

## Wind Energy in the UK State of the Industry Report

October 2009





# 2009 Deployment

Progress in the deployment of wind energy in 2009 has continued along the same path of growth achieved in the five years that preceded it. The onshore wind industry continues to march forward with rapid acceleration and 2009 has already eclipsed the installed capacity of last year, with 648MW commissioned this year to the end of August compared to 532MW installed in the whole of 2008. 28 newly commissioned projects contribute to this total with Whitelee, Europe's largest wind farm at 322MW, now fully operational. A further 10 medium sized wind farms of between 10MW and 59MW have made significant contributions to the total, which is an annual onshore deployment record with one third of the year still remaining.

Average onshore turbine size in 2009 to date, has also hit a record breaking 2.1MW with the newly installed capacity being delivered from just 308 turbines.

Technological advancement and the rate of construction are going from strength to strength.

2009 has seen completion of Lynn and Inner Dowsing's 54 turbines with an installed capacity of 194MW, the first offshore wind farm commissioned since Burbo Bank back in October 2007. This is the start of the resurgence of offshore as Robin Rigg, Rhyl Flats and Gunfleet Sands close in on completion.

### Future Deployment - Onshore

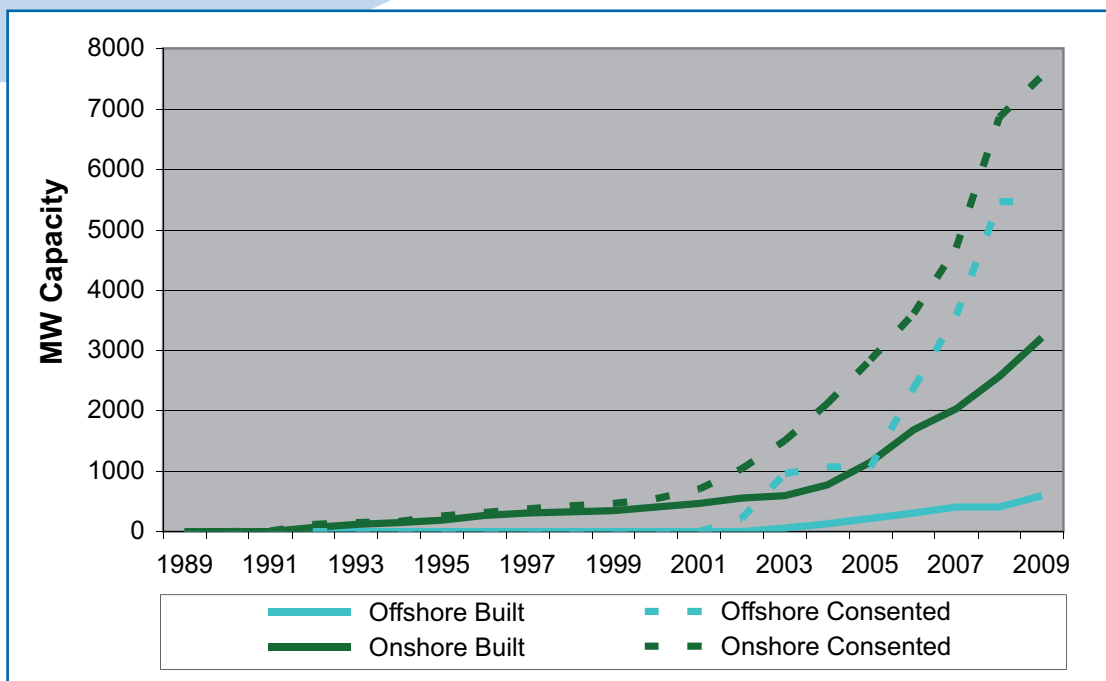
Looking ahead, those onshore projects which are consented and yet to break ground comprise 3,474MW from 1,437 turbines, maintaining the average turbine size for outstanding consented projects at nearly 2.5MW. However, 2009 appears to show a drop in the rate of consented capacity both onshore and offshore, when compared to recent

years. These figures only take account of the first two thirds of the year, but barring a flurry of approvals for projects over 50MW which are determined under Section 36 of the Electricity Act, it looks like industry will fall short of the consented capacity secured in 2008 by the end of the year due to a lack of consents for larger projects over 50MW. Only three such schemes have been approved so far this year. More detailed analysis of onshore consenting in 2009 can be found on page 6.

### Future Deployment - Offshore

Turning to offshore, after the consents at Lincs (250MW) and Gwynt y Mor (750MW) at the tail end of last year, there have been no offshore consents to date in 2009. This is not surprising as until recently, only one offshore project had spent a significant time in the planning system and a decision is expected soon

**Graph 1.**  
Wind energy capacity consented and commissioned 1989-2009



on the 300MW Humber Gateway project which has been awaiting determination since April 2008. The very nature of the offshore licensing rounds leads to peaks and troughs in activity which is evident when looking back since the birth of Round 1 in 2001, shown below in Graph 2.

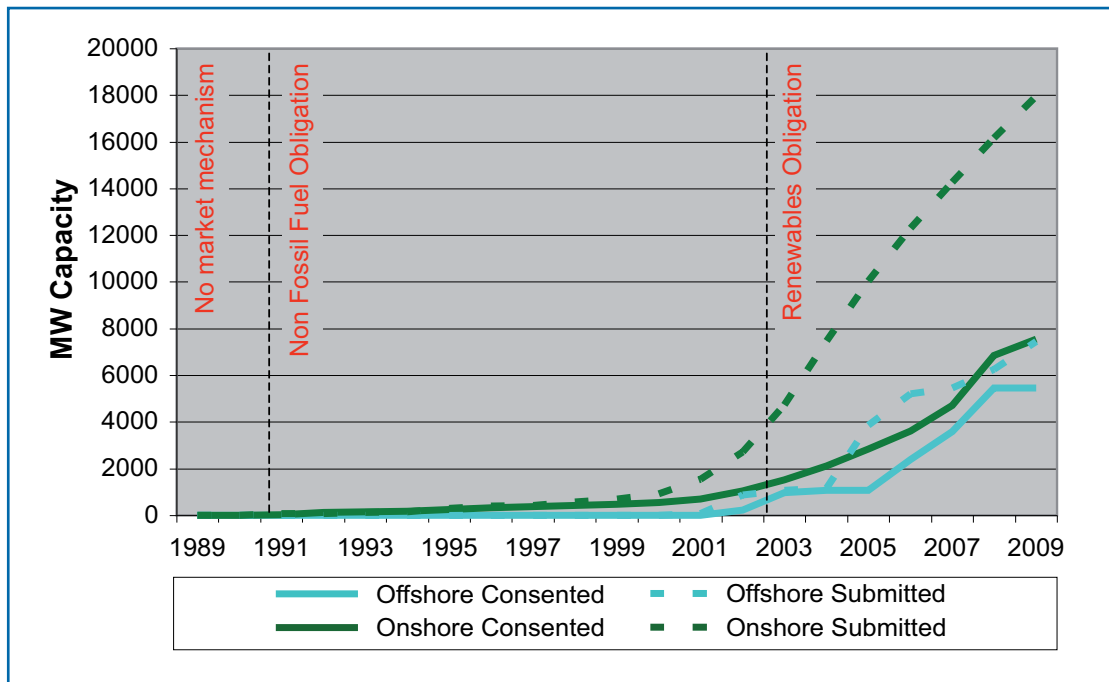
The submission of wind farm applications is continuing to rise at the same rate as in recent years. 1.8GW of

