

Report to: Cabinet

Date of Meeting: 4th December 2017

Report Title: An Energy Transition for Hastings

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Purpose of Report

This report is submitted to recommend in principal investments the Council can make to take advantage of available energy opportunities; to achieve outcomes in two areas:

- To contribute to the investment outcomes outlined in the Income Generation Strategy through the generation and use, or sale of energy.
- To deliver economic, social and environmental benefits to the people and businesses of the Borough.

The report outlines outcomes that can be achieved in the short, medium and long-term.

The opportunities identified in this report are subject to further due diligence (see para. 23) and the possible quantum of investment referred to in the report is unlikely to be achieved when opportunities are assessed further.

Recommendation(s)

1. To note the progress already made in achieving energy efficiencies.
2. To make provision within the Capital Programme of £1.76m for the purchase and installation of solar photovoltaic arrays.
3. That delegated authority be given to the Chief Financial Officer, in consultation with the Leader to authorise the procurement of design and installation of solar photovoltaic arrays as outlined at para. 19-23.
4. That a position of Project Support Officer is created for a fixed term until Mar 2019 (with an option to extend) to assist delivery. This position will be paid for through a bid to the Invest to Save Fund.
5. To continue work to develop plans to bring forward large scale wind generation for the Borough. This will include a review of gaps in planning policy and a bid to the

Invest to Save fund to erect wind monitoring masts to check the national database wind assumptions; with a further report to follow in April 2018.

6. To continue work to develop plans to bring forward district heat networks for the Borough; including submitting a bid to the Heat Networks Delivery Unit for a grant funding to conduct feasibility studies, with match funding of up to 33%. A further report to follow in April 2018.
 7. To continue work to develop plans to bring forward an alternative energy generation and supply model for Hastings; including submitting a declaration of interest to the European Regional Development Fund to trial a smart grid. A further report to follow in Apr 2018.
 8. To enter into informal dialogue with energy supply licence holders about a potential partnership with Hastings Borough Council which could bring offer a tariff underpinned by local generation. A further report to follow in Apr 2018.
 9. To develop an Energy Strategy for Hastings Borough, the first draft to be considered in April 2018.
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Reasons for Recommendations (outcomes)

10. Implementing the recommendations in this report will help the Council deliver its Corporate Priorities, as follows:
 - a. **Economic and physical regeneration** – generating and supplying energy locally keeps money in the local economy. Supporting local businesses by retaining them to deliver some of the recommendations in this report could help safeguard and create new skilled jobs.
 - b. **A greener town** – if they are all implemented following due diligence the measures in this report have the potential to contribute to the Councils climate change ambitions namely, to reduce emissions of greenhouse gases. We will establish an appropriate target to monitor the energy generated and the greenhouse gases saved through our planned activities. This will be established in the context of national carbon reduction targets as set by the Climate Change Act 2008 (to reduce emissions by at least 51% by 2025 and 80% by 2050 based on 1990 levels).
 - c. **Intervention where it's needed** – the energy industry is in the throes of transition. There are various reasons for this but a major one is the increasing cost of distributing energy. It is for this reason that UK Power Networks, the District Network Operator for the area including Hastings has publically declared its move to a new model of doing business. The Council has a leadership role to play in this transition to ensure that the Borough derives maximum benefits as the transition rolls out.
 - d. **Changing the way we work** – it is unlikely that all of the opportunities identified in this report can be brought forward. If, after due diligence they are all implemented they could generate an annual contribution of up to £1.156m for an investment of up to £9.98m; this represents a gross Return on Investment (ROI) of 11.57%. The Income Generation Strategy is far more cautious and, after discounting the more challenging aspects of the programme calls for a return of £630k for an investment of £6m, or a gross ROI of 10.6%.

