

Llywelyn Rhys  
Head of BWEA Cymru  
Williams House  
11-15 Columbus Walk  
Cardiff  
CF10 4BZ

Paul Harrington  
Sustainable Energy and Industry Wales  
Welsh Assembly Government  
Cathays Park  
Cardiff  
CF10 3NQ

May 2008

**Ref: Renewable Energy Route Map consultation response**

Dear Paul Harrington

BWEA welcomes the opportunity to respond to the above consultation and provide constructive comments on behalf of Wales' wind, wave and tidal renewable energy industry.

Established in 1978 BWEA is the UK's leading renewable energy body with 374 company members - representing the vast majority of all grid-connected renewable energy projects currently installed.

With 30 years experience, BWEA is leading the UK debate on wind and marine renewable energy industries. Our primary purpose is to promote the use of wind, wave and tidal power in and around the UK, both onshore and offshore.

BWEA plays a crucial role in bringing together all the key players around the vital issues affecting industry through our working groups and events. Members of BWEA range from the small companies to the largest international corporations, providing us with a united and representative voice and our members with fantastic networking opportunities.

In spring 2006, the BWEA established a Wales Steering Committee to champion the wind, wave and tidal renewable energy technologies in Wales with a focus of achieving the Welsh Assembly Government 2010 renewable energy targets. This consultation response is submitted on behalf of that group which is now called BWEA Cymru.



In representing the wind industry, BWEA is in a unique position to comment on the circumstances which affect the future growth and development of the sector. BWEA would be pleased to clarify any issues raised in our response and offer any further information which may be required.

BWEA welcomes the publication of the Renewable Energy Route Map consultation document and would like to generally congratulate the ambition of the Welsh Assembly Government in making Wales self sufficient in renewable energy terms within a generation. We welcome Minister Jane Davidsons' commitment to make the fight against climate change her top priority and agree with her remarks that Wales has an opportunity to take a lead amongst small nations in adopting a low carbon economy.

Yours sincerely

**Llywelyn Rhys**  
Head of BWEA Cymru

## BWEA Cymru response to Welsh Assembly Government consultation document:

### ***Renewable Energy Route Map for Wales***

*Consultation on way forward to a leaner, greener and cleaner Wales*

#### **Introduction and Background:**

- 1.1 Overall, BWEA Cymru welcomes the Renewable Energy Route Map as a positive step that highlights the urgent need to move towards a sustainable renewable energy society as a result of the devastating threats presented by Climate Change.
- 1.2 Nonetheless, BWEA Cymru is concerned that the document is very general and aspirational in tone. It fails to address some of the more important issues such as the barriers that will prevent Wales from achieving renewable energy self-sufficiency. It also fails to suggest what new enabling measures need to be introduced to make it possible to reach the stated target of 33TWhr of renewable energy generation by the year 2025.
- 1.3 Whilst we appreciate that the purpose of the Route Map is to set out the direction of travel rather than detail how to achieve goals, it is our view that more positive action must be taken on the ground if current and future targets are to be given any chance of being delivered.
- 1.4 In particular it is the BWEA Cymru's view that if developer confidence is to be sustained, the planning system needs to be used much more effectively with a dramatic increase in the rate of approval, at the local level, for wind energy developments and a decrease in planning application waiting times. Only then can Wales demonstrate that it is truly open for renewable energy business.
- 1.5 BWEA Cymru believes that the Welsh Assembly Government (WAG) must concentrate its effort on maximising the delivery of viable renewable energy projects. This will require a robust new policy framework in Wales. Specifically we are seeking measures to:
  - Introduce clear and realistic interim milestones on the way to achieving renewable energy self-sufficiency for Wales.
  - Strengthen measures to ensure local authorities play their full part in the promotion and approval of renewable energy projects.
  - Actively engage with Ofgem and the network operators to ensure that new routes for the extension of the National Grid and Distribution Network needed to support development in the TAN 8 Strategic Search Areas, are quickly identified and consulted upon.

