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BWEA Response: Microgeneration Strategy and Low Carbon Buildings Programme

BWEA welcomes the DTI Consultation on Microgeneration Strategy. Microgeneration, particularly the small scale wind energy sector has large potential for growth over the coming years and BWEA sees that it is important that a robust Government Strategy is established for this market early on. At present there is a clear gap between funds available to support microgeneration and those required to drive a significant market. With the right regulatory measures microgeneration can have a key role by helping tackle climate change, securing energy supplies and helping to address fuel poverty. Furthermore, microgeneration can reduce electrical losses on the transmission network and thus reduce energy costs.

This response has been prepared on behalf of the wind industry and BWEA members although individual member companies with wider interests may hold a different position on some issues. BWEA was established in 1978 and is the representative body for companies active in the UK wind energy and marine renewables market. Its membership has grown rapidly in recent years and now consists of 320 companies. Over 20 of our member companies are involved in small scale wind (defined as turbines that are less than 50kW of installed capacity); either through research and development, manufacturing, installation or consultancy, and several others have an interest in this area.

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Summary of key points

BWEA agrees that the time is right to be creating a Strategy for microgeneration, given the potential business and excellent prospects of these new technologies coming to the market.

The key issue that needs to be addressed is the gap between the cost of small scale wind to the consumer against the potential income they can generate. Microgeneration technologies are currently being produced in small volumes, and therefore are concomitantly more expensive to the private individual. If this gap can be effectively addressed, then volume can be built to meet consumer demand at sustainable prices and economies of scale achieved, thus bringing down costs through a virtuous cycle. Early high levels of support for pioneering installations can be phased out over time, until full market convergence is reached.

While technology developers have been forging ahead to produce new innovate designs, policy developments have been slow in comparison. BWEA believes that there is a case for an interim policy to be put in place quickly while the long-term structure of microgeneration support is determined. A combination of net metering, ROC award and capital grant support affords the best balance of simplicity, speed of introduction and compatibility with current arrangements for such an interim package.

For the longer term policy, a number of different elements are available that can be rolled up into a comprehensive package. BWEA has a preference for measures that reward delivery of power, in line with our recommendations in the wave and tidal stream sector (see *Into the Blue*). Of the measures that could be used, BWEA would opt for ROCs and EECs being used due to their link to generation, plus Council Tax rebates. However, it is too early to draw a definitive conclusion on the best package. Government must begin a process now to determine the measures that should be used in the longer term to see microgeneration technologies through to full convergence with the market.

BWEA view is that the following key areas require viable solutions each in order to close the gap between few high price installations and a sustainable mass market:

- **Costs** – There is a clear gap in this market between the real costs of microgeneration and the income available to support investment in it. The key issue is how to ensure that prices come down to a sustainable level. BWEA view is that there is a range of options for the Government to consider – grants, revenue support, ROCs, EECs, council tax rebates – but no clear indication of which option will be the most cost effective; BWEA has a general preference for revenue support measures, but believes that a debate must ensue to determine the most cost-effective package of policies. The role of Government is to map out which options are the most effective.

This can be done by modelling exercise or for instance by different trial schemes across the country. Government should start this process immediately.

- **Targets** – BWEA believes that it is very important that the Government sets clear targets for the small scale wind energy sector and other microgeneration technologies. Government targets within the Renewables Obligation have been crucial in the development of the UK's large wind energy sector and BWEA believes that a similar approach could help the small scale market enormously by committing the Government and stimulating the microgeneration industry. However, at this early stage of the sector, when the long-term mechanisms to be used are unclear, BWEA understands that UK-wide targets would be largely symbolic. Perhaps better at this stage would be a commitment by Government to install microgenerators across the public estate: as pointed out by Scottish and Southern Energy in their submission to this Consultation, if one microgeneration unit were to be installed in every school in the UK, this would provide enough volume for costs to be driven down to close to commercially sustainable levels. Government procurement of these technologies can buy down the costs of installations and assure market players that there will be customers for their products if they invest to scale up production. However, a nation-wide target for microgeneration must be set as part of the determination of the long-term package of support that would follow this stage of market development.