onshore capacity has been submitted from 58 projects so far this year, making up just less than the 1.9GW submitted in the whole of 2008. Investor confidence in the onshore market would therefore appear to be remaining strong through the credit crisis and difficult economic times. However, this figure is influenced by a small number of larger projects such as Scottish & Southern's Viking Wind Project which contributes a whopping 540MW, the largest onshore wind

application ever submitted in the UK. Altogether, five Section 36 applications have been submitted in Scotland totalling 795MW, almost half of the capacity submitted in the UK in 2009.

Offshore, two Round 2 submissions totalling 1,180MW have been submitted at Dudgeon and Race Bank, a tangible increase on the 800MW submitted last year.

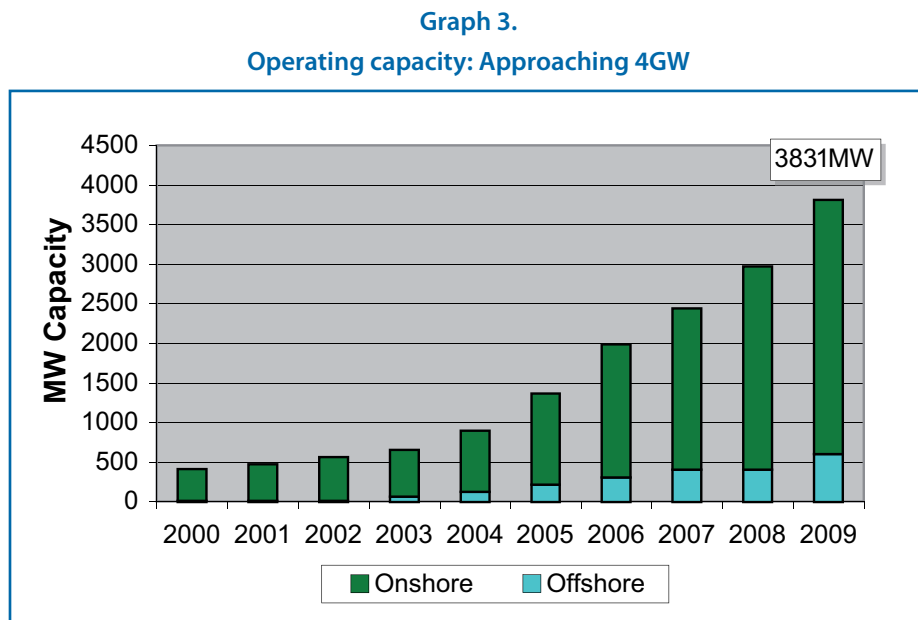
**Graph 2.**  
**Wind energy capacity submitted and consented 1989-2009**



# The rate of deployment

The first GW of installed wind energy capacity was delivered in 2005, 14 years after the first wind farm was built. Since then, the industry has maintained a continued period of exponential growth. The second GW followed just 20 months later in February 2007 and the third GW barrier was broken at the time of BWEA30 in October 2008, a further 20 months into the future. Now, just 12 months on, the 4GW landmark of installed capacity is imminent with 3,831MW of installed capacity operating in the UK. The ongoing commissioning of Dong's Gunfleet Sands Round 2 offshore wind farm is expected to deliver the industry milestone off the coast of Clacton-on-Sea in Essex at some time in October 2009.

There are now 240 operating onshore wind farms in the UK totalling 3,233MW of onshore capacity and a further 598MW of offshore capacity are currently installed and operating, meaning the UK has retained its position as fifth in the European league table. With over 2GW currently in construction, the UK is



well on the way to delivering the 8GW of installed wind capacity as its required contribution towards the Government's 10% renewable electricity target by 2010.

This growth of installed capacity demonstrates the leading role of wind energy in delivering the 10% renewable electricity target by 2010 and paves the way to secure the UK's energy future from an indigenous resource, as

the primary technology in delivering the 15% renewable energy target by 2020. However, it is also delivering ever increasing economic and environmental benefits to the UK, creating thousands of new jobs and saving nearly 4.5 million tonnes of carbon emissions each and every year.

**Table 1.**

	<b>MW installed</b>	<b>TWhrs<sup>1</sup></b>	<b>Homes equivalent<sup>2</sup></b>	<b>CO2 savings in tonnes<sup>3</sup></b>	<b>Jobs created<sup>4</sup></b>
Onshore	3233	8.33	1771574	3,580,351	12932
Offshore	598	1.83	390100	788,391	3169
Total	3831	10.16	2161674	4,368,742	16101

<sup>1</sup> According to DIGEST OF UNITED KINGDOM ENERGY STATISTICS 2008 an average capacity factor of 29.4% for onshore and 34.9% for offshore wind was achieved in the UK in 2008.

<sup>2</sup> This assumes an average annual household consumption of 4700kWh.

<sup>3</sup> Wind benefits the environment by reducing the demand for other sources of electricity, thereby replacing significant amounts of brown energy with green. The UK's electricity generating mix will change over time, making it impossible to give a precise estimate of the savings. This calculation assumes a CO<sub>2</sub> offset of 430 g/kWh.

<sup>4</sup> According to a report from Bain & Co, 4 jobs are created in the UK for each MW installed onshore and 5.3 jobs for each MW installed offshore.