- 1.6 Whilst welcoming the future ambitions of the Route Map we would remind the WAG that it already has an existing renewable energy target of meeting 10% of Wales's electricity needs from renewable energy sources by 2010.
- 1.7 The Ministerial Interim Planning Policy Statement (MIPPS) 01/2005: Planning for Renewable Energy recognised that:

*"In order to meet the 2010 renewable energy target, the Assembly Government's energy policy is that 800 MW of renewable capacity should be provided from strategic onshore wind developments – mostly in the form of a small number of large wind farms."*
- 1.8 Together with Technical Advice Note 8 (TAN8): Planning for renewable Energy, it was recognised that onshore wind energy is currently the most advanced renewable technology, and that the largest share of 10% will need to come from this source. MIPPS and TAN 8 specified that an additional 800 MW of electricity would be needed to be generated by onshore wind farms to meet the 2010 target.
- 1.9 BWEA Cymru is concerned that since the publication of TAN 8 in July 2005 only 73 MW of additional capacity has become operational putting Wales 80% behind schedule. Furthermore, only another 11 wind energy projects, amounting to 177 MW have been approved by the planning system during that time. Currently there are 14 onshore wind farm projects in the planning system in Wales with a total potential capacity of up to 298 MW. If all were approved before 2010 Wales would have 549 MW of wind energy either commissioned, or consented contributing 69% to the TAN 8 2010 targets. The vast majority of these applications have been submitted to the local authorities for well over a year - the average time in planning being 21 months which is much longer than the statutory 16 week period.
- 1.10 A significant number of projects are being rejected by the local authority planning committees, even when the planning officers have recommended approval. Such projects may well achieve consent at appeal or public inquiry, but the delay in the process is unnecessary. The increased costs and business uncertainties that such delays create make it almost unfeasible to manage wind development projects in Wales.
- 1.11 The slow progression of projects through the planning system puts the 2010 targets for operational capacity, at serious risk. Failure to deliver WAG's 2010 target will in turn make the task of reaching the much more ambitious targets mentioned in the Renewable Energy Route Map all the more challenging.
- 1.12 Given the current capacity waiting to be determined, a significant percentage (at least 69%) of the Welsh Assembly Government's 2010 targets could be met, but only if immediate robust action is taken to ensure that the planning system delivers renewable energy projects.

- 1.13 BWEA Cymru supports the aim of achieving self sufficiency in renewable energy terms by 2025. However we believe that if the current planning system is not reformed to prevent some local authority's attempts to frustrate national policy, then it is our view that the 33TWh may be too ambitious and may not be realized.
- 1.14 We believe that a number of clear national milestones should be set to deliver the eventual objective. We propose these to be:
- 2015 – 10TWhr
  - 2020 – 15TWhr
  - 2025 – 25TWhr
  - 2030 – 33TWhr
- 1.15 In calling for the introduction of interim milestones to track progress towards the 33TWh target it must be ensured that they are not used to hold back development.
- 1.16 We call on the Welsh Government to create a planning environment that has a presumption in favour of renewable energy projects. WAG should make it clear to local authorities that the 'national need' for renewable energy should have a considerable bearing when determining project planning applications. Local authorities must be compelled to significantly contribute to Wales' renewable energy targets by achieving obligatory minimal targets of their own.
- 1.17 In order to ensure that Welsh local authorities fully appreciate the renewable task at hand, and to prevent malicious delay and frustration of national policy, WAG should introduce robust sanctions. For example, if determinations are overdue, each planning authority should be required to justify to WAG why they have failed to process renewable energy planning applications within the statutory 16 weeks period. If there are further extensive delays that go over a notified time threshold, then the Welsh Assembly Government should assume the powers of determination in regard to the application in question.
- 1.18 In cases where local authorities have refused a planning application, wind farm developers have the right to appeal through either a hearing or inquiry. Developers normally favour an inquiry as the appeals are usually complex and controversial matters, with a range of issues involved and where evidence needs to be cross examined. Hearings were not designed for this kind of matter as they are a structured meeting, led by the inspector, where expert witnesses cannot be called or cross examined. Furthermore, there is only a limited opportunity for members of the public to participate. It is for these reasons that the Planning Inspectorate has long been of the view that wind farm appeals should normally be dealt with by way of public inquiry, and BWEA Cymru developer members generally agree with this approach.