- **Supply Chain** - There is clear evidence of a significant market demand for small scale wind technologies, however, several barriers remain in place due to a lack of effective supply chain. BWEA believes that one of the key aims of this Consultation must be to ensure a cost-effective manufacturing, distribution and installation network for small scale wind in the UK, to meet existing and future demand. This will also help in establishing the potential benefits on employment and manufacturing that this market offers. The UK has several small scale wind manufacturers, who are already exporting small numbers and the Government should recognise that with support there is potential for the UK to become a leader in this field. It is important to note that setting a market framework will not in itself ensure that a supply chain will appear. Government must work closely with market actors, Regional Development Agencies, local authorities and other stakeholders to ensure that a thriving industry is created.

- **Technical Standards** – BWEA view is that it is important that microgeneration products are accredited through a reputable and well designed scheme. The process of installing microgenerators to the electricity system and metering their production should be simplified, as this would encourage greater installation. Most

importantly, it is in the wider renewable energy industries' interest that these technologies are installed in a safe manner.

- **Planning** - The requirement for planning permission can in some cases hinder the installation of microgeneration technologies. In the case of small scale wind energy, planning permission is required for most installations. The cost of planning permission can in some cases be quite substantial in comparison to the cost of the microgeneration product itself. BWEA would support permitted development rights for certain types of microgeneration technologies on buildings other than listed ones or in conservation areas. How this is determined, would be for the Government to decide in terms of planning legislation and current technological development. Furthermore, it will be important that any permitted development rights are only granted for technologies that meet relevant accreditation and Health and Safety criteria. BWEA is willing to work together with the DTI and the planning profession to provide information on small scale wind energy technologies and how these would fit under possible permitted development rights.

- **Low Carbon Buildings Programme** – BWEA believes that capital grants are important as part of a short term, interim package of measures, and that an effective funding programme should be available at the end of Clear Skies to avoid any gap in support. Furthermore, BWEA believes that at this embryonic stage of the small scale wind energy market, grants should be available for not only householders and communities but also for small businesses, farmers and other organisations wishing to install these technologies. There should also be a clear and immediate indication from the Government of how much funding is available through the Low Carbon Buildings Programme and how this will be allocated.

- **Communications** – there is a need for a one-stop shop on microgeneration, whereby information on technologies, grants, suppliers, installers, planning and case studies would be available from one independent place. If a one-stop shop were to be put in place, BWEA would be willing to help put together details regarding the small wind sector.

Microgeneration Strategy - Full list of consultation questions

General

Q1. What are the main obstacles to the development of a long-term self-sustaining market in microgeneration technologies? How can these obstacles be overcome?

- **Costs** - Small scale wind turbine technology is still relatively expensive to buy and lacks economies of scale.
  Solution: Continuation of grants schemes such as Clear Skies are important at this early stage of the market. However, in order to generate a self-sufficient market and respond to the increase in demand, the small scale wind industry needs to attract large investment to set up mass production and bring the costs down. BWEA view is that there is a range of options for the Government to consider – grants, revenue support, ROCs, EECs, council tax rebates – but no clear indication of which option will be the most cost effective. The Government should map out immediately all the various options in order to find the most cost-effective. This can be done by modelling exercise or for instance by different trial schemes across the country.

- **Grid connection and payment for electricity** – Access and connection to the electricity network is still an issue and often a complex one for microgenerators. This also includes the issue of metering equipment and the fact that payment for exported energy is still relatively low.
  Solution: Installing microgenerators to the electricity network should be simplified. In the short term BWEA supports net metering as part of an interim package of measures to support microgenerators. In the long-term a more integrated system is required; BWEA has a general preference for policies that reward success in the form of revenue support measures, but has no fixed view about which of the current proposals being discussed will ensure the cost-effective development of microgeneration.

- **Accredited Product Development and installation** – There are several technical issues that need to be considered with new products being developed. In the case of small scale wind these include issues such as noise, vibration, structural issues, visual acceptability in the urban environment and Health and Safety.
  Solution: The Government should have a clear process for accreditation in the UK for different categories of small scale wind, e.g. rooftop turbines. It would be beneficial for the market if there would be one body who administers accreditation, product development and code of practise.

- **Planning** - see Question 19. Planning is time consuming and expensive in relation to the cost of the microgeneration product. More importantly, the UK will not be able to create a sustainable market for small scale wind if Local Authorities have to deal with thousands of applications for small scale and rooftop wind turbines. **Solution**: Permitted development rights will save associated planning costs for the consumer as well as allowing the market to progress unhindered by local planning authority resource constraints. Government should encourage permitted development rights on buildings other than listed or in a conservation area as soon as possible in liaison with the industry, planning profession and other stakeholders. This will allow the wind industry to respond in its product development.

