

**Environment and Sustainability Committee**  
Inquiry into Energy Policy and Planning in Wales  
EPP 245 - WWF Cymru



**WWF Cymru**

Tŷ Baltig, Sgwâr Mount Stuart  
Caerdydd CF10 5FH

Baltic House, Mount Stuart Square  
Cardiff CF10 5FH

Ffôn/phone: 029 2045 4970

Ffacs/fax: 029 2045 1306

[wwf.org.uk/cymru](http://wwf.org.uk/cymru)

## **SUBMISSION DOCUMENT TO ENVIRONMENT AND SUSTAINABILITY COMMITTEE**

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# **Evidence by WWF-Cymru to the inquiry into energy policy and planning in Wales**

**23 September 2011**

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## **Summary**

WWF-Cymru is concerned that there is no specific plan on how the target reductions in greenhouse gas emissions will be achieved. We would like to see the Welsh Government engaging more with the UK Government and the Committee on Climate Change on practical ways to meet the targets.

We are also concerned that the Welsh Government does not have clear targets, and associated action plans, for how much electricity and heat will be produced in Wales from renewable energy sources by specific dates.

We consider that Local Authorities should have a greater role in seeking renewable energy opportunities.

## 2. WWF General Statement

### 40% reduction in greenhouse gas emissions by 2020

WWF is supportive of the Welsh Government's stated aim to reduce greenhouse gas (GHG) emissions by 40% by 2020 compared to emissions in 1990 and is pleased to note that all Parties in the National Assembly for Wales have endorsed that aim. However, it is not clear how this reduction will be achieved, seeing as it covers all GHG emissions within Wales – from power stations, industry, vehicles, houses, agriculture etc. Most of these emissions are from sources that are not within the control of the Welsh Government (WG).

It is essential that the WG works closely with the UK government to have a clear plan on how the reduction can be achieved. But difficulties are envisaged due to the fact that the UK Government aims to reduce GHG emissions by 34%, rather than 40%, by 2020. The Committee on Climate Change (CCC) is advising the UK Government on what is needed to meet its target and, as it provides advice on a UK basis, the CCC should also be advising the Welsh and UK Governments on what is needed to achieve the WG's 40% target.

We would urge that the WG asks the CCC to provide advice on reaching the 40% target, that it publishes this advice and enters into an explicit agreement with the UK Government on the necessary actions.

### 3% per year reduction

The target to reduce GHG emissions by 3% per year from 2011 is against a baseline of the average GHG emissions between 2006 and 2011, rather than 1990. It covers only sectors for which WG has devolved competence, but even in these sectors the Government's ability to control emissions is limited; the Climate Change Strategy of October 2010 showed that less than a third of the required reduction would be brought about by WG policies. Again, active involvement with the CCC and the UK Government is essential to enable the WG to achieve the 3% per year reduction.

### Renewable energy targets

We call on the Welsh Government to specify realistic targets on how much energy – both electricity and heat – will be generated from renewable sources by specific dates, and to have a clear action plan for how these targets will be achieved.

It is particularly important to set firm targets for 2020 so as to identify what Wales' contribution will be to meeting the requirement on the UK to produce, by that date, 15% of all the energy it uses from renewable sources.

Scotland already has a target to generate 100% of its electricity needs and 11% of its heat needs from renewable sources by 2020.

**<http://scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17612>**

We suggest that each Local Authority in Wales should be required to specify its own target for the amount of renewable energy that will be developed within its area by specific dates. This could result in them becoming more proactive in seeking renewable energy opportunities – individually and in collaboration with neighbouring Authorities. Local Authorities in Southwest England already do this.

**[http://regensw.s3.amazonaws.com/regen\\_2011\\_survey\\_web\\_odeeec813256ce4c.pdf](http://regensw.s3.amazonaws.com/regen_2011_survey_web_odeeec813256ce4c.pdf)**

### 3. Responses to Committee questions

#### **What are the implications for Wales if responsibility for consenting major onshore and offshore energy infrastructure projects remains a matter that is reserved by the UK Government?**

WWF comment: If powers relating to large energy infrastructure projects in Wales were to remain with the UK Government this would restrict the ability of the WG to ensure that its target for reducing GHG emissions by 40% by 2020 was met. However, if powers were devolved, the WG could impose conditions on any new fossil fuel power stations, such as requiring that they operated on a combined heat and power basis, or had Carbon Collection and Storage provision. But imposing such requirements might well mean that the power stations would not be built in Wales since developments are initiated by the industry rather than by government policy.

