WTF218
FOR DECISION
WARD(S): WINCHESTER TOWN AREA

WINCHESTER TOWN FORUM

10 June 2015

SOLAR CITY: OUTCOME OF SCOPING STUDY

REPORT OF ASSISTANT DIRECTOR (ECONOMY AND COMMUNITIES)

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RECENT REFERENCES:

WTF213 – Winchester Town Account Budget 2015/16, 21 January 2015

WTF 207 – Winchester Town Account Budget 2015/16, 19 November 2014

EXECUTIVE SUMMARY:

During the course of the last municipal year, Winchester Town Forum agreed to commission a short study scoping the potential for solar energy in the Town area, which has now been completed. It also allocated £7,500 in 2015/16 to take forward this work (WTF213 – Winchester Town Account Budget 2015/16, 21 January 2015 refers).

This Report summarises the findings of the study, previously circulated, and proposes a way forward for Town Forum's aspirations to make Winchester a 'Solar City'.

RECOMMENDATIONS:

That the Town Forum:

i) Expresses its satisfaction with the preliminary study carried out by Horizon Power and Energy;
ii) Reconfirms its commitment to progressing the Solar City initiative in this financial year;
iii) Approves the 'next steps' set out in section 4 of this report, and delegates responsibility to the Assistant Director (Economy & Communities) to take this forward.

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DETAIL:

1 Introduction

1.1 In discussions over the course of the last financial year, Town Forum expressed interest in the potential to establish Winchester as a 'Solar City'.

1.2 In order to inform its aspirations in this area, Members identified funding for a high level scoping study which was commissioned from local energy consultants Horizon Power and Energy, through Winchester Action on Climate Change.

1.3 The study assessed the number, size and orientation of non-domestic roofs in the Town area, and identified nearly twenty which might be suitable for a 'pathfinder' exercise. In theory, these site could accommodate over 1MWp of solar photo voltaics (PV), equating to 4,000 panels covering 1.5 acres of roof space.

1.4 Given the modest size of the budget for this study, no feasibility work was included and no dialogue took place with the landlords or occupants of the buildings.

1.5 The Town Forum has allocated a further budget of £7,500 in the current financial year to progress this work. The Report summarises the findings of the study and proposes a possible way forward for Members to consider.

2 The Solar City Concept

2.1 For newer Members of Town Forum, it may be worth revisiting the aspirations which were embodied in the Solar City concept. As set out in the consultant's brief, these were:

a) The City of Winchester to become a model for solar development across a mixed rural and urban area in England.
b) To promote a collaborative approach to develop this model, involving business, universities, public sector bodies, town and parish councils, individuals and households (represented by WinACC), and those professionally involved in developing renewable energy.
c) To provide information, intelligence, encouragement, guidance and co-ordination to a multitude of projects at many different scales.

d) To establish a hub for the promotion of solar PV across the Winchester District.
e) To help establish the scale of the opportunity to develop solar PV across the District.

2.2 The concept aligns well with the Council's wider Route Map for a Low Carbon Economy. This identifies solar PV as an area of opportunity for job creation in the developing a low carbon economy, with an estimated potential for 60 additional jobs over a five year period

2.3 The development of a 'solar city' initiative could make a helpful contribution to Winchester's share of national and European targets for carbon reduction and increased generation of renewable energy as set out in the recent Cabinet report CAB2682 -Working Towards a Low Carbon District, 15 April 2015.

2.4 Corporate discussions between senior Council officers and Leading Members prompted by Town Forum's aspiration led to a useful visit to Eastleigh Borough Council to learn about its own solar PV projects, and a presentation from the University of Winchester on its energy reduction programme. The view was expressed that Winchester City Council was already doing much to reduce energy consumption and emissions through its ongoing asset management programme – using LED lighting, insulation, air source heat pumps and so on – before moving immediately to bigger, more expensive PV projects. However, Members were clear that decisions should be made on a case by case basis, armed with the full facts in terms of viability, cost and benefits. They were also supportive of a facilitation role for the Council in bringing about a project involving other landlords, possibly of a scale to attract external funding.

3 Conclusions of the Scoping Study

3.1 The brief for the study was drawn up by the Chair of Winchester Town Forum, in discussion with Winchester Action on Climate Change (WinACC). WinACC is commissioned by the Council to provide advice on matters relating to climate change and sustainability, and it co-ordinates the activities of the Low Carbon Board.

3.2 The brief required the study to:

"provide evidence of the potential for installing solar PV on selected large and larger roofs of public, commercial and industrial buildings in the unparished area of Winchester Town."

In particular, it required the study to include Winnall, because of the concentration of larger roofs in that area, and as many as possible of the buildings owned by the Council.

