National Assembly for Wales Sustainability Committee Inquiry into Carbon Reduction in Wales: Energy Generation
Large Scale Renewable Energy Developments
13th November 2008

KEY ISSUES

- A strategic spatial approach, integrating marine and terrestrial systems can help deliver the right development in the right place.
- Integration of consent mechanisms for the generation and transmission of energy is critical.
- Assessment processes such as Strategic Environmental Assessment can help identify opportunities for the location of development avoiding environmentally sensitive sites and locations.
- For specific development proposals securing engagement with developers, statutory bodies, planning authorities and regulators early in the project planning process can help deliver positive environmental outcomes.

1. INTRODUCTION

The Countryside Council for Wales is the Government's statutory advisor on sustaining natural beauty, wildlife and the opportunity for outdoor enjoyment in Wales and its coastal waters.

This paper should be considered alongside CCW's submissions to other elements of the Committee's inquiry, namely carbon emission reduction relating to residential, transport, industry, public bodies and electricity generation. Our response to the general questions outlined within the call for evidence is included within our original submission on residential carbon emissions, submitted in October 2007.

2. ENERGY GENERATION AND NATURAL HERITAGE

CCW's interest in energy stems from the fact that its generation, in all its forms, leads to environmental impacts. Generating energy from fossil fuels releases carbon dioxide and other greenhouse gases, contributing to climate change. Acidification, and increasingly eutrophication, as a result of fossil fuel burning remains a major concern. Renewable energy sources, while not creating such pollution, can lead to other environmental impacts. These can take the form of changes to the landscape and seascape and, depending on the technology involved, impacts on particular habitats and species.

3. CCW'S POSITION AND ROLE

In the context of energy generation, CCW's role is to provide independent, evidence based advice to Government and developers on the potential impact of strategic policy, plans and programmes and individual developments on natural heritage. The aim being to steer the right development to the right place.

In our policy work, CCW will support initiatives which expand generation from lower carbon sources while minimising unnecessary impacts on natural heritage. In doing so, it will often be necessary to reconcile the need to accept some local impacts on our natural heritage, in the short term, in order to secure a lowering of emissions from energy generation.

In advising government on energy generation we stress the need for a strategically planned approach, seeking to lower overall environmental impacts of energy generation, through:

1. demand management measures;
2. energy efficiency;
3. expanding renewable energy by getting the right technology in the right place; and
4. lowering pollution from fossil fuel generation.

While the gains to be made by technological improvements to existing fossil fuel plants are substantial, we believe that demand management and renewable energy provide a more effective long-term solution.

4. PRINCIPLES GUIDING CCW'S INVOLVEMENT IN THE PLANNING SYSTEM

It is critical to CCW and our partners that we have a robust, transparent and effective approach to providing advice on proposed developments. To ensure effective input our engagement is framed by an understanding that:

1. The main purpose of CCW's involvement in the planning system is to minimize the environmental impact of development, by directing it to the right place, and by avoiding or reducing unavoidable consequences.

2. Early CCW involvement in emerging issues is the key to success, at both the strategic level and the individual case (e.g. development proposals for a site). This requires close working relationships between CCW staff and key personnel in partner organisations, and with developers.

   CCW places a very high priority on proactively advising on the preparation and content of National Policy and Strategy and Unitary and Local Development Plans. CCW also advocates the importance of the Strategic Environmental Assessment Directive (SEA) and Sustainability Appraisal to inform the planning and decision making process.

3. CCW's input to the planning system at the regional and local levels will take place in the context of active involvement in all-Wales policy development, such as the Wales Spatial Plan the Renewable Energy

Route Map for Wales and the Marine Renewable Energy Strategic Framework.

4. CCW will also engage effectively with any planning processes that emerge from the developing Planning and Marine bills.

5. CCW'S WORK ON ENERGY ISSUES

To implement our position on energy, CCW have been active in helping facilitate the deployment of renewables, as part of the effort to mitigate climate change. We pioneered the strategic approach to the development of renewables used to identify areas which maximise the output of renewable energy while minimising impacts on our natural heritage, which informed the WAG TAN8 planning guidance on terrestrial renewables. We also work proactively with developers, BERR, WAG and The Crown Estate at a strategic level in developing studies and policies.

In supporting partners ongoing work on energy efficiency and developing renewable energy development we have sponsored a network of 3rd sector energy agencies across Wales to provide advice to the public and SMEs on energy efficiency measures and sources of funding for renewables. Recognising the benefits of community based renewables in literally bringing environmental messages home, we have funded a number of locally based initiatives. Examples are a feasibility study for a community owned turbine near Machynlleth, a biomass fuelled district heating scheme study in Llanwddyn and a project to stimulate community renewables in 3 communities in Powys.

We are currently in discussions with the British Wind Energy Association about joint initiatives, including production of guidance, joint training and staff secondments.

While recognising the need to uphold existing legal frameworks to safeguard protected species and designated areas, CCW acknowledges that we need to accept small scale, local, environmental impacts from renewable energy developments to secure global, long-term environmental benefits. We will work strategically, with regulators and developers, to help ensure that we get the right development in the right location.

6. RENEWABLES: THE RIGHT TECHNOLOGY IN THE RIGHT PLACE

The WAG has a target of producing 4 TWh of electricity from renewable sources by 2010, a doubling of current supply. [1] The EU has set the UK a target of gaining 15% of its energy needs from renewable sources by 2020. The actual figure generated in the UK at present is 2%, among the lowest of any EU member state. Because of the low starting base for renewables in heat and fuel the bulk of Britain's contribution to meet this target will have to come

[1] http://www.assemblywales.org/bus-home/bus-chamber/bus-chamber-third-assembly-rop.htm?act=dis&id=91292&ds=7/2008#rhif4

from electricity. That will mean that between 30-40% of our electricity will have to come from renewable energy by 2020.[2]

To facilitate the expansion of renewable energy and to provide the necessary certainty for developers while minimising the environmental impact we need a strategic, spatial approach, steering the right technology to the right location. This can be achieved by proactive policy work using planning policy and Strategic Environmental Assessment to set a framework for development where individual applications will, as a result, have already been steered to the areas with most capacity to absorb them.