Q2. What are the most important policy/regulatory/other issues that we should address to facilitate successful implementation of microgeneration technologies?

- BWEA believes that continuation of grant support for all microgeneration installations, not just for new large scale developments, is vital in the early stages of the market. However, in the longer term there may be other more effective options available, such as ROCs, EEC and Council Tax rebates.

- The Government should streamline the metering process to ensure that microgenerators which are entitled to receive Renewables Obligation Certificates under the Renewables Obligation will do so. BWEA also believes that net metering is a key part of a short-term policy to kick-start the market.

- There is also a need for further planning guidance requiring local authorities to encourage small scale wind turbines in new developments.

- Building Regulations should be amended to encourage new buildings to require microgeneration.

- BWEA believes that a reputable and easily accessible accreditation scheme is vital for a sustainable microgeneration industry. This process needs to be undertaken in conjunction with the industry.

- BWEA view is that all microgeneration technologies should be manufactured, installed, operated and decommissioned in relation to relevant Health and Safety legislation. If there is no H&S guidance in place, the Government should work together with the industry to provide this by participating in the development of international and European standards which will eventually supersede British ones. BWEA is starting the process of providing H&S guidance to the small wind sector.

Q3. What are the key supply chain issues affecting the industry? What should be done to address these issues?

The supply chain for small scale wind is relatively small in the UK, and in many case manufacturers have opted to design their own components and parts.

The Government should provide more support for manufacturing in the UK, particularly since the global small scale wind market is expected to grow substantially in the coming years. With the right support UK manufacturers, many of whom have undertaken advanced product development, could play a key part in this market. This could be achieved through encouraging large scale investment in the UK manufacturing sector. BWEA believes that one of the key aims of this Consultation must be to ensure a cost-effective manufacturing, distribution and installation network for small scale wind in the UK, to meet existing and future demand. This will also help in establishing the potential benefits on employment and manufacturing that this market offers. The UK has several small scale wind manufacturers, who are already exporting small numbers and the Government should recognise that with support there is potential for the UK to become a leader in this field. It is important to note that setting a market framework will not in itself ensure that a supply chain will appear. Government must work closely with market actors, Regional Development Agencies, local authorities and other stakeholders to ensure that a thriving industry is created.

Q4. How will the costs of microgeneration technologies develop over the next 5 -15 years? How will these costs compare with other low-carbon technologies such as large-scale renewables and energy efficiency measures?

The costs per kWh for small scale wind turbines should come down once volume production can be implemented and economies of scale take place.

Rooftop wind turbine manufacturers estimate that following an increase in production these technologies are likely to fall down to approximately £1,000 per kilowatt installed[1]. Figures for free standing machines are expected to follow suit as demand increases. Were such costs to be achieved, then the price of power from small wind turbines would be comparable with that from large turbines, without the losses involved in transmission and distribution. Some (though not all) energy efficiency measures would provide carbon reductions at a lower cost, but despite much Government effort, even those with a negative lifetime cost (i.e.

[1] Estimate from Renewable Devices and Windsave

savings for the customer) have yet to achieve major uptake in the market.

The Renewables Obligation has secured the development of large-scale renewables in the UK, such as wind energy, and support for microgeneration from the Obligation is crucial. However, there needs to be a discussion on how this can be implemented to ensure that the registered microgenerator is the beneficiary. BWEA supports the various options for simplifying access to the RO as expressed in the project by Jade Energy[2].

Cost of small scale wind will only come down if there is a large mass market for this technology. Large interest is already apparent. However, at this early stage of production microgeneration technologies are often too expensive for the ordinary consumer and will require support from the Government in the form of grants. It is not only the demand which is a factor at play in the market; if small wind systems are going to contribute to the fight against climate change and the UK is to become a leader in this field then an industry needs to develop which can *supply* a dramatic increase in demand. This will not be achieved without significant investment in the manufacturing, delivery and installation sector. In the longer term a tax relief for the consumer will be a vital incentive in contributing to market growth and sustainability.

Q5. What are the criteria by which the strategy should measure success?