3.3 Outputs required from the study were as follows:

- A list of the main large roofs in Winchester Town that have potential for cost effective solar PV generation.
- For each roof, an estimate of the potential KW capacity, the number of panels that could be installed, the savings and the likely return on investment.
- Any other useful data it is possible to collect within the very limited time and budget (for example, ownership of appropriate buildings; current leasing arrangements; estimated power consumption of occupants; EPC ratings; basic structural assessment of roofs).

3.4 Schools under Hampshire County Council's auspices were excluded from the study, along with properties with short term tenancies by small businesses (in favour of more owner-occupiers). As far as was possible to ascertain, the roofs that were selected were thought to have the structural capacity to accommodate a solar PV system.

3.5 The final study came in two parts, with the caveat that it was desk-based research and calculations, which would require further work to validate assumptions. The two parts are:

a) A report which summarises the solar PV potential and associated benefits etc (previously circulated to Town Forum members).

b) A one page (A3) schedule showing the capacity of each building and the current tenant's name (not circulated for reasons of confidentiality).

3.6 The key findings of the study are summarised as follows:

a. The capacity of the fifty sites studied is 2.94MWp, or some 11,750 solar PV panels covering 4.75 acres of rooftops.

b. 79% of the identified capacity is on business premises, which are largely located on the various industrial and trading estates surrounding the city. Only 7% of the identified capacity is in the centre of the city.

c. The likely installation cost would be in the region of £3.2M to £3.5M, depending on equipment quality and the potential for collective buying initiatives. The blended simple payback period for the programme would be in the range of six to seven years.

d. The power generated over the 25 year life of the systems would be in the region of 59.6 million units of electricity, equivalent to powering 722 family homes for 25 years.

e. The carbon emissions displaced over a 25 year period would be in the region of 29,000 tonnes, equivalent to eliminating the emissions of 400 family cars for 25 years.

f. The financial benefits resulting from Feed In Tariff payments and avoided electricity costs would be in the region of £10.1M over the 25 years (at today's prices).

g. The programme would sustain approximately twelve jobs over a one year implementation programme.

4. Next Steps

4.1 As indicated elsewhere in this report, the consultant identified a group of nearly twenty buildings which might be suitable to form part of a 'pathfinder' project, should Town Forum be minded to take this initiative forward.

4.2 *Step one – establishing ownership*: Although the tenants of the buildings are named by the consultant, it would be necessary to engage with the landlords of the buildings, and the first step would therefore be to identify these. It is suggested that up to three days' work might be required for the purpose, and this could be commissioned externally in view of other pressures on Council officers. The priority would be to identify the 'pathfinder' landlords, with others included if time permits. These are likely to be landlords who are sympathetic to the solar city objectives (potentially public sector) and where leases long enough to make installation viable (ie no break clause after five years).

4.3 *Step two – initial approaches*: Once these are identified, the landlords would need to be approached with a proposition. Given that a number of them may not be local, this may require an individual, targeted approach, which would need to be supported by an energy expert who could spell out the costs and benefits to the freeholders of investing in solar PV together with the various ways this might be arranged (eg straightforward installation by the owner, roof rent to a commercial company, the involvement of a community energy scheme). It would also be necessary to assess the condition and suitability of the roofs.

4.4 *Step three – coming together:* It is likely that scope for external funding and economies of scale (through joint procurement) would be enhanced by bringing together the freeholders in a joint approach. This might require one or more project meetings, depending on the interest and availability of the landlords.

4.5 Assuming Town Forum wishes to progress this initiative, it has allocated £7,500 in its budget for 2015/16 and could use this to fund the above work as follows:

	Chargeable Activity	**Cost £**
Step one	search fees (3 to 4 days)	900
Step two	external technical support for individual approaches to landlords (20 visits at £300 per day, allowing for drafting individual proposals for each)	6,000
Step three	room hire, printing, refreshments	300
	contingencies/follow up	300
	Total	7,500

4.6 Members are asked to confirm their wish to proceed with this initiative and to comment on this suggested approach.

OTHER CONSIDERATIONS:

4 COMMUNITY STRATEGY AND PORTFOLIO PLANS (RELEVANCE TO):

4.1 The Solar City initiative would support the Community Strategy's economic prosperity outcome by creating jobs and training opportunities in the local economy, and its high quality environment outcome by lowering carbon emissions.

5 RESOURCE IMPLICATIONS:

5.1 Town Forum has already included the sum of £7,500 in its budget for 2015/16 to progress this work. There would also be a requirement for officer time to commission and support consultants/external experts.

5.2 If a pathfinder project is considered to be viable, then a paper will need to be brought back to Town Forum and Cabinet demonstrating how this might be funded and setting out any implications for the Council in terms of its own estate, risk, financial liability and so on. It would ultimately be for Cabinet to decide whether it wished the Council to participate.

BACKGROUND DOCUMENTS:

Solar City Programme: A technical and economic assessment of the Solar PV potential for Winchester City, Hampshire – produced by Horizon Power and Energy.

Previously circulated to all Town Forum members and the Low Carbon Board.

APPENDICES: None