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Wind Energy in the UK

State of the Industry Report Summary 2015

October 2015

RUK15-020-3

2014/15 in Numbers

648 MW

Built onshore

1,394 MW

Built offshore

13,313 MW

Total capacity

1,826 MW

Consented onshore

7,202 MW

Consented offshore

10%

Wind energy contribution to UK power needs

9 MW

Average onshore project size

51%

UK local consenting rate

16 months

Average time to onshore planning decision

£1.25bn

UK investment in wind

£1.25m

UK annual community benefit funding

6th

UK wind energy world ranking

15,500

Direct UK wind energy jobs

207

Manufacturing companies in the supply chain

Front cover image: Wind turbines in northern Scotland (Shutterstock)

Executive summary

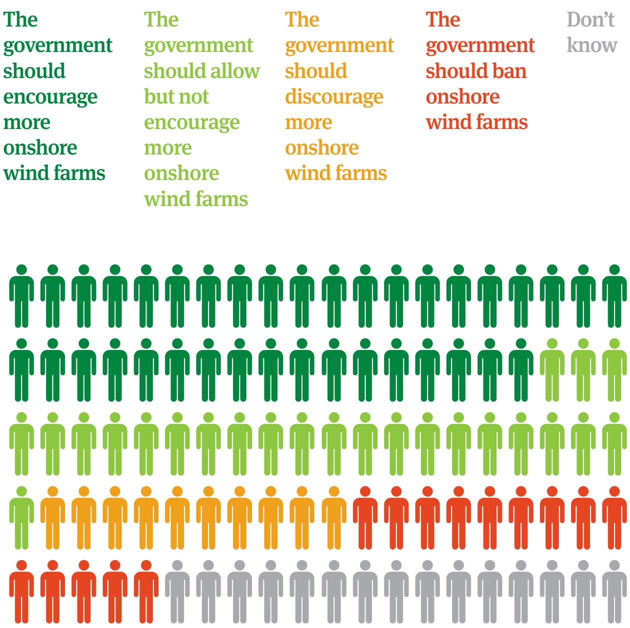
The role of wind energy in the UK has never been under more intense scrutiny. In less than ten years wind energy's contribution to UK electricity needs has grown from less than 1% to 10%, making wind energy the UK's single biggest source of renewable power. Wind energy alone provides more renewable electricity (nearly 50% of the total) than all other sources combined. But it is this very success which has brought political challenges.

Wind energy is now at a crossroads. Difficult choices face the sector, but also Government. Put simply wind energy remains the best proven route to decarbonisation in the UK – growth over the last ten years confirms this. Government has yet to set out its long term plan for energy policy, but if we want to keep the lights on, decarbonise and protect consumers, then wind energy needs to play a continuing role.

It was Mike Tyson who said that "everyone has a plan 'til they get punched in the mouth." The wind sector has and continues to face a series of challenges. But it remains confident of its ability to deliver low carbon energy at best value to UK consumers, within a timescale that works for the country, while also delivering wider economic benefit. The public knows this too, with a majority of voters across all parties supporting continued growth of wind energy in the UK.

2015's edition of *Wind Energy in the UK* sets out the achievements of our sector over the last twelve months. These achievements are set against a backdrop of policy uncertainty, with a new Government having moved to halt onshore wind deployment, while also showing scepticism of other renewable energy options.

Sunday Times 2015 poll of attitudes to Onshore Wind farms



Source: YouGov poll for the Sunday Times, fieldwork 14–15th May 2015.

Government's stated objective is cutting carbon at lowest cost. It is right that Government challenges industry on its ability to protect consumers against costs. What is more difficult to justify is undermining the investment climate for the whole energy sector and delaying or adding on cost to much-needed new energy infrastructure.

Onshore wind is the closest of any source of low carbon power to being cost competitive with the front-runner – new gas plant. Offshore wind, meanwhile, is ahead of target in its efforts to bring down costs, and has proven its ability to deliver at scale while securing significant wider economic benefits.

The biggest single challenge for the sector has been the policy changes introduced by the new Government since coming to power in May 2015. The Renewables Obligation, scheduled for closure in 2017, is now set to close in 2016 (for onshore wind). The consequence of this decision has been a messy political debate, with the Government's use of primary legislation to bring about closure creating a hiatus as financiers wait to see detailed clauses in the new Energy Bill. Despite assurances that Government wants to protect investors and support projects at an advanced stage of development, delays in the publication of grace period clauses have compounded investor uncertainty.