- Number of microgenerators installed and total generating capacity by 2010 (and in the future by 2015 and 2020) – these numbers should be set during the process of defining longer-term policy for the sector
- Percentage of households and businesses with installed microgeneration technologies
- Number of UK-based manufacturers
- Number of UK-manufactured technologies vs. installed numbers
- Number of exported small scale turbines and other microgeneration technologies
- Reduction in CO_2 emissions from buildings

Product development and deployment

Q6. Is Government funding for research and development being effectively targeted?

[2] Jade Energy's report *P04: Accrual of ROCs LECs and REGOs - Phase 3a: Pre-determined Entitlements to ROCs for Small Microgenerators*, which will be submitted to the DTI for the Microgeneration Strategy Consultation

Several BWEA member companies have received considerable help from the DTI SMART award scheme and BWEA strongly believes that this or similar schemes should also be available in the future for new product development.

Following the agreed permitted development criteria as set out in Question 19 Government funding should be provided for the appropriate/relevant technical modifications and physical specifications of existing products to assist with their swift deployment to the market place.

Q7. Is there sufficient co-ordination of research efforts?

In terms of small scale wind turbine research, manufacturers are often in a position where for reasons of commercial sensitivity they cannot share research with their competitors. To provide benefits to the whole sector, BWEA would welcome Government-funded test and demonstration sites for small scale wind turbines, as many companies developing this technology are small and have limited cash assets. These could be relatively short term test activities, for instance on university sites.

Q8. What actions could the Government take to develop the skills base in relation to the development of microgeneration technologies and their integration into communities and buildings by good practice in design, installation, operation and maintenance?

BWEA welcomes the Energy and Utility Skills Council's proposal to undertake a functional and occupational mapping exercise of the UK renewable energy sector.

As more small scale wind turbines are purchased, they are going to require installation and maintenance from qualified engineers. There are good small wind energy training courses available for instance in Australia, Cuba and the US, but not so many in the UK. Given the time it takes to train a qualified engineer, BWEA predicts that there is likely to be a skills shortage in this area. Therefore it is important that the relevant Government departments (DTI, Department for Education and Skills) address this.

BWEA is currently looking into developing H&S guidance for small scale wind. At present there are no standards which would cover all small scale wind technologies in the UK on manufacturing, installation, maintenance and decommissioning, and very few qualified H&S practioners work in this sector. BWEA view is that the small scale wind industry can provide guidance; however, the Government should provide support to the industry in this area. The small wind industry requires codes of practice, standards and other guidance to ensure that the microgeneration

products can be seen to comply. The Government should play a role in ensuring these are developed, this could include for instance participation in the development of international and European standards which will eventually supersede the British ones.

Communications

Q9. Where are the most significant communications gaps and what should the Government be doing to help to fill them?

There is still a communications gap in the following:

- Real costs of microgeneration
- What technologies are available and where these can purchased from
- Information on what is involved in installing microgeneration technologies
- Which electricity companies are willing to purchase supply from microgenerators
- Grant schemes other than Clear Skies – there is plenty of information available on Clear Skies but not so much on local grants from sources such as energy supply companies, the National Lottery Fund, local energy agencies etc.

At present there is no *one-stop shop* for microgeneration in the UK. The existing grant programme of Clear Skies provides information on technology, but not necessarily on feasibility studies, planning and general information on individual microgeneration technologies. At present we are in a situation where trade associations and manufacturers receive hundreds of enquiries from organisations and the general public on microgeneration. However, as many of these organisations are small they may not have sufficient resources to handle the volume of interest.

BWEA would therefore support the establishment of a one-stop shop for microgeneration, from where interested parties could find independent information on different technologies, manufacturers, costs, grants, site requirements and planning. Were a one-stop shop established, BWEA would be willing to help put together details regarding the small wind sector.

Q10. How important are the existing advice/information services to successful development of microgeneration technologies? Is further activity required and if so at whom should it be targeted and who should be leading?

Despite the fact that there is disparity among available information on microgeneration, these services nevertheless are very important.

Further activity is required particularly in the form of *one-stop shop* on microgeneration and more targeted communications to businesses who are interested in installing these technologies, see Question 9.

Q11. Is there a need for more general communication / education activity and if so how should this be tackled?

