roofs which will require two renewals over the 25 year period will be avoided (the roof renewal scheme costs in one roof renewal over the length of the contract).
- 7.5. Wherever available, under the roof rental option for social housing, electricity



generation from solar PV will feed directly into the asset communal supply. This will ensure that the cost avoidance of electricity is delivered through the service charge to residents, thus reaching as many residents as possible, without favouring any. Wherever units are single occupancy, individual tenant agreements will form part of a tripartite agreement, providing electricity directly to the tenants, and roof rental income to the Council.

- 7.6. Under a roof-rental agreement, the supplier takes on the full liability for the maintenance of the panels and their insurance covers theft and vandalism, as well as professional and public indemnity, ensuring that leaseholders and residents are not recharged for any works that arise from issues with the solar panels, or as a result of them (such as roof damage).
- 7.7. Under a contracting model, the Council will need to enter into a maintenance agreement for panels over the 25 year period. The indicative costs of maintenance are highlighted in Appendix C and have been factored into the life cycle costing for the contracting proposal. The maintenance of solar panels is not a specialist discipline and can be undertaken by qualified electricians. There is an opportunity here to deliver apprenticeships to residents of the borough who are interested in an electrical engineering vocation. Furthermore, the Birmingham City Council contract has specific provisions for apprenticeships which we are able to explore.

## **8. Chief Financial Officer Comments**

- 8.1. The capital cost of the contracting option would be a maximum of £8.658m which would need to be funded through Prudential Borrowing. It is likely that the final spend will be a much lower figure as the list of applicable buildings is reviewed against the Accommodation Strategy.
- 8.2. Savings have been calculated based on borrowing being paid back over a 25 year period based on the current Public Works Loan Board borrowing rate.
- 8.3. Savings can be achieved in 4 ways:
- ▶ Feed-In Tariff payments received once Solar PV is installed under the Contracting option;
  - ▶ Roof Rental payments received under the Roof Rental model;
  - ▶ Energy Cost Savings where Solar PV reduces the Councils dependence on the National Grid; and
  - ▶ Carbon Reduction Commitment savings, although this is not currently agreed with the Department of Energy and Climate Change.
- 8.4. It is assumed that the level of savings achievable will be as follows:
- 8.5. Feed-In Tariff income up to a maximum of £162,000 above the cost of borrowing, this is based on a £8.6m capital spend – so the income will reduce if less capital is spent. Schemes would only proceed where the individual building generates an income level that clearly exceeds the cost of borrowing. The sum received would be expected to remain fixed providing installation is complete before April 2012;



- 8.5 Roof Rental Payments are expected to generate £91,000 per annum – this sum would be expected to be relatively fixed in amounts;
- 8.6 Energy Savings are estimated to amount to around £270,000 per annum. Again this figure may reduce if less capital is spent and fewer buildings are fitted with Solar PV. However, with energy prices generally expected to rise over time the energy savings can be expected to increase over time;
- 8.7 Further savings can be expected to be made related to the Carbon Reduction Commitment Energy Efficiency Scheme where organisations are required to buy allowances from the Government to cover their Carbon Emissions. Reducing Carbon Emissions will reduce the funding required here. Although the saving is relatively small at this stage, it is likely to increase over the 25 year life of the Solar PV.
- 8.8 Any savings expected to be achieved need to be seen in context of the associated risks of the project, which primarily relate to changes in Government policy, maintenance costs and certainty of Council tenure / ownership. Although Government policy regarding the level of Feed In Tariff payments could change, it is unlikely that this will happen providing installation is completed prior to April 2012.
- 8.9 The risk around maintenance cost can be mitigated by ensuring that only projects where the expected return significantly exceeds the cost of borrowing are approved. The final risk is around the Council deciding it no longer needs to utilise a building over the course of the 25 year payback period. This risk can be mitigated by both novating the income from FIT's in any sale agreement of existing property assets and by including Property services in any approval process to ensure that Solar PV is not installed on buildings that may be part of Regeneration aspirations and thus could be demolished.
- 8.10 It is also worth noting that the expected rise in Energy Costs is likely to make the case for Solar PV more compelling in years to come and hence Capital spend may well be incurred even if this project does not proceed.
- 8.11 The financial analysis necessary for a scheme such as this has been initially undertaken by Corporate Finance staff, at a relatively high level. However, the outcome from the analysis is particularly reliant on the savings projections calculated by Camco (as referred to above). I have taken the decision, therefore, to commission some independent corroboration of the Camco analysis using a consultant on the Council's framework arrangement. This work has been requested to be undertaken quickly and should be available for consideration by the date this report is discussed by the Cabinet.

