

# AGENDA SUPPLEMENT (1)

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**Meeting:** Environment Select Committee  
**Place:** Committee Room III, County Hall, Trowbridge  
**Date:** Tuesday 11 January 2011  
**Time:** 10.30 am

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**The Agenda for the above meeting was published on 23 December 2010 and indicated that the report detailed below would be to follow. This is now available and is attached to this Agenda Supplement.**

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This Agenda and all the documents referred to within it are available on the Council's website at [www.wiltshire.gov.uk](http://www.wiltshire.gov.uk)

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8. **Renewable Energy** (Pages 1 - 12)

This item has been included at the request of Cllr Stephen Oldrieve who asked for an overview of Wiltshire Council's proposals for energy regeneration from renewable resources.

In response a report is attached from the Director for Economy and Enterprise.

**Recommendation:**

**The Committee is asked to consider the report and make recommendations as appropriate; to include any future role for scrutiny of this topic.**

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**Wiltshire Council**

**Environment Select Committee  
11 January 2011**

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## **Developing Proposals for Renewable Energy Generation**

### **Executive Summary**

This report provides an update on Wiltshire Council's approach to energy generation from renewable sources, which includes:

- (i) Developing policies to support renewable energy development for inclusion in the Wiltshire Core Strategy;
- (ii) Developing a Wiltshire Renewable Energy Action Plan; and
- (iii) Supporting and promoting opportunities for renewable energy proposals.

Evidence to support draft policy options for inclusion within the Wiltshire Core Strategy is currently being prepared and will be published for key stakeholder consultation. This includes a study assessing the potential for renewable energy across Wiltshire.

A Wiltshire Renewable Energy Action Plan is proposed for completion by April 2012. This will include targets for renewable energy development in Wiltshire and establish a delivery plan for how these targets can be met. Detailed proposals for completing the action plan will be published later in 2011 following approval of the Energy, Change and Opportunity Strategy.

### **Proposal**

That the Committee:

Considers and comments on the content of this report.

### **Reason for proposal**

To update the Environment Select Committee on the development of renewable energy proposals for Wiltshire.

**MARK BODEN**  
**Corporate Director**  
**Department of Neighbourhood and Planning**

## Developing Proposals for Renewable Energy Generation

### Purpose of report

1. To update the Committee on the development of proposals for energy generation from renewable sources in Wiltshire.

### Main Considerations for the Committee

2. Wiltshire Council's approach to energy generation from renewable sources fall into three areas:
  - (i) Developing policies to support renewable energy development for inclusion in the emerging Wiltshire Core Strategy;
  - (ii) Developing a Wiltshire Renewable Energy Action Plan; and
  - (iii) Supporting and promoting opportunities for renewable energy proposals.

These are discussed below.

#### Wiltshire Core Strategy

3. Work is ongoing to develop the Wiltshire Core Strategy. This will set a strategic policy framework to shape development across the county up to 2026. A draft Core Strategy will be published for public consultation in the spring of 2011, with a final document programmed for submission to the Secretary of State for examination before the end of the year.
4. The Wiltshire Core Strategy will contain policies to be used for determining planning applications across several topic areas, including climate change.
5. Climate change, including development of renewable energy, is a key UK Government priority. A strong national policy framework has been established to drive climate change action and these include the 'Planning and Climate Change Supplement to Planning Policy Statement (PPS) 1'. The planning system is expected to make a significant contribution to reducing Greenhouse Gas (GHG) emissions, stabilising climate change and to take into account its unavoidable consequences. These matters are often referred to as climate change mitigation and adaptation.
6. The PPS 1 supplement sets out a number of clear requirements for Wiltshire Council, as local planning authority (LPA). These include the need to develop an evidenced based understanding of the local feasibility and potential for renewable and low carbon<sup>1</sup> technologies to supply new development in their area, as well as providing alternative energy sources generally.

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<sup>1</sup> Low-carbon energy utilises conventional and non renewable fuels, such as oil or gas, however they use technology which reduces carbon emissions. An example is a very efficient gas fired boiler.

