



Wiltshire Renewable Energy Action Plan

Autumn 2005

The Wiltshire & Swindon Renewable Energy Action Plan was co-ordinated by Wiltshire Wildlife Trust and Severn Wye Energy Agency in partnership with the Wiltshire and Swindon Renewable Energy Forum. Funding was provided by the Government Office for the South West.

Action Plan

Wiltshire & Swindon Renewable Energy Action Plan

Joint Policy Statement

Renewable energy has a vital role to play in delivering a sustainable and secure future energy supply. Delivering appropriate local renewable energy generation within Wiltshire and Swindon will help the County to contribute towards reducing carbon dioxide emissions and will benefit the local economy. Renewable energy has the potential to make a very significant contribution to energy supply, for both heat and power, in Wiltshire and Swindon.

The promotion of renewable energy across Wiltshire and Swindon should be integrated with improved energy efficiency as part of a co-ordinated approach to sustainable energy supply.

Our vision is a low carbon county, based on high levels of energy efficiency and complemented by renewable energy and heat from a variety of different sources. Wherever possible, this should be locally owned, community led and contribute to a vibrant local economy

We therefore endorse the delivery of the renewable energy target for Wiltshire and Swindon of 65-85MW of electricity by 2010 and the content of this Action Plan.

Action Plan

We are pleased to confirm our endorsement and support of the Wiltshire and Swindon Renewable Energy Action Plan:



R. C. Floyd

Robert Floyd
Chairman
Wiltshire Wildlife Trust



Mike Twomey

Mike Twomey
Head of Sustainability & Environmental
Technologies
Government Office for the South West



Fleur de Rhe-Philippe

CLr Fleur de Rhe-Philippe
Cabinet member for Environment,
Transport and Economic
Development
Wiltshire County Council



Mike Bawden
Mike Bawden
Leader
Swindon Borough Council



Mark Boden

Mark Boden,
Chief Executive
Kennet District Council



Richard Sheard

Richard Sheard
Chief Executive
Salisbury District Council



Jeff Osbourne

Jeff Osbourne
Planning Portfolio Holder
West Wiltshire District Council



Tristram Sykes

Tristram Sykes
President
National Farmers Union - Wiltshire



Juliet Davenport

Juliet Davenport
Chief Executive
Good Energy



Matthew Spencer

Matthew Spencer
Chief Executive
Regen South West



George McDonic
Chairman of Wiltshire Branch
Campaign to Protect Rural England



Neil Evans

Neil Evans
Director
Energy for Sustainable Development



Philippa Read

Philippa Read
County Secretary
Wiltshire Association of Local Councils



David Ashmore

David Ashmore,
Chief Executive
Westlea Housing Association

Action Plan

Contents

Executive Summary

1. Introduction

- 1.1 What is renewable energy?
- 1.2 Aims of this Action Plan
- 1.3 Why do we need a Renewable Energy Action Plan?

2. Renewable Energy in Wiltshire and Swindon

- 2.1 Where are we now?
- 2.2 Potential for Renewable Energy in Wiltshire and Swindon
- 2.3 Opportunities from Renewable Energy

3. Wiltshire and Swindon Renewable Energy Action Plan

- 3.1 Key Challenges to the Implementation of Renewable Energy
- 3.2 Principal Issues
 - 3.2.1 Improving Awareness and Information
 - 3.2.2 National and Local Government Policy and Planning System
 - 3.2.3 Landscape and the Built Environment
 - 3.2.4 Financial Issues
 - 3.2.5 Local Expertise and Training
 - 3.2.6 Electricity Infrastructure Constraints

4. Action Plan Tables

Action Plan

Executive Summary

Introduction

Following development of the South West Renewable Energy Strategy, the REvision 2010 project proposed a renewable energy target for Wiltshire and Swindon of 65-85 MW of electricity by 2010 (73,750-87,000 households). The key aims of this action plan are to: -

- Identify the barriers to deployment of renewable energy projects in Wiltshire and Swindon and address them.
- Identify how we can meet the REvision 2010 renewable electricity target and develop a sustainable renewable energy industry for the future with targets beyond 2010.
- Promote renewable energy for heat and electricity as a sustainable future industry for Swindon and Wiltshire.

The Action Plan has been shaped and developed through extensive consultation with relevant key organisations. It is currently undergoing a process of formal endorsement from these same organisations.

Background and rationale

For the purposes of this plan, renewable energy is defined as solar photovoltaic (PV), solar thermal, wind, biomass (wood fuel from sustainable sources, energy from organic waste), small-scale hydro power, wave energy and tidal energy. Renewable energy systems do not rely on finite resources such as fossil fuels. Their other key characteristic is that they emit no net greenhouse gas emissions in operation, and so do not contribute to climate change, one of the most serious environmental threats facing the world today. In addition, they produce significantly lower levels of other environmental pollutants. Renewable energy can provide economic and social benefits through the development of new, sustainable local industries. The South West Renewable Energy Strategy estimated that this could create 12,000 new jobs in the region over a ten year period, worth £260 million. Renewable energy sources could also contribute to providing a more secure energy supply for the UK, which is now increasingly dependent on imports. Energy efficiency complements the development of renewable energy and there is an active energy efficiency programme within Wiltshire and Swindon.