## **9 Head of Legal Services Comments**

- 9.1 The Head of Legal Services notes the contents and recommendations of the report





to Cabinet.

- 9.2 In terms of the use of the contracting model, in October 2010 Birmingham City Council issued an OJEU Notice for a framework agreement for supply of photovoltaic system components. The framework agreement was advertised so that other contracting authorities including local authorities were able to utilise it. The European Commission and OGC have issued guidance saying that it is sufficient to identify contracting authorities by reference to a specific class in an OJEU procurement. It is not entirely clear to what extent a class needs to be specified as potential users but legal opinion would appear to be of the general view that it is sufficient to refer to local authorities as a class.
- 9.3 With regard to the roof rental model, the Council will need to ensure that it follows a procurement process which is competitive and compliant with Contract Standing Orders.
- 9.4 For both contracting models, the Council will need to ensure that its proposals adhere to its Community Strategy.
- 9.5 The Head of Legal Services should be consulted on this initiative as it progresses.

## **10 Head of Procurement Comments**

- 10.1 General legal opinion on the EC Procurement Regulations in the context of PV for Free, Roof Rental and SPV opportunities is that they do not apply in their fullest. This is because, as there is no flow of consideration from the contracting authority to the supplier, this does not fall within the parameters that define a necessity to advertise in the OJEU.
- 10.2 However, as this is a commercial arrangement, there is still a requirement to comply with the general principles of EC Procurement Law. As a result, a competitive, advertised opportunity, evaluated on objective and non-discriminatory criteria is still required. This could take the form of a competitive quotation across three suppliers. This would significantly reduce the timescales required to agree a programme of works.
- 10.3 With regards to contracting and in house solutions, the purchase and installation represents a supply contract under EC procurement rules. Even if the Council agreed to a solution involving a selection of buildings, it is likely that the cost threshold for OJEU compliance would be exceeded and hence OJEU will apply.
- 10.4 In order to reduce the timescales for a compliant OJEU process, the Council has identified and acceded to an existing call-off opportunity, run on behalf of all local authorities by Birmingham City Council. Whilst the Council is not obliged to purchase through the framework, the pricing of the solution is substantially below average market rates and represents a favourable option, both in terms of resource and supply costs.



## **11 Equalities & Community Cohesion Comments**

- 11.1 The implementation of a solar photovoltaic programme will help the Council to address inequalities in the borough, both in terms of fuel poverty, where council tenants will receive cost reductions to their utilities service charge, and unemployment, where the Council will use the contracts associated with the programme to generate local apprenticeships and employment opportunities.

## **12 Consultation**

- 12.1 The evaluation of the potential for solar photovoltaics in the borough has been undertaken in conjunction with Camco – a leading environmental consultancy.
- 12.2 Camco's outputs have been independently assessed by Deloitte – the Council's external auditors – to ensure assumptions concerning market forces and financial data are in line with industry standards.
- 12.3 Initial discussion has been undertaken with Homes for Haringey (HfH) as there is obviously a significant opportunity with the housing stock. HfH officers support the principals of the proposals, but have some issues that need to be addressed to maximise the benefit of this opportunity and avoid potential pitfalls. These centre around consultation with residents, how residents will benefit from the installations, ongoing maintenance of the equipment and the surfaces they are installed upon (impact on warranties etc), deliverability of the programme and the synchronisation of this work with other HfH programmes.
- 12.4 This has not yet been considered by the HfH Board and any such proposals would need to be considered by the Board.