- 1.19 WAG should include guidance and instruction in their remit letters to public statutory bodies, (in particular those who are involved with conservation and environmental management such as Countryside Council for Wales, Environment Agency, Cadw and the National Parks), making it clear of the high level priority that they should award renewable energy projects when determining applications together with an instruction to work with developers to overcoming any planning difficulties.
- 1.20 The consequences of unmitigated climate change are such that all nations and societies have a moral responsibility to endeavour in efforts to reduce harmful emissions. Moral leadership needs to be shown by Governments, politicians and civic society to ensure that the population is fully understands the enormity of the danger and accept that the measures that are needed to redress the situation will have unavoidable impacts on our lifestyles.
- 1.21 The Government of Wales should better communicate its full support to renewable energy, and aim to be an effective advocate for onshore and offshore wind energy. All political parties and politicians in Wales who recognize that concerted action is needed to tackle Climate Change, should refrain from contradicting their ethos by opposing local renewable energy projects for electoral advantage. We suggest that each leader of the political parties in Wales sign up to an undertaking to refrain from such negative posturing.
- 1.22 The Stern Report concluded that climate change is the greatest and widest-ranging market failure ever seen. However, the report said that there is still time to avoid the worst impacts of climate change if we take strong action now. One suggested action is to provide greater support for the low carbon economy such as the renewable energy sector. Investment that takes place in the next 10-20 years will have a profound effect on the climate in the second half of this century and in the next.
- 1.23 The emerging energy revolution presents a significant economic advantage for nations such as Wales who wholeheartedly adopt and support the sector. If a strong renewable energy sector was developed then there would be the potential for Wales to become a centre of excellence within the UK and amongst other small nations of Europe benefiting in terms of investments, skills and employment. If Wales continues with a lackluster attitude toward the renewable energy sector then the initiative will be lost to competing regions and nations.
- 1.24 There is no wind turbine manufacturing plant in Wales, as the only company which did produce steel towers for wind turbines, relocated several years ago due to delays and uncertainty in the renewable sector.

- 1.25 As such we call on the Government to make the renewable energy sector central to the Governments economic development policy.
- 1.26 Given that BWEA Cymru represents wind, wave, tidal and small wind technologies we will direct our comments only to relevant sections of the consultation namely section 4, 7, 8, 11, 12, 13 and annexes A, B, and E.

### **Marine: tides and waves**

- 2.1 BWEA Cymru highly commend Wales's commitment to marine renewable development and support its ambition for major expansion of wave and tidal energy. However we wish to point out that to realise the potential will require increased and sustained support in tackling all the barriers to renewable development.
- 2.2 We agree that tidal-stream technology is currently progressing through the research and development stage and therefore not yet commercial. However, we support the commitment shown to a number of projects that are proving their feasibility
- 2.3 As the new EU Convergence Funds will focus on supporting initiatives to tackling climate change and help to create a low carbon economy, we encourage further examination into the idea of whether the Funds could be used to run a competition to identify and support the development of one or more tidal energy lagoon sites.
- 2.4 If tidal stream is to generate one GW of renewable electricity off the coast of Wales by 2025, then the Welsh Assembly Government will need to give continued support in terms of facilities, planning and economics to the emerging sector.
- 2.5 BWEA Cymru is happy to be consulted in the drawing up of the study that will collate relevant environmental data for the seas in Wales in order to inform how wave and tidal technologies will have minimal impact on marine eco-systems. We also accept the need for an environmental impact assessment for all phases of construction, maintenance, grid connection and decommissioning as is already common practise.
- 2.6 However, when examining possible cumulative impacts of renewable energy developments there should be some mention of the positive environmental impacts they will bring such as climate change mitigation, ecological protection and possible enhancement of sea fisheries.
- 2.7 The wording of the paragraph on community engagement (para 4.7):

*"Considerable community opposition to major off-shore renewables may be expected on the grounds of visibility,*

*concern about impacts on seals, dolphins and other marine life, interference with navigation and safety"*

is biased and gives the impression that all impacts are negative and unpopular. Experience from Kentish Flats has shown that the majority of local people like to see offshore turbines, demonstrated by two local towns competing in claims that the wind farms 'belong' to them.