BWEA believes that there is likely to be a need to educate local planning officers and Councillors on microgeneration technologies, particularly issues relating to small scale wind such as residential amenity, visual effects and costs. With part-funding from the DTI, BWEA has been delivering planning workshops on large-scale wind energy development and could potentially do a similar series for the smaller end of the wind energy market.

BWEA also believes that it is important that renewable energy, microgeneration and sustainability were included in teaching at schools across the UK.

Q12. Are the existing support and advice networks sufficiently coordinated? What more could be done?

See answers to Q9 and Q10.

Q13. What would be the most effective way of setting up and running a reputable accreditation scheme?

BWEA welcomes the plan for setting up a reputable accreditation scheme. It will be important that the Government supports the initiative and communicates the scheme clearly to all stakeholders. Furthermore, the scheme should be easily accessible, so that any new products will be encouraged to enter the market through a simple, cost-effective and well-managed accreditation process.

The Clear Skies accreditation scheme has worked effectively in the past and is a good model for the new Low Carbon Buildings Programme to follow on. In the case of small scale wind energy, the Clear Skies accredited supplier/installer list is already in place, so it would be preferable that this information is available after April 2006. Furthermore, manufacturers who are on the Clear Skies list tend to receive many orders through that list, so in effect the existing list also acts as an important point of information for potential customers.

Q14. What would be the most effective way that Government could support the development of robust product standards for all microgeneration technologies (including installation and maintenance)?

BWEA view is that there is a need for an agency which will ensure that microgeneration products are designed to relevant standards and the designs are supported by relevant technical tests and data. The agency should have a vetting procedure to do this.

Economics

Q15. How can the Government best encourage householders and all businesses to consider microgeneration as part of a package of measures to make their energy consumption more sustainable?

Grants are important at the early installation of microgeneration. The Clear Skies programme has been successful in offering grants to householders and communities to install small scale wind energy and other microgeneration technologies. Without grant support only a very small minority would find microgeneration technologies value for money.

Continued grant support is crucial for householders and communities at the early stage of the market. In addition, commercial users should be included in the Low Carbon Buildings Programme, as often these types of organisations are interested in installing microgeneration but may not have the necessary cash flow to do so. BWEA view is that grants are vital as a short term financial push for the market, however, the Government should consider other options such as Energy Service Companies (ESCO), ROCs, EEC and council tax rebates as medium to long-term financial support mechanisms to create a consumer market.

Q16. How can competition for the excess electricity generated by microgenerators be encouraged?

BWEA believes that simplified metering system would make microgeneration much more desirable at the generation point and for the electricity supply company. BWEA would support such measures such as ESCO models, abolishing the 28-day rule (competition for customers rather than excess generation) and net metering.

Installation

Q17. How could Building Regulations (taking account of the availability of the new powers to make regulations about the way energy is used in the Secure and Sustainable Buildings Act) be used to encourage cost-effective microgeneration technologies?

BWEA view is that Building Regulations could be used better to require onsite renewable and microgeneration. It is considered that there is a

greater opportunity to improve the sustainability of new and existing buildings, and therefore CO_2 emissions in England and Wales – around 30% of which come from buildings. This legislation should ensure that new and existing buildings have a mandatory requirement to use energy efficiency measures, renewable energy and microgeneration.

However, in order to encourage a greater uptake of microgeneration the industry will need the support of both Building Regulations and planning policy. While Building Regulations can ensure a minimum amount of renewable energy requirements in new buildings, they can also be rigid in some circumstances. Therefore BWEA believes that in order to create a successful microgeneration market Building Regulations should be used in conjunction with planning policy. Significant action is currently being taken by some local authorities, such as London Borough of Merton, who are requiring a mandatory 10% of energy demand for new buildings to be met from onsite renewables within the development plan.

Q18. How could Government help the construction industry and the building control bodies to be become better informed about the applications of microgeneration systems, satisfactory design, installation operation and maintenance practice, and the benefits to be obtained?

BWEA view is that this can be undertaken through education and courses, so that qualified construction workers and electricians can obtain extra qualifications in microgeneration technologies. This information can also be communicated through relevant professional institutions.

Q19. Are there any barriers in the planning system that are hindering the development of micro-generation?