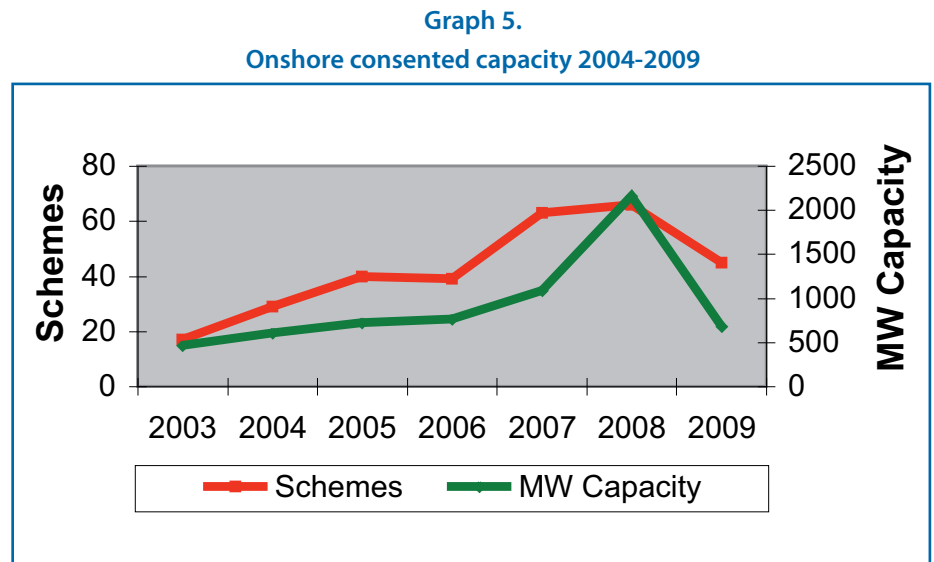
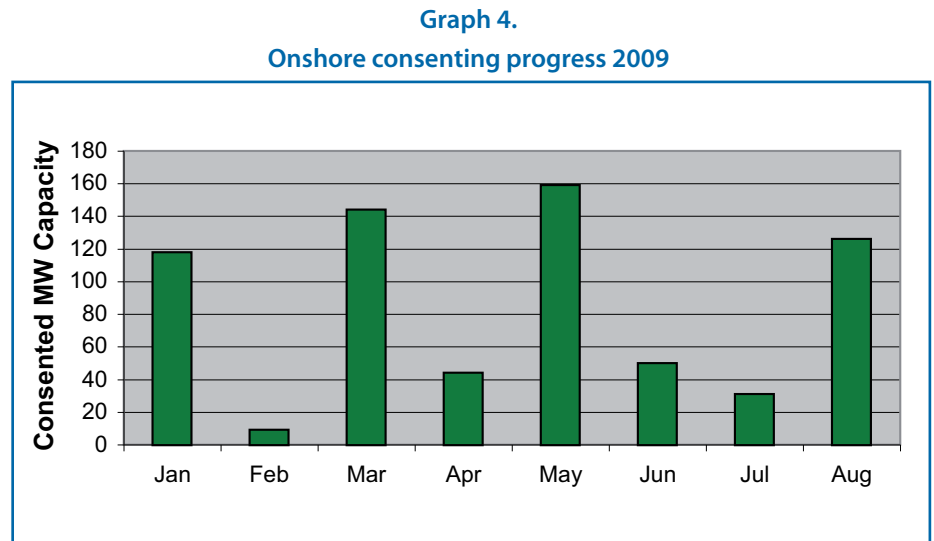
# Consents

A massive 1,857MW of consents have been achieved over the last 11 months, since the publication of the 2008 State of the Industry Report. As reported on Page 1, the approvals of Gwynt y Mor (750MW) and Lincs (250MW) at the end of last year contribute 1GW of this total.

857MW of onshore capacity has been consented since October 2008 with 682MW of this being delivered in 2009 to date, from a flurry of consents arriving every couple of months. A key milestone came with the approval of the Whitelee Phase 1 extension of 130MW in May. August then tied off a reasonable year with 126MW consented, largely helped by the approval of the 80MW Berry Burn project in Moray, Scotland from the Force 9 Energy and Statkraft partnership. Once again, this shows how UK progress in onshore wind is driven by a relatively small number of larger sites.

There have already been 45 consents to date making up the 682MW awarded in the first eight months of 2009, compared with 66 consents totalling 2,160MW awarded in the whole of 2008. We are therefore on target to more than match the *number* of consents in 2008. However, what is noticeable is that the capacity consented is likely to fall short of last year and this is best explained by looking at average wind farm size consented, which last year stood at 32.7MW whereas the average wind farm size from the 45 consents so far awarded this year is just over 15MW. This is a striking difference and can be attributed to the slowdown in the larger Section 36 determinations for projects over 50MW.

To date, there have been only three Section 36 approvals this year totalling



224MW, all of which were awarded in Scotland. This compares to nine such determinations last year (eight in Scotland) totalling 1,318MW, almost two-thirds of the UK total consented capacity in 2008. Meanwhile, 34 Section 36 projects totalling 3,364MW are still languishing in the planning system of which 28 are in Scotland.

This is a worrying trend suggesting a hiatus in decision making by the Scottish Government, similar to that experienced prior to 2007 and this issue is explored further in the Review

of Planning Performance. However, Graph 5 (above) illustrates that while 2009 to date has been a poor year for Section 36 determinations, by the end of the year consented capacity is still projected to meet the level achieved in 2007 and surpass the performance of the four previous years. This demonstrates 2008 was a unique year in consented capacity driven by the nine Section 36 decisions, a consenting rate that needs to be matched if the UK is to consistently deliver more than 1GW of onshore consents each year.

# Wind energy in the UK: Current status

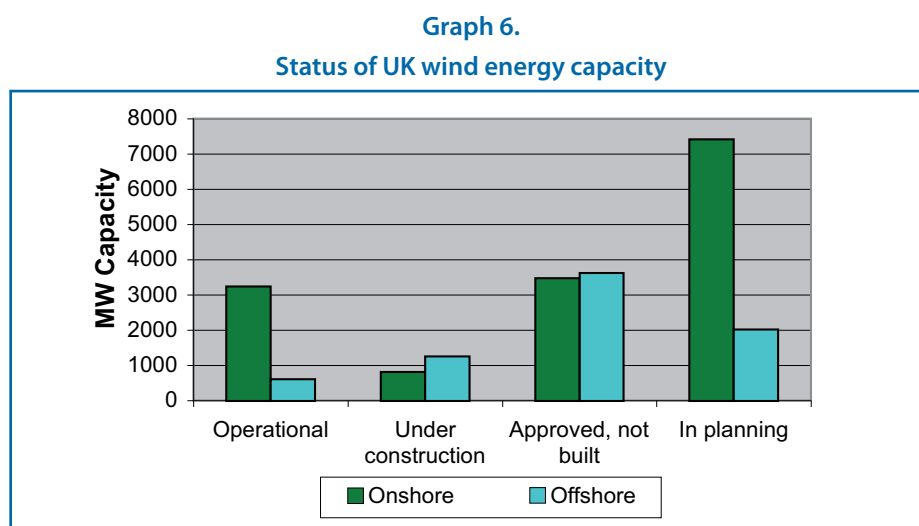
Graph 6 and Table 2 below show the current state of play for wind energy projects and capacity in the UK as a whole. In total, there is now a portfolio of projects which contribute over 20GW of wind energy capacity at various stages in the development process in the UK.

## Offshore

The completion of Centrica's Lynn & Inner Dowsing project has increased the offshore wind operating capacity to 598MW. As offshore Round 2 moves into the construction phase five schemes are now underway amounting to 1,247MW, including Thanet (300MW) and Greater Gabbard (504MW) which have commenced construction in 2009.