The important role of renewable energy was recognised in the government Energy White Paper, published in February 2003. A national target of 10.4% of electricity generated from renewable sources by 2010 was set, with a proposed further target of 20.4% by 2020. The Government Office for the South West then set a regional renewable energy target of 11-15% by 2010 (RPG10). Widespread consultation and research was carried out to identify the resource at county level, and propose county targets.

Action Plan

The Wiltshire and Swindon target

The total renewable energy capacity in Wiltshire and Swindon at present is 8MW, almost entirely from landfill and sewage gas. This is approximately 7.5% of renewable energy generated in the South West region. The target of 65-85MW is approximately 12-16% of the 545MW regional target.

An economic resource assessment for Wiltshire and Swindon, carried out through REvision 2010, identified the following mix of technologies as the most likely scenario based on current economics. This was done after excluding designated areas (e.g. AONBs) from consideration, as well as taking into account other constraints (buffer zones, inter-visibility limits etc). The mix of technologies took into account economic viability as well as the maturity of the technology by 2010; this is likely to change significantly in the future, as the costs of PV, for example, come down.

- Hydro and solar power - 0.4 MW
- Energy from waste - 5 MW
- Landfill gas - 5 MW
- Agricultural waste - 6 MW
- Woodfuel/energy crops - 7 MW
- Wind power - 61 MW

However, there is strong local support for the vision of a community led, locally owned renewables sector, which might well lead to a different mix of technologies, particularly as different options mature or receive more government support.

Energy from advanced thermal conversion or combustion (gasification and pyrolysis) of organic waste is regarded as renewable energy by government policy and is included as an option to help deliver the County renewable energy target. This action plan does not contain specific policies on energy from municipal and commercial waste (including combustion, thermal conversion and landfill gas) as these options should be developed as part of a sustainable waste management strategy and are therefore covered by the County Waste Management Strategy.

Key challenges to the successful delivery of renewable energy schemes

The key challenges that need to be addressed have been identified as:

- improving awareness, information and support at all levels
- submitting successful planning applications for renewable energy systems
- landscape and built environment constraints
- financial issues
- lack of local expertise
- constraints presented by the existing electricity network.

All these challenges are addressed within the Action Plan.

Action Plan

Action plan

In order to meet the challenges identified, a timetable for action over the next two years, indicating high or low priority as well as responsibility has been developed. This includes the following activities:

- **Awareness raising and provision of information:** Provide training and information events as well as an advice service for local government, the general public, schools and others. This should include promotion of practical examples.
- **Community involvement:** Maintain community advice service; develop examples of community ownership and involvement, establish guidelines for wind energy development.
- **Establish new renewables projects:** Identify existing and potential projects, including in local authority properties, and on strategic development sites. Establish local wood fuel supply (chip/pellet), and examples of wood fuel projects
- **Strategic development:** Integrate renewable energy into community strategies and work of Local Strategic Partnerships (LSPs), planning policy etc.
- **Monitoring targets:** Carry out local monitoring of targets to feed into the regional process and monitor progress on delivery of the Action Plan. Establish renewable heat target.
- **Develop sensitive response to landscape and heritage issues:** Carry out county level landscape assessment. Identify and promote exemplars of sensitive renewable energy development. Develop appropriate planning policies and Supplementary Planning Documents.
- **Lack of finance:** Work with relevant partners, including developers, to access EU/UK grants for practical exemplars. Establish local capital grant fund for leverage

Next steps

The Action Plan has been shaped and developed through extensive consultation with relevant organisations. Their comments have been incorporated into this final draft. The Plan is currently undergoing a process of formal endorsement from these same organisations and will be formally launched in 2005 once it has been fully endorsed by key partners.

Action Plan

Introduction

1.1 *What is renewable energy?*

Renewable energy sources are those which are continuously and sustainably available in our environment.

'New and Renewable Energy – Prospects for the 21st Century' DTI

Renewable energy sources do not rely on finite resources and produce significantly lower levels of environmental pollutants than conventional sources of energy; in particular, they generally release no net greenhouse gas emissions in operation.