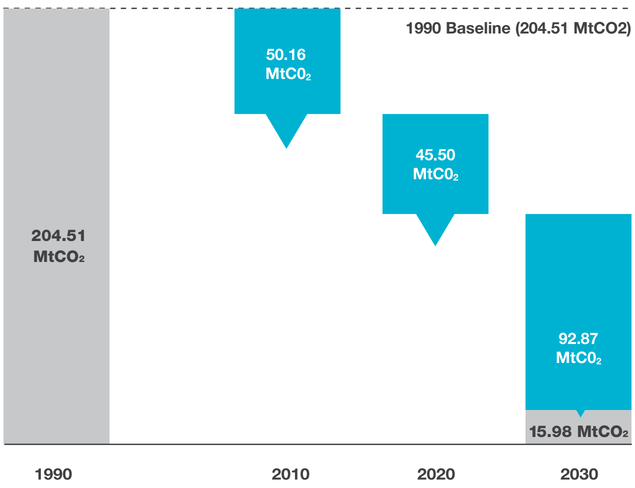
In addition, Government has proposed radical changes which effectively bring Feed-in Tariff support to an end, has delayed decisions on future Contract for Difference auctions, and removed exemption from the Climate Change Levy for a group of renewable technologies including wind, which now means that low carbon generators must pay a carbon tax.

The new administration has also introduced sudden sweeping changes to the planning system. Formally there to ensure local communities' views are taken into account, the changes include a wider set of restrictions which single out onshore wind for different treatment to that of all other infrastructure development and which run counter to the principles of the National Planning Framework established in the last Parliament.

The new Government has been resolute that enough capacity has come forward to meet our short-term renewable energy targets, and that any more would breach limits on funding set within the Levy Control Framework (LCF). Unfortunately, Government has not set out its workings about the LCF, or clarified how it is balancing over-delivery of renewable electricity with under-delivery of renewable heat in their dual role of delivering our 2020 energy target.

But above and beyond these setbacks, Government has yet to acknowledge the continued need for renewables in replacing ageing capacity and decarbonising our electricity supply. Delivery against our 2020 renewable energy targets may be important, but they are only a milestone in wider efforts to decarbonise. According to the Committee on Climate Change, in the next decade the UK must take out twice as much carbon from our electricity system as we are tasked with delivering in this decade.