## **13 Use of appendices /Tables and photographs**

- 13.1 Appendix A - Haringey PV potential (broken down by building type).
- 13.2 Appendix B: Proposed delivery mechanisms for PV and revenue generation calculations.
- 13.3 Appendix C: Pros and Cons – Contracting and Roof Rental Models

## **14 Local Government (Access to Information) Act 1985**

- 14.1 Solar Renewable Potential North London Report – Work Stream 1: Opportunity Mapping
- 14.2 Solar Renewable Potential North London Report – Work Stream 2: Market testing – analysis of finance and delivery options
- 14.3 Solar Renewable Potential North London Report – Work Stream 3: Evaluation



**Appendix A: Haringey PV potential (broken down by building type)**

**Table 1: Haringey PV potential**

Summary: Haringey				
Building Type	Sum of Indicative CAPEX	IRR	Sum of Total Size (kWp)	Number of projects
Car Park	£ 96,000	9.32%	32	1
Care home/Day centre	£ 288,000	10.48%	96	2
Cemetery	£ 150,000	9.38%	50	1
Community Building	£ 681,000	9.89%	227	6
Depot	£ 150,000	9.91%	50	1
Housing	£ 738,000	10.10%	246	5
Industrial Units	£ 1,779,000	10.01%	593	14
Library	£ 117,000	8.75%	39	1
Office Building	£ 924,000	10.16%	308	8
Schools/Nursery	£ 3,825,000	9.94%	1,275	28
Shops	£ 498,000	10.01%	166	4
Social Housing	£ 7,077,000	9.77%	2,359	60

The cost of each sector shown in the table illustrates the internal rate of return (IRR) expressed as a percentage of capital. The IRR varies by building, but has been grouped into categories and averaged to provide tranches of work with similarities in build type and relationship between occupiers and the Council. For ease, in Appendix B, buildings that are not offices/libraries, social housing or schools have been grouped into a single consolidated tranche.



**Haringey Council**

**Appendix B: Proposed delivery mechanisms for PV and revenue generation calculations.**

**Table 2: Cashflow analysis for Solar Panels – Rent-a-Roof Model**

Building Stock	Individual categories		Cumulative	
	Annual Income	Income over 25 yrs	Annual Income	Income over 25 yrs
Offices & Libraries	£8,675	£216,875	£8,675	£216,875
Social Housing	£91,175	£2,279,375	£99,850	£2,496,250
Schools	£31,875	£796,875	£131,725	£3,293,125
Remainder	£36,500	£912,500	£168,225	£4,205,625

**Table 3: Cashflow analysis for Solar Panels – Contracting Model**

Building Stock	Individual categories				Cumulative		
	Capital cost	Annuity over 25 yrs	Annual Income	Surplus per annum	Annuity over 25 yrs	Annual Income	Surplus per annum
Offices & Libraries	£1,041,000	£84,240	£104,116	£19,876	£84,240	£104,116	£19,876
Social Housing & Housing	£7,815,000	£632,410	£765,961	£133,551	£716,650	£870,077	£153,427
Schools	£3,975,000	£321,667	£395,115	£73,448	£1,038,317	£1,265,192	£226,875
Remainder	£3,642,000	£294,720	£363,387	£68,667	£1,333,037	£1,628,579	£295,542

Note: If capital expenditure is incurred during 2010/11, an annuity payment will be due every year 2012/13 to 2036/37 inclusive

**Table 4: Recommended options – Maximum borrowing requirements and potential financial benefits**

Building Stock	Proposed Solution	Maximum Costs/Borrowing	Income p.a.	Rate of Return	Electricity Cost Avoidance p.a.
Offices & Libraries	Contracting	£1,041,000	£19,876	1.9%	£17,000
Social Housing	Rent-a-Roof	£0	£91,175	N/A	£115,000
Schools	Contracting	£3,975,000	£73,448	1.8%	£63,000
Remainder	Contracting	£3,642,000	£68,667	1.9%	£75,000
	<b>Total</b>	<b>£8,658,000</b>	<b>£253,166</b>	<b>£253,166</b>	<b>£270,000</b>