If the WG had powers and, somehow, the resources to provide incentives, it might be possible to encourage industries to set up more marine energy pilot projects in Welsh waters – as Scotland has done.

It is worth noting that even without powers over large projects, the WG has been able (so far), through TAN 8, to direct energy companies to 7 Strategic Search Areas for onshore wind developments.

If WG is to continue to seek additional powers in this area, it needs to be clear whether it wants responsibility for the grid infrastructure, including its maintenance, or just the consenting of large power stations. Exercising the additional powers would require the development of new areas of expertise within the Welsh Government.

#### **How does this affect achievement of the Welsh Government's aspirations for various forms of renewable and low carbon energy as set out in the Energy Policy Statement?**

Aspirations are not the same thing as firm targets.

Even if powers over energy infrastructure projects were devolved, the WG would not be able to require companies to build offshore or onshore windfarms – or other forms of renewables. For example, the Energy Policy Statement identifies Severn tidal power as a potential source of renewable energy but the WG could not act unilaterally on a cross-Estuary barrage.

It is essential, therefore, for the WG to gain the support of the UK Government for realistic targets for renewable energy generation in Wales and for both governments to cooperate on achieving them.

#### **How does this affect delivery of the Welsh Government's target for a 3 per cent reduction in Green House Gas emissions per annum from 2011?**

If powers are not devolved, the WG will be able to continue to say it has control over only a third of the levers that could bring about a 3% pa reduction in GHG emissions within sectors for which it has responsibilities. The WG would have more control if the relevant powers were devolved. But with or without these powers, the WG should actively engage with the UK Government, the CCC, Local Authorities, industry and other energy users to develop a clear plan on how the whole 3% annual reduction can be achieved.

Generating more electricity from renewable sources will not lead to a reduction in GHG emissions unless it replaces energy from fossil fuels. Generating more green electricity therefore has to be accompanied by a reduction in the use of unabated coal and gas power stations and by using energy from renewable sources to replace fossil fuel for heating and transport.

**What will be the impact if consenting decisions on major infrastructure projects and associated development are not all taken in accordance with Welsh planning policy?**

It is possible that the UK Government could approve the development of large windfarms outside the TAN8 SSA despite Welsh planning policy. This could add to concerns of community groups that windfarms were being imposed on them and could increase general opposition across the wider Welsh society.

In order to ensure it meets its GHG reduction targets and aspirations for sustainable development, the WG should develop a plan for the amount of electrical energy that needs to be generated in Wales from fossil fuels and renewables by specific dates. In the absence of devolved powers on energy generation, assurance should be sought from the UK Government that it would not consent developments outside the Welsh plan.

**4. Additional issues to be considered by the Committee:**

**The role of the different consenting agencies, how they inter-relate and how the current system could be improved, both with and without further devolution (Infrastructure Planning Commission, Planning Inspectorate, Local Planning Authorities, National Parks, Welsh Government, Marine Management Organisation, Environment Agency).**

WWF Comment: The consenting process for Pembroke Power Station illustrates the piecemeal approach to marine consenting. The multiple consents needed introduce complexity and delays; for example, different bodies are involved in issuing Environmental Permit to operate, Section 36 consent under the Electricity Act to build, capital dredging permit and dredging disposal licence. An overarching body for at least some of these permits could speed things up, but such a body would have to ensure that its decision making was open and transparent.

**The relationship between the UK Government's Energy National Policy Statements and Welsh national and local planning policies (including Planning Policy Wales, Technical Advice Note 8 and Local Development Plans) and whether or not these policies can achieve the Welsh Government's aspirations, including whether or not a formal review of TAN 8 is now required.**

No WWF comment.

**The potential contribution and likelihood that different types of renewable and low carbon energy (offshore wind, tidal, onshore wind, hydro-power, nuclear, bio-energy/waste, micro-generation, community energy projects) will be capable of delivering the Welsh Government's aspirations for energy generation as set out in A Low Carbon Revolution – Energy Policy Statement and the UK Renewable Energy Roadmap.**

The Energy Policy Statement identifies “Wales’ ‘sustainable’ renewable energy potential to 2000/2025” but does not comment on the likelihood that this energy will be harnessed. It is important to consider likelihood and environmental impacts so that aspirations can be converted to firm targets. For example, there is certainly a theoretical potential for large amounts of electricity to be generated from tidal energy in the Severn Estuary, but it’s unlikely, in view of DECC’s decision not to support a scheme as well as concerns about environmental impacts, that this energy will be harnessed by 2022.

