



Community & Regeneration Scrutiny Committee

Briefing Paper

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Open

Report of the Renewable Energy and Efficiency Review Panel

1. Summary

- 1.1 This report details the key findings of the Renewable Energy and Efficiency Review Panel and makes recommendations to Cabinet, and the Transformation Board.

2. Background

- 2.1 The Renewable Energy and Efficiency Review Panel was convened in response to concerns regarding the country's dependence upon fossil fuels. Members felt that this dependence was storing up considerable problems for the future, given the finite levels of fossil fuels available, their impact upon climate change, and their seemingly ever increasing cost.
- 2.2 Members felt that it was crucial to achieve a significant shift towards renewable energy supplies, which in the long term would be sustainable, cost effective and environmentally friendly. In addition to using more renewable energy it was also deemed important to encourage energy efficiency, and to reduce the unnecessary waste of energy.
- 2.3 Given this, Members agreed to examine how the Council could encourage the uptake of such technologies and measures within the District, by looking at the following:
- i. Available renewable energy technologies and energy efficiency measures, and their practical implementation, including the experiences of partner organisations and small businesses.
 - ii. The advice, support and guidance provided by the Council to residents, landlords, businesses and developers with regard to renewable energy and efficiency measures.
 - iii. The implications for renewable energy and energy efficiency arising from the Local Development Framework process.
 - iv. The Council's plans for a Single Site of Office Accommodation.

3. Key Issues

3.1 Available Technologies

- 3.11 The review started by looking at what technologies were available and whether they could be practically implemented, and invited Act on Energy and Worcester Bosch to provide evidence.

Members considered several renewable energy technologies which it was said could be implemented in an effective manner, namely:

- Ground Sourced Heating
- Air Sourced Heating
- Solar Thermal Panels
- Solar Photovoltaic (Electric) Panels
- Wind Turbines
- Biomass

- 3.12 Members felt that it was crucial to witness evidence of the practical implementation and effectiveness of these technologies and heard from the Community Housing Group (CHG) regarding this. CHG emphasised the importance of effective insulation alongside renewable energy measures, and advised that in order to meet the Government's Code for Sustainable Homes Level 4, a property would require an effective combination of the two.

- 3.13 CHG had undertaken an extensive programme of insulating its properties, which had resulted in them achieving high energy efficiency ratings on their properties (as measured through the Standard Assessment Procedure, SAP).

- 3.14 In addition, CHG were currently undertaking numerous trials of the above renewable energy measures, and would then analyse their performance and effectiveness.

3.2 Hobson's Brewery

- 3.21 A demonstration of the effectiveness of these technologies was provided during a site visit to Hobson's Brewery in Cleobury Mortimer. Members were shown a 12 kilowatt (kw) Ground Sourced Heat Pump which simultaneously heated an ale proving room, whilst chilling the adjacent cold storage room. Also on site was an 11kw wind turbine which provided up to 25% of the site's electricity requirements.

- 3.22 Members were impressed by the effectiveness and simplicity of these two technologies which were being demonstrated within a real world industrial application. Furthermore, the cost effectiveness of these measures was equally impressive, as including grant funding for both measures, and a comparison against the cost of using mains electricity instead of gas, Hobson's were expecting a five year payback on the

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Ground Sourced Heating System, and after this an £8,000 saving each year on their energy bills compared to the cost of using mains electricity to heat and refrigerate the site. Members felt that it was crucial to spread the awareness that such technologies could potentially save businesses money in the short to medium term as well as in the more distant future.

3.3 Worcestershire County Council

- 3.31 Members considered further practical evidence from Worcestershire County Council's Chief Engineer, who had undertaken considerable research into the effectiveness and cost efficiency of various renewable energy technologies. Members observed that biomass boilers were deemed typically to be the most cost effective way to introduce renewable energy and reduce the carbon emissions of a building. However, Members did question the sustainability credentials of biomass as it was dependent upon burning a constant supply of wood chip or pellet.
- 3.32 Members reflected on the research which had ranked the cost effectiveness of various technologies and observed several key points. Firstly, that the payback estimations provided by the research were calculated in comparison to the current price of gas. However, Members felt that as the cost of gas and other fossil fuels was likely to continue to increase, the actual long term cost effectiveness of such technologies was likely to be a much more attractive proposition.
- 3.33 Furthermore, Members suggested that such technologies might be appraised in terms of how renewable and effective they were, and how much they reduced dependency upon fossil fuels and carbon emissions.
- 3.34 Members received a spreadsheet from the Chief Engineer which enabled calculations to be made regarding the cost efficiency of various renewable energy measures. This required the user to enter variables such as the cost of gas as a comparison, which meant that more complicated calculations could be made to estimate the cost efficiency of such measures.
- 3.35 Members also noted that Ground Sourced Heating could be used to provide both heating, air conditioning, and simultaneously where required. This technology was already in use at several schools across the County. In conjunction with another renewable energy device such as a wind turbine or solar panel, this could provide an almost entirely self sufficient heating and air conditioning system.