Gwynt y Mor and Lincs Round 2 sites have been consented, totalling 1GW, giving a total of nine consented projects with a capacity of 3,613MW, most of which are looking to move into the construction phase. These consents exiting the planning system have been more than replaced over the last 12 months by the three large offshore Round 2 projects; Docking Shoal, Dudgeon and Race Bank, all 500MW+ schemes totalling 1,680MW, while Humber Gateway (300MW) still awaits a decision.

Looking forward to the months ahead, the massive 1,200MW Triton Knoll



offshore Round 2 project has been awarded agreement to lease, with the RWE Npower Renewables application expected in the first quarter of 2010. Dong's Westernmost Rough Round 2 project has also been awarded agreement to lease and is expected to add 240MW into the mix at some point next year.

## Onshore

For onshore wind, 2009 has witnessed the industry breaking through the 3GW mark of installed capacity as 3,233MW are now operating from 240 onshore projects in the UK. As projects move from construction to completion, capacity has moved from consent to construction in tandem with almost 1GW now under construction, similar to 2008, suggesting a stable level of activity in the UK onshore construction market.

At the earlier stage in the development process, the onshore market continues to attract new project applications with the capacity currently in planning growing slightly on 2008 levels to nearly 7.5GW. This growth has been achieved, after almost 1.5GW has left the planning system with either consent or refusal, since the publication of the last State of the Industry Report in October 2008. The growth however, also points to the continued pressing need for a more effective and efficient planning system for onshore projects. By now, the capacity in the planning system should be on the decline as the planning system gets to grips with this form of development and responds to an increasing need to tackle climate change and energy security. However, industry is not seeing a growth in either the number or capacity of consents coming through the planning system.

**Table 2.**

Onshore Status	Schemes	MW Cap	Offshore Status	Schemes	MW Cap
Operational	240	3233	Operational	8	598
Under construction	29	813	Under construction	5	1247
Approved not built	169	3474	Approved not built	9	3613
In planning	262	7419	In planning	4	2020

# A Year in Policy

## Context

The passing of the Climate Change Act in November last year was a significant step on the UK's path to a low carbon future. In agreeing to reduce its carbon emissions by 80% by 2050, compared to 1990 levels, the UK was the first country in the world to introduce legally binding long-term targets on climate change.

A new Climate Change Committee was established through the Act. Having responsibility for reviewing Government performance against agreed long-term commitments and advising government accordingly on the 2050 target, the Committee will also advise on the five yearly carbon budgets to be set by the Government.

Due to the scale of ambition and the extent of its vision, the Act should instill investor confidence in the future of the UK renewable energy sector. This Act should be seen to frame the following policy interventions:

## Renewable Energy Strategy & Low Carbon Transition Plan

The Renewable Energy Strategy (RES) and Low Carbon Transition Plan, published in July this year establishes a clear route-map for the growth of a new green energy industry from which 60,000 UK jobs will be created from the wind, wave and tidal energy sectors. The RES recommits the Government to a massive increase in renewable electricity generation, increasing from 5% today to 30% by 2020, and is set to deliver a host of other incentives designed to enable the deployment of on- and offshore wind, wave and tidal generation, which

is expected to deliver the bulk of the UK's 2020 targets.

Key policy interventions identified within the RES include the creation of the Office of Renewable Energy Deployment, a Renewables Deployment Taskforce to bring coordination and leadership to the various tiers of Government involved in delivering our energy targets, and a new Renewable Energy Deployment, Environmental Issues Project Board designed to bring together representatives from the main consenting bodies and statutory consultees. The government has also committed to developing a clear Skills and Training Strategy, in conjunction with BWEA, and to providing ongoing financial contributions to aviation radar mitigation solutions under the Aviation Plan.

Planning measures identified include £10 million skills development funding for regional and local planning authorities, revision of national planning policy statements on renewable energy and climate change (PPS22 and PPS1), the introduction of new Single Regional Strategies for spatial and economic development, £1 million for regional capacity assessments and the creation of local Leaders Boards within England. These measures are in addition to the creation of the Infrastructure Planning Commission and National Policy Statements (NPSs) for nationally significant infrastructure projects - applicable across England and Wales. There were also a number of measures designed to improve the development consent process at the local level.

However, the strategy does not contain a detailed breakdown of the contribution expected from different technologies, and we therefore rely on the scenarios set out within the draft RES, which imply that 22% of all electricity will come from offshore and onshore wind by 2020, with a further 2% from marine technologies.

## Planning Act 2008

The Infrastructure Planning Commission began to issue guidance to prospective applicants at the beginning of October 2009 and will be ready to receive applications from April 2010. Throughout 2009, BWEA has been actively engaged in consultation on a series of statutory instruments to have fallen out of the Act concerning the decision-making framework and has paid particular interest to the drafting of the National Policy Statements.

Under the Act, IPC decisions will be guided by NPSs covering all aspects of policy for nationally significant infrastructure development. These NPSs are likely to be of great significance to all energy developments.

BWEA support the Planning Act and the creation of the IPC. If implemented with due care and resource allocation, the regime could accelerate renewable energy delivery, through the introduction of an effective and efficient single consenting regime.

## Strategic Environmental Assessment for Offshore Energy

The expansion of offshore wind has moved from a plan to reality during 2008. The Government's decision on the

Strategic Environmental Assessment for Offshore Energy gave the green light to The Crown Estate to award the nine 'strategic zones' for development under its Round 3 offshore licensing programme. By the end of the year the consortia of companies that have won the zones will be finalised and the process of identifying individual wind farm sites within the zones can begin in earnest.

BWEA spearheaded a successful lobbying campaign earlier this year to remove the recommendation of a 12 nautical mile coastal buffer zone. 2009 also saw the call for potential extensions to Round 1 and 2 sites being announced.

### **The Marine and Coastal Access Bill**

The Marine and Coastal Access Bill aims to coordinate all marine activities and creates several new policy tools for the marine area. These include a Marine Management Organisation, which will be the policy delivery agent for the sea, a new marine planning system, a network of marine protected areas, restructured fisheries committees and a coastal path around the English coast. This new framework creates an opportunity to streamline consenting and BWEA has worked hard to ensure that renewable energy remains a priority in this legislation.

### **Electrical Transmission**

Two major developments in the way the grid is regulated offer the opportunity to make the connection process easier. Firstly, Government is consulting on changes to the way generation accesses

the transmission system, through powers taken in the Energy Act 2008. BWEA is committed to getting the best result for industry from this process. The second development is the introduction of a new offshore transmission regime and the creation of Offshore Transmission Operators (OFTOs) to deliver the new offshore grid infrastructure required to bring the power from Offshore Round 3 to shore. The first few projects have entered the regime which will be fully implemented in 2010.

# A Review of Planning Performance

## Offshore wind applications

No offshore consents have been granted so far this year, however a decision on the 300MW Humber Gateway project is expected by the end of the year. Two projects, totalling 1,180MW have entered into planning in 2009, with an almost 1.5GW expected to enter planning next year.

