

7/5/05



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Submission by the British Wind Energy Association to the Review of the UK Climate Change Programme Consultation

The British Wind Energy Association is the trade body for the wind power industry in the UK. It has over 310 member companies covering all aspects of wind farm development and construction – see Appendix 1 for a full list. As the leading renewable energy technology, wind is a key part of the UK's response to climate change, and achievement of the targets set for renewable energy is crucial to meeting Kyoto commitments on greenhouse gas emissions and Government targets for CO₂ reduction. BWEA also champions the emerging technologies of wave and tidal stream energy, which will be vital in further reducing carbon emissions beyond 2010.

BWEA has decided to submit a focused document rather than fill in the response form provided as we have comments only on certain aspects of the consultation. Given wind's key role in meeting the targets for renewable energy, and hence carbon emissions, we will be focusing on what the Government has to do to ensure that wind can be developed as planned up to 2010. If the conditions are not right for the development of large amounts of wind generating capacity, then the industry will not deliver and there will be a large gap in the Government's carbon reduction objectives. The submission will turn to longer-term issues towards the end of the document.

The Renewables Obligation, which came into force in 2002, has been very effective in stimulating the market for onshore wind (see Figure 1). Last year some 3,000MW of projects were submitted into planning, representing a roughly 20-fold increase over 1999 levels. The RO, combined with intervention in the form of capital grants, has also stimulated the market for offshore wind, resulting in over 1,000MW of projects with consent now awaiting construction,



and a further 7,000MW due to enter the consenting process over the next few years.

In terms of capacity built or building, the UK now has just under 900MW in operation (of which 124MW is offshore), and a further 600MW (including 90MW offshore) currently under construction. The industry has planning consents for about 1,300MW onshore and a further 1,000MW offshore. Between now and the end of 2006, enough new capacity should come on stream to bring the total UK wind generating fleet to between 2,200MW and 2,500MW. This will make the UK the world's number six in terms of overall wind generating capacity, and the offshore development expected should see the UK overtaking Denmark next year to claim the crown of number one offshore generator.

To meet our 2010 10% renewables target, analysis by the Carbon Trust (for the DTI's recent Innovation Review) and, more recently, the National Audit Office, have concluded that wind is expected to be meeting the bulk of the new renewable capacity needed to meet the target – indeed, it is the only technology capable of delivering the significant amounts of capacity in the short timeframe to 2010. BWEA, DTI and NAO have concluded that some 7,500MW of wind capacity is needed to be operational by 2010 for the 10% target (and the 10-17mt of CO₂ savings associated with it) to be met. All three organisations also are in agreement that this 7,500MW will be met through the deployment of both onshore and offshore wind farms throughout the UK. BWEA expects a roughly equal contribution from the on- and offshore sectors. This almost even split was also the conclusion of modelling by OXERA for the NAO report (Figure 1, p2).

BWEA concludes from this that for renewables to deliver their part of the Government's climate change programme, estimated to be some 10-17mt of CO₂, then delivering our onshore and offshore wind programme must be a central and urgent Government priority. Failure to deliver wind will only further undermine the programme and put greater pressure on other sectors to exceed their expected emissions reductions. While BWEA is confident that these targets are within our reach, they will only be achieved if urgent action is taken across a number of areas. This again is a similar conclusion recently drawn by the NAO, which also concluded that the target is achievable but only with action in five key areas. These are set out below with BWEA's comments.

Planning

In order to reach our 2010 targets, BWEA estimates a further 2,500MW of onshore and 3,000MW of offshore capacity is required to be both consented and built. From an onshore perspective, the consents need to be achieved by the end of 2007 to allow adequate time to build the projects out in time. As a result, some 700-800MW per year of new consents are required. In 2004, the wind industry secured 700MW of consents, with an overall approval rate of 80%. This scale of approvals needs to be maintained. Central to this is the speeding up of the decision-making process for planning at both a local (under planning law) and national level (ie projects that require approval under Section 36 of the Electricity Act 1989). Analysis by BWEA shows that the time

taken for decisions is increasing significantly, with the average wind farm under 50MW taking over 12 months to be determined when the target time is a mere 16 weeks. At a national level, BWEA is extremely concerned at the significant delays being experienced in determining large projects in Scotland. Currently over 4,000MW of Section 36 projects are awaiting determination by the Scottish Executive. The average time taken to determine these larger projects is increasing and is now over two years.