- 2.8 Paragraph 4.8 on the Sustainable Development Commission report contains comments referring to difficult social, environmental and economic issues facing marine projects. This again gives a negative portrayal of the impacts and unpopularity of renewable developments.
- 2.9 BWEA Cymru welcomes the commitment to develop a Wales marine energy action plan to consider all marine proposals. As the main UK renewable energy trade association, we ask to be closely consulted in drawing up the action plan and would be interested to learn when the Assembly Government intends to carry out the work.
- 2.10 As an industry we strongly support the need for the Marine Action Plan to look at economic opportunities for making Wales a centre of excellence in marine renewable technologies.
- 2.11 In regard to aiming to generate 14TWhr per annum of renewable energy from wave and tidal technologies by 2025, the BWEA commend the Welsh Assembly Government's ambitious targets. Assuming capacity factors of 35-40%, 14TWhr will require an installed capacity of 4- 4.6 GW. If the Severn Barrage is rated at 5GW and Wales claims half, then 1.5 to 2GW remains to be supplied by wave, tidal stream and lagoon. For this to be realised Wales will have to pull out all the stops.

### **Wind: on-shore and off-shore**

- 3.1 BWEA Cymru welcomes the continued acknowledgement from the Government that wind energy is the most readily available, commercially viable and technologically mature, renewable energy technology. Meeting the current set of renewable energy targets is dependant on the further development of commercial scale onshore wind farms.
- 3.2 Some, but not all forms of renewable energy, including wind energy, can accurately be described as "variable" as this reflects the nature of the electrical output. However, we disagree with the inference in paragraph 7.2 that wind power, in particular, is unreliable. It should be made clear that conventional energy generation such as coal and nuclear are "intermittent" and also require backup in case of any outage that would result in a sudden dramatic loss of power. Despite its variability, wind energy is reasonably "predictable" due to established forecasting techniques.

- 3.3 It is correct to point out that some 300MW of wind energy was installed in Wales in the years prior to 2005. In July of that year *Technical Advice Note 8: Planning for Renewables* was published by the Welsh Assembly Government. TAN 8 set out a strategy whereby an additional 800 MW of onshore wind energy and 200 MW of offshore wind energy would be generated by 2010. Since publication of TAN 8, only 73 MW of additional onshore wind energy has become operational, with no additional MW for offshore wind. In onshore terms this means that Wales has only achieved 9% of its total target. To maintain progress from the launch of TAN 8 in July 2005, an average of 12.8 MW wind capacity should have become operational each month giving a total of 418 MW by May 2008. As there is only 73 MW of additional capacity thus far, it can be said that Wales is lagging 82% behind schedule with only 32 months remaining to achieve the targets.
- 3.4 In 2005 BWEA accepted that the Welsh Assembly Government considered a strategic approach the way forward to meet 2010 target. However it is felt that this approach would have worked better if development within the SSA's had benefited in planning terms from a presumption in favour of wind-farm development.
- 3.5 BWEA members still generally favour a criteria approach when identifying potential sites for onshore wind developments. A criteria approach for developments within the SSA's would have removed the need for local authority refinement, with all the delays to development that has resulted as a result.
- 3.6 To ensure that the new Route Map targets are met, BWEA Cymru calls on the Assembly Government to relax the rigid strategic search area approach whilst establishing a presumption in favour of development within the existing 7 Strategic Search Areas and to identify and direct alternative and additional options including a criteria based approach to development outside of SSAs, when TAN 8 is refreshed in 2009.
- 3.7 The Industry in general has taken on board TAN 8 and is keen to develop projects as soon as possible, however delays were/are inevitable, whilst LPAs attempted to revise the SSA boundaries, as suggested in TAN 8, which dangerously undermined developer confidence.
- 3.8 The Renewable Energy Route Map does not mention the likelihood of failure to meet the current 2010 target in time, nor seek to explain why this is the case. Without acknowledging current failings it is hard to imagine how the Government can learn from mistakes and address the problems.
- 3.9 Annex E of the Route Map, which the report claims to outline the scale of potential for commercial wind-farms, provides an overoptimistic picture as the number of projects and total MWs which are currently in the planning system may not all be

approved. Indeed BWEA Cymru feels that the report which Annex E is based on, contained data discrepancies, was over enthusiastic, and is out of date. Since the completion of this exercise 5 projects, representing 134 MW have been refused at the local level, withdrawn by the developer or called in by the Government.

3.10 We note that Forestry Commission land is currently being leased to developers and are relieved that this process is being taken forward. However, the Forestry Commission tender process has been long and laborious and has contributed to the lack of progress in achieving current targets.