The statutory instruments of the Planning Act are progressing through the drafting process, with regulations on environmental impact assessment, prescribed forms and procedures and model provisions already in place, and regulations on examination procedures expected before the end of the year. Round 3 offshore projects are expected to be submitted to the Infrastructure Planning Commission under this new system.

A number of onshore proposals currently being progressed within Welsh Forestry Commission sites within the Wales Strategic Search Areas, are also likely to be submitted to the IPC.

## The onshore planning system

In the last year, the Government has been developing a series of measures designed to streamline the terrestrial planning system and remove barriers to decision-making at the local level.

This year has seen national policies undergo a period of review across much of the UK. Scotland's series of national planning policy documents (Scottish Planning Policies) is currently being consolidated into a single Scottish Planning Policy, while in England the national series of Planning Policy

Statements is undergoing review – with policies on renewable energy and climate change likely to be merged.

In August, Northern Ireland's Planning Policy Statement 18 on Renewable Energy was published, finally replacing Policy PSU 12 Renewable Energy of the Planning Strategy for Rural Northern Ireland. BWEA continues to work with the Northern Ireland Executive to revise Draft Supplementary Planning Guidance on Wind Energy in Northern Ireland's Landscapes.

Following a long-standing commitment from the Welsh Assembly Government, Technical Advice Note 8, the national planning policy for renewables in Wales, is due to undergo refreshment in 2010.

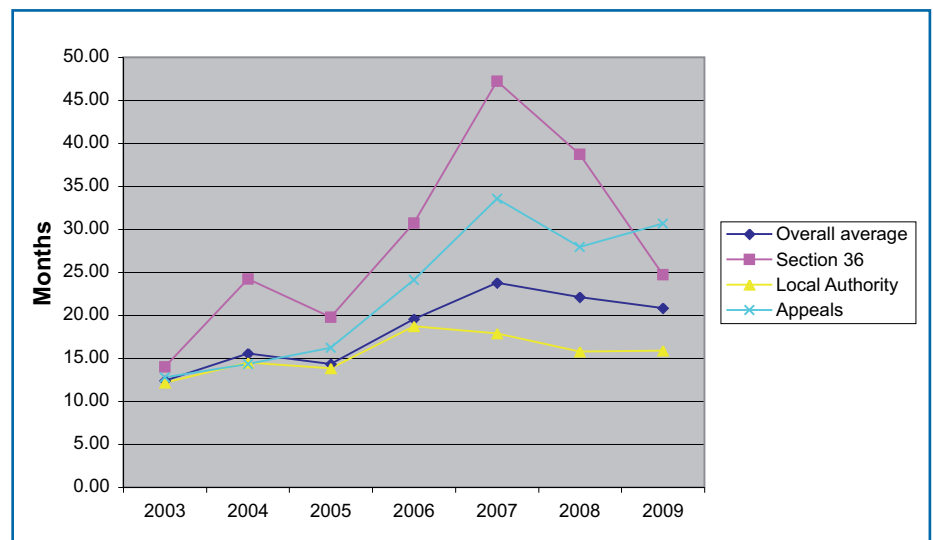
## The efficiency of decision making

Looking at Graph 7 below, overall onshore decision times seem to be falling gradually across the UK from 24 months in 2007 to 21 months in 2009 to date. This statistic takes into account decision times at the local level, at

appeal, and under Section 36. Looking at Graph 8 (see right page), there has also been a notable steady fall in the time taken to determine projects at the local level in England, from 16 months in 2006 to nine months in 2009; however, local decision times have slightly increased from 16 to 21 months in Scotland and almost doubled from 10 to 19 months in Wales. The dramatic increase in decision times in Northern Ireland is due to the fact that Carrickatane and Slieve Kirk (the two projects approved so far this year) were approved in March this year, after spending 49 and 52 months respectively in planning.

The reasons behind the fall in local decision times in England is due primarily to the historical poor performance in decision times. Only 17 decisions have been taken at the local level in England so far in 2009 and by the end of the year, the number is unlikely to reach the 30 decisions made in 2007 or the 26 determinations made at the local level last year. The 17 local decisions in England compares markedly with the 26

**Graph 7.**  
Onshore average decision times



projects which currently sit in the appeal process - more than three-quarters of the 34 projects in the appeal system throughout the UK are English schemes.

This trend suggests that an increasing number of developers are choosing to go to appeal on the grounds of non-determination rather than waiting potentially years for a decision at the local authority level, skewing the statistics and explaining why there appears to be a reduction in decision times at local level in England. Meanwhile, the result of this is growing pressure on the appeal system and overall, longer decision times while the appeal process takes its course.

At first sight, onshore decision times at Section 36 also appear to be falling across the UK. However, looking at this in further detail, it is clear that the fall in Section 36 decision times in 2009 is the result of a corresponding fall in the number of decisions made at this level offering a poor sample size to conduct any meaningful analysis. So far this year only three projects have been determined under Section 36 of the Electricity Act, and all have been decided by the Scottish Government. The average onshore decision time this year, at Section 36 currently stands at 24 months.

This overall fall in the number of decisions taken under Section 36 is considerable; down from 11 decisions made in 2008. There remains 3,364MW of onshore capacity awaiting decision under Section 36 from 34 projects, of which 28 schemes are with the Scottish Government. Over half (18) of the 34 projects have been in planning for more

than three years with projects dating back to 2002 and there are 14 projects submitted prior to 2006 which are still awaiting determination.

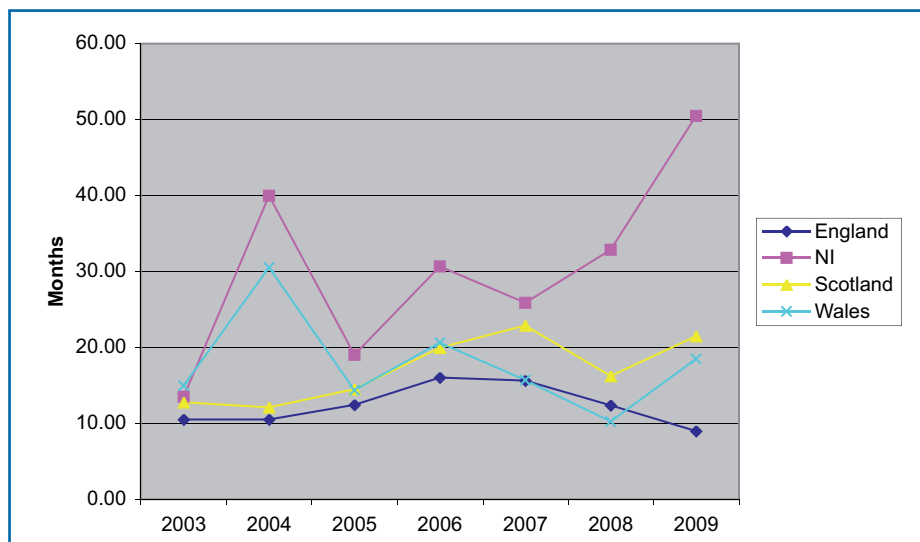
In Northern Ireland, the approval rate remains strong, while the number of decisions taken is down for the third year in succession; down from 9 projects in 2007 and 6 projects in 2008 to just 2 decisions so far this year. This is in no small part due to the continued uncertainty surrounding

the planning framework in Northern Ireland, particularly with regard to the proposed planning reforms, and the increasing number of demands placed on developers by the Planning Service.