BWEA concludes that the greatest threat facing the industry delivering its onshore contribution to the 2010 target is delays in the determination of projects.

Grid reinforcement

With the majority of wind's contribution to 2010 targets coming from Scotland and offshore, the provision of grid capacity in a timely fashion will be vital. BWEA is concerned that there is no strategic plan for the network in order to achieve the required goals, and that this will slow down the rate of development, potentially compromising our targets. Given the strategic importance of renewables for UK energy policy, BWEA believes that the Department of Trade and Industry, working with industry and stakeholders, should immediately establish a ministerial-led process to deliver a grid investment plan that ensures timely construction of network capacity in the regions where the renewable resources are. This investment plan should be paid for by all users of the grid, reflecting the strategic nature of the resources to be exploited. Current arrangements, which charge the costs of grid extension solely to generators distant from existing networks, is at odds with the historic development of the National Grid, which was seen as a national project and paid for socially.

While such a strategic plan is being put in place, there is an urgent need to sanction grid upgrades, especially in Scotland, to enable 2010 targets to be met. Good progress has been made under the banner of the RETS planning process, but the infrastructure identified in that study needs to be built in a timely fashion if Scotland's crucial contribution is to be realised. For the period beyond 2010, further reinforcement will be required, for which planning must start now.

Particular attention needs to be paid to the uncertainties surrounding grid for offshore wind development. In principle, the wind industry believes that as a strategic resource, the offshore network should be paid for on a social basis. In the past, the cost of the grid has been spread across all users; we believe that offshore wind will be the first resource that is expected to pay the entire cost of its grid connections in the history of the UK electricity industry, which strikes BWEA as unfair.

A particularly urgent grid issue that needs to be addressed for the development of offshore wind is that of final sums liabilities. When applying for a grid connection, a developer is required by National Grid to underwrite the cost of reinforcing the network onshore to accept the project's power. Should the project not be built, then the developer is liable for the cost of

reinforcement attributable to the offshore project in question. This is a risk that developers could accept if they had full control of whether the project is to be built or not. The problem comes when National Grid asks the developer to accept the liability before they have even applied for consent, let alone gained it, in order to get a connection at the time they are aiming to complete the construction of their project. In the case of the Round Two projects in the Northwest, the liability that National Grid is asking them to accept is in the order of £100m for each project, before consent has been achieved. This is holding up the development of these projects; developers will hold off from applying for connection until they have consent, thus delaying the projects by 3-4 years. Urgent action is required by Government to solve this problem, or it will risk losing the contribution that needs to come from Round Two by 2010 if emissions targets are to be met.

Wholesale electricity prices

The NAO underlined that renewable targets would only be met if the underlying cost of power on the wholesale market remained robust, thus boosting income for renewable generators in addition to the Renewables Obligation. While high and volatile gas prices are likely to ensure this situation, it will also require tightening of allocations under the EU Emission Trading System across the whole Union. BWEA urges the Government to negotiate for tighter caps to be imposed both in the UK and other EU Member States in order for the cost of carbon to be steadily increased.

Stability of the RO

In order to keep investor confidence high in the renewable energy sector, it is important that the Renewables Obligation remains as a stable policy instrument. In this vein, BWEA welcomed the restrictive terms of reference for the current Review of the RO, which have maintained confidence in the Review process thus far. The extension of the RO out to 15.4% in 2015-16 that has already been implemented was an extremely welcome sign of the Government's intention to keep confidence in the RO high, and BWEA looks forward to a positive outcome from the current Review. The Association will be lobbying for the RO to be further extended to 20% in 2020, thus further boosting confidence that the Government will deliver on its aspiration of providing 20% of the UK's power from renewables in 2020.