3.11 The map which appears on page 25 of the report titled 'November 2007' is misleading as it continues to show the original Strategic Search Areas as they appeared in the TAN 8 document, rather than the much reduced proposed 'wind zones' that have resulted from the Local Authorities' refinement work. The BWEA Cymru are extremely concerned of the tendency by Local Authorities who have SSA's to carry out excessive rather than minor refinement, resulting in the Search Area being severely reduced in size. For example the massive reduction proposed by Neath Port Talbot to SSA E in their recent draft planning consultation does not fit with TAN 8 Annex D guidance which stated:

*"TAN 8 will allow the local planning authorities to make **minor** adjustments to the SSA boundaries when translated into their local planning documents."* (p58, para 1.3, TAN 8)

A similar situation arose in Area A where the final 'Refined Area' is only 30% of the original size of the SSA.

3.12 The reductions in strategic search areas mean that many sites shown on the map as 'Pre-application Wind Farms' and 'Application Wind Farms' are no longer within the SSAs refined areas and are therefore likely to be refused. Reduction in the size of SSA will also create greater density of turbines in the remaining areas which will significantly increase all cumulative impacts. Significantly, no consideration appears to have been given to the effect of cumulative noise impacts on developments within the SSAs or refined windfarm zones.

3.13 Whilst we understand that National Parks and Areas of Outstanding Natural Beauty would not be included in TAN 8 SSAs, it must be acknowledged that 4 of the SSAs are close to National Park boundaries and that some degree of visual impact upon such areas is unavoidable. There should therefore be recognition that visual impacts on AONBs and National Parks may be necessary to meet SSA targets.

3.14 BWEA Cymru is willing to work with and share its extensive data on wind farm developments and TAN 8 progress updates with the Government when further monitoring work is undertaken.

- 3.15 There continues to be confusion in terms between what is a “Community Windfarm” and what is a “small scale commercial windfarm”. In regard to the current lack of community-owned wind farms in Wales, TAN 8 limits such schemes to “*generally less than 5 MW*” (p7, para 2.12, TAN 8) which discourages larger community-owned schemes and community-owned schemes within strategic sites where larger developments are expected. This inconsistency in the wording of TAN 8 should be amended.
- 3.16 If Community Ownership is believed to make developments more acceptable to the local community, there doesn't seem to be any rationale for limiting their size to less than 5MW. Community Ownership should be seen as an additional benefit of projects being considered for planning consent and recognition of this should be made irrespective of whether or not such projects are inside or outside of the SSAs. Recognition of the benefits that projects bring to local communities should be given. Whilst projects must always be considered in planning terms, provided projects meet certain planning criteria there is no reason why benefits offered to the local community or earned by the local community through ownership, should not be taken into consideration overall.
- 3.17 While we welcome that the review of TAN 8 will revise upwards the old targets for renewable energy whilst maintaining the same strategic search areas it is difficult to see how this can be realistically achieved if those areas are shrinking. If a revised TAN 8 with enhanced targets is to be effective then the Welsh Assembly Government should send a strong message to relevant Local Planning Authorities to expand their refined areas.
- 3.18 In reference to paragraph 7.17 we reiterate our criticism of the report which identified 2500 MW of potential capacity in the TAN 8 strategic areas as
- giving a false impression that all applications will be approved;
  - out of date in that projects included have since been withdrawn, called-in or rejected; and
  - containing minor discrepancies.

Planning delays makes the 2500 MW capacity by 2015 extremely unlikely.

- 3.19 Annex A of the report identifies the possibility for 500 – 1000 MW of electricity being generated from offshore wind by 2025. There is already over 1000 MW of offshore wind in Wales either in operation, construction, having been approved, or awaiting planning determination. The target of only 1 GW from offshore wind therefore seems low and uninspiring; especially considering the UK Government's objective to install up to 33 GW of offshore wind by 2020.
- 3.20 Wales has high wind speeds and shallow sea beds that make it an ideal place for offshore wind projects. A significant proportion of Welsh renewable energy generation can come from offshore

wind even after environmental issues and grid availability have been taken into consideration

- 3.21 BWEA Cymru believes that an additional 2 GW of wind generation is possible off the coast of Wales. The Route Map should adopt more ambitious and positive targets in regard to offshore wind.
- 3.22 Annex E seems to deal only with onshore wind projects in TAN 8 strategic areas. It neglects to mention the TAN 8 offshore wind target to generate an additional 200 MW by 2010. With a capacity of 35 - 40% load factor, offshore wind could generate well over a GW of electricity by 2015.

