

Causeway House solar photovoltaic (pv) panels project		Agenda No:7b
<p>Corporate Priority: The environment is clean and green Portfolio Area: Sustainability and Environment Report presented by: Cllr Roger Walters Report prepared by: Mark Wilson</p>		
Background Papers:		Public Report
British Gas PV Assessment for Causeway House		
<p>Options: To approve the installation of photovoltaic (pv) panels on Causeway House at zero cost to the authority</p> <p>To approve the investigation of 37 BDC owned sites for solar pv installation</p>		<p>Key Decision: YES</p>
Executive Summary:		
<p><i>A brief description of the project</i> This report sets out the case for the Council to go into partnership with an energy company. In this case the proposed partner is British Gas, to install solar photovoltaic (PV) panels on Causeway House to produce electricity for the purpose of income generation and carbon reduction. The project will be at zero cost to the authority, the costs for the installation of the panels, the connection to the electricity grid and ongoing panel maintenance will be borne by the installer. The report includes the proposed scope of the project, financial analysis and risks.</p> <p>A desktop feasibility study was commissioned in August 2010 to establish the viability of Causeway House roof for a solar panel installation. This provided a very positive result. In December 2010, this was followed up by a full site inspection, which confirmed the suitability of Causeway House for a solar pv panel installation. A draft contract is currently being reviewed.</p> <p>The Council is proposing a further 37 sites from our Asset Register for assessment for the suitability of solar pv panels for the purpose of roof rental and electricity generation. These range from leisure centres to industrial units, we would be looking at a similar arrangement as Causeway House to further reduce Council revenue costs and carbon emissions and generate income.</p> <p><i>What are the drivers for the project?</i></p> <ul style="list-style-type: none"> • Revenue saving for the Council • Income generation for the Council • Carbon reduction and global climate change • Local energy generation and UK fuel security 		

- Reduced pressure on national electricity transmission grid
- The desire for Braintree to be a lead authority and its community leadership role
- A strong green message as part of the Council's Causeway House refurbishment project

The Council is committed to reducing its carbon emissions and the installation of solar panels at Causeway House supports the Council's Corporate Clean and Green objectives. It also links directly with the Council's ongoing Local Authority Carbon Management Programme (LACM) with its objective of reducing our carbon emissions by 25% by 2013.

Solar electricity systems capture the sun's energy using photovoltaic (pv) cells. The cells convert the sunlight into electricity. Each cell is made from one or two layers of semi-conducting material, usually silicon. When light shines on the cell it creates an electric field across the layers. The stronger the sunshine, the more electricity is produced.

Project scope

We have the opportunity to work in partnership with an energy supplier to provide and install an 82 kWp system comprising approx 400 solar photovoltaic (pv) panels to all south and east/ west elevations of Causeway House.

The package proposed in this report is for the energy supplier to provide and install and maintain solar pv panels at zero cost to the Council. The costs for the manufacture and installation of the panels, the connection to the electricity grid, meter installation and ongoing panel maintenance will be borne by the installer. The energy company will take the Feed-in Tariff income and the Council will receive and use the free electricity.

This project has the potential to reduce our electricity costs for Causeway House by £6000 pa and carbon emissions by approx 37 tonnes per year. This would be a net income to the authority as there would be no associated costs of using this free electricity generated on the roof.

Feed-in Tariffs were introduced to Great Britain in April 2010. The scheme requires energy companies to make regular payments for the generation of electricity from renewable sources, in effect a tax on producing energy from fossil fuels. The scheme guarantees a minimum payment to the solar pv panel owner (British Gas) for all the green electricity generated by the system, as well as a separate payment for the electricity exported to the grid. The site owner (Braintree District Council) has the benefit of using the green electricity generated on-site.

The Feed-in Tariff scheme is under review, however it is anticipated that schemes of this size will not be subject to changes to the tariff rate. The review of the Feed-In Tariff scheme is to close the current loophole, which is allowing the development of large field based solar pv arrays by investment companies, rather than stimulating local domestic and commercial investment in renewable energy.

Financial analysis

It is estimated that the system proposed for Causeway House would require a capital investment of c.£280,000 if it were to be funded by Braintree District Council. While investing in the solar pv panels, either outright or part funded, would give the Council a greater revenue return than just free electricity and roof rental, we would be liable or part liable for installation costs, maintenance costs (including costly replacement of

inverters every 6-8 years), insurance costs and removal costs. This would substantially reduce any long term revenue returns the Council would make on the capital investment.

Over the 25 year life time of the Causeway House project, based at current electricity prices, the Council would see a reduction in electricity costs of £6,000 per year, this equates to a saving of £150,000 lifetime revenue saving to the authority at zero cost. (The final figure will be substantially higher as electricity prices will increase over the next 25 years).

The roofspace will be leased to the energy company, this will generate a rental income for the 25 year period, this rental income would be index linked. The final rental figure is under negotiation, but expected to be c.£3000pa.

At the end of the 25 year feed-in tariff scheme we will have the option of the solar panels being removed or gifted to the Council (by this time they will be operating at c.80%-85% efficiency), this will be negotiated as part of the contract. While they will still be producing electricity, I would advise to remove them as they will start to increase in maintenance costs after that length of time and become a liability.

Recommendations:

1. That the Council supports the proposal and utilises the opportunity of including a solar panel installation to produce green energy as part of the wider Causeway House refurbishment project.
2. That the Council investigates the same opportunity for an additional 37 Council owned sites.

Decision:

1. To agree to the installation of 3rd party fully funded solar pv panels at Causeway House subject to acceptable contract terms being signed off by the Assistant Chief Executive
2. To agree the investigation of 37 BDC sites for suitability of solar pv panel installation.

Purpose of Decision:

To seek Member approval for the installation of solar pv panels at Causeway House and to explore the opportunity at other sites.

Any Corporate implications in relation to the following should be explained in detail	
Financial:	The project costs are £nil to the Council. However our electricity bills will be reduced by approx £6,000 per year or £150,000 over the life time of the project. The Council expects to see a roof rental income of c.£3000 per year.
Legal:	A draft agreement in the form of a lease has been received and an initial assessment indicates that amendments to clarify certain provisions and the addition of further provisions to reflect the decision of Cabinet will be required before the document can be completed. These will be progressed following the Cabinet meeting.
Equalities/Diversity	N/A
Customer Impact:	The project will demonstrate community leadership in this area of renewable energy.
Environment and Climate Change:	The project supports the Council's Local Authority Carbon Management Programme (LACM) part of which includes reducing our emissions by 25% by 2012/13. Our emissions will be reduced by approx 37 tonnes per year.
Consultation/Community Engagement:	Causeway House falls within a Conservation Area, the advice of the planning department is that this constitutes a material change to the appearance of the building and will require planning permission. This project is at zero cost to the Council Tax Payer.
Risks:	Should the project not be approved, the Council's carbon emissions will increase together with the electricity costs. With the future rise in energy prices, these costs will inevitably increase. Should Causeway House be sold within the 25 year contract period to a 3 rd party the solar panel revenue would go to the new owner, at nil risk/cost to the Council. Should Causeway House be demolished then the authority would be liable for the safe removal and return of the solar panels to the owner and payment of outstanding feed-in tariff income.
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