7. The evidence to support the development of climate change policy falls into five main categories:
- (i) Review of relevant national and local policy, including the performance of any existing policies already adopted in Wiltshire;
  - (ii) Review of emerging best practice from other LPAs;
  - (iii) Identifying relevant priorities across Wiltshire communities;
  - (iv) National Indicator (NI) 188 'Planning to Adapt to Climate Change' - ongoing monitoring to help us understand the likely future consequences of climate change in Wiltshire; and
  - (v) A study of renewable energy potential has been undertaken by Camco to fulfil the requirements of the PPS 1 Supplement, as above. A brief summary of some of the main findings of this report are included in **Appendix 1**.
8. In order to adequately address climate change in line with PPS 1, the Core Strategy will need to contain policies relating specifically to renewable energy which:
- (i) Maximise opportunities to deliver decentralised<sup>2</sup>, low-carbon and renewable energy in new development; and
  - (ii) Encourage the development of large scale stand-alone renewable energy schemes in Wiltshire.
9. A Draft Climate Change Topic Paper, identifying the evidence base and policy options, will be available for key stakeholder consultation during February 2011. The paper could be presented to the March meeting of the Committee for comment.

#### Wiltshire Renewable Energy Action Plan

10. A Draft Wiltshire Energy, Change and Opportunity Strategy has been prepared and will be considered by Cabinet early in 2011. This draft Strategy provides a framework for addressing climate change in Wiltshire and proposes that detailed action plans, including one for renewable energy, will be prepared by April 2012.
11. The draft Strategy suggests that the renewable energy action plan should:
- (i) Set targets for renewable energy for Wiltshire for 2020;
  - (ii) Establish a delivery plan for how the Wiltshire renewable energy targets can be met;
  - (iii) Investigate particular opportunities for large scale renewable energy development in Wiltshire and work with developers to secure inward investment and job creation;
  - (iv) Work with communities across Wiltshire to promote community based renewable energy schemes which should also help to address fuel poverty; and
  - (v) Identify particular opportunities for improving the energy performance of the existing building stock across Wiltshire, including funding sources to deliver these improvements.

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<sup>2</sup> Decentralised energy means generating energy on-site or near to the development site. This is more efficient than generating electricity in large central power stations as a large amount of energy is lost through its distribution.

12. More detailed proposals for developing the Wiltshire Renewable Energy Action Plan could be presented to the Committee for comment once they have been prepared later in 2011.
13. Some specific projects have already been initiated to help increase the delivery of renewable energy in Wiltshire. Details of some example projects have been summarised in **Appendix 2**.

### **Environmental Impact of the Proposal**

14. In line with current planning legislation, the Wiltshire Core Strategy is subject to Sustainability Appraisal (SA), Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment. These are processes designed to test the overall sustainability and environmental impact of the strategy. Reports into each of these will be published alongside each stage of the draft Core Strategy.
15. Any potential environmental impacts of the Wiltshire Renewable Energy Action Plan will be considered in more detail once the draft Action Plan has been prepared.

### **Equality and Diversity Impact of the Proposal**

16. There is no direct equalities impact arising from the proposal. The Core Strategy will be subject to an Equalities Impact Assessment.

### **Risk assessment**

17. There are no risks arising directly from the proposal. However, the risks associated with the timely delivery of the Core Strategy and the Energy, Change and Opportunity Strategy are referred to in the Corporate Risk Register.

### **Financial implications**

18. There are no financial implications arising directly from the proposal. Work to prepare the Wiltshire Core Strategy and Wiltshire Renewable Energy Action Plan already form part of the commitments of the Spatial Planning and Climate Change Teams and so there are no further implications.

### **Legal implications**

19. There are no legal implications arising directly from the proposal. The Core Strategy must be prepared in accordance with relevant European and national planning legislation.

### **Options considered**

20. The Council has a statutory duty to prepare a Core Strategy which needs to be developed in accordance with national planning policy and make provision for renewable energy. The Renewable Energy Action Plan will enable delivery of the Core Strategy and renewable energy projects generally in the interests of energy security and helping address fuel poverty.

## Conclusion

21. This report provides an overview of Wiltshire Council's approach to energy generation from renewable sources and includes progress on the preparation of renewable energy policies within the Wiltshire Core Strategy and proposal to develop a Wiltshire Renewable Energy Action Plan. In addition, a summary has been provided of the findings of a study undertaken to assess the renewable energy potential in Wiltshire, as well as an overview of projects that have, or will, contribute to the delivery of renewable energy within Wiltshire.
22. The Committee is asked to consider and comment on the contents of this report including whether it would like to receive updates and provide comments on both documents as they develop.