**Approval rates: Section 36 applications**

As discussed above, there have been a disappointingly low number of decisions made at Section 36 so far this year which makes it impossible to forecast any meaningful trends in approval rates. Last year, in Scotland, 80% of the eleven

**Graph 8.**  
**Average local authority decision times**



**Table 3. - Graph 7.**

ALL UK – APPROVAL RATE BY SCHEME			
	2007	2008	2009
LPA	66%	61%	54%
APPEAL	53%	65%	56%

**Table 4. - Graph 8.**

ALL UK – APPROVAL RATE BY MW			
	2007	2008	2009
LPA	64%	68%	53%
APPEAL	40%	74%	65%

projects were approved at Section 36, although in terms of MW capacity the approval rate fell to 58%; down from 64% of capacity approved by the Scottish Government in 2007. This year, all three of the Section 36 decisions were approvals but with 34 projects awaiting determination, the real story is the lack of decisions, not the approval rate.

The downward trend in the number of determinations made at Section 36 in Scotland is a major cause for concern, given the influence of larger projects in meeting the UK's renewable energy targets and securing a diverse energy supply. If this hiatus in decision making continues, there will be serious consequences in meeting these objectives and damage to investor confidence may result.

Due to the low number of decisions made, the Section 36 approval rate in England has been positive for the last two years, with the approval of both Fullabrook Down and Middle Moor, the only schemes determined in Westminster over that period. There are currently two projects in England awaiting determination, which have collectively been awaiting determination for 86 months. There have been no Section 36 decisions in England so far this year. Both north and south of the border, there is a pressing need for a turnaround in performance of Section 36 decision making, particularly given that national governments should be leading by example if local authorities are expected to dedicate more resources and improve their own decision making performance. If there is not a swift improvement in deciding

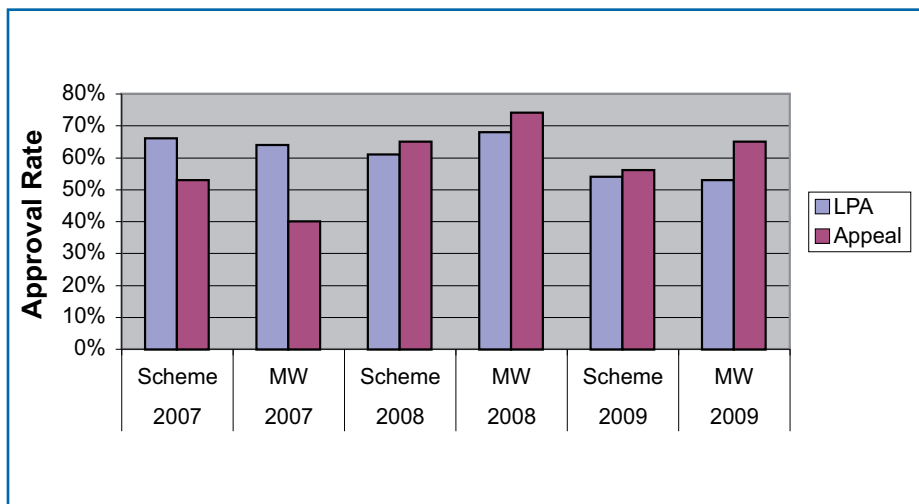
larger schemes, there will also be knock on effects for the supply chain as the industry involved in the construction of wind farms can only respond to a certain level of fluctuation in demand, operating best with a steady and predictable portfolio of projects.

**Approval rates: Town and Country Planning Act (<50MW) applications**

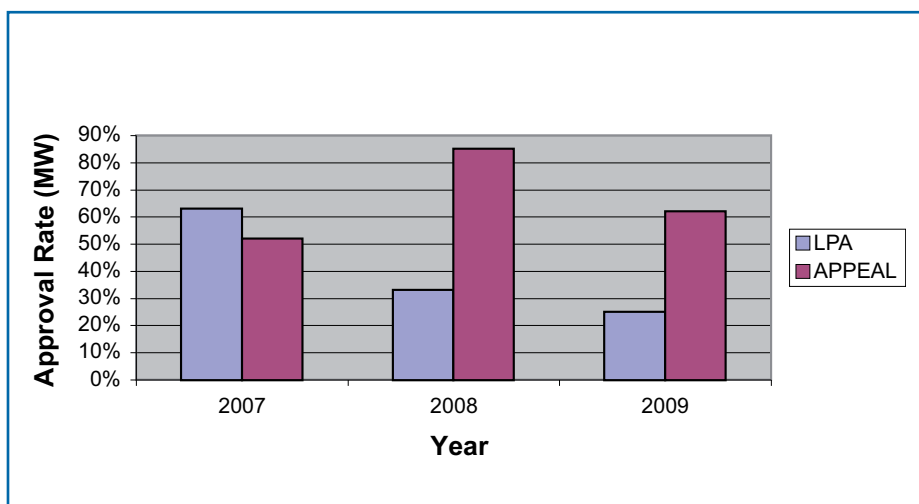
Across the UK as a whole, local approval

rates in general have remained relatively stable at around 60-65% in the UK over the 2 years 2007-2008. Looking at Graph 9 (below), this relatively modest rate of consent has fallen for 2009. With approval rates of 53% and 54% based on MW capacity and the number of schemes, respectively, we remain hopeful that this is not the beginning of a downward trend. The average rate of approval at appeal is more positive,

**Graph 9. UK Approval Rates at the local level**



**Graph 10. English Decisions <50MW**



with an increase in the proportion of determined capacity approved having risen from 40% to 65% between the beginning of 2007 and 2009 to date.

Across England and Wales, the average approval rate at appeal is also encouraging when compared to an average rate of approval at appeal of 34% across all Planning Inspectorate casework.

Research conducted between April 2006 and September 2009, using a good sample size of 44 appeal decisions, points to a success rate at appeal of nearly 70% for projects previously recommended for approval by planning officers at the local level, and refused by planning committee.

This trend illustrates how a decision made in the Committee Chamber to overturn officer recommendation for approval and so refuse an acceptable scheme can become costly for local council tax payers, who essentially foot the bill for costs awarded to the successful appellant.