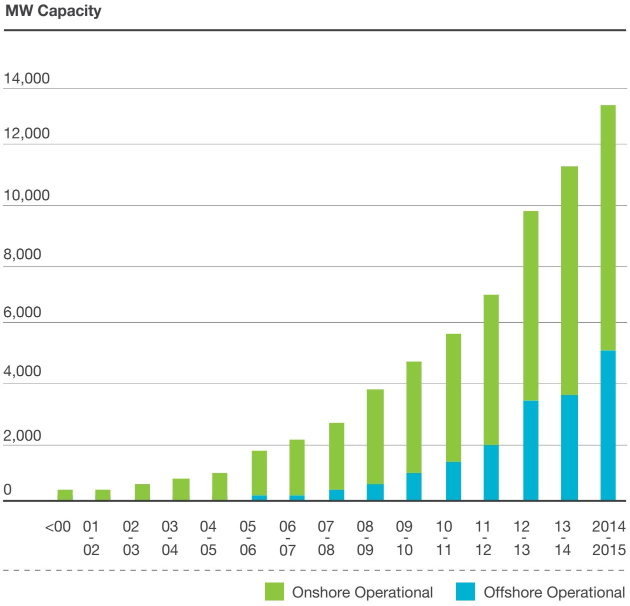
Carbon Reduction Projection



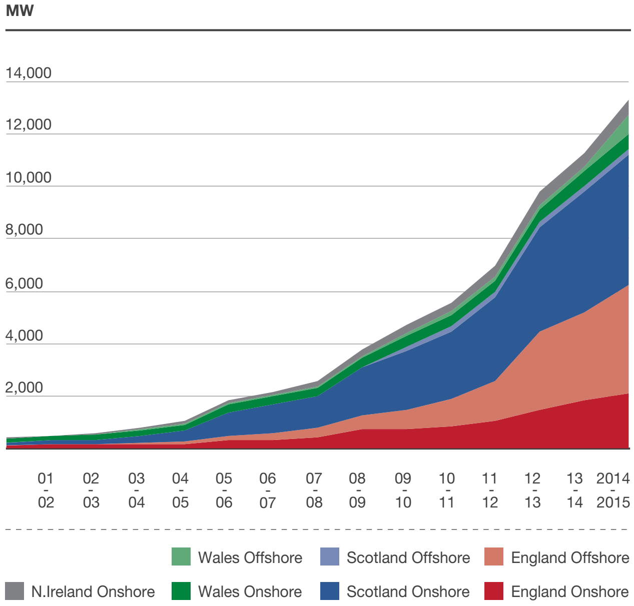
It is this need for continued evolution of our energy market which gives our industry confidence that our business model is the right one. And this vote of confidence is borne out in this report which shows how wind energy is delivering new capacity, investment in communities and the economy as a whole, and jobs growth. However, our report also shows increasing concern about the investor climate, and low levels of confidence in Government and its ability to deliver a stable policy climate. This was a concern echoed by the CBI, which last month warned that "despite progress so far, today's investors are more uncertain about the UK's low carbon future."

Wind energy is delivering innovation, embracing competition and proving cost reduction. Alongside this it is offering clean electricity and long term skilled jobs, which makes our plan the right plan for the UK, despite current challenges.

UK operating capacity 2000-2015



Annual deployment – England vs Scotland



The Main Highlights of 2014/15

Between July 2014 and the end of June 2015, the UK saw an additional 648MW of onshore and 1,394MW of offshore wind built, giving a total capacity of 13,313MW. This growth means that wind now provides 10% of UK power needs.

This growth means that in the last year £1.25bn was invested into the UK because of wind energy, sustaining 15,500 direct & 15,078 indirect jobs. These employment figures show an industry broadly static in numbers, with small reductions in numbers working in onshore and offshore wind, but a large increase in numbers in medium wind.

Our industry has a growing number of people employed in the operation of sites. However, construction activity remains important, and lower levels of deployment onshore in the last twelve months can therefore explain these reductions.

A significant pipeline of projects looks set to be built out over the next 12 months. The onshore industry will have a busy year ahead as it builds out ahead of RO closure, as well as beginning to prepare new CfD schemes for delivery. While there is over 8GW of onshore wind in operation and 2GW in construction, we can also expect to see a further 3GW added to this in the next few years, with this technology set to deliver up to 13GW by 2020.

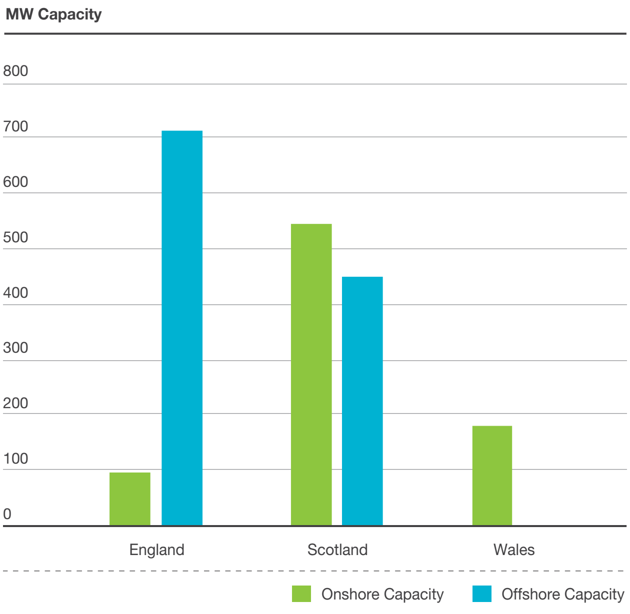
Offshore wind has seen high levels of construction over the last twelve months, though it is now having to manage a dip in activity. The UK has over 5GW in operation, but limited growth over the next two years. Industry expects 10GW to be delivered by 2020, so a doubling of capacity is set to take place, but the sector has further ambitions to go beyond this into the next decade. Over 7GW of offshore wind was consented in 2014/15, with a further 5GW in the planning system in June 2015.