The requirement for planning permission can in some cases hinder the installation of microgeneration technologies. In the case of small scale wind energy, planning permission is required for most installations. Often planning officers do not have sufficient knowledge of small scale wind, leading to applications being turned down on false grounds more associated with myths surrounding large scale turbines. In addition, the cost of planning permission can in some cases be quite substantial in comparison to the cost of the microgeneration product itself.

BWEA would support permitted development rights for certain type microgeneration technologies on buildings other than listed ones or in conservation areas. How this is determined, would be for the Government to decide in terms of planning legislation and current technological development. Furthermore, it will be important that any permitted development rights are only granted for technologies that meet relevant accreditation and Health and Safety criteria.

BWEA is willing to work together with the DTI and the planning profession to provide information on small scale wind energy technologies and how these would fit under possible permitted development rights.

Q20. If the Code for Sustainable Buildings is to be helpful in terms of promoting microgeneration, what sort of issues might it address?
See Q31.

Q21. What more should the Government be doing through the management of its own wider estates to promote microgeneration?

The Government should set a target for renewable energy on its estates and this could follow the Energy White Paper's target of at least 10% of renewable energy generation from electricity by 2010. This should be met by both large and small-scale technologies. The Government could then use its own example as an educational tool for Local and Regional Authorities across the UK.

Low Carbon Buildings Programme

Q22. Will a 6 year programme provide the confidence that industry requires for future investment decisions?

BWEA believes that the small scale wind industry requires long-term support mechanisms in order to secure investment and development in the sector. 6 years may be long enough to provide this confidence; however, this will ultimately depend on how effective the Low Carbon Buildings Programme will be.

Furthermore, it is important that the end of a six year programme does not result in the same uncertainty that has developed at the end of the Clear Skies programme. There should be a pre-set review of the programme at the end of year 4 to allow time for the follow-on work to be agreed and set up.

In addition to the grants programme, the Government should start work immediately in designating the most cost-effective long-term support mechanisms for this sector.

Q23. Are the objectives on page 33 an appropriate focus for the new programme and will they contribute to developing and moving the micro-renewable sector forward?

BWEA believes that energy efficiency is one of key measures in tackling climate change. However, the objectives for the Low Carbon Buildings

Programme may exclude many people and organisations from financial aid for installing microgeneration because they are not installing energy saving measures at the same time. This Consultation should note that some people or organisations may already have installed energy saving measures or may plan to do so at a later date. There is some evidence that owners of microgeneration become more aware of their energy consumption in any case and are inclined to make more investments or at least reduce consumption, which proves that it can be beneficial to let customers select their own priority.

To provide continued support at the end of Clear Skies, the Low Carbon Buildings Programme should not focus on building integrated technologies only but should be equal to non-building integrated technologies. For example, many schools, farmers, business centres and community centres have installed small scale wind turbines in the proximity of their buildings.

An overemphasis on placing microgeneration only on buildings which include highly rated energy efficiency measures may prevent the growth of the industry. It is difficult to comment without knowing the scale of the proposed LCB scheme but there may be a risk that it would only support exemplar buildings and become only a demonstration scheme rather than a market development scheme.

Q24. Views are invited on the impact of a "technology blind" approach on the selection of the renewable technologies

BWEA view is that technology blind programme is likely to be the right approach as often microgeneration technologies use a different resource base (wind, sun, water, ground heat) and some technologies may be better suited to some areas than others. However, under the 'technology blind' approach it is likely that only the most developed technologies will succeed. Other less well-developed technologies may therefore need extra support in the research and development stage. In any case, BWEA view is that with this approach the market will eventually dictate the winning technologies.

Q25. Are there any other micro-renewable energy technologies for generating either heat or electricity that should be considered in addition to those mentioned on page 34?

Q26. Would the same fixed level of grant for all technologies have an impact on selection of renewable technologies or should there be a variable rate for different technologies?

BWEA believes that the Low Carbon Buildings Programme should be technology blind. At present there is great disparity on costs between different microgeneration technologies and ultimately the same level of grant would discourage the selection of less efficient technologies and

encourage winning technologies. However, BWEA believes that a variable rate may build in differential and BWEA would thus support a same level of grant as long as these were kept under periodic review as to ensure that no one technology neither overheats in the market nor fails to gain the support that it should.

Under the Renewables Obligation, the same level of grant is available for all technologies, though the Obligation does recognise that some technologies may need additional support. BWEA would support a similar approach with the microgeneration technologies.