Background

13. The Corporate Plan calls for Hastings to be a 'Greener Town' and for the Council to 'Change the way we work'. These corporate priorities are reflected in the draft Income Generation Strategy (IGS) which seeks to commercially optimise policy delivery; this ensures that the Council is protected from future changes to its funding position by helping to ensure that it has adequate resources. A key investment theme of the IGS is energy generation. The adopted IGS calls for investment in energy generation technologies for self-use or sale.
14. During the summer of 2017 officers managed an 'Energy Options Study' for the Council, and the wider Borough. Two leading energy consultancies were retained to help with this work. The study was concerned with identifying options to generate and more efficiently consume energy, both for the Council and the wider Borough.
15. An important background activity of the 'Energy Options Study' was the engagement of local and national stakeholders in the energy generation and supply chain. This included The Department for Business Energy and Industrial Strategy; energy supply licence holders; the local Distribution Network Operator; local businesses; third sector organisations concerned with the alleviation of fuel poverty and the promotion of renewable energy technologies; other Councils heavily involved in energy matters; and leading academics. This has enabled an understanding of a fast moving industry in the midst of transition.

Opportunities

16. The Energy Options Study and officer research has identified four distinct types of energy opportunity available to the Council: efficiencies; small scale solar photovoltaic generation; large scale wind generation; and innovation. The opportunities are of varying degrees of difficulty to deliver. This will most obviously manifest itself in varying lengths of time to capture.

Efficiencies

17. These are measures which will reduce energy consumption; reduce the cost of energy; and capture the financial incentives to comply with Demand Side Management initiatives. Examples include: pipe lagging; installing accurate metering; low energy lighting; etc. The identified measures are being included in the Council's renewals and maintenance plans and funded through an approved bid to the Invest to Save fund.

Solar photovoltaic generation

18. These are solar panels installed under the Microgeneration Certification Scheme (MCS). The Council is a significant landlord and has extensive opportunities to install solar panels on its estate. All of the opportunities referred to in this section of the report are covered by permitted development.

19. The Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 provide a power allowing local authorities in England to sell electricity generated from renewable sources, including solar.
20. Where the opportunity is in a building that the Council owns and occupies the benefits can be summarised as follows:
- Carbon reduction.
 - Receipt of Generation Tariff component of the Feed in Tariff (FIT).
 - Cost avoidance in not purchasing power.
 - Receipt of the Export Tariff component of the FIT for power not consumed in cost avoidance.
21. Where the opportunity is in a building that the Council owns, but is tenanted the benefits can be summarised as follows:
- Carbon reduction.
 - Receipt of Generation Tariff component of the FIT.
 - Receipts from the sale of power generated to the occupier (or other customer).
 - Receipt of the Export Tariff component of the FIT for power not sold.

These opportunities have special considerations regarding the lease arrangements with the tenant which may require lease amendments (in respect of self-repairing leases, for example); and power purchase agreements with the tenant (or other purchaser).

22. Where the opportunity exists to fund an installation on a building not owned or occupied by the Council the benefits can be summarised as follows:
- Carbon reduction.
 - Receipt of Generation Tariff component of the FIT.
 - Receipts from the sale of power generated to the occupier (or other customer).
 - Receipt of the Export Tariff component of the FIT for power not sold.

The Council requires special securities for projects such as this:

- Tariff rights.
- Rooftop rental agreement.
- And power purchase agreements.

It is not envisioned that the weight of Council's investments will be in opportunities of this type but having the option available gives two advantages: it increases the possible investment opportunity; it gives the Council flexibility to bring forward community energy schemes, where appropriate.

23. The solar photovoltaic opportunities have been identified after an assessment of the generation potential at each site the Council owns using the MCS datasets. In order to progress installation at a given site a due diligence process will be carried out which will include:
- Confirmation of installation costs.
 - Confirmation of connection availability.

- Confirmation of permitted development rights.
- Confirmation of registration of a scheme with a FIT licensee including FIT tariff rates available.
- Confirmation of minimum installation standards as proscribed by the MCS.
- Structural assessment considering the proposed installation.
- Certification by Building Control.
- Finance checks (ROI).