Technologies

For the purposes of this Action Plan, the following technologies are included under the definition of renewable energy:

- Solar Photovoltaic (PV)
- Solar Thermal
- Wind Energy
- Biomass energy (wood fuel from sustainable sources)
- Anaerobic Digestion
- Small Scale Hydro power
- Wave Energy
- Tidal Energy

Nuclear Energy

This Action Plan does not cover nuclear energy for the following reasons:

- Nuclear energy is not truly renewable as it uses uranium and plutonium which are finite resources
- As recognised in the Government's "Energy White Paper":
 - There is currently no satisfactory way to deal with nuclear waste
 - New nuclear energy is currently not economic despite significant subsidies for waste management and decommissioning
- The future of the nuclear industry and development of new nuclear plants is a national policy issue, beyond the scope of a county action plan

Energy from Waste

Energy from advanced thermal conversion or combustion of organic waste is regarded as renewable energy by government policy and is included as an option to help deliver the county renewable energy target. However, this action plan does not contain specific policies on energy from municipal and commercial waste (including combustion, thermal conversion and landfill gas) as this option should be developed as part of a sustainable waste management strategy and is therefore covered by the County Waste Management Strategy.

Action Plan

1.2 Aim of this Action Plan

The Wiltshire and Swindon Renewable Energy Action Plan aims to address the key barriers to the development of renewable energy in the County of Wiltshire and in Swindon Borough and will promote the sustainable and appropriate use of renewable energy sources. It provides a more local focus to actions outlined within the South West Renewable Energy Strategy. The Plan outlines actions that will help to deliver the Wiltshire and Swindon renewable electricity target (see page 10) but also deals with a wide range of other issues including renewable heat generation, economic opportunities from renewable energy and community involvement with renewable energy.

The Renewable Energy Action Plan does not deal directly with increasing the efficiency of fossil fuel use. However the development of renewable energy should be integrated with improved energy efficiency. This action plan has been developed to complement existing and future energy efficiency initiatives and should form part of a future sustainable energy strategy alongside activities to promote energy efficiency.

1.3 Why do we need a Renewable Energy Action Plan?

Environmental impact of energy

The majority of energy used in the UK is currently generated using fossil fuels. It is generally accepted that this situation is not sustainable in the long term. Not only is there potential for significant environmental degradation but security of supply is also an issue. There are serious economic and social implications to consider as a result of becoming increasingly dependent on imported supplies of fossil fuels.

Climate Change

Perhaps the most important environmental impact of fossil fuel use is the emission of carbon dioxide into the atmosphere leading to the enhanced greenhouse effect and climate change. This is widely regarded as one of the most serious environmental issues facing human society. Reducing carbon dioxide emissions to sustainable levels is critical in addressing this issue and will demand a major reduction in the burning of fossil fuels. This can be achieved through a combination of improved energy efficiency and the introduction of renewable energy sources which do not produce greenhouse gas emissions as a substitute for fossil fuels.

Pollution and safety issues

Using renewable energy sources can dramatically reduce the environmental impact of energy generation in a number of other ways. The current methods of energy generation from fossil fuels lead to the following environmental impacts:

- **Air** – Nitrous Oxides (NO_x), Sulphur Oxides (SO_x), particulates and Volatile Organic Compounds (VOCs), produced by burning fossil fuels.

Action Plan

- **Water and Sea** – oil spills from transport accidents, leaks from fossil fuel extraction.
- **Land** – open cast mining and exploitation of wilderness areas for fossil fuel extraction. Nuclear power produces radioactive waste, which can be extremely difficult and expensive to manage safely.

Security of supply

The UK is becoming increasingly dependent on imported fuels. There are concerns about the strategic implications of this for maintaining a secure energy supply and how it might affect foreign policy.

Establishing new renewable energy generation within the UK could help the UK become more self sufficient in energy and help to keep some of the economic benefits of energy generation within the UK.

Social and Economic Issues

The global market for energy and primary fuels can have significant social impacts on communities involved with fuel extraction and supply. Although legislation may soon force electricity companies to declare the sources of the power delivered to the consumer there is *currently* no mechanism for consumers to find out the origin of their fuel and whether it has been extracted and processed in a socially and environmentally responsible way.

Locally generated renewable energy can be easily traced and, if structured correctly, can have a positive social and economic impact. The South West Regional Economic Strategy suggests that the renewable energy sector could create 12,000 new jobs across the region over a ten year period bringing an estimated £260 million into the regional economy¹.

Sustainable Energy Policy

The UK Government's "*Energy White Paper*" published in February 2003, set out a new direction for UK energy policy focussed on sustainable and affordable energy supply. The White Paper advocates major improvements in energy efficiency and increasing renewable energy capacity in the UK to reduce the environmental impact of energy supply.

As well as setting out government targets for carbon emissions and renewable energy, the White Paper also sets out strategic actions to help develop a more sustainable energy supply. This includes upgrading the electricity distribution network to provide secure electricity supply but also to facilitate a much higher proportion of renewable energy generation (in particular from intermittent sources such as wind, wave and solar).