Investor confidence in the RO will also be boosted through additional resources for technologies that are currently not economic under the RO, as these will facilitate the development of a wider range of technologies and thus bring us nearer to fulfilling the Obligation's targets. The greater the success of the RO in bringing forward new renewable generation capacity, the more likely it is to be retained as a successful policy measure.

Additional support for some technologies

The NAO called for extra resources to be made available for technologies other than landfill gas and onshore wind in order to diversify the UK's portfolio of renewable generation. BWEA particularly calls for extra help to be given to offshore wind development, to allow it to make its full contribution to the 2010 target and beyond. Decisions on the means and amounts of this extra help

need to be made in 2005, otherwise development work on Round Two projects is likely to slow dramatically, risking delivery of the 2010 target.

The other key areas that BWEA seeks extra funding for are the emerging technologies of wave and tidal stream. We welcome the Government's recent announcement on measures to support these nascent industries with £42m of public money. We note that further resources will be required – see below.

Additional support for all the renewable technologies available in Britain, such as solar and biomass, will be required if they are to fulfil their potential and contribute to the UK's climate change programme. BWEA calls for a coherent programme of support across the board, in the heat and transport sectors as well as electricity generation.

Beyond 2010

With the momentum that should be built up in the renewable industries to meet the 2010 target, BWEA looks forward to a further decade of success up to 2020. Fulfilling the Government's aspiration to have 20% of our power from renewables by that date should give extra carbon savings of 11-18m tonnes of CO₂. Further action on grid infrastructure in Scotland and further south, plus effort to spread wind development over a wider area, will be required to keep new onshore wind capacity coming forward at a suitable rate. BWEA is also hopeful that dispersed development of turbines close to demand centres, including small wind turbines contributing to domestic power consumption, will be providing significant amounts of power after 2010.

For offshore wind, keeping up the momentum will require a 'Round Three' of development. Experience so far offshore shows that the development cycle of site award to first build is five years or more. Round Two will likely be built out in the period 2008-2012, and it is important that in order not to have a hiatus in construction there should be projects ready to build around 2013. Working backwards, this will require an announcement of Round Three in 2008, with a view to awarding sites no later than 2009. Any third round of offshore development should be of similar size to Round Two, which will be over 7,000MW if built to its full extent. An additional reason for having Round Three before 2010 is to allow time for a possible fourth round to be awarded towards the end of next decade which could be built by 2020, and thus keeping the option of a further contribution from offshore to the 20% target.

BWEA notes that any third or later round of offshore wind would likely have to be developed within the framework of marine spatial planning, currently being discussed in the context of a possible Marine Bill. While BWEA is in favour of such planning in principle, there is the possibility that the planning process will either delay development of the UK's huge offshore wind resources, or restrict development to unnecessarily small areas of seabed. Offshore wind's contribution to emission reductions would be reduced if marine spatial planning were to result in such outcomes.

A significant contributor beyond 2010 will be the wave and tidal stream technologies, which the Government has already put considerable resources

into. We would note that in order to develop these technologies to their full potential over the next ten years will require considerably more funds as the technologies mature, and the size of demonstration projects significantly increases – though the incentive given in future funding may well be less per MWh than the £100 proposed for projects built in the first three years of the scheme. A significant sum will be needed in the next comprehensive spending review to build upon the good foundation laid so far. If UK plc is to benefit to the full from developments in this sector, stable long-term policies will be required, with commitment to spend the sums required over a period covering two or more Government terms.