Those opportunities that meet these standards and deliver a positive ROI of 10.6% will be installed in accordance with the recommendation at para. 3.

24. A summary of the current tariff rates can be found in the background documents to this report.
25. An allowance of up to £1,500 per site is available in the recommendation at para.2 for professional fees to retain professional comment (for example from structural engineers) on the due diligence measures in para. 23.

Large scale wind generation

26. Examination of the national wind database shows that Hastings benefits from excellent wind resource. Giving due consideration to grid connection costs, three sites have been identified on the Council's estate and elsewhere that may potentially be viable for the installation of wind turbines. These sites are: the promenade (vertical axis wind turbines); Upper Wilting Farm (horizontal axis wind turbines); and the previously approved (horizontal axis) turbine at Enterprise 21. A soft market test has been completed to ascertain what factors and considerations would make our opportunities attractive to the market; either as a design and install or a lease proposition. Although both types of opportunity do appear to be of interest to the market there are two major issues to address before plans can be progressed: firstly the assumptions in the national database need locally testing through the erection of wind monitoring masts; and secondly the policy of the relevant planning authority needs to allow the commissioning of wind turbines. For the Upper Wilting Farm site this is Rother District Council and Crowhurst Parish Council. This report makes recommendations to progress planning to deliver wind generation opportunities at para.5. Should all sites be successfully brought forward there is a total installed generation opportunity of 1.93 mWp; at a cost of £6m; giving a return of £600k.

Innovation

27. Officer research demonstrates quite clearly that the current model of energy generation and supply where large quantities of energy are brought into the borough area is unsustainable in the face of exponentially rising demand. This situation is likely to be exacerbated by the rise of the electric vehicle (EV). The current plans of both our local Distribution Network Operator (UK Power Networks) and the government to deal with this situation are included in the background documents to this report. In essence developing local generation options is being promoted as the solution to keep resilience up, consumer costs down, and minimise the need for expensive infrastructure upgrades. The Council

could take the view that it has a leadership role to play in the development of energy supply plans for the borough. This is most obviously seen in the Council's planning policy which can support the development of local energy generation, or not.

28. **District Heat Networks** – the energy options study identified two areas of the town which could be suitable for District Heat Networks, namely: around the Conquest Hospital and around Bohemia Road. Officers have discussed this with the Heat Network Delivery Unit (HNDU) at the Department of Business, Energy and Industrial Strategy (BEIS) and they agreed with the Council's consultants initial findings. HNDU offers grant funding for the development of heat network plans, including the testing of commercial viability. This funding can only be bid for by the local authority, who must match fund 33% of the total grant amount (up to £100k). The benefits to the people and businesses of Hastings of a functional heat network are potentially very large indeed. Consequently, we recommend the development of plans through this grant scheme and there is an appropriate recommendation at para. 6. Further information will allow the investment opportunity to be properly identified.
29. **Smart 'push-pull' grid** – in order to promote local generation and consumption of energy there is a market failure which needs to be addressed. Currently there is no way to build a tariff based on local generation due the correct information being available to energy supply licence holders, in the right format. If this failing was addressed then energy costs could be kept down; energy production could be more environmentally friendly; and investments in local energy generation could be commercially optimised. The Council has an opportunity to lead a project to address this failure through the role out of a smart grid and a partnership with an energy supply licence holder to offer the correct tariff. The proposed project could be part funded through a grant from the European Research and Development Fund. There are recommendations at para. 7 and 8 in this regard. We have expressions of interest from local business and Sussex University to partner in such a project. A draft project narrative has been submitted to the District Network Operator for comment. The proposed project narrative could result in a £2m project.
30. **Strategy** – it is recommended that the Council develops an 'Energy Strategy' to reflect the proposed leadership role, as described above and identify how the Council can build upon the work completed to date and address key issues we and the town are facing with regard to the energy transition that is underway in the UK. A strategy would aim to respond to the 'energy trilemma' of energy security, energy affordability and environmental sustainability (i.e. decarbonisation of the national grid)
31. A strategy would
 - Provide a strategic framework to co-ordinate effort in delivering common aims
 - Provide opportunities for joint working and ownership with partners and stakeholders

- Help to provide a focus on priority areas where activities will provide the greatest benefits to the Council, local businesses and residents of the of the borough
- Help to secure extremal funding

Policy implications

32. **Risk management** – risk management will be handled in accordance with corporate policy and the IGS. A programme register will be maintained and, where the criteria are met risk transferred to the corporate register.