Targets for CO₂ reduction

Action Plan

- **UK's Climate Change programme** - The UK government has set a target of a 20% cut in carbon dioxide emissions from 1990 levels by 2010.
- **The Royal Commission on Environmental Pollution** – recommended the target of reducing CO₂ emissions by 60% from 1990 levels by 2050.
- **The Government's Energy White Paper** - The UK government has expressed a wish to work towards the Royal Commission's recommended target of a reduction in CO₂ emissions of 60% by 2050.

Targets for renewable energy

- **Renewable Energy Targets** - The UK government has set a target to generate 10.4% of its electricity from renewable sources by 2010.
- This has subsequently been reinforced with a target, to generate 15.4% by 2015/16 and an intention to generate 20.4% by 2020. As yet there are no national targets for generation of heat from renewable energy sources but a transport bio-fuel target is currently under review.
- **The SW Renewable Energy Strategy** – has set the target of 545 MW, equivalent to 11-15% of electricity production, from renewable energy sources by 2010. This is also included in Regional Planning Guidance for the South West (RPG10). Development of this regional strategy began with a regional renewable energy resource study, carried out on behalf of Government Office South West. The regional Renewable Energy Strategy was then developed by a broad-based regional partnership, including representatives of the public, private and voluntary sectors. Regen SW has been established as a regional renewable energy agency to co-ordinate delivery of the strategy.

Action Plan

2. Renewable Energy in Wiltshire and Swindon

2.1 *Where are we now?*

Wiltshire and Swindon Renewable Energy Target

The South West Renewable Energy Strategy and the REvision 2010 process have established a Wiltshire and Swindon target for installation of 65-85MW of renewable electricity generating plant by 2010. This could generate enough electricity to supply between 73,750 and 87,000 average homes. The target was established through the REvision 2010 consultation process² and is approximately 12-16% of the 545MW target for the South West region.

Current capacity

The total renewable energy capacity of Wiltshire and Swindon at the current time is approximately 8 MW; this is approximately 7.5% of the renewable electricity generated in the South West.

Table 2.1 List of current renewable electricity projects in Wiltshire and Swindon (source Regen SW)

Technology Type	Project Name	Owner/developer	Renewable energy capacity (MW)
Landfill Gas	Calne	Viridor	2.00
Landfill Gas	Chapel Farm Landfill	Hills Minerals and Waste	0.96
Landfill Gas	Compton Bassett Landfill	Hills Minerals and Waste	2.00
Landfill Gas	Westbury Power Plant Landfill	Viridor	2.41
Solar Photovoltaic	ESD electric vehicle garage, Neston	Commercial	0.001
Solar Photovoltaic	BP Garage, Hungerdown Lane	Commercial	0.016
Sewage Gas	Salisbury STW	Wessex Water	0.09
Sewage Gas	Swindon	Thames Water	0.45
Sewage Gas	Trowbridge STW	Wessex Water	0.09
County Total			8.017

As shown in Table 2.1 the majority of current renewable energy generation is from landfill gas. Landfill gas plant has a role to play in reducing greenhouse gas emissions in the short term; however, it should only be used within the context of sustainable waste management within the County Waste Management Strategy.

Action Plan

2.2 Potential for Renewable Energy in Wiltshire and Swindon

Wiltshire and Swindon have the potential to generate significant amounts of renewable energy from a range of different sources. The potential resource for the future is very large with the main constraints in the short term being: -

- Identification of appropriate sites
- Economic viability
- Availability of different technologies.

What is the resource?

The potential for the development of renewable energy was assessed for the South West Renewable Energy Strategy³. This was refined further through the REvision 2010 consultation process and an accessible economic resource was identified for each county.

This scenario outlines the most likely mix of technologies to deliver the renewable energy target under current market conditions. This may however be influenced both by changes in national policy and resource allocations, and particularly by local action towards our vision of a locally owned, community led resource.

Renewable Energy in Wiltshire and Swindon - Accessible Economic Resource (after landscape character assessment) by 2010

Technology	Potential contribution based on resource assessment (MW)*
<i>Biomass</i>	7
<i>Poultry Litter</i>	3
<i>Anaerobic Digestion</i>	3
<i>Landfill Gas</i>	5
<i>Waste (th)</i>	5
<i>Wind</i>	61
<i>Photovoltaics</i>	0.1
<i>Small Scale hydro</i>	0.3

****NOTE: These figures are NOT technology specific targets but are indications of the potential for development of renewable energy, by 2010, under current economic conditions. This takes into account landscape character assessment***

The table displays the results of the scenario produced by Revision 2010 on how the Wiltshire and Swindon renewable energy target might be produced. Electricity generation ***potential**** is displayed in MW.

The accessible economic resource was produced by assessing the technical resource (land area available, technology and yields etc.) and then excluding designated areas such as Areas of Outstanding Natural Beauty (AONB's), National Parks and Heritage Coasts.