However, we are greatly concerned at the significant downward trend in England's approval rate at the local level, over the period 2007-2009. Approval rates by scheme currently stand at 29% for 2009, down from 57% in 2007. This decline is put into even starker relief when assessing approval rate based on capacity, as shown in Graph 10 (see left page). This graph shows that local authority approval rates by MW are down from 63% in 2007 to just 25% capacity approved so far this year.

There may be some cause for optimism as project approval rates at appeal may be on a gradual upward trend; up from 50% to 56% between the beginning of 2007 and September 2009, and up from 52% to 62% based on MW capacity approval rates over the same period, more than twice the approval rate of local authorities in England. However, since the appeal process is intended to arbitrate and make decisions based upon the relevant policy, this begs the question of why the local planning system is not consenting these projects in reasonable timeframes in the first place? It is evident that the local planning system in England continues to fail the wind energy sector and BWEA remain in ongoing discussions with the Department for Communities and Local Government and the Department of Energy and Climate Change in seeking to resolve this problem.

In Wales, approval rates have remained strong over the 33 months between the beginning of 2007 and August 2009, both at the local level and at appeal, with an increase from an approval rate of 71% of projects and capacity in 2007, to 80% and 95% in 2008, looking at approval rates by project and MW capacity respectively.

However, while we are seeing more capacity approved rather than rejected by local authorities, this approval rate is undermined by the fact that there have been only two decisions made at the local level in Wales this year. This is on the back of the five decisions made in 2008 and seven decisions in 2007. Meanwhile, 22 projects totalling nearly 1GW in



capacity, languish in the Welsh planning system.

### The influence of project size on the decision making process

There is continuing interest, among industry and Government alike, as to whether project size makes a difference at the local level. However, ongoing studies demonstrate that development size makes a negligible difference in the way that applications are determined by local planning authorities and the Planning Inspectorate.

### Improving planning performance

In February 2009, the government launched a web-based Expert Support Network for local authority officers and councillors across the UK. The service is

designed to support good quality and robust decision making through the provision of advice and information to local decision-makers as they deal with renewable energy applications. The initiative is currently funded to operate until January 2010 and BWEA will be working with government to ensure that this service is strengthened further.

The Renewable Energy Strategy re-affirmed the government's commitment to call-in planning appeals for decision by the Secretary of State. The industry has seen an increase in the number of decisions on wind energy projects being called in to the Secretary of State and welcomes this move.

The RES confirmed that the Planning Inspectorate will give high priority to

the handling of all appeals relating to renewable energy proposals. The RES also provided confirmation that where an appeal against non-determination is allowed, the local planning authority risks having costs awarded against them if it is concluded that there were no substantive reasons to justify the delay

Following the Government's March 2009 response to the Final Report of the Killian Pretty Review into the planning application system in England, government has committed to a series of workstreams designed to increase the efficiency and effectiveness of the local planning process. The decision to streamline the national policy framework through revision to the PPS suite forms part of this work. For current planning stats see Table 5.

**Table 5. Breakdown of Onshore Wind Projects & MW Capacity in the Planning System**

	England		Wales		Scotland		Northern Ireland		UK	
	Scheme	MW	Scheme	MW	Scheme	MW	Scheme	MW	Scheme	MW
LPA	67	802	17	560	58	934	52	1,005	197	3,316
S36	2	101	3	321	28	2,862	0	0	34	3,364
Appeal	25	438	2	47	5	247	1	9	34	753
JR	1	12	0	0	0	0	0	0	1	12
<b>Total</b>	<b>95</b>	<b>1353</b>	<b>22</b>	<b>928</b>	<b>91</b>	<b>4043</b>	<b>53</b>	<b>1,014</b>	<b>262</b>	<b>7419</b>

## What does the future hold?

It is never easy to accurately forecast future growth, given the number of factors influencing the rate of deployment. Availability of finance and the level of support from the renewables obligation play a significant role in how the market unfolds. The industry eagerly awaits the impact that the planning reforms will have on the decision making process for offshore wind and grid infrastructure projects and BWEA continues to maintain its position that the Infrastructure Planning Commission will only be a success in expediting decisions if it is properly and appropriately resourced, in terms of both the quantity and level of available expertise.

The rate of progress towards delivering mitigation solutions to resolve the aviation radar issue will have a major impact on deployment rates in the medium to long term. 5,265MW from 84 projects across both the on- and offshore sectors are currently sterilised by aviation objections. Project and regional specific solutions are beginning to unlock these projects which could bring the majority of this capacity to market that would have otherwise been left untapped. This will make a difference in the medium term, but if generic solutions can be found to resolve conflict with air traffic, air defence an en route radar, a total of nearly 11GW from projects which have already been identified by developers could continue through the planning system, and swathes of land and sea around the UK could give rise to even greater wind energy development potential for the first time.

Practical and logistical issues will determine deployment rates in the

short term, such as whether the supply chain and skills market can keep up with demand. In the onshore sector, there has been just under 1GW in construction at any one time for the most part of the last two years. While there has been a steady shift of projects moving from construction to completion and from consent to construction over the last two years, industry has yet to witness acceleration in the level of onshore construction activity, even though there has remained a consistent portfolio of nearly 3.5GW of consented projects awaiting construction at most times during this period.

Looking to the future deployment of offshore wind in the short term, while there are a number of caveats in accurately predicting offshore construction, developers can reasonably forecast when they hope to complete Round 1 and Round 2 projects, which helps give the wider industry a glimpse into what is possible for delivery in the next few years. Table 6 below outlines forecast estimated completion dates for offshore projects with consent, with those in blue already in construction.

Offshore wind continues to accelerate the path to deployment with three

<b>Wind Farm</b>	<b>MW Capacity</b>	<b>Forecast completion</b>
Gunfleet Sands 1 & 2	172.8	2010 – part commissioned 2009
Rhyl Flats	90	End 2009
Robin Rigg	180	End 2009
Thanet	300	End 2010
Greater Gabbard	504	End 2011?
Sheringham Shoal	315	2011
Walney	450	End 2012
London Array	1000	630MW from Phase 1 estimated completion end 2012
Ormonde	150	Start construction 2010 Estimated completion 2012
Lincs	250	Start construction 2010 / 2011 Estimated completion 2012 / 2013
West of Duddon Sands	500	Start construction 2012 Estimated completion 2014
Gwynt y Mor	750	Unknown
Teeside	90	Unknown
Scarweather Sands	108	Unknown

projects totalling 443MW well on the way to completion. In addition to the 598MW already operating, Rhyl Flats and Robin Rigg are scheduled for commissioning before the end of the year taking the total to 868MW. Gunfleet Sands continues to be commissioned in phases and Dong believe it is within their grasp, weather pending, to complete the 132MW portion of the scheme required for the industry to break through the

first GW of operational offshore wind capacity by the end of 2009.