Microgeneration

A package of measures to support the long term development of micropower technologies should be introduced. While we welcome the development of a Microgeneration Strategy, it is important that this contains meaningful, new policies for the sector, and is not simply a restatement of existing policies. In particular, the strategy should contain measurable targets for the sector. Policy should also be extended to small-scale renewables other than those producing electricity. Measures should be aimed not just at households but also at small businesses and other non-domestic buildings. The Government has made a good start in this area with the successful Clear Skies scheme, which should be retained and extended. The prospective new Part L of Building Regulations also represents a small yet promising step forward, as do VAT reductions for ground source heat pumps and microCHP. The 'green building' programme that is intended to replace existing solar power programmes must be implemented quickly in order to reduce uncertainty for companies in this area and to stimulate building developers' transition to the use of renewable energy technologies. To support policy in the area of small-scale renewables, standards, competence and accreditation systems must be developed in order to sustain customer confidence in these new sectors. If microgenerators are to be properly supported, then two-way metering must be mandated as a necessary preparatory step.

Conclusion

Wind is well placed to fulfil its planned contribution to the UK's climate change targets, which will bring key economic and security of supply benefits as well as the environmental gain. However, there are still key challenges that need to be addressed if this outcome is to be realised. BWEA calls on Government to redouble its efforts to smooth the path for wind development, which will prepare the path for the full range of renewable energy technologies to make their own necessary contribution to emission reduction in the future.