Action Plan

In addition to this a range of other constraints were also applied where applicable (e.g. urban areas, inter-visibility limits, buffer zones around dwellings and roads etc.).

Lastly, assumptions were applied about the economic viability and maturity of each technology to estimate the accessible economic resource potential available within the 2010 time frame. The target could be delivered through a significantly different technology mix but this would require policies to encourage the favoured technologies.

It should be noted, that in the period following 2010 the mix of renewable energy sources is likely to change quite significantly due to advances in technology. For example, solar PV (which is currently high cost) and other micro generation technologies may become cheaper and therefore more widespread.

2.3 Opportunities from renewable energy

Renewable energy has the potential to deliver sustainable development projects at a local level to provide environmental, social and economic benefits.

Regional Economy

The key driver for renewable energy is its role in reducing the environmental impact of energy supply by replacing energy generation from fossil fuels. However, it can also contribute significantly to the local economy. The South West Economic Strategy lists renewable energy as a major opportunity for economic development in the region, potentially contributing £260 million to the regional economy over a ten year timescale.

Local Economy

It is important that local renewable energy projects should contribute to the economy of Wiltshire and Swindon and that communities are involved in the decision making process. There are many ways to achieve this including community ownership, community funds and establishment of local energy supply companies. These models for community involvement in renewable energy will be encouraged within Wiltshire and Swindon.

Recycling Revenue

In addition to the direct economic benefits from individual projects, generation of energy from local renewable energy plant could help to keep revenue within the local area. Currently revenue from energy bills generally passes out of the local economy to multinational companies. This revenue could be retained within the county if local generation of renewable energy could be linked to local demand and local supply.

Woodland Management

Biomass projects, particularly where the wood fuel is sourced from local forests, can help to encourage the management of local woodland. This can have a

Action Plan

positive impact on the biodiversity and long-term sustainability of local woodlands.

Action Plan

3. Wiltshire and Swindon Renewable Energy Action Plan

3.1 *Key challenges to the implementation of renewable energy projects*

Key challenges to the appropriate development of renewable energy were identified by Wiltshire Renewable Energy Forum as:

1. *Improving awareness, information and support at all levels.*
2. *National and local government policy and submitting successful planning applications*
3. *Landscape and the built environment*
4. *Financial issues*
5. *Lack of local expertise*
6. *Electricity infrastructure constraints*

3.2 *Addressing the Challenges*

3.2.1 *Improving Awareness and Information*

The successful development of renewable energy is highly dependent on the level of awareness amongst decision makers and the general public.

There is a general lack of awareness of renewable energy technologies in the UK as they are not yet regarded as “mainstream”. It is important that decision makers have access to accurate high quality information on renewable energy to ensure that policies and planning decisions are balanced and well informed. Technologies that attract a high level of controversy, such as on-shore wind power, need to receive special attention to ensure that information from reliable, independent sources is available to both the public and key decision makers

There is also a need to ensure that information on renewable energy is easily accessible to all. Advice services are currently provided by the Countryside Agency’s Community Renewables Initiative (CRI)⁴. However, this service focuses on *community* renewable energy projects and there is a need to expand services to provide advice to Small & Medium Enterprises (SMEs), as well as expert support to local authorities, and to carry out wider public awareness work.

Confidence

Renewable energy technologies are often regarded as new and unproven by potential users, despite being widely applied across the UK and throughout the rest of the world. There is a need to develop successful, high profile local

Action Plan

exemplar projects to demonstrate the viability of renewable energy technologies at a local level.

Exemplar projects

Exemplar projects should be established to demonstrate the practical use and opportunities that exist for integration of renewable energy technologies at a local level in various situations including: -

- Renewable energy projects at schools, such as solar (photovoltaic and water heating) systems, small wind turbines and wood heating systems.
- Sustainable housing projects with integration of sustainable building techniques and renewable energy into new-build housing developments.
- Examples of mixed development where combined heat and power schemes can be utilised.
- Community renewable energy schemes involving local stakeholders in the decision-making process and delivering benefits to the local community.
- New housing developments incorporating renewable energy technologies as part of a package to deliver carbon neutral homes.

Community Involvement

There is a need to involve local communities in the decision making process for new renewable energy projects. Community involvement in renewable energy projects in the county could bring a range of benefits to the area including: -

- Community consensus on planned projects and greater acceptability of a scheme in the local area.
- Renewable energy has the potential to contribute significantly to the local economy with potential for establishment of producer groups for wood fuel, for example.
- Projects can also improve social cohesion in the local area, providing local people with a common goal and aspiration.
- Potential for communities to share some of the economic benefits of projects through local ownership or community funds

A wide range of different models is available for involving communities in the development of their local renewable energy sources.

