

The road to renewable

Julian Boswall explains the role the planning system plays in implementing renewable energy projects which will be essential in the UK's drive to meet its electricity needs



THE PLANNING SYSTEM for energy projects is under the spotlight at the moment, as it is one of the keys to meeting the large energy gap which the UK is facing in the next few years. This has arisen because most of the nuclear stations are close to being decommissioned and many coal stations cannot continue past 2015 due to limits on emissions. In addition to the need to replace this capacity, there is the need to provide at least 30 per cent of UK electricity from renewable energy sources by 2020, to meet an EU target of 20 per cent of total EU energy (electricity, heat and transport fuel) by 2020.

The 30 per cent target is almost certainly the biggest challenge the UK electricity system has ever had to meet, given that the government would previously only describe a goal of 20 per cent renewable electricity by 2020 as an aspiration rather than a formal target.

The fuel mix

One notable feature of electricity projects is that the end product is identical regardless of the manner in which it is generated. The range of fuel sources is extraordinarily wide: natural gas, coal, oil, other hydrocarbons (tars, orimulsion), uranium,

wind (offshore and onshore), biomass (a wide term encompassing, for example, wood, waste wood, chicken litter, energy crops, and some types of waste), the sun, the daily tide (barrages), tidal currents, waves, lakes formed by dams, rivers and household/commercial waste.

The different fuel sources give rise to different design requirements and environmental impacts: types of location (urban, rural, port, marine), size of site required, emissions, noise, visual effects, ecological effects, waste arisings, radar, transport of fuel and waste, etc. This means there are a number of sub-sectors within the overall category of electricity projects, each with a very different set of planning issues.

The decision maker

Since electricity privatisation under the Electricity Act 1989, there has been a split between onshore schemes above 50MW, which are decided by the Secretary of State for Energy and Climate Change (DECC) under s.36 of that Act, and those at or below 50MW, which are decided by the local planning authority under the Town and Country Planning Act 1990 (TCPA).

With an s.36 application, the relevant local planning authorities (district and county, or unitary) are notified of the application and have a right to object. If they do object then there is an obligation on the DECC to hold a public inquiry. To date it has been rare for local authorities to object to schemes other than wind farms, and virtually all of the s.36 public inquiries in England and Wales to date have been wind farm inquiries. Where there is no local authority objection, DECC still have a discretion to call an inquiry but almost never do so.

When applying for s.36 consent, the applicant will also apply for deemed planning permission under s.90 of the TCPA. This permission will contain a set of normal planning conditions which are enforced by the relevant planning authority rather than the DECC. If there is a section 106 agreement (dealing with, for example, off-site landscaping) then this is, again, negotiated with and enforced by the local planning authority.

Where new overhead power lines are needed this is dealt with by the DECC under s.37 of the Electricity Act 1989, with deemed planning permission under s.90 of the TCPA. While the developer can obtain the relevant

s.37 application, it is more common for the Distribution Network Operator (or, if the connection is direct to the national transmission system, the National Grid) to do this in parallel with the s.36 application.

The position is different offshore, where any scheme above 1MW is decided by the DECC. In addition, however, it is normally the case that consent is also required under s.5 of the Food and Environment Protection Act 1985 for the deposit of materials on the seabed (e.g. the electricity cables) and in relation to interference with navigation under s.34 of the Coast Protection Act 1949. Both of these applications are granted by the Department for the Environment, Food and Rural Affairs.

The Infrastructure Planning Commission

Under the Planning Act 2008, a new decision-making body is being set up in England and Wales called the Infrastructure Planning Commission (IPC). This body will make decisions on a number of categories of major infrastructure projects (including airports, major roads, ports, rail interchanges), one of which is electricity projects (above 50MW onshore and above 100MW offshore). A gas-fired power station is normally between 700MW and 1600MW. Each onshore wind turbine is normally between 1MW and 2MW.

Its decisions are to be made in accordance with the National Policy Statement (NPS) which applies to the relevant category of development. Each NPS will be the subject of public consultation and scrutiny by Parliament. Once the NPS is in place the decision on that category of applications passes to the commission, and is removed from ministerial control.