Integration of terrestrial and marine planning systems together with integrating consents mechanisms for the generation and transmission of electricity should help ensure greater clarity and certainty for stakeholders within the decision making process.

7. SUPPORTING THE DELIVERY OF WELSH RENEWABLE TARGETS: MARINE RENEWABLE ENERGY

To illustrate the above principles, CCW has engaged proactively and works in collaboration with the rapidly developing marine renewable sector. We contribute to a range of strategic partnerships and forums across Wales and the UK to ensure that proposals are brought forward and implemented in a way which takes full account of environmental sensitivities. We regularly meet with a wide range of developers to discuss particular issues. We will continue and build upon this approach and have identified 'working with developers' as a key corporate priority.

In order to provide advice to both Government and the industry CCW has undertaken a range of innovative research with the aim of providing a strong evidence base upon which sound decisions can be made. Examples of important research that is facilitating the sustainable development of marine renewables in Wales includes:

- undertaking and making widely available results of a Wales-wide Phase 1 intertidal survey and a seabed habitat predictive modelling and mapping project (HABMap) so that we are well placed to advise on the location and sensitivities of important species and habitats. We have now mapped, at a high level of detail, habitats around the entire Welsh coast and almost the entire Welsh seabed.

- the development of an internationally recognised model for assessing Welsh seascapes to inform decisions about the visual and character impacts of development to offshore developments. Very recently we

[2] BWEA Press Release Feb 2008: http://www.bwea.com/media/news/080123.html

have produced a detailed baseline assessment of the character and sensitivities of Welsh seascapes.

- a range of targeted research specifically aimed at understanding the likely nature and scale of impacts of marine renewable technologies upon the marine environment with the aim of enabling an evidence based, plan led approach to development

Because of focussed research efforts by CCW and others, particularly COWRIE (Collaborative Offshore Windfarm research into the Environment) the scientific understanding of the environmental impacts of wind turbines is increasing rapidly. As the sector develops it is therefore critical that we learn from our experiences and increase our scientific understanding. This information then needs to feed back into future planning and decision-making in relation to future developments.

CCW has strongly supported COWRIE from which the wider renewables sector has benefited significantly and we believe that this is a useful model for developing a better understanding of generic issues associated with other marine renewables.

In Wales, we are now contributing to the WAG Marine Renewable Energy Strategic Framework study and believe that by providing a sound evidence base, this important initiative will play a key role in ensuring the sustainable development of the industry. We also view the recently established Welsh Marine Renewable Energy Task Force as a positive forum for sharing experience and co-ordinating activity across Wales.

8. SECURING A SUSTAINABLE FUTURE

Wales is fortunate to have a significant marine renewable resource in terms of wind, wave and tidal energy. It is necessary to develop some of this resource in order to meet Government targets for renewable energy generation and greenhouse gas emissions to move Wales towards a clean, low carbon future.

Wales is also rich in natural heritage with beautiful and diverse coasts and seas, the health of which underpins the provision of a wide range of essential goods and services enjoyed by society (e.g. food, recreation opportunities, nutrient cycling, climate regulation).

Clearly it will be important to develop the Welsh marine renewable resource in a sensitive and sustainable manner. CCW believes that a strategic approach is essential to ensuring that Wales can meet its targets for marine energy production. We strongly endorse the model adopted by Government in identifying areas for the development of offshore wind farms and believe that the Severn Tidal Power Feasibility Study is also an important, strategic approach to identifying opportunities and constraints in a transparent and evidence-based manner. The priorities in our involvement to date have been to ensure that environmental issues and impacts are fully and objectively taken into account in the Feasibility Study and that any projects selected can comply

with environmental legislation including the Habitats and Birds Directive. CCW have and will continue to engage proactively in these important processes.

In its Renewable Energy Route Map for Wales, the WAG has identified that there is considerable scope for the exploitation of wave and tidal energy in Welsh waters. Currently, this sector is in its infancy with a small but increasing number of proposed developments. We have only a limited understanding of the issues associated with individual technologies. It will be important to ensure that any deployment of wave and tidal demonstrator devices is undertaken sensitively and in way which maximises our learning of the environmental issues involved.

Because the industry is at such an early stage of development, individual demonstrator developments are currently being proposed outside of any strategic framework. It would seem appropriate to move as quickly as possible from an *ad hoc* position where individual developments are proposed and considered on a case by case basis to a plan-led approach where opportunities for exploiting resources can be clearly identified and progressed.

CCW understands that the environment report from the Offshore Energy SEA will be published shortly and that this will identify opportunities for delivering 25GW of offshore wind energy through the 'Round 3' licensing round. Looking beyond Round 3, the ongoing Severn Barrage Feasibility Study and current proposals for small scale wave and tidal devices, CCW believes that a comprehensive, strategic approach is needed to the development of the Welsh Marine Renewable Resource. Such an approach would mean that the strength and limitations of all marine renewable options would be considered alongside each other and that options for connecting to the energy transmission network would be integrated feature of any future plans.

Finally, in order to secure the appropriate governance framework to enable the sustainable development of Welsh seas, CCW believes that the changes proposed by Government through the Marine Bill are urgently required. In particular we support:

- Improved measures for marine nature conservation
- A statutory system of marine spatial planning
- A consolidated and improved marine licensing regime

COUNTRYSIDE COUNCIL FOR WALES
NOVEMBER 2008