3.2.2 National and local government policy and planning system

Renewable energy should be integrated across relevant local strategies to support a balanced decision-making process.

It is important that criteria based policies supporting renewable energy are integrated into the following local strategic documents:

Action Plan

- Local Development Framework – Local Development Documents should set out specific criteria against which planning applications for renewable energy project should be assessed.
- Community Strategies
- Economic Development Plans
- Local Agenda 21 and Environment Strategies
- Forestry Commission Framework for Action in the South West

Planning Policy Statement 22: Renewable Energy

- PPS22 sets out the Government guidance on renewable energy planning issues and will be taken into account by local planning authorities in the preparation of local development documents. The policies set out in PPS 22 may also be relevant to decisions on individual planning applications.
- PPS 22 includes the statement that “*Local planning authorities may include policies in local development documents that require a percentage of the energy to be used in new residential, commercial or industrial developments to come from on-site renewable energy developments*”

Targets and Monitoring

Renewable Electricity

The renewable electricity target for Wiltshire and Swindon is 65MW-85MW of generating capacity by 2010 (see section 2). This represents Wiltshire and Swindon’s contribution to the national renewable energy target of 10.4% of electricity from renewable sources. Monitoring of progress towards this target will be carried out by RegenSW at a regional level but will need to be supported within Wiltshire and Swindon. Regular feedback on progress will also be required by decision makers.

Renewable Heat

Less work has been done to identify potential renewable heat targets, and renewable heat was not included in the Revision 2010 process. The following targets are suggested:

- 5,500 new solar water heating system installations by 2010 (this represents roughly 3% of all existing houses in Wiltshire and Swindon)
- 1000 ground source heat pumps powered by renewable electricity by 2010 (approx. 0.5% of all housing stock)
- 5 MW of biomass heating by 2010
- To have a viable wood fuel supply business serving the county by 2010

Action Plan

Targets for Renewable Energy in New Developments

New developments offer excellent opportunities to incorporate renewable energy technologies. Integrating systems at an early stage in the design process will maximise the benefits from the technologies and minimise construction costs.

It is important that local authorities begin to draw up policies that will require developers to source a percentage of the energy for both new developments and major refurbishments from renewable sources, in particular on-site renewable energy generation.

Such targets are in line with planning guidance set out in PPS 22 which states that *“Local planning authorities may include policies in local development documents that require a percentage of the energy to be used in new residential, commercial or industrial developments to come from on-site renewable energy developments”*

Bio-fuels

The EU directive 2003/30/EC "the Biofuels Directive" will come into force at the end of December 2004⁵.

The directive will promote the use of biofuels or other renewable fuels as a substitute for petrol or diesel in the transport sector. The directive sets the overall objective of a 20% substitution of conventional fuels by alternative fuels in the road transport sector by the year 2020. It requires Member States to set indicative targets for biofuels sales for 2005 and 2010 based on EU reference values:

- 2 percent by 31 December 2005
- 5.75 percent by 31 December 2010

The Department of Transport public consultation document 'Towards a UK Strategy for Biofuels' estimates that the UK could achieve sales of as much as 12 million litres a month in 2005 and feels that this "represents a realistic target for the UK".

The Action Plan recognises the growing contribution of CO₂ emissions from the transport sector and promotes the establishment of exemplar bio-fuel projects.

Action Plan

3.2.3 Landscape and the built environment

Landscape

It is important that renewable energy development in Wiltshire and Swindon is sensitive to the local landscape. The accessible economic resource, on which the target is based, assumes no development in designated areas (AONBs, SSSIs etc.) and also takes account of the findings of a landscape character assessment. Despite this, it still identifies a significant renewable energy resource.

With regard to the issue of development of renewable energy in designated areas the action plan follows the guidance set out in PPS 22 which states that “*Small-scale developments should be permitted within areas such as National Parks, Areas of Outstanding Natural Beauty and Heritage Coasts provided that there is no significant environmental detriment to the area concerned*”. The document also outlines the need for Regional Planning Bodies and Local Planning Authorities to set out criteria based policies which outline the circumstances in which particular types and sizes of renewable energy developments will be acceptable in designated areas.

The Built Environment

Energy use in buildings accounts for a significant proportion of overall energy demand. Renewable energy systems can be integrated into buildings to help satisfy their energy demand. This has a number of benefits including:

- Building integrated systems tend to have a low visual impact.
- Energy generated on the building can be used directly in the building, greatly reducing transmission losses.
- Individual sites or buildings can become self-sufficient in energy.
- Integration of renewable energy into new developments can help to mitigate the lifecycle carbon emissions of new developments.

Integration of renewable energy into new developments in Wiltshire and Swindon will be encouraged. Consideration of the lifetime carbon emissions from developments should be considered within the planning process.

Strategic development sites present an opportunity for the establishment of flagship renewable energy projects, integrated into major new developments. An assessment of the opportunities for renewable energy within strategic development sites will be carried out and renewable energy systems integrated where appropriate.

