

### 3. Why does the Bill matter and what does it need to do?

It is clear from the above that low carbon developers have plans in hand that would make a major contribution to meeting the UK's energy security and carbon reduction objectives, and to this country's GDP. However, much of the major investment required will not be forthcoming unless progress is made on the Energy Bill.

Our combined membership stands at **over 900 companies** and includes some of the major players in the energy industry as well as representatives across the entire low-carbon energy supply chain. We all agree that the reforms to the electricity market set out in the Energy Bill are vital to unlocking the necessary investment, and that any slippage in agreeing the Bill's key provisions could result in investment being postponed, with major implications for associated new industrial development and jobs in a high-tech, high growth sector.

### Solutions

- The Bill needs to **proceed to Royal Assent as quickly as possible** - whilst allowing adequate scrutiny – if the necessary investment in low carbon technology is to come forward
- The **role of the Contract for Difference counterparty is crucial**. The provisions need to be robust – which means in line with the Government's amendment at Energy Bill report stage in the House of Commons
- There needs to be **clarity on the Levy Control Framework** and Delivery Plan in line with the timetable previously outlined
- The Government should **set out a vision regarding decarbonisation of the electricity sector beyond 2020**

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## Energy Bill and the UK Supply Chain

### *Briefing Paper from the Carbon Capture & Storage Association, Nuclear Industry Association, and RenewableUK*

#### 1. Introduction

As trade associations representing the three key low carbon electricity generating technologies, we very much support the Government's objectives to reform the electricity market,

The Climate Change Committee recently concluded that delaying investment in low carbon technologies to the 2030s would be likely to drive up costs – by up to £100bn in some scenarios. Momentum also has to be maintained in investment in order to meet energy security objectives and climate change targets.

We believe the proposed reforms should help facilitate the necessary investment. Whilst the Associations may differ on specific requirements for their sectors, we are agreed that delivering the UK's electricity needs depends upon the Energy Bill and its associated regulations proceeding swiftly. This will enable the certainty needed for investment in much needed infrastructure, across the low carbon sector, to enable a full mix of technologies to be able to operate together.

We therefore strongly support the Government's Energy Bill and would like to see it proceed to Royal Assent as early as possible. We believe it is of major significance not only for the future of the UK energy industry but for the economy more generally at a critical point in the economic cycle. Taken together, low carbon investment could boost UK GDP by many billions per year – indeed, the sector is one of the few parts of our economy that is growing in the current economic climate. Estimates of the potential contribution in each of our sectors is set out below:

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## 2. The Economic Potential of Low Carbon Industries

### a) CCS

The deployment of CCS is expected to create a massive future global industry worth trillions of dollars by 2050, a value similar to today's global oil industry. The UK has the potential to take a significant share of this market value – the CCSA report “A Strategy for CCS in the UK and Beyond” estimates that the CCS market could be worth more than **£10 billion per year by 2025**, creating more than **50,000 jobs by 2030**.

At present, there are two projects in the Government's CCS Commercialisation Programme and a number of projects outside of this process. A typical (new build) CCS project will create 2-3000 direct jobs in the construction phase, which would stimulate a further 5-6000 indirect (supply chain) and induced (wider economy) jobs. In the operational phase, up to 300 direct jobs would be created, which again would stimulate 2,500-3000 indirect and induced jobs in the wider economy.

The value of a typical CCS project is significant – with a Gross Value Added (GVA) of potentially more than £3 billion to the UK economy in the construction phase (direct, indirect and induced) and more than £100 million per year in the operation phase.

There are wider benefits of CCS; in a carbon constrained world, industrial sectors such as steel, cement and ammonia will be dependent on the ability to fit CCS in order to decarbonise (as their carbon dioxide is process as well as fuel generated). CCS will therefore ensure the continued operation of these vital sectors – creating and retaining valuable jobs in the UK. In addition, the combination of CCS with Enhanced Oil Recovery will create a significant revenue stream for a CCS developer – significantly improving the economics of a CCS project.

### b) Nuclear

The UK was a pioneer in development of civil nuclear technology and has capability across the whole nuclear fuel cycle. There are currently **60,000 people** working in the UK civil nuclear industry - 25,000 employed directly - plus many further in the supply chain.

Three nuclear new build consortia have plans for around 16 GW of new plant at 5 sites in England and Wales, and EDF Energy are poised to start construction at Hinkley Point in Somerset. Hinkley Point C alone will avoid around 10m tonnes of CO2 emissions a year over 60 years. There is both cross-party political and public support. Latest public opinion polls show those in favour outnumbering those against by around 2:1.

Each project is similar in scale to the London Olympics, and **total investment is estimated at £60bn**. The UK nuclear supply chain will make a major contribution. EDF Energy has stated that just under 60% by value of their

project will be sourced from UK suppliers. Hitachi – who have purchased Horizon Nuclear Power – expect their equivalent number to be slightly higher. It is envisaged that the number of UK companies involved in the nuclear programme will grow as UK suppliers develop their offering to the developers and gain experience in the nuclear market.

During construction of the Hinkley reactor, 25,000 people will work on the project with 5,000 jobs being created for people in Somerset alone. The station will create 900 jobs for the lifetime of the plant and require an additional 1,000 individuals working as an outage team. 1,200 businesses in Somerset have already signed up to participate and a further 550 have done so nationally. Horizon Nuclear Power have confirmed that they intend to invest £20billion in the UK through their projects at Wylfa in Anglesey, and Oldbury in Gloucestershire.

Globally an estimated £930 billion will be invested in nuclear new build over the next 20 years, with another £250 billion for decommissioning old plants. A successful UK nuclear new build programme would enable the UK nuclear supply chain to compete in this very important international market.

The Nuclear Industry Association and Government are working closely together through the recently published Nuclear Industrial Strategy to strengthen the UK supply chain so it can take maximum advantage of these opportunities. The government has committed to continued funding for research and development, innovation and skills, including ongoing support for the Nuclear Advanced Manufacturing Research Centre and other centres.

### c) Wind, wave and tidal

Between July 2011 and June 2012, total investment in offshore wind represented a Gross Value Added (GVA) **to the UK £150m to £600m**. This value will increase significantly as the level of UK content in offshore developments grows, with developers moving to source at least 50% of content from the UK – further boosting the contribution of wind to a rebalanced, manufacturing driven economy. Over the last year examples of investment include Belfast Harbour, which progressed the construction of a £50m logistics facility for DONG Energy and ScottishPower Renewables, creating 150 construction and 300 long-term jobs.

Capital investment in onshore wind in 2011-12 amounted to just over £1bn – of which over £470m was spending retained within the UK, representing **a GVA to the UK economy of over £182m**. Additionally, the onshore projects developed over the period will bring £737m to the UK over their lifetime through Operation & Maintenance contracts. As of April 2012, the wind, wave and tidal industries currently provided full-time equivalent (FTE) direct employment for over 12,200 people and sustained up to 5,000 further jobs in the wider supply chain.

Moving forward, it's predicated that growth in wind wave and tidal is predicated to create **over 88,000 jobs by 2021**.