### **MARK BODEN**

Corporate Director  
Department of Neighbourhood and Planning

Report Author

**Georgina Clampitt-Dix**  
Head of Spatial Planning

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### **The following unpublished documents have been relied on in the preparation of this Report:**

Draft Wiltshire Energy, Change and Opportunity Strategy  
Wiltshire Renewable Energy Planning Study

### **Appendices:**

**Appendix 1:** Summary of main findings from Draft Wiltshire Renewable Energy Study, Camco (October 2010)

**Appendix 2:** Summary of Wiltshire projects to promote renewable energy

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## Summary of main findings from Wiltshire Renewable Energy Study

### Renewable Energy Potential in Wiltshire

1. Wiltshire Council commissioned Camco to undertake a study on the technical and practical potential (i.e. realistic potential once a number of constraints have been considered) for renewable energy technology across Wiltshire. The technologies considered include:
  - Large Scale Wind;
  - Biomass;
  - Hydropower;
  - Solar Arrays; and
  - Micro-renewables.

The potential for each is considered in turn below following which consideration is given to the difference between small and large scale wind potential and a summary of other key findings of the study provided.

#### Large scale wind

2. The technical potential for large scale wind power (taken to be 2.5 MW turbines) in Wiltshire is for over 1800 MW which could contribute as much as 281% of the current electricity consumption of the county.
3. Two scenarios have been developed which demonstrate that delivering between 160 and 480 MW, this is between 15 and 29% of the current electricity demand in Wiltshire, could be practical.

#### Biomass

4. The potential for energy from biomass has been assessed. This is considered to include crop residues, animal manures, energy crops, residues from forestry operations, sawmill co-products, municipal solid waste, commercial and industrial waste wood and commercial and industrial food waste.
5. The practical potential for renewable energy derived from biomass is calculated to be capable of providing 11.7% of the projected energy demand for Wiltshire for 2020.

#### Hydropower

6. The technical potential for hydropower in Wiltshire is assessed to be 5.8 MW which could contribute 2% of the current electricity demand for the county.
7. Two scenarios developed show that between 1.2 and 2.9 MW, between 0.3 and 0.7% of the current electricity demand, could be practical to deliver.

#### Solar arrays

8. The potential for renewable energy derived from solar PV arrays in Wiltshire is large, and is really only limited by the area of land covered by panels. To meet 5% of the projected electricity demand for Wiltshire by 2025, 3.6 km<sup>2</sup> of land would need to be covered by panels. This equates to approximately 0.11% of the land area of Wiltshire and would have a capacity of around 143 MW.

### Micro-renewables

9. The technical potential for micro-renewables in Wiltshire is large, see below. However, it is useful to consider the number of installations that would be required to meet these figures.
  - Solar PV = 165 MW (1 million m<sup>2</sup> of PV panels)
  - Solar Thermal = 127 MW (60,000 installations)
  - Heat Pumps = 1348 MW
  - Small Wind (6 kW turbine) = 308 MW (51,000 installations)
10. However, the technical potential does not take account of a large number of technical, economic and supply chain constraints that could significantly limit uptake. An uptake scenario has been developed, as for other technologies, and this concludes that 1.2% of future energy demand (0.4% of future electricity demand) could be realistically derived from micro-renewables installed on existing buildings in Wiltshire.
11. The potential for micro-renewables in Wiltshire is significant. However, two factors are important: firstly, a large number of installations are needed; and secondly, the total contribution to the overall Wiltshire renewable energy target from micro-renewables is likely to be small.
12. It should be stressed that Micro-renewables can also be used to generate income, through financial incentives and to help reduce fuel poverty.

### Large scale vs. small scale wind power

13. There is a significant difference in terms of electricity output based on the height and capacity of a turbine and small scale turbines have a far lower output than large turbines.
14. To deliver the two uptake scenarios outlined above for large scale wind (2.5 MW turbines), 64 turbines would be needed to deliver 160 MW output or 192 turbines for 480 MW of electricity.
15. To produce the technical potential identified for small scale wind (6 kW turbines) of 308 MW output, 51,000 turbines would be needed.
16. No assumptions are made about the level of future wind power in Wiltshire that may be considered appropriate. These figures are simply presented for illustrative purposes.