3.4 Promoting Technologies

- 3.41 The Members of the Review Panel were surprised by the effectiveness and efficiency of many of these readily available technologies, and felt that there were countless applications within which they could be used.

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- 3.42 It was felt that there was sufficient scope to develop the Sustainability webpage to act as a promotional and educational tool for the public, by including a section which details and explains these technologies and their potential applications.
- 3.43 It was suggested that local case studies of renewable energy and efficiency measures could be included to illustrate their successful implementation. Local businesses and residents who had adopted such measures would be invited to provide details of their experiences in order to provide inspiration and a useful resource for others who might wish to implement similar measures in their homes or businesses.

3.5 Support, Advice and Guidance

- 3.51 The Principal Health and Sustainability Officer advised the review on what work the Council currently undertook to promote sustainability issues relating to renewable energy, energy efficiency, and fuel poverty. In particular, emphasis was placed upon the many and varied streams of grant funding and subsidies available to those wishing to better insulate their homes, have a more efficient boiler, or adopt renewable energy technology.
- 3.52 Members felt that fuel poverty was a significant problem, and more could be done to raise awareness of grants and support available to improve the energy efficiency of homes of those in this category. Fuel poverty is defined by the Department of Energy and Climate Change as when a household is unable to afford to keep warm, specifically when it needs to spend more than 10 percent of its income on fuel for adequate heating (usually 21 degrees for the main living area, and 18 degrees for other occupied rooms). [**Department of Energy and Climate Change, 2010**]
- 3.53 The Panel felt that the Sustainability webpage should be developed to include more information about the variety of grants and funding available for insulating properties and implementing energy efficiency and renewable measures.
- 3.54 It was considered that not all sufferers of fuel poverty would have internet access, or would live in areas which received local newspapers, which were often used to publicise such matters. Members therefore recommended that the Sustainability Team should build upon existing promotional events carried out in the community, and to target these at the most vulnerable, by holding awareness raising events at suitable locations including local Children's Centres, and also to make flyers and information available for display.
- 3.55 A further recommendation is for information detailing the areas of highest instance of fuel poverty, and lowest take up of related grants and support to be made available to Ward Councillors. This would then

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allow Councillors to promote the available support and grants to those most vulnerable to fuel poverty, whilst undertaking their regular ward duties.

3.56 Landlord Accreditation Scheme

- 3.57 The thermal efficiency of private sector rented properties was a cause of concern for the review panel. It was observed that sufferers of fuel poverty within this sector might struggle to obtain grant funding and support compared to those living within housing association and privately owned properties, and many may be trapped within fuel poverty, especially through living in poorly insulated properties with prepaid card energy payment.
- 3.58 It was considered that the Council's forthcoming Landlord Accreditation Scheme provided an important opportunity to try to improve the conditions of private sector tenants with respect to fuel poverty. Members were informed by Act on Energy that Carbon Emissions Reduction Target Funding (CERT) was available to private sector tenants provided that they obtained a letter of permission from their landlords. In the light of this, it was recommended that the scheme should insist upon two conditions for accreditation of landlords, firstly that their properties achieve a high standard of energy efficiency, and secondly that landlords make available information regarding energy efficiency grants and support, in particular CERT funding.

Transition Initiatives

- 3.59 Members considered the growth of Transition Towns, as one such network had recently been established in Bewdley. This is a movement which is based around networks within villages, towns or cities, of people wishing to make a transition to a low carbon and energy efficient way of living. It was considered that a guest speaker regarding Transition Towns could be invited to the Members' Quarterly Scrutiny Briefing to raise awareness regarding the movement. The development of the best practice showcase on the Sustainability webpage could potentially aid this networking process by spreading awareness of other projects and like minded people across the district.