Key risks to individual sites:

Risk	Impact	Likelihood	Comment
Tariff reduction	High. As the tariffs reduce so the viability of the individual sites diminishes. Some will be lost altogether.	High. The tariffs are reduced quarterly.	There is a chance that government policy will see the removal of the FIT completely.
Connection availability/costs	High. If there is no connection available or if connection costs are prohibitive this could render a proposed site unviable.	Low to medium. The DNO has already had oversight of the Council's estate and no immediate flags have been raised by them.	Officers have a clinic scheduled with the DNO to discuss in connections in detail.
Structural	High. Installation costs could prove to be prohibitive or, in extreme cases render a site unviable.	Medium. Some building the Council owns will just not be suitable to take an installation	
Operational	High. The Councils strategic plans might mean an installation id not appropriate.	Low. A particular site could be identified, for strategic reasons for disposal or development, etc.	

33. **Environmental issues** – as mentioned elsewhere in this report the recommendations could deliver a considerable reduction in carbon emissions. To bring clarity of direction and to help maximise benefits to Hastings para. 9 recommend the development of an energy strategy for the borough.
34. **Economic/financial implications** – the benefits of the wind and innovation themes of this report will be quantified at the next stage report, in Apr 2018. The financial benefits of investment in solar photovoltaic arrays as recommended at para. 2 can be realised as follows:

Type	Start	Investment	Commissioned	Return
Council owned and occupied (para.20)	Dec 2017	Up to £440k	Mar 2018	Up to £67k per annum
Council owned and tenanted (para.21)	Mar 2018	Up to £1.32m	Dec 2018	Up to £200k per annum

These figures show potential, only. After sites are rendered unviable by the due diligence the actual figures will be reduced.

Procurement will be conducted through a framework agreement to which the Council is already a signatory.

For planning purposes, the total estimated investment opportunity (subject to due diligence) amounts to around £9.98m over the next three years.

35. **Organisational consequences** – the following table demonstrates the impact to the Council:

Person or department	Task/s
Income Generation Manager	Programme management Investment performance management
Sustainability Manager	Programme management Policy development
Project Support Officer (fixed term	Management of solar photovoltaic

contract to be created)	installer/s Programme administration
Legal	Power purchase agreements Lease variations Review of grant bids/terms Procurement Rooftop rental agreements Partnership/JV with energy supply licence holder
Finance & Estates & Surveyors	Financial due diligence Risk management Lease variations Treasury management Accounting support
Planning	Review of planning policy Considering applications
Senior management	Programme sponsorship Strategic management

Wards Affected

All wards are affected.

Policy Implications

Please identify if this report contains any implications for the following:

Equalities and Community Cohesiveness No

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Crime and Fear of Crime (Section 17)	No
Risk Management	Yes
Environmental Issues	Yes
Economic/Financial Implications	Yes
Human Rights Act	No
Organisational Consequences	Yes
Local People's Views	No
Anti-Poverty	No

Additional Information

Appendix A – Individual site opportunities.

Background documents

<https://www.cleanenergynews.co.uk/news/solar/ukpn-embraces-dso-future-a-transition-as-significant-as-the-advent-of-broad>

<http://futuresmart.ukpowernetworks.co.uk/>

<https://www.ofgem.gov.uk/environmental-programmes/fit>

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651916/BEIS_The_Clean_Growth_online_12.10.17.pdf

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/654902/Cost_of_Energy_Review.pdf

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