### **Energy efficiency / micro-generation**

- 4.1 In regard to the potential for micro-generation equipment on commercial buildings and its planning implications the Welsh Assembly Government should take the initiative and bring forward policies customized to Wales' differing topography and excellent wind source. We see no advantage in delaying the introduction of such policies in order to wait for Westminster's Department for Communities and Local Government to report on their consultation into the matter.
- 4.2 Clarification is needed on how WAG intends to define the renewable energy feed in tariffs (REFIT). Are REFITs different to the standard agreements made between the micro-generator and their utility supplier to pay for exported electricity (typically 4p per KWh)?
- 4.3 We welcome the commitment to issue planning guidance to make micro-generation systems easier to install and we encourage the Government to discuss the details of delivery with BWEA Cymru. We feel there have been too many documents published in recent times that do little to address either public or planner awareness with small systems. The BWEA is currently crafting SWT planning guidance for Planners, and input from WAG would be welcome.
- 4.4 We do not understand why the third bullet point in paragraph 8.5 differentiates between *"building mounted micro-wind electricity turbines or stand alone small wind turbines."* All micro-wind turbines produce electricity and therefore there is no need to label one of the systems. Secondly the 'or' in the middle of the bullet point should read 'and' as both 'micro-wind' and 'small-wind' turbines should benefit from planning guidance. The wording implies that micro-wind turbines cannot be stand alone mounts which is not the case.
- 4.5 The phrase *"encourages a fair price for the export"* can be considered outdated as an Ofgem report has recently concluded that Utilities were *"now offering reasonable value rewards"* for exported electricity.

- 4.6 It is not clear to which programmes and timetable micro-generation systems will be installed. Manufacture production rates of micro-generation systems will have to meet the demand created by the 2011 zero carbon commitment.
- 4.7 In conjunction with support to the solar PV industry, the green jobs strategy should also encouraging the development of small-wind systems which are cheaper to manufacture than PV (financially and environmentally), while their utility is better suited to the rural landscape of Wales.
- 4.8 The Farming Connect service should emphasise the benefits and rate of investment re-payment from micro and small wind systems. In addition to providing carbon free electricity to the National Grid, it presents a good opportunity for farmers and land-owners to generate diversified income.
- 4.9 Inserting a single capacity factor target of 0.45TWhr for all micro-generators fails to appreciate the difference between micro renewable technologies. For example there is a different load factor between 'micro-wind' and 'small-wind' systems. The Assembly Government needs to explain how this target has been calculated.

### **Grid Infrastructure developments:**

- 5.1 One of the greatest constraints to the growth of the UK renewable energy industry is the nature of the UK grid infrastructure and the availability of access to the grid network.
- 5.2 The electricity Networks were designed for a time when large central generation delivered electricity through transmission and distribution networks. Much of the infrastructure built in the 60s and 70s is reaching the end of its useful life. We need to think carefully before replacing like for like as some intelligent investment and a new approach could create a better for future generation and demand.
- 5.3 In Wales, renewable electricity generation can make a significant contribution in tackling Climate Change but for this change to happen the grid infrastructure must play a role in supporting clean electricity distribution.
- 5.4 There is increasing concern that the delays in planning and the overall regulatory approach to the grid are holding back delivery of renewable electricity potential. Changes to the regulatory system could incentivise the distribution and transmission systems to rise effectively to the challenge. A future where active distribution management coupled with a more diverse type of system management at the transmission interface will more efficiently and effectively support delivery of renewable energy in Wales.

