### Subsidy free energy and proportionate EIA – two forces pushing in the same direction?

The removal of subsidies for new onshore wind farms has presented developers with the twin challenges of seeking to maximise energy production whilst driving costs down. Despite a comparative hiatus in onshore wind development over the past couple of years, we are now seeing developers bringing projects forward to screening, scoping and environmental impact assessment. It is clear that viable unsubsidised projects do exist, but how do they stack up against the potential environmental impacts?

The need to maximise efficiency and reduce costs will apply to all stages of a project life cycle, not least to the development phase. Site selection and design will therefore have to focus more strongly on good wind resource as well as lowest construction and grid connection costs. The environmental impacts and associated planning risks will determine whether or not an application will be made.

Some cost reductions come from reduced manufacturing costs for turbines or construction techniques but others will be sought in the development phase, particularly as it is at this stage that developer’s expenditure is at risk. Wind Farm EIAs typically cover large areas, requiring extensive surveys and assessments, so are not cheap.

As part of the technical solution to project viability there is a move to larger turbines so their blades sit in higher wind-speeds and can provide greater energy capture. Prior to withdrawal of subsidies most proposals were for turbines in the order of 125m to tip, though some projects at 145m to tip were consented towards the end.

Now we are seeing proposals in scoping at 200m tip heights, bringing with it new challenges to landscape and visual assessments, not least with the added implication of aviation lighting for wind turbines over 150m to tip.

However, the move to larger turbines raises other design and environmental impacts than just visuals. Taller towers and longer blades have a greater swept area and may well require larger supplementary infrastructure such as crane pads and wider bend radii on site tracks.

It is not generally possible to hide a cluster of 200m tall turbines in a UK landscape, let alone build the required infrastructure without disturbing vegetation and surface water run-off and deliver the parts to site un-noticed.

At the same time we have a strong push for more “proportionate” EIAs, aimed at reducing and focusing effort, both for those undertaking EIAs as well as those whose role it is to consider them. Clearly we have likely tensions between developer pressure to reduce EIA cost and deliver a “proportionate EIA” versus planning authorities and consultees concerned about potentially greater impacts from larger turbines.

Tensions will also occur in planning decisions weighing both the increased benefits and environmental impacts from larger turbines. Whereas “green tariffs” were blamed for increasing energy bills, new-build wind is now the cheapest form of commercial large scale energy in the UK. In times of austerity will planning policy adapt to keep consumers electricity bills down?
Perhaps some of the tensions between cost and EIA effort can be resolved through more ruthless site selection and thorough scoping. Ultimately it is not the cost of each individual EIA and planning application that a developer needs to measure, but rather the cost of the total effort for each megawatt of capacity consented. Clear and early identification of potential impacts, risks and opportunities on any site needs to inform developers on how to continue or whether to cut their losses. Ultimately a thorough but well focused, if perhaps more costly, EIA supporting a successful planning application is better than a whole handful of cheaper EIAs that don’t result in a consent.

Another factor that is more relevant now is that developers are working on smaller margins and sites will be less likely to realise value at consent but be built out and sold as operational assets or even retained by the developer. This means that site optimisation at development stage and through construction is also key to viability. The “siloing” of project life stages needs to be broken down and the best projects will have involvement from construction and site operation experts right from inception. Properly done this presents opportunities to minimise environmental impact as well as optimise investment returns. Pulling together and fully integrating such a team is another challenge for the developer.

It’s early days for the revival of interest in new onshore wind projects in the UK but challenging renewable energy targets, cost pressures, new turbine technology coupled with changing EIA guidance and planning policies will make for interesting times.

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