Action Plan

3.2.4 Financial issues

Economics of renewable energy systems

The economic viability of renewable energy technologies can be a significant barrier to their widespread implementation. Although renewable energy sources have been used for thousands of years many of the modern renewable energy technologies are at a relatively early stage of development. The technologies are competing with fossil fuel burning technologies that are well established, putting them at an economic disadvantage. Despite this the economic prospects for renewable energy are very good and technologies such as onshore wind power can already be competitive with new fossil fuel energy generation.

Renewable energy represents a considerable economic opportunity for the county. A number of national government funding programmes exist to support renewable energy due to its environmental and social benefits. It is important that Wiltshire and Swindon are able to access a fair share of this funding in addition to investing local money in these new technologies.

Whilst some technologies are already economically viable others may require local investment in the short term to establish pilot projects. For example the development of sustainable wood heating and power in the county requires the establishment of a new wood fuel supply chain. Investment in this supply chain could lead to significant local economic and social benefits, in particular to land-based industries.

3.2.5 Local expertise and training

There is a need to develop local expertise in renewable energy amongst local decision makers and businesses. Local decision makers (e.g. planning officers and councillors) have a key role in ensuring the appropriate and sustainable deployment of renewable energy within the county. This is a relatively new area of work for local authorities, so additional training is needed to help officers and members to make informed decisions on planning applications for renewable energy.

There is also a need to develop renewable energy expertise within local businesses, to ensure that they are in a position to participate in the development of renewable energy and that economic benefits are retained within the local economy. There are already a number of successful and innovative renewable energy businesses based in Wiltshire and Swindon.

Action Plan

3.2.6 Electricity Infrastructure Constraints

Discussions with the District Network Operator (DNO) have indicated that there can be significant problems with voltage rise and voltage unbalance especially in predominantly rural areas with a high proportion of overhead networks. However locating renewable energy systems close to a substation can solve the majority of such problems and is standard practice amongst developers.

A major increase in renewable electricity generation capacity in the county is likely to require changes to the electricity distribution network. The majority of new renewable energy schemes would be classed as small scale embedded generators and the DNO will need to make adjustments to the network in order to accommodate significant new renewable energy generation.

Work is being undertaken to address these issues by developing a remote system for monitoring/controlling voltage across the network in order to facilitate the uptake of small scale renewable energy generation. The recent White Paper on Energy stated that provision for increased renewable energy generation should be incorporated into necessary upgrades to the system.

Action Plan

4. Action Plan Tables

Barriers/Issues	Action	Timescale	Responsibility	Potential Resources	Monitoring	Priority
Information and Awareness	Training for local government officers and members – to be supported by GOSW – including general info and technology specific workshops	2005	Government Office South West (GOSW)	GOSW	GOSW	High
	Ongoing programme of training/information support for members and officers	2005-ongoing	Severn Wye Energy Agency (SWEA), Wiltshire Wildlife Trust(WWT) Local Authorities (LAs)	LAs	RE forum	High
	Programme of consultation/information events and activities aimed at the public	2005-ongoing	SWEA, WWT LAs, Energy 21, FoE local groups	Revenue needed	RE forum	Medium
	Establish and promote exemplar RE projects in the County	2005-ongoing	LAs, SWEA, Community Renewables Initiative (CRI)	DTI (Clear Skies etc) Private sector, local funds	RE Forum	High
	Develop educational activities around sustainable energy and exemplar projects in local schools	2005-ongoing	Wiltshire County Council (WCC), Swindon Borough Council (SBC), CRI, WWT, Energy 21	DTI (Clear Skies etc) Private sector, local funds	RE Forum	Medium

Action Plan

Barriers/Issues	Action	Timescale	Responsibility	Potential Resources	Monitoring	Priority
Community Involvement	Establish guidelines for wind energy developers on appropriate development.	2005	Regen SW	Regen SW	Regen SW	High
	Develop examples of community ownership and involvement through exemplar projects.	2006	CRI/Wiltshire and Swindon RE Forum	Capital funding needed	RE Forum	Medium
	Maintain community advice services on renewable energy	2005-ongoing	CRI, WWT	CRI programme, local/regional funding, LAs	RE Forum/CRI	High
	Integrate consideration of renewable energy opportunities into the Market and Coastal Towns Initiative process	2005 - ongoing	CA, CRI, LAs	Minimal	CRI	Medium
Establishing new and exemplar renewable energy projects	Identify existing and potential exemplar projects. Local authorities will seek to develop exemplar renewable energy projects within their own properties	2005	LAs – support from CRI	CRI, LAs	CRI	High
	Carry out a review of potential for integration of renewable energy for all strategic development sites	2005	LAs, with CRI support	LAs	LAs	High

