

Executive Summary

- The renewable technologies of wind, both on- and offshore, wave and tidal stream can bring strategic benefits to the UK, since they are zero-carbon, fuel-independent, indigenous and not subject to political interference, and promote diversity of our generation portfolio. Wind in particular can deliver significant quantities of electricity in the period up to 2020, reducing the UK's reliance on imported gas and playing a key part in reducing the 'generation gap'. In fact, wind is the only low-carbon power source that can be built in sufficient quantities before 2015 to address the gap that retirement of coal and oil plant under the Large Combustion Plant Directive would otherwise create.
- Onshore wind is leading the way in the delivery of renewable power: there is already 1,800 megawatts (MW) operating or under construction, and projects either already consented or likely to be consented in the near future should result in a total capacity onshore of 6,200 MW in 2010, assuming current planning conditions remain. This amount of capacity would deliver just under 5% of the UK's power in 2010.
- While progress has been made on offshore, it has not been as fast as hoped for. With a new policy impetus it can still deliver up to 8,000 MW in 2015, providing 6% of our power in that year. Action by Government to support this new sector is required if this potential is to be realised, however.
- BWEA's research shows that in the period to 2020 a combination of on- and offshore wind, plus a significant contribution from the new marine renewables and smaller, distributed wind turbines, can alone provide 21% of the UK's projected power needs. This would be made up of 12,500 MW of onshore wind (generating almost 9% of 2020 demand), 11,500 MW of offshore wind (9.4%) and 3,000 MW of wave and tidal stream (2.1%), plus an additional (but at this point uncertain) contribution from small wind systems.
- This amount of renewables, if displacing gas-fired generation, would result in gas imports being reduced by 14.6 billion cubic metres annually, equal to 324 tanker-shipments of Liquefied Natural Gas, and carbon dioxide emissions of 32 million tonnes (mt) being avoided. This generating capacity would be providing the equivalent of two-thirds of all the electricity used in UK homes. There will also be major economic benefits from this investment: BWEA estimates that building 12,500 MW of onshore and 11,500 MW of offshore wind will result in direct economic benefits of £16.3 billion to UK plc in the period up to 2020.
- The renewable contribution of 20% in 2020 is deliverable, but the key to unlocking this potential is getting the financial mechanism right for emerging as well as existing lower-cost renewables. If no extra resources are provided for newer technologies or the Renewables Obligation (RO) not evolved to direct more resources to them, offshore wind will not be delivered in the quantities required to establish the sector and attract investment in the supply chain that will bring costs down. Should offshore wind not deliver, then it will be difficult for investors to show confidence in Government providing the right framework for the nascent technologies of wave and tidal stream; finding a solution for offshore, whether within or without the RO, will be a key test of the Government's resolve to set the UK on the path to a low-carbon future.
- Delivery of 20% of our power from renewable energy will require additional support. This should be done by extending the RO to 20% in 2020 and providing additional resources to the emerging technologies. Extending the RO to 20% in 2020 from its current top level of 15.4% in 2015 would increase the overall cost of the RO in 2020 from £1.9 billion/year to £2.5 billion/year, in 2006 money. For an average domestic consumer, this would mean an extra £8/year on top of the existing commitment of about £20/year for the 15.4% Obligation, or an additional rise of about 2% on top of the 6% pre-committed rise on a typical household bill of £400/year. The resources required to support the emerging

technologies are of the same order of magnitude as the surplus being generated by the Non-Fossil Purchasing Agency – £0.5-1 billion cumulatively up to 2010 – and if this surplus were to be used to provide such support there would be no additional rise in consumers' bills.

- Concerning the RO, BWEA would prefer for it to remain as it is and the emerging technologies be given extra resources outside of that mechanism. However, should no or insufficient funds be forthcoming, then offshore wind will not deliver and the RO would be open to charges of underperformance. BWEA is thus open to the argument that the RO may need to be evolved to address these issues. The Association has reviewed options that are being debated as possible changes to the RO against five key criteria; at present BWEA is not in a position to endorse any shift from the status quo as it is not clear how investor confidence in onshore wind can be assured under any of the options reviewed. This is not to say that this cannot be done, but further work is required to ensure that any possible change to the system continues to support the healthy expansion of the onshore wind sector.
- Alongside certainty on the economic front, the realisation of the 20% contribution from wind, wave and tidal requires action on planning. With clear steps to reduce the decision times for onshore wind projects, current progress can be accelerated. In the near term, the issue of Section 36 consents for larger projects in Scotland must be addressed: developers have been awaiting decisions from the Scottish Executive on 4,250 MW of projects, some of which were lodged several years ago. Determinations must be made soon to allow this capacity to be brought forward. The offshore renewables require a strong planning framework from the Marine Bill currently being consulted on.
- Renewable development also requires grid issues to be addressed. New thinking is required on strategic planning as it takes longer to plan and build new transmission lines than it does to develop wind farms, both on- and offshore; thought will also have to be applied to how capacity can be provided for the new marine technologies or they will risk being squeezed out of the market, particularly in Scotland.
- The most obvious way that will communicate that Government is serious in tackling this ambitious agenda is to convert the current aspiration to source 20% of our power from renewable resources into a firm target. Government should make this a key result of the Energy Review and subsequently work with the renewable industry to implement the policies required to reach this objective, alongside the numerous agencies and administrations at all levels that will be required to deliver key parts of the agenda.