3.6 Planning Policy

- 3.61 Members were keen to stress that planning policy played a crucial role in transforming the use of renewable energy and energy efficiency of buildings in the district. They felt that the Local Development Framework (LDF) and the Development Control process should be used to encourage and require such technologies.
- 3.62 With this in mind, Members heard how changes to national building regulations expected in late 2010 would require a 25% reduction in the carbon emissions of all new build homes, with a target of all new

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homes to be carbon neutral by 2016. This reinforced the views of Members that the planning process needed to be used to lead this change process as soon as possible.

- 3.63 Members were advised that once the Core Strategy had been adopted, the Kidderminster Central Area Action Plan (KCAAP) and Site Allocations and Policies Document could be looked at to include higher requirements for energy efficiency and renewable energy use for site specific schemes where appropriate.
- 3.64 Furthermore, a review to the Design Supplementary Planning Guidance could be used to introduce additional validation requirements for planning applications. This could require details of plans for renewable energy and energy efficiency measures to be provided before an application form would be validated. Failure to provide the requisite information would prevent the application being considered.
- 3.65 Members felt that this could be achieved by sending a covering letter in response to new planning applications requiring them to set out their plans for renewable energy and efficiency measures. This was considered to be important as it would prompt developers to think about how they would meet the increasingly stringent requirements of Building Regulations standards.
- 3.66 Members felt that the LDF process should be utilised to promote energy efficiency and renewable energy development across the district, and suggested that a seminar (or series of) be held at an appropriate stage in the LDF process, in order to outline to developers and architects the high energy efficiency and renewable energy standards which would be encouraged within the district.

3.7 Solar Panels

- 3.71 It was considered that many households in the district were unable to make use of solar panels as they did not have south facing roof elevations. Members therefore felt that a planning policy to encourage south facing roof elevations should be adopted.
- 3.72 Members were advised that the LDF Core Strategy included a policy for developments to maximise the amount of solar energy available which would address this issue. It was therefore recommended that the Sustainable Development Standards (which included this) be adopted into the Development Control process, following the adoption of the Core Strategy. This was necessary as it was important for Building Control policy to reinforce the aims of the LDF.

3.8 Single Site

- 3.81 The Members of the Review Panel consistently stated that it was of great importance for the Council to lead the community to use

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renewable energy and to increase efficiency, and commented that the Single Site Project provided a significant opportunity to do so by setting a good example.

- 3.82 It was felt that many of the technologies which they had considered and witnessed in use, such as ground sourced heating and air conditioning could be successfully utilised at the Single Site.
- 3.83 The Panel were conscious that affordability was of critical importance to the Single Site Project but felt that it was important to take a long term view regarding the cost effectiveness of renewable energy and efficiency measures.
- 3.84 As the Single Site building would serve the Council for many decades, it was important to look at the long term cost effectiveness relative to increasing energy costs (as referred to at point 3.32 regarding increasing costs of gas and oil), rather than to simply focus upon the short term cost effectiveness of renewable energy technologies compared to the current price of gas and electricity. What might not look economically feasible compared to the current price of gas could potentially look a very attractive proposition in several years time assuming continuing increases in real terms of the cost of gas, especially as a system such as ground sourced heating would not be subject to fluctuating cost variables as it required no fuel other than a minimal amount of electricity. Once installed the only cost would be its upkeep and maintenance.
- 3.85 Members therefore recommended that the Single Site should be as energy efficient and use as much renewable energy technology as could be afforded, in order to prepare for the future, and to set the best possible example and provide leadership to the district.

3.9 Conclusions

- 3.91 The Review Panel felt that it was crucial for the Council to provide leadership in this area through all areas of the Council's services, particularly through the planning, sustainability and housing services. Members felt that promotion of sustainability funding and issues should be carried out wherever possible, including an advertising campaign on the Council's refuse collection fleet.

4. Options

- 4.1 The Committee is requested to recommend the following to Cabinet, subject to any relevant amendments or additions:

Sustainability

- 4.11 For the Sustainability Section to build upon their promotional work in the community with regard to awareness of fuel poverty, energy

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efficiency, renewable energy, and grants and support, by providing relevant literature and holding awareness raising sessions at locations which will target those most vulnerable to fuel poverty, such as at Surestart Children's Centres.