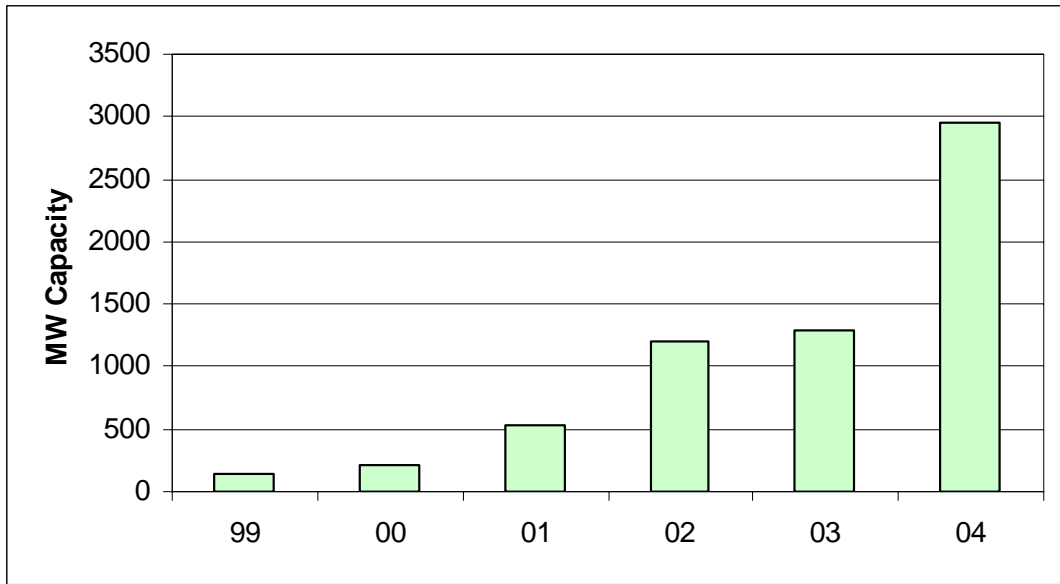


Figure 1: MW of onshore wind capacity entering planning system, 1999-2004

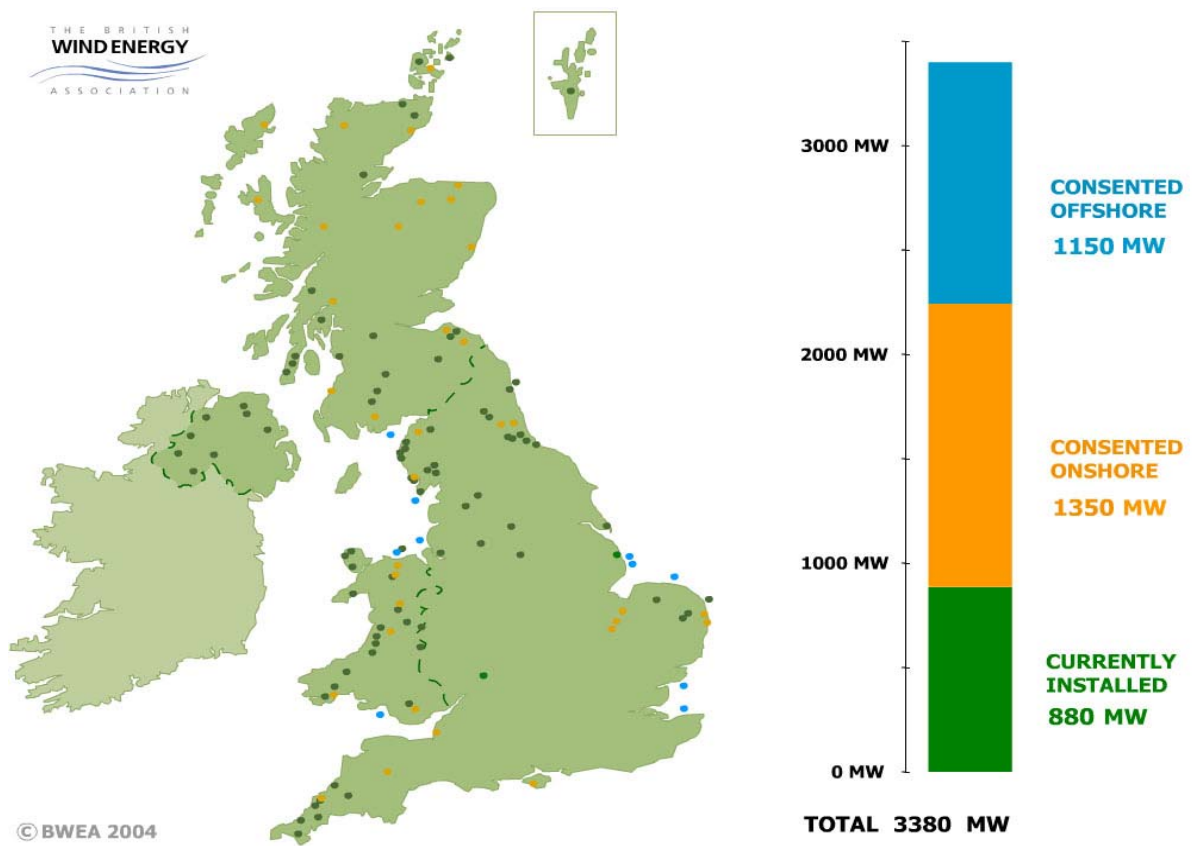


Figure 2: Constructed and consented wind projects in the UK.