Q27. If there should be a variable rate, what should this rate be based on – potential electricity or heat generation over the lifetime of the product, potential to reduce carbon emissions, nearness to market?

Under the Renewables Obligation, the same level of grant is available for all technologies, though the Obligation does recognise that some technologies may need additional support. BWEA would support a similar approach with the microgeneration technologies. The primary driver should be nearness to market and what is needed to encourage sufficient growth in the industry.

Q28. Views are invited on alternative support mechanisms to capital grants for supporting the uptake of renewable technologies and the advantages that these alternatives would have over a capital grant scheme.

BWEA welcomes the Government's view that capital grants are an important incentive for the microgeneration market. A combination of net metering, ROC award and capital grant support affords the best balance of simplicity, speed of introduction and compatibility with current arrangements as a short term support. However, BWEA sees that in the long-term, other incentives may be more effective.

For the longer term policy, a number of different elements are available that can be rolled up into a comprehensive package. BWEA has a preference for measures that reward delivery of power, in line with our recommendations in the wave and tidal stream sector (*Into the Blue*). Of the measures that could be used, BWEA would opt for ROCs and EECs being used due to their link to generation, plus Council Tax rebates. However, it is too early to draw a definitive conclusion on the best package. Government must begin a process now to determine the measures that should be used in the longer term to see microgeneration technologies through to full convergence with the market. The role of Government is to map out which options are the most effective. This can be done by modelling exercise or for instance by different trial schemes across the country. Government should start this process immediately.

Q29. How should Stream 1 (individual and community projects) be designed to ensure energy efficiency is addressed effectively?

BWEA believes that energy efficiency is one of key measures in tackling climate change. However, the objectives for the Low Carbon Buildings Programme may exclude many people and organisations from financial aid for installing microgeneration because they are not installing energy saving measures at the same time. This Consultation should note that some people or organisations may already have installed energy saving measures or may plan to do so at a later date.

One emerging pattern in the small renewables industry is for local installation companies to develop, whose main work is small installations. Stream 1 is essential if this industry is to grow. Therefore it should not be phased out unduly early in favour of large projects. Furthermore, the individual ownership of a microgenerator can be far more effective in raising awareness of energy issues and changing behaviour than sight of a large system.

BWEA believes that at this embryonic stage of the small scale wind energy market, grants should be available for not only householders and communities but also for small businesses, farmers and other organisations wishing to install these technologies. There should also be a clear and immediate indication from the Government of how much funding is available through the Low Carbon Buildings Programme and how this will be allocated.

Q30. What other measures should be included under Stream 2 (larger scale developments) to ensure that energy efficiency is addressed effectively?

Under Stream 2 the energy efficiency and environmental attributes of a proposal affect the marking in a competitive cycle. This element might be strengthened as time goes by but it should not prevent otherwise sound projects from coming forward, except perhaps in new build.

Q31. Views are invited on whether the Code for Sustainable Buildings is the most appropriate standard for buildings supported by this programme.

As far as BWEA is aware the CSB is a voluntary initiative, by Government and Industry, to actively promote the transformation of the building industry towards more sustainable practices by requiring buildings that use:

- Energy resources more efficiently
- Water resources more efficiently

- Material resources more efficiently
- Practices and materials designed to safeguard occupants' health and well being.

BWEA view is that the CSB would be an appropriate standard for the Low Carbon Buildings Programme if it is widely accepted and recognised by the building and construction industry. However, since the CSB is still in Consultation it will be difficult to comment on it at this stage.

Q32. Would earmarking funding for individual and community projects under Stream 1 in the way proposed enable a smooth transition between the existing schemes and the new programme?

BWEA view is that the transition from Clear Skies to the Low Carbon Buildings Programme is unlikely to be smooth. Several manufacturers in the small scale wind sector are already seeing an increase in enquiries due to the forthcoming end of the Clear Skies scheme; and some anticipate a drop in interest after March 2006. There is a chance that due to increased enquiries manufacturers may be unable to meet the amount of orders before the new programme starts. Furthermore, the selection of household and community grants on a competitive basis may prevent fair selection in some cases.

Q33. What restrictions or criteria should be used for selecting individual and community projects (e.g. size of installation, type of building)?