Appendix C: Pros and Cons – Contracting and Roof Rental Models

	Contracting Model	Roof Rental Model
Procurement Options	<p>Birmingham City Council commissioned Buy for Good to undertake an OJEU compliant tender on behalf of all local authorities.</p> <p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ The contract can fully manage and deliver a fully installed 1.9kW solar PV system at a cost just under £5,100. This is substantially lower than average market rates.</li> <li>▶ As an existing framework, this model is available for utilisation immediately.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ The Council will be required to fund the works, meaning a large initial capital outlay, with recourse to borrowing mechanisms likely.</li> </ul>	<p>Energy suppliers such as Eon offer schemes. Legal opinion is that OJEU does not apply, although a tender process would prove prudent to ensure best value.</p> <p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ The Council does not have to consider any capital outlay to fund the installations.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A.</li> </ul>
Feed in Tariff	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ The Council will have access to the full FIT from any installation undertaken under this model.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ Revenue generation will be diminished by annuity resultant of any borrowing.</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ The supplier will take all FIT generation to cover the cost of capital investment, significantly reducing the financial benefit to the Council.</li> </ul>
Other Revenue Factors	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ Council has the opportunity export surplus electricity to the grid at 3p/kWh</li> <li>▶ Where installations are on properties at which the Council is the occupier, electricity generation will reduce the Council's dependency on the grid, thus reducing costs to the Council by 8p per kWh generated.</li> <li>▶ Where installations are on operational and commercial properties, generation will offset CRC costs. For every 1,848kWhs generated, the Council will reduce its CRC liability by £14.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ Council will have to consider insurance costs of both buildings and PV equipment.</li> <li>▶ Whilst Solar PV requires minimal maintenance, the Council should budget for an annual clean and assessment of panel condition, as well as replacement of inverters and other electrical components.</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ Council will receive a fixed income of circa £25-£35 per annum, per kW capacity.</li> <li>▶ Where installations are on properties at which the Council is the occupier, electricity generation will reduce the Council's dependency on the grid, thus reducing costs to the Council by 8p per kWh generated.</li> <li>▶ Where installations are on operational and commercial properties, generation will offset CRC costs. For every 1,848kWhs generated, the Council will reduce its CRC liability by £14.</li> <li>▶ Costs of insurance for equipment are covered by the supplier and damage to the roof as a result of installation is covered by suppliers' indemnity.</li> <li>▶ All maintenance will be the responsibility of the supplier.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul>



<p><b>Maintenance</b></p>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ Council will retain responsibility to undertake routine cleaning and maintenance of panels at the following indicative market rates.            &lt;4W: fixed cost of £110            4-10kW:&lt; £24/kWp            &lt;10-100kW: £22/kWp            100-5000kW:&lt; £20/kWp</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ All maintenance will be the responsibility of the supplier.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul>
<p><b>Asset Retention</b></p>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ In the event of asset disposal, the Council retains ownership of the PV array and has the flexibility to relocate the system to other sites to maintain income generation or novate the ownership to incoming tenants/owners.</li> <li>▶ As the owners of the arrays, there is an opportunity to recover revenue to limit losses/generate profit should relocation not prove feasible.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ The Council will have to consider storage costs and capacity for panels should relocation/resale take time.</li> <li>▶ Disposal of panels may prove to be required if relocation or resale not prove feasible.</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ In the event of asset disposal, the Council will not be subject to storage overheads.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ Contract terms with suppliers may financially penalise the Council for breach of contract, which typically lasts 25 years.</li> <li>▶ Council will have no control over relocation decisions, as energy companies will wish to generate maximum revenue, and hence may remove them from the borough.</li> </ul>
<p><b>Carbon Reduction</b></p>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ The Council will benefit from any and all carbon reduction associated with the offset of electricity from the grid.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ The Council will benefit from any and all carbon reduction associated with the offset of electricity from the grid.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul>
<p><b>Social Benefits</b></p>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ Revenue generation is maximised and could be used to support further carbon reduction work in the borough. For example, through the 40:20 commission.</li> <li>▶ Residents in social housing blocks will benefit from reduced service charges for communal lighting.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul>	<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>▶ Revenue generation could be used to support further carbon reduction work in the borough. For example, through the 40:20 commission.</li> <li>▶ Residents in social housing blocks will benefit from reduced service charges for communal lighting.</li> </ul> <p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>▶ N/A</li> </ul>