The IPC process is much more demanding in terms of steps the developer must take before an application is submitted. There must be a formal, rigorous public consultation exercise on the application in draft, with changes made as a consequence properly documented. Once the application is submitted, the Planning Act lays down a period of six months in which the application is to be 'examined' by the IPC (including any inquiry), and a three month period for the final decision. If the IPC keeps to this timetable, then this will represent a substantial improvement on timescales of s.36 consents in recent years.

Carbon capture and storage

In the last three years a number of proposals have come forward for new coal-fired power stations, typically to replace existing facilities. The government is

supportive in principle of this, but has wrestled with the question of requiring carbon capture and storage (CCS). This involves stripping the coal (pre or post-combustion) of carbon dioxide, transporting it by pipeline to be pumped into sub-sea depleted gas or oil fields or sub-sea saline aquifers. The different elements of this process are all proven individually elsewhere in the world, but have not yet been put in place at a commercial scale for a power station. The UK government is committed to funding a demonstration project to assist in proving the technology and getting the cost down, as well as introducing a levy to fund three other demonstration projects.

The long-term storage of carbon dioxide has some parallels with the long-term disposal of nuclear waste. The directive provides for a liability regime for the carbon dioxide, and the transfer of liability to the public after a period of time. The Energy Act 2008 provides the basis for a new consenting regime for CCS, which will be developed in detail going forward.

The question of CCS has been the critical issue when deciding whether or not to grant s.36 consent. The government announced in April 2009 that all new coal-fired power stations will need to have CCS for at least part of their output; and will need to be 'Carbon Capture Ready', meaning there is sufficient space for the retro-fitting of the station and a credible proposal for transport and storage of the carbon dioxide. Retro-fitting must take place within five years of CCS being deemed technically and commercially proven.

Offshore wind

The UK government is placing considerable reliance on offshore wind farms delivering the lion's share of the renewable energy generation needed for 2020. A number of wind farms have been constructed to date within territorial waters.

A new legal and consenting regime was put in place under the Energy Act 2004 to enable wind farms to be constructed outside territorial waters and within a so-called Renewable Energy Zone declared under the United Nations Law of the Sea. The first such wind farm has been consented and is now under construction. The Crown Estate is currently considering bids from developers for nine very large seabed areas, mostly outside territorial waters. The sheer scale of the new projects, involving many hundreds of turbines, will give rise to novel consenting issues, particularly involving the impact on birds, commercial shipping and fisheries.

Nuclear

The development of a new generation of nuclear power stations has been strongly encouraged by the government. The new IPC regime has been designed with this in mind, to try to avoid a re-run of the extremely lengthy public inquiries for Sizewell B and Hinckley Point C. A formal site assessment process is under way. The expectation is that all of the locations for new nuclear build will be existing nuclear sites. If the IPC regime works as intended, the merits of national policy will not be debated, and the IPC will focus on site-specific issues – design, ecological impact, landscaping, flood protection etc.

Onshore wind

Arguably, onshore wind projects give rise to the most multi-faceted planning decisions for electricity projects. Landscape and visual impact are always important. However, the mix of issues beyond that can be extremely long, including interference with civil and defence radar, impact on the setting of scheduled ancient monuments or listed buildings, impact on birds and their habitats and the noise effects on residents. Wind turbines are now typically 100m to 125m in height, to the top of the blade at its highest point. These are very large, moving structures and it has required a major change in mindset on the part of the planning system to find a way of calibrating their acceptability, given the previous general policy of opposition to large structures in the countryside.

The government has needed to emphasise repeatedly the national need for renewable energy, most recently in a formal Statement of Need in 2007. In Wales, one of the areas with the best wind resource, a policy of concentrating larger wind farms in so-called Strategic Search Areas has been followed since 2005. To date this policy has caused substantial delay in bringing forward new developments, though there is now a batch of large applications awaiting determination.

A key issue for the next few years is the need to increase public acceptance of the need for new electricity schemes across a range of technologies. The urgency of the energy gap and the need to address climate change provide the policy imperatives, but the planning system will always work more successfully where there is clear public support – which at the moment is not particularly evident.

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