- 4.12 To provide a breakdown to Members regarding areas of high fuel poverty and low uptake of grants and support, so that ward Members can promote energy efficiency, grants and support to those most in need whilst carrying out their ward duties.
- 4.13 To promote sustainability across as many areas of the Council's business as possible, including an advertising campaign on the Council Refuse Fleet.
- 4.14 To develop the Sustainability webpage to include the following:
 - I) A section outlining renewable energy technologies and their practical applications and benefits.
 - II) To invite local residents and businesses who have adopted renewable energy technologies and/or high standards of energy efficiency to submit their experiences, in order to compile a showcase of best practice case studies.
 - III) Further information detailing available funding, support and grants for energy efficiency and renewable energy.
- 4.15 To invite a speaker to provide a presentation regarding Transition Towns to the next meeting of the Quarterly Scrutiny Briefing.

Planning

- 4.16 That the Local Development Framework process encourages renewable energy and energy efficiency amongst new developments following the adoption of the Core Strategy, particularly within the Kidderminster Central Area Action Plan and Site Allocations and Policies Documents.
- 4.17 To ensure that the Development Control process fully implements the Sustainable Development Standards Policy as set out in the Core Strategy, once adopted.
- 4.18 At the appropriate stage of the Local Development Framework Process to review the Design Supplementary Planning Guidance and introduce additional validation requirements for planning applications, requiring details of plans for renewable energy and efficiency measures to be provided to enable an application to be validated. Failure to provide the requisite information would prevent the application from being considered.

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- 4.19 To hold a promotional seminar (or series of), at an appropriate stage in the LDF process in order to outline to developers and architects the high energy efficiency and renewable energy standards which are encouraged within the district, and the required changes for lower carbon developments contained within national Building Regulations.

Landlord Accreditation Scheme

- 4.20 To include the following criteria for accreditation within the forthcoming Landlord Accreditation Scheme:
- i) Properties must be of a high standard of thermal efficiency.
 - ii) Landlords must provide information relating to energy efficiency and renewable energy funding, in particular Carbon Emissions Reduction Target funding, to tenants.

Single Site

4.3 The Committee is requested to recommend the following to the Transformation Board, subject to any relevant amendments or additions:

- 4.31 That the Single Site of Office Accommodation achieves the very best standards of energy efficiency and uses the most appropriate and effective renewable energy technologies as can be afforded.
- 4.32 Details of progress in achieving the above aim to be provided on an ongoing basis to the relevant Scrutiny Committee.

5. Consultation

- 5.1 Not applicable.

6. Related Decisions

- 6.1 Not applicable.

7. Relevant Council Policies/Strategies

- 7.1 Local Development Framework Process
- 7.2 Wyre Forest Climate Change Strategy and Action Plan
- 7.3 10:10 Campaign

8. Implications

- 8.1 Resources: It is considered that most of the recommendations such as promotional activity and development of the website could be met within existing budgets, and where recommendations are made with regard to the Single Site of Office Accommodation this is to encourage

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the best outcome within the constraints of affordability, which does not intend to place significant financial burden upon the Council.

- 8.2 Partnership working: The recommendations do not provide any direct implications for partnership working, but Members may wish to consider how the Council could work in partnership with partner organisations such as the Community Housing Group to promote renewable energy and energy efficiency.
- 8.3 Human Rights: There are no discernible implications
- 8.4 E-Government: There are no discernible implications.

9. Equality Impact Needs Assessment

- 9.1 Members may wish to consider how fuel poverty may impact upon particular groups such as the elderly, and how to target support and awareness work regarding this to cover all affected groups. Aside from fuel poverty, there are no discernible implications upon the equality strands, and it is not considered that a full equality impact assessment is necessary.

10. Wards affected

- 10.1 The entire district is affected by climate change and the depletion of fossil fuels, and the recommendations in this report apply to all wards.

11. Appendices

- 11.1 None

12. Background Papers

- 12.1 Minutes of the Renewable Energy and Efficiency Review Panel
- 12.2 Informal Notes of the Site Visit to Hobson's Brewery
- 12.3 Wyre Forest Climate Change Strategy and Action Plan
- 12.4 Fuel Poverty Definition - Department of Energy and Climate Change, 2010
http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/fuel_poverty/fuel_poverty.aspx

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