Appendix 1: BWEA member companies and academic members as of 7/3/05

A2Sea A/S
ABB Limited
ABEnergy Ltd
ABP Marine Environment Research Ltd
Active Power Ltd
Adler Group
AEA Technology Environment - Future Energy Solutions
Aegis Rubber Engineering
AEI Cables Ltd
Afon Toolmakers & Engineers Limited
Agrilek Limited
Airtricity Development Ltd
Albro Planning & Environmental
Alfred McAlpine Business Services
All Wind UK Ltd
Allen & Overy
All-Energy Opportunities
AMEC Wind Energy
Andaray Engineering Ltd
Andrew Weir Shipping
Anglesey Wind & Energy Ltd
Anglian Water Services
Aqua Energy Development UK Ltd
Areva T & D Ltd
Ashurst Morris Crisp
Atlas Equipment Finance LLP
AWG Project Management Services
B9 Energy (O&M) Ltd
Babcock & Brown Limited
Babtie Group Limited
Bank of Scotland
Barclays Bank Plc
Barton Willmore Planning Partnership
Baywind Energy Co-operative Ltd
Bendalls Engineering
Berwin Leighton Paisner
Besix
Bheara Ltd
Bircham Dyson Bell
Black & Veatch Consulting Ltd
Bomel Limited
Bond Pearce Solicitors
Bonus Energy A/S
Bosch Rexroth Ltd
British Energy plc
Broadview Energy Limited
Brodies LLP
Brodies W.S., Solicitors
Brown McFarlane Ltd
Brumac Wind Systems Ltd
Bue Viking Ltd
Burgess Salmon
Cambrian Caledonian Ltd
CB & I John Brown Limited
CEASA Promociones Eolicas S.L
Centre for Management Under Regulation (CMUR)
Centre for Sustainable Energy
Centrica Energy Management
CG Property
Chalcroft Construction
Clarke Energy Ltd
Climate Change Capital
Clipper Windpower Europe Ltd.
CLRC, Rutherford Appleton Laboratory
CNS Subsea Ltd
CO2e
Collett Transport Ltd
Cornwall Consulting
Cornwall Light and Power Co Ltd
Coronation Power Limited
Corus
Cranfield University
CREST
CSL Bird Management Unit
Cumbria Windfarms Ltd
Cwmni Gwynt Teg Cyf
Dan McNally Limited
Dansteel Trading Ltd
Densit A/S
Devon Wind Energy Limited
DLA (Partnership)
DM Energy
Dong VE A/S
DP Energy Ireland Ltd
DSB Offshore Limited
Dulas Ltd
Dundas & Wilson
DW Consultancy Ltd
E.ON UK Plc
E4environment Limited
Eco2 Ltd
EcoGen Ltd
Econcern
Econnect Ltd
Ecotricity Ltd
EDF Energy
Edmund Nuttall Limited
eeegr, East of England Energy Group
EHN
ELSAM A/S
Emby Energy Limited
EMU Ltd
Energi E2 A/S
Energiekontor (UK) Ltd
Energy for Sustainable Development
ENERTRAG UK Ltd
Engineering Technology Applications
Entec UK Ltd
Enviros Consulting
ERA Technology Ltd
ERGOFinance LLP
ERM
Ernst & Young
ESS Ltd

EU Energy Limited
Eurus Energy UK Limited
Eversheds LLP
Falck Renewables Limited
Farm Energy Ltd
Fellows International Limited
Field Fisher Waterhouse
Fluor Limited
Force 9 energy
Fortis Bank
Freshfields Bruckhaus Deringer
Fugro Engineering Services Ltd
Gamesa Energy UK
Garrad Hassan & Partners Ltd
GE Wind Energy
Geo Plant bv
Geotrupes Energy
Global Marine Systems Ltd - Energy Services
Good Energy
Good Relations
GreenPower
Hainsford Energy Limited
Halcrow Group Ltd
Hammonds
Harworth Power Ltd
Heath Lambert Group
Hedley Purvis
Heriot-Watt University
HgCapital Ltd
Hibernian Wind Power
HJ Banks & Co Ltd
Holman Fenwick & Willan
HR Wallingford Ltd
Hunton & Williams
HVB
Hyder Consulting (UK) Limited
Hydrosearch
I & H Brown Limited
Ilex Energy Consulting Ltd
Impax Capital Corporation
Ince & Co
Independent Power Systems Ltd
Infinergy Ltd
Institute for Environment and Sustainability Research
Investec Bank (UK) Limited
IPA Energy Consulting
IPSA Power Ltd
Iskra Wind Turbine Manufacturers Limited
Isleburn Mackay & Macleod Ltd
IT Power Ltd
ITI Energy
James Walker & Co Ltd
JBI Technology Limited
John Mowlem & Company plc
KBR
Kema Ltd
Kendall Freeman
Kongsberg Simrad Limited
KPMG
LDA Design Consulting LLP
Ledingham Chalmers
LM Glasfiber A/S
London Offshore Consultants
Lovells
Macaulay Institute
MacRoberts Solicitors
Mammoet Van Oord B.U
Marine Current Turbines Ltd
Marine Projects International Ltd
Marlec Engineering Co Ltd
Marsh Ltd
Martineau Johnson
McGrigor Donald
McNicholas Construction Services Ltd
Mersey Docks & Harbour Company
Met Office
Metoc plc
Mistral Invest
Morgan Est
Morrison Construction Services Ltd
Mott MacDonald
Mullion Manufacturing Limited
Multi-Science Publishing Co Ltd
Nabarro Nathanson
National Energy Foundation
National Grid Transco
Natural Power Consultants Ltd
Nexans Deutschland Industries GmbH & Co KG
Nordex UK Ltd
Nordic Windpower AB
Norsk Hydro Energy
North British Wind Power Limited
North Energy Associates Ltd
Norton Rose
Novera Energy
Npower Renewables
Nsure Renewables
Nuon Renewables
Ocean Power Delivery Ltd
Ocean power Technologies Ltd
Oceantecs Limited
OCP Cable Protection Ltd
Offshore Renewable Energy Alliance Ltd
Open University
Operis Business Engineering Limited
Orga Limited
Orrick Herrington & Sutcliffe
Osborne Clarke
Oscar Associates (UK) Ltd
Osiris Projects
Pager Power Limited
PB Power Ltd
Peel Holdings plc
Pendragon Consultants Ltd
Pinsent Masons
Pirelli Cables Ltd
PMSS Ltd