We note that the table in Appendix 1 of the Policy Statement identifies a total capacity of 6GW which includes the ‘over 4000MW’ of potential capacity indicated by the Crown Estate in Zone 9 of the third round of offshore wind farm leasing. Almost all the zone is outside Welsh territorial

waters so the potential generation capacity may need to be reassigned as a joint Wales/England resource; but regardless of which part of the UK the offshore wind energy is located, WWF would support environmentally sensitive projects to harness it.

**[http://www.seabreezes.co.im/index.php?option=com\\_content&view=article&id=201:crown-estate-announces-offshore-wind-development-partners&catid=27:maritime-log&Itemid=48](http://www.seabreezes.co.im/index.php?option=com_content&view=article&id=201:crown-estate-announces-offshore-wind-development-partners&catid=27:maritime-log&Itemid=48)**

The issue of environmental impact needs to be considered carefully in setting targets for energy generation from all renewable sources.

### **The potential contribution of these different types of renewable energy to meeting the Welsh Government's annual target for Green House Gas emission reduction.**

Generating more renewable energy will only contribute to the reduction in GHG emissions if this energy is used to replace energy generated from fossil fuel.

### **The potential role of other forms of energy production in Wales e.g. existing fossil fuel energy generation, proposed nuclear generation and newer technologies such as coal-bed methane and shale gas.**

As well as considering different forms of energy production it is vitally important to consider how we can reduce the amount of energy we need through improving the energy efficiency of our homes, industry and transport.

#### **Nuclear Power**

Our opposition to nuclear power is not a philosophical position, it is a position based on a thorough review of environmental and economic evidence.

- A major environmental concern relating to nuclear power is the generation of high level radioactive wastes that stay dangerous for more than 100,000 years and which must be contained and actively managed (e.g. spent fuel is dangerous for 200,000 years and plutonium for 250,000 years).
- Despite 50 years of civil nuclear expertise, there is still no long-term solution for storing radioactive wastes. Creating more radioactive waste with no real solution available for its safe and secure long-term disposal is passing on a serious legacy for future generations to deal with. Exposure to even the smallest amount of high-level radiation is dangerous.
- Other safety concerns include radiotoxic emissions from fuel mining and processing, transport, routine releases during use, and the prospect of leaks in accidents - which though estimated to be low risk could have potentially catastrophic consequences if they occurred.
- The World Nuclear Status Report 2009 commissioned by the Federal German Ministry for the Environment showed that, in the last 2 decades, the costs of dealing with nuclear waste have increased faster than the cost of the plants themselves.

#### **Shale Gas**

- Gas-fired plants are not a zero carbon technology, given that modern Combined Cycle Gas Turbines have a carbon intensity of around 380gCO<sub>2</sub>/kWh. Building more unabated gas is incompatible with the objective of delivering a power sector carbon intensity of 50g by 2030 as recommended by the CCC in the 4<sup>th</sup> carbon budget report.
- There are a multitude of environment related concerns about shale gas. These include concerns about risks of contamination of water by fluids used for hydraulic fracturing or by substances present in the rock formation (over 1,000 such cases have already been reported in 5 US states). These concerns are the subject of a major investigation by the US Environmental Protection Agency.
- Exploiting shale gas is likely to hinder attempts to mitigate climate change. An assessment by R.W. Howarth et al of Cornell University found that fugitive emissions of methane to the

atmosphere over the lifecycle of a shale gas well would be greater than for conventional gas. It also found that the GHG emissions from production and use of shale gas could be greater than for coal. More peer-reviewed research is required to establish whether this is the case.

**<http://www.sustainablefuture.cornell.edu/news/attachments/Howarth-EtAl-2011.pdf>**

- From a security of supply perspective, increasing our reliance on gas for electricity generation on top of the amount of gas we already use for heating is going to open up serious security of supply concerns and exposure to volatility of gas prices.
- WWF believes Chris Huhne was right when he said recently that the UK should aim to reduce its dependence on oil and gas. If we are serious about tackling climate change, we should be improving energy efficiency and building a strong renewable industry in Britain, not another fossil fuel industry.

**The transport issues relating to wind turbines and other forms of renewable energy including their impact on roads, traffic and tourism.**

No WWF comment.

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*For more information please contact:*

Alun James, phone: 029 2045 5001, e-mail: [ajames@wwf.org.uk](mailto:ajames@wwf.org.uk)