For offshore wind, a critical issue is the future pipeline for projects, which is largely dependent on future CfD allocation rounds. With the new Government yet to set out its aspirations for offshore wind growth past 2020 – necessary for the UK to capture further supply chain benefits and deliver ongoing cost reductions – cannot be assured.

A Devolved Energy Market?

2014/15 also shows further evidence of a trend apparent for a number of years now, which is the growing devolution of energy markets. The UK's offshore wind market remains focussed on England, which has over 80% of operating capacity. However, new Scottish schemes are beginning to come through, with 2GW (over 30%) of offshore consented projects being Scottish, and contracts secured through FID Enabling or CfD auctions for two Scottish wind farms.

Wind Capacity awarded in CfD auction by location (MW)



The more significant shift is the growth of the Scottish onshore wind market. Over 60% of UK onshore wind capacity is now in Scotland. In the last year, half of all construction activity and over 70% of new consents were in Scotland. In contrast, only 25% of operational onshore capacity and less than 10% of new consents are in England.

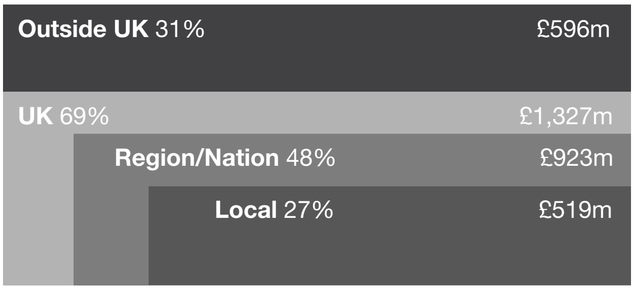
This shift is perhaps best illustrated by CfD auction results. Only 11% of the contracted capacity is in England. In contrast 67% is in Scotland and 22% in Wales. Meanwhile, CfD awards for offshore capacity, were split 60:40 between England and Scotland, with one scheme in each country being awarded a CfD contract.

A Strong Investment Story

UK investment remains strong, with £855m of capital investment onshore in 2014/15, resulting in £402m of turnover for UK companies and £174m GVA to the UK economy.

Research into UK content shows that 69% of onshore wind spend remains in the UK, which equates to £1.9bn of spending across the life of wind farms built in 2014/15. Given Scotland's leadership in onshore wind, it is clear that the bulk of onshore wind investment is benefiting Scottish companies.

Lifetime Economic Contribution of onshore wind built in 2014/15



Offshore we estimate that some £840m has been spent in the UK in 2014/15. The bulk of this is in capital on construction and equipment, with offshore expenditure on ongoing operation and maintenance (O&M) being increasingly valuable to the UK and communities near offshore wind projects. Over time the level of benefit coming to the UK will grow as the offshore wind fleet expands and the level of UK content increases.

Falling Investor Appetite

Our Annual Survey of member attitudes shows a worrying reduction in confidence. 73% say that the investment climate is less favourable now than over the previous 18 months. The percentages show this has been increasing over the last four years. Especially worrying for this Government is the fact that 2015 is the first year in which more people say the investment climate is less favourable than the same or better. Only last year 51% of members said the investor climate was the same or better as the previous year, whereas in 2015 the equivalent figure is just 27%.

To meet renewable electricity's contribution to our 2020 renewable energy targets, we will need around 13GW of onshore wind and 10GW of offshore wind by 2020. However, a majority of our members now think we will deliver below these levels, suggesting pessimism that enough capacity can be translated from consent to operation to meet our targets.

Overall it is clear that lack of Government backing is impacting on sector confidence. 89% of companies see that Government policy has become less favourable in the last 18 months. This figure is at its highest level since we began surveying industry confidence. In contrast, back in 2011 63% rated Government as either the same or becoming more favourable.

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The voice of wind & marine energy

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Our vision is for renewable energy to play a leading role in powering the UK.

RenewableUK is the UK's leading renewable energy trade association, specialising in onshore wind, offshore wind, and wave & tidal energy. Formed in 1978, we have a large established corporate membership, ranging from small independent companies to large international corporations and manufacturers.

Acting as a central point of information and a united, representative voice for our membership, we conduct research, find solutions, organise events, facilitate business development, advocate and promote wind and marine renewables to government, industry, the media and the public.

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