Power Technology
Proven Engineering Products Ltd
QinetiQ Ltd
RED (Renewable Energy
Development)Group Ltd
Redfield Consulting Limited
Renergys GmbH - Renewable Energy
Solutions
Renew North
Renew Tees Valley Ltd
Renewable Devices Ltd
Renewables East
Renewables North West
REpower UK Ltd
RES Group
ReSoft Ltd
Ridge Wind Ltd
Risk Mitigation Geoservices Ltd
RMB Engineering Services
Royal Haskoning Ltd
RPS Group
RSK Environment Limited
Rural Land Services
Ruston Wheb
Saipem s.a.
Scott Wilson Oceans
Scottish & Southern Energy plc
ScottishPower
Screwfast Foundations Limited
Seabed Scour Control Systems Ltd
Seacore Ltd
SeaRoc UK Ltd
SgurrEnergy Limited
Shaw Power Technologies International
Shell WindEnergy Ltd
Siemens Power Generation
Simmons & Simmons
Sinclair Knight Europe Ltd
SLP Energy Ltd
SMD Ltd
Solent Composite Systems Ltd
Statkraft SF
Stephenson Halliday
Talisman Energy
Tegni Cymru Cyf
Terence O'Rourke
The Engineering Business Limited
The Royal Bank of Scotland Plc
Theodore Goddard
Titan Environmental Surveys Ltd
TLT Solicitors
Toby Manning Limited
Total Energies Developpement S.A.
Trac International Ltd
Trinity House
Triodos Bank / Triodos Renewable Energy
Fund
Turcan Connell
TWI Ltd
UMIST

Underwater Security Consultants Ltd
United Utilities Green Energy
University of Birmingham
University of Edinburgh
University of the West of England
UXB (UK) Ltd
Vestas - Celtic Wind Technology Ltd
Vinsen & Elkins
Wardell Armstrong International
Warwick Energy Limited
Waterman Environmental
Watson, Farley & Williams
Wave dragon Ltd
Wavegen
West Coast Energy Ltd
Western Windpower Ltd
Westwind
White & Case
Wichita Co. Ltd
Wind Energy Ltd
Wind Prospect Ltd
Windelectric Management Ltd
Windfarms Ltd
Windmade Energy Ltd
WindPro
Windsave Ltd
Windspeed Ltd
Windsupply
Wisenergy
WKN Windkraft Nord AG
Wragge & Co
Wrigleys Solicitors
Wynns Limited
Your Energy Ltd

Total: 322