Action Plan

Barriers/Issues	Action	Timescale	Responsibility	Potential Resources	Monitoring	Priority
Monitoring RE targets	Renewable energy targets are monitored by Regen SW at regional level. Local monitoring is needed to feed into this process.	2005-ongoing	SWEA/Wiltshire and Swindon, RE Forum, WWT	Minimal	RE Forum	Medium
	Establish and monitor a County renewable heat target (including biomass heat, solar water heating etc.)	2005 -2006	Wiltshire and Swindon RE Forum, WWT	Minimal	RE Forum	High
	Review the Action Plan on an annual basis and update as necessary	2006 - ongoing	Wiltshire and Swindon RE Forum	Minimal	RE Forum	Medium
Strategy issues	Integrate renewable energy into Community Strategies, Community Plans, Local Development Frameworks.	2005-ongoing	Wiltshire and Swindon RE Forum/Wiltshire and Swindon Local Strategic Plans	Minimal	RE Forum	High

Action Plan

	Identify case studies of action taken by other authorities (e.g. London Borough of Merton) to help bring forward capital projects.	2005	LAs, SWEA	LAs	RE Forum	Medium
Barriers/Issues	Action	Timescale	Responsibility	Potential Resources	Monitoring	Priority
	Work towards establishing a target of 15% renewable energy for all new developments to include domestic, public, educational establishments, commercial and industrial buildings.	2005	Local Authorities	LAs	RE Forum	Medium
	Encourage the introduction of renewable energy generation targets in all major refurbishment projects (floor area over 10,000m ²).	2005	Local Authorities	LAs	RE Forum	Medium
Landscape issues	Carry out county level landscape assessment	2005	WCC, SBC	LAs	Wilts CC	High

Action Plan

	Incorporate criteria based policies relating to renewable energy into Local Development Frameworks Development of Supplementary Planning Documents and Local Development Documents and locational guidance criteria as appropriate	2005-2006	LAs	Local Planning Authorities	LAs/RE Forum	High
Built environment heritage/ conservation issues	Develop list of exemplars of sensitive integration of appropriate renewable energy technologies into heritage sites/buildings/AONBs which will feed into development of relevant planning policies.	2005-2006	CRI, LAs	CRI, LAs, AONBs, Heritage sites	RE forum	Medium
Barriers/Issues	Action	Timescale	Responsibility	Potential Resources	Monitoring	Priority
Financial issues	Work with developers to bring in private sector finance. Identify opportunities to access UK or EC grant funding for exemplar projects.	2005-ongoing	LAs, SWEA, Regen SW, WWT	In-kind	RE Forum	Medium

Action Plan

	Establish local capital grants for renewable energy projects to help establish exemplars and lever in national and European funding	2005-2006	RE Forum, LAs/LSPs,	LAs, LSPs, local businesses	RE Forum	Medium
Developing local expertise & promotion of opportunities	Promotion of energy efficiency and renewable energy opportunities for local businesses including farmers and land owners	2005-2006	LAs, CRI	Action Energy	RE Forum	Medium
	Establish local sustainable wood fuel (chip/pellet) supply in Wiltshire and Swindon	2005-2005	FC, Forestry companies, farmers	Private Sector (possible DTI part-funding)	RE forum	High
	Promote the use of sustainable wood fuel and establish exemplar projects demonstrating the use of wood fuel at an appropriate scale	2005-2006	CRI, LAs	CRI, LAs	CRI	High
	Local authorities and other major transport users and providers to consider procurement of bio-fuels for vehicle fleets Promote the establishment of exemplar bio-fuels projects and keep a watching brief on bio-fuels policy developments	2006 – ongoing	LA's, RE Forum	LA's, Private Sector	RE Forum	Medium

Action Plan

Glossary:

GOSW - Government Office South West
CRI - Community Renewables Initiative
SWEA - Severn Wye Energy Agency
WCC - Wiltshire County Council
SBC - Swindon Borough Council
FoE - Friends of the Earth (local groups)

LAs - Local Authorities
LPA - Local Planning Authorities
FC - Forestry Commission
WWT - Wiltshire Wildlife Trust
RegenSW - Regen South West
RE Forum - Renewable Energy Forum

Action Plan

¹ South West Regional Economic Strategy

² Revision 2010 – www.oursouthwest.com/revision2010/

³ ETSU & Terence O'Rourke plc, Renewable Energy Assessments and Targets for the South West, Study commissioned by GOSW, Final Report Volumes 1, 2 &3, February 2001.

⁴ In Wiltshire and Swindon the CRI is managed by the Severn Wye Energy Agency and delivered in partnership by Wiltshire Wildlife Trust and the Severn Wye Energy Agency.

⁵ DIRECTIVE 2003/30/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 8 May 2003 on the promotion of the use of bio-fuels or other renewable fuels for transport