Grants should be available to a wide range of potential customers; homeowners, commercial organisations, non-profit and community organisations should be entitled to a grant for the installation of microgeneration. Selection means that some potential microgeneration customers would get financial support while others would not. Furthermore, there is a danger that potential microgeneration customers would not find out whether they have secured a grant until they have been through a selection process; this type of a process would not benefit the small scale wind energy market. Streams 1 and 2 should be open to the widest possible range of buildings. Stream 1 (maximum size as yet undefined) should be open to all qualifying applications on demand.

Q34. Is the focus on larger scale projects likely to contribute towards a change in the market?

BWEA believes that the focus should not be in large scale projects only, but the Low Carbon Buildings Programme should also take into account individual projects, which in large numbers can have a substantial part in this market. BWEA view is that microgeneration technologies should be easily accessible to individuals, whether they are a householder, community or a business. Furthermore, the focus on large-scale projects

only may result in a demonstration project type programme and not in greater growth in this market.

Q35. Further suggestions of the kind of larger scale developments that might be suitable for support are invited.

- For example a village where several people want to buy a small scale wind turbine for their individual property
- Businesses centres and retail parks
- Leisure centres, camping and caravanning sites

Q36. Views are invited on other factors affecting the development of low carbon buildings and specifically the uptake of renewable energy technologies, particularly factors that are not already highlighted elsewhere in this consultation document.

BWEA believes that it is vital that the Government takes action in order to change the attitudes of the building and construction industry towards more sustainable technologies such as microgeneration. This can be undertaken through education and communications campaigns.

Physical Infrastructure

Q37. What set of metering arrangements would allow consumers to exploit the full range of the potential benefits of microgeneration?

BWEA would like to highlight the following points in the case of metering:

- In the short term, BWEA supports net metering. In the long-term, BWEA considers that cheap electronic standard meters, which identify both export and import, would be the ideal system.
- In the case of claiming ROCs the generator would need a single meter or export meter associated with the generator so that demand and generation could be established.
- Recording metering should be made as easy as possible for export for payment from energy service companies and for ROCs.

In addition, the Government should consider private wire networks as one way of promoting microgeneration. BWEA supports the views raised by Jade Energy's report *P04: Accrual of ROCs LECs and REGOs - Phase 3a: Pre-determined Entitlements to ROCs for Small Microgenerators*, which will be submitted to the DTI for the Microgeneration Strategy Consultation.

Q38. What steps can be taken to reduce the costs of metering and encourage new meter operators to enter the market with more sophisticated products?

BWEA believes that meters for recording export should be fitted as standard – in the mean time existing meters could be used for permitting re-direction of surplus electricity for instance water or space heating.

Q39. Are there any public safety implications that may arise in relation to large-scale uptake of microgeneration? If so, how can these be managed?

These should be covered by industry standards, accreditation and better guidance on safe siting of microgeneration technologies.

See also Questions 1, 8 and 13.

Local authorities and regional bodies

Q40. What specific roles should Devolved Administrations, Local Authorities, Regional Development Agencies, Regional Housing Boards and Housing Associations play in promoting microgeneration?

All of the above mentioned bodies can play an important role in promoting microgeneration by encouraging the installation of these technologies on their properties. For instance many Local Authorities have an interest in small scale wind and are willing to install these technologies (example includes the London Borough of Camden for instance). These can then act as examples for others to follow suit.

Q41. What steps should Government take to assist these bodies in taking this role?

BWEA believes that the Government should set mandatory targets for microgeneration for these bodies in national and regional level.

Other issues raised by the consultation

Annex A – eligible microgeneration technologies

BWEA would like to highlight that the costs which the Consultation document quotes for small scale wind energy in Annex A are not in line with latest industry figures. The Consultation sites a 29 year payback time for a 6kW wind turbine, however, industry figures show that this is likely to be around 19 years (just under 19 years for a 15kW machine and 20 years for a 6kW machine)[3].

[3] Figures from Proven Energy, manufacturer of 600w, 2.5kW, 6kW and 15kW wind turbines.

The use of payback period can be misleading when the timeline is more than 5 or 10 years as it reflects only current prices and does not take account of external costs (e.g. environmental) or other benefits. Furthermore, the Consultation document provides payback times only some of the microgeneration technologies, which does not give a full picture of the whole sector.

British Wind Energy Association, September 2005