### **Summary of Other Key Findings**

17. The study has also developed energy opportunity maps for each of the Wiltshire Towns. These illustrate any identified opportunities for renewable energy technologies and include heat mapping of existing buildings. An understanding of heat and energy demand is useful to help inform the establishment of district heat or energy networks.
18. A wider range of recommendations are made to inform the Wiltshire Core Strategy, including the following recommendations for areas of possible future policy:
  - (i) Indicate the types of low carbon energy systems that could be incorporated into new development and encourage developers to install communal systems, where this is viable.

- (ii) Encourage housing developers to work with renewable energy developers e.g. wind and biomass, and with expert Energy Service Companies (ESCOs) to design, finance and build energy supply systems within their developments.
- (iii) Ensure that master plans for key growth sites contain comprehensive zero carbon methodologies addressing buildings and low carbon infrastructure, putting the onus on developers to prove why zero carbon standards are not possible if this is the claim.
- (iv) Develop policies to maximise the delivery of decentralised, renewable and low carbon technologies within new development where this is viable.
- (v) Capture all low carbon energy installations in the Council's Annual Monitoring Report to monitor effectiveness of policy implementation.
- (vi) In line with the emerging but undefined national mechanism for 'off-site' allowable solutions, develop rules to ensure that 'off site' renewables are additional to any commercial renewable energy developments that would occur anyway.
- (vii) Use the renewable energy study and subsequent work to highlight to developers the key renewable energy sources in the area and how these relate to key development sites.

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**Renewable Energy Schemes in Wiltshire, January 2011****1) Existing schemes installed by Wiltshire Council, as at January 2011**

<b>Renewable energy type</b>	<b>Location</b>
Solar PV	Shrewton School Hardenhuish School Amesbury Archer school St Barnabus school Melksham Oak school Corsham Primary school Paxcroft school Pewsey Library
Solar thermal (hot water)	Braeside outdoor education centre, Devizes Bradford on Avon Fitzmaurice Childrens Centre Downton Clearway Childrens Centre Melksham Canberra Childrens centre WB Manor House Childrens Centre Pewsey Childrens Centre
Biomass (boiler)	Stanton St Quintin School
Wind turbine	Hardenhuish school
Combined Heat and Power	Salisbury Five Rivers Leisure Centre Olympiad Leisure Centre, Chippenham
Air Source Heat Pump	Shurnhold council offices Pewsey Library

The council has not received any income from Feed-in-Tariffs. This is because none of the installations that are generating electricity were eligible for FITs because they were installed prior to the cut-off date and made use of government grants to fund the installation which precludes them from the FIT. However, due to recent clarifications from government, some schools may now be able to start claiming FIT income. Schools have been informed of this change.

**2) Potential schemes under consideration by Wiltshire Council**

The council is interested in renewable energy generation and has commissioned a study to investigate the renewable energy potential across the county. The council is currently reviewing its property portfolio and this will include, among other things, the potential to generate renewable energy and maximise income from the FIT. It is too early to be able to estimate the council's likely annual income from FIT.

Schemes that are under consideration include:

<b>Renewable energy type</b>	<b>Location - scheme</b>
Solar PV	MECH – refurbishment work
	County Farms – potential to install solar PV on suitable farm buildings
	Corsham Primary School – discussions are underway with TransCoCo into the potential to install solar PV
Combined Heat and Power	Trowbridge – there is potential to include a district CHP scheme within the Trowbridge vision development. Feasibility study underway. Marlborough Leisure Centre – potential to install a CHP plant.
Hydro	Chippenham – Monkton Park weir. Investigations underway into possibility of a small hydro scheme
	Kennet & Avon Canal - Investigations underway into possibility of a small hydro scheme
Energy from Waste	MBT plant at Westbury – there is potential to work with Hills Waste Solutions Ltd to have the new MBT plant altered to include on-site energy generation.

The Climate Change Team is producing guidance for schools on Solar PV/thermal to ensure that if individual schools wish to take up offers from energy companies they get the best deal possible.

The Climate Change Team works closely with Strategic Property Services and the Workplace Transformation Programme to identify potential new schemes on an on-going basis.