The larger projects at Greater Gabbard and Thanet are now well under way and four projects (Sheringham Shoal, Walney, London Array Phase 1 and Ormonde) are anticipated to commence construction at various points over the next 12 months.



### Beyond the 4<sup>th</sup> GW

The BWEA forecast scenario for the next three years assumes small and incremental growth in onshore delivery as supply chain and skills availability begins to react to increasing demand. This forecast therefore assumes 1GW of onshore deployment in 2010 and 1.2GW in 2011 and 2012.

The starting point for this forecast is accurate, with 137MW of onshore capacity known to be due for

completion by the end of 2009 and around 400MW of offshore capacity from three projects nearing completion. Additional industry intelligence on project specific offshore forecasts mean BWEA can make a robust prediction for deployment over the course of the next three years.

The onshore assumption of construction rates and the intelligence for offshore projects lead to the conclusion that the 5<sup>th</sup> GW will be completed in summer 2010, with almost 6GW of capacity completed by the end of 2010. This

equates to the capacity that was originally deemed to be the contribution wind energy would need to make in meeting the 10% renewable electricity target, when the target was first posted in 2003.

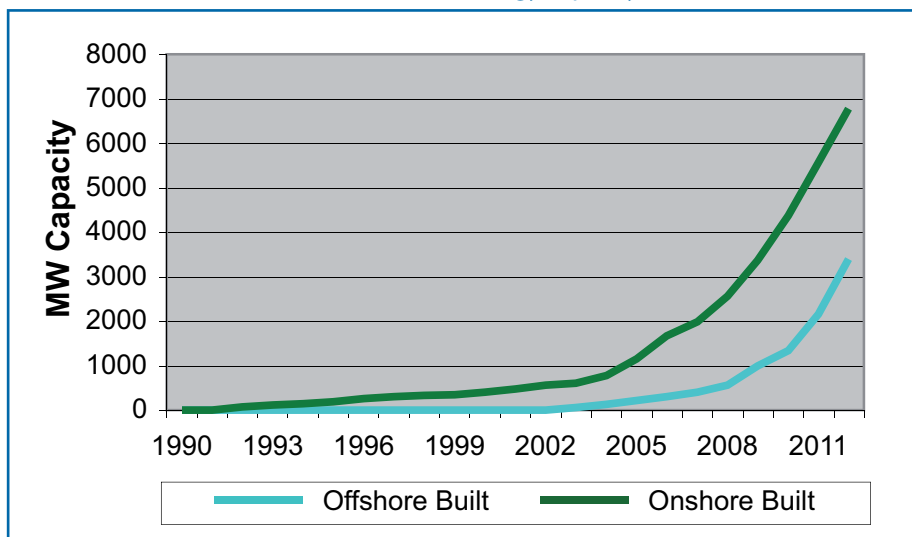
Almost 8GW should be operating by the end of 2011, meeting the revised wind energy contribution required to deliver the 10% target, one year behind schedule. More than 10GW will be installed by the end of 2012.

**Table 7.**

Year	Offshore (MW)	Onshore (MW)	Total (MW)
2008	566	2566	3132
2009	1000	3370	4370
2010	1341	4370	5711
2011	2160	5570	7730
2012	3390	6770	10160

**Graph 11.**

Forecast installed wind energy capacity to 2012



# The role of wind energy by 2020

In the longer term, questions remain over the accuracy of the Government's least cost scenario to 2020 as set out in the Renewable Energy Strategy, which eludes to 28GW of wind energy split roughly 50:50 with 14GW of onshore and 14GW of offshore wind operating by 2020.

The offshore industry is on the verge of preparing for Offshore Round 3 projects, with The Crown Estate preparing to announce the winning companies and consortia to develop a potential 25GW of installed capacity from the nine Round 3 strategic zones. The Crown Estate has also recently invited extensions to licenses for offshore Round 1 and 2 sites which could amount to a further 2-3GW. Progress north of the border has seen Exclusivity Agreements invited for up to 6.4GW of new offshore wind capacity within Scottish Territorial Waters. When taken as a whole with the existing Round 1 and 2 licenses, there is well over 40GW of potential capacity up for grabs in the offshore wind sector. Yet, the 14GW offshore scenario can be more than met without a single project coming to fruition from Round 3. This is sending the wrong message to investors in the supply chain as those in manufacturing and construction need strong signals of an ongoing sustainable deployment market going forward, if they are to bring jobs and investment to UK shores. Industry believes that 14GW of offshore wind is a gross underestimate and if renewable heat and transport fall short of their ambitious targets, offshore wind energy will be the technology that will have to pick up the deficit, being the most advanced technology that can be delivered on a large scale.

Furthermore, should aviation radar solutions be implemented in the next few years as is anticipated, several GW of additional on- and offshore capacity will become available that was previously sterilised from development.

Even considering the arduous UK planning system, the snail-like pace of Section 36 decision making and the scandalous approval rates at the local level in England, based on current performance levels 14GW of onshore wind remains eminently achievable by 2020, requiring just 5,500 turbines in total to deliver this capacity from a starting position of 2,433 turbines operating today. As a scenario, the onshore wind position certainly seems to lack ambition, but the current wealth in deployment can be mostly attributed to a small number of large schemes which cannot be counted upon as these finite sites dry up. The onshore sector therefore continues to rely heavily on the performance of the planning system; in the short to medium term decision makers at Westminster and Holyrood need to address performance to match the desired political outcomes on climate change, energy security and the economic recovery. To meet the same ends from the present time right up until 2020, local authorities and the appeal process will need to operate effectively and efficiently to deliver a growing number of small to medium sized projects.

Despite poor decision making at the Section 36 and local level, developer interest continues to be consistently high in the UK onshore wind market with a sustained supply of capacity feeding

into the planning system. If the last few years are considered a robust sample size, there is every reason to expect the onshore market to remain buoyant with annual onshore submissions stabilising at around 2GW every year for the last three years. However, when the larger projects have been all but identified and a greater number of smaller projects are targeted, there will be even greater pressure placed on the local planning system. It is therefore hoped that the planning initiatives outlined in the Renewable Energy Strategy will see improvements to the system leading to an increase in consenting levels reaching beyond 1GW per year which we have seen in recent years.

In summary, the wind industry both on- and offshore continues to prove it can deliver on a large scale at ever growing rates of deployment, investor confidence remains stable even during difficult economic times and new offshore rounds and technical aviation solutions offer new swathes of land and sea for potential development. This begs the question, should wind energy be playing a greater role in the delivery of the 15% renewable energy target by 2020?



# BWEA



Delivering the UK's wind, wave and tidal energy

BWEA  
Greencoat House  
Francis Street  
London SW1P 1DH  
United Kingdom

Tel: +44 (0)20 7901 3000  
Fax: +44 (0)20 7901 3001

[www.bwea.com](http://www.bwea.com)