- 5.5 Delays in investing and approving new upgrades are preventing good renewable electricity project from connecting. Consequently there are high risks and cost for renewable energy projects connecting to the transmission network.
- 5.6 The Government, in partnership with its stakeholders, needs to secure an enduring solution for grid access reform. The BWEA Cymru propose measures to:
- Reduce the timescales for securing grid connections.
  - Give priority to renewable energy projects that are seeking grid connections.
  - Introduce new regulations for the licensing and charging of offshore transmissions.
  - Clarify the implications of the Final Sums Liability on grid queues
  - Secure changes in the way the Grid network is managed and promote more DNO active management
- 5.7 One of the main barriers to achieving current targets is the lack of grid network in the mid-Wales region where 3 of the 7 Strategic Search Areas are located. This means that no potential project in the area would be able to distribute renewable electricity.
- 5.8 BWEA Cymru has been instrumental in working with partners to commission a feasibility study that examines the constraints facing a new grid network in the area. Once the study has been made available we call on the Welsh Assembly Government to lead by forming a stakeholder's forum with a view to present a grid routing options paper. A completed functioning grid network should have been installed in mid Wales by no later than 2013.
- 5.9 Whilst agreeing with the sentiments of paragraph 11.6;

*"However we still believe that OFGEM primary duties and the grid connection rules should be changed to enable connection preference to be given to low carbon generation projects."*

we suggest the wording should be amended to read:

*"However we still believe that fundamental review of industry governance and the grid connection rules should be changed to enable connection preference to be given to low carbon generation projects."*

## **Research and Development**

- 6.1 BWEA Cymru welcomes the creation of the Welsh Energy Research Centre to provide support for relevant R&D topics with strong environmental and economic associations. Of particular interest to us is the development and installation of tidal stream energy systems of which the Wave-dragon project is an example.

- 6.2 We also support the focus of making use of European Structural Funds to support the Welsh Energy Research Centre and to support the development of energy innovations to create a low carbon economy.
- 6.3 As stated previously Wales has much to gain by being at the forefront of creating a low carbon economy. To do so it is vital that the private renewable energy sector is considered a key partner with intense effort being made to ensure that industrial confidence is maintained. The Welsh Assembly Government must demonstrate that Wales is truly open to renewable energy business.
- 6.4 BWEA Cymru strongly welcomes the focus on developing investments into the skills agenda to ensure innovations are turned into viable businesses.
- 6.5 While onshore wind is a mature technology, there are areas where research in Wales can add value, for example in investigating the operational impacts of wind farms installed in forested areas.
- 6.6 There is considerable scope for R&D in offshore wind to benefit Wales, given that there is major potential for this source off Welsh coasts. This is also an area where innovation is much needed. If there is support for development of both projects and technologies in Wales, then it is more likely that manufacturing in Wales will result.
- 6.7 Wave & tidal research and development must be supported with key infrastructure like the Wave Hub off the Cornish coast, or other support that makes developing early projects easier. Without a clear path to market, marine device developers will struggle to turn innovation into sustainable businesses.
- 6.8 Overall, companies will be incentivised to invest in R&D if there is a clear market for the resulting products. The most important role for WAG is to provide such market conditions so that technology companies can see rising demand for their products and hence invest to meet it. While WAG support for R&D is welcome, it is secondary to the wider policy agenda.
- 6.9 R&D policy should dovetail with industrial development policy: WAG needs to work closely with TSB, ETI and ETF to ensure this is the case.
- 6.10 The Renewable Energy Route Map should give consideration to the need of developing a renewable energy sector supply chain in Wales. Industrial policy needs to be taken forward in this regard with greater resources being utilised by Energy Net Wales.

## **Conclusion**

BWEA Cymru welcomes the opportunity to respond to the Renewable Energy Route Map for Wales consultation document.

Whilst generally welcoming the dedication of the document to Renewable Energy, and congratulating the Welsh Assembly Government on its ambition to make Wales self-sufficient in renewable energy terms within a generation, BWEA Cymru is concerned that the document fails to address some of the more important issues that may prevent Wales from achieving its aims.

In our response we have identified existing problems in implementing current renewable energy policy in order to learn from past mistakes. Our submission contains a number of ideas and suggestions of measures that could be introduced to ensure that Wales moves forward towards a sustainable energy future.

If you would like to discuss BWEA Cymru views on the Renewable Energy Route Map please contact:

**Llywelyn Rhys**  
**Penaeth BWEA Cymru    Head of BWEA Cymru**  
Willimas House  
11-15 Columbus Walk  
Caerdydd  
CF10 4 BZ

**02920 020 615**

**07875 434 049**

[llywelyn@bwea.com](mailto:llywelyn@bwea.com)