SUBMISSION FROM PHILIP KERR

Targets

The main issue to be tackled in this section relates to the estimate of overall costs of achieving the targets and the identification of which parties bear them.

There seems to be little evidence that anything other than a very narrow definition of cost has even been considered, and that consideration of energy efficiency has had any substantial bearing on the process to date, especially when the emphasis has been on wind energy.

The primary bearer of the financial cost has been the consumer, through the system of subsidies, without which the developments would not have been undertaken.

There is no acknowledgement or recognition of the broader costs which cover such areas as the environmental impact, for example the Visual Impact, or evidence indicating the increasing negative health impact which seems to be totally ignored. Potential negative impacts on property values, lack of sufficient notification, the economic cost of the risk to tourism, and the ecological cost all seem to be swept aside, in pursuit of a goal that looks increasingly single minded and reckless.

Much of the evidence used to justify the minimal impact precedes the recent rapid acceleration and proliferation of developments which only have served to harden attitudes and change perceptions. It also precedes the significant increase in the actual size of turbines in the case of wind energy.

Such a single minded pursuit also seems to have failed to take fully into account the need for reserve or backup generation capacity that can cope with ever larger fluctuations in electricity supply arising from a greater reliance on power sources that are intermittent in nature. Not every form of electricity generation can be used as back up due to the need for rapid substitution, and the net result would be a need for a massive amount of CCGT plants that would be operating sub-optimally to act as a reserve, also requiring subsidisation by their owners. In terms of energy efficiency this is sub-optimal leading to a far greater economic cost for the economy than it is necessary or justifiable. It will also need a far greater upgrading of the Grid network than would otherwise be necessary. With the goals for wind power as they currently stand, by 2030 although our electricity demand is projected to only rise by 5% our reserve capacity will need to increase by 45% due to the greater dependence on intermittent power sources, which need reserve back up. Until a solution is found to store energy produced by wind turbines it makes no economic sense to pursue the current targets whatsoever.

Challenges
Technology
The main drawback to the pursuit of the renewable targets remains the inability to store power from intermittent sources of generation. Should that be achievable an entirely different picture might emerge. Other sources of power are also being developed, though these are technically further behind. In terms of technical development it makes more sense to devote resources in Universities and research institutes to where we are at the early stages of development and at the forefront, rather than focussing on technology which has been developed elsewhere, and is now shifting to lower cost production locations having been commercialised.

New energy technology is being developed all the time, and the developments in shale extraction have changed the whole shape of the US Energy map, initially for gas, and now potentially for liquids too. Such changes may also affect our energy use and needs, and that possibility, so far, doesn’t seem to have been taken into account.

Supply chain and Infrastructure
As one can see from some of the infrastructure projects being considered, the current framework is considered to be inadequate for the targets set. In focussing so much attention upon intermittent power sources requiring further back-up, one might suggest that current targets are creating an energy inefficient response, and certainly an economically inefficient one. A more energy efficient target would lead to significant savings in the required infrastructure spend. This could be more effectively channelled.

Planning
Is the planning system adequately resourced and fit for purpose? How can national policies be reconciled with local policies?

This is one area where government action and interference has clearly made the local planning system lose credibility, confidence, and efficiency. This is no reflection on the capability of the planning departments at local authority level, but instead the way the planning system has evolved in the renewable area, has led to a process that currently is unsatisfactory in many respects and has led to a loss of confidence.

The initial guidance from the Scottish Government is not adequate, or clear, and some aspects of the national planning guidance also need to be tightened up. Recent developments have only served to accentuate the pressure on local planning systems.

The shortening of the time period for processing applications has proved counterproductive. It has become impossible for local authorities to process applications within the predetermined time period simply because of the number of applications and the lack of resource. The system has also become weighted against those who are not in a position to receive official notification of developments, and in many cases only discover what is going on after applications are lodged, and the closing date passed.

The Scottish Government now needs to revisit certain aspects of the guidance it has given, to allow proper consideration, and also to establish its global credentials as a
renewable leader. Renewable goals can be complementary with local interests but they currently are far from that.

Planning timelines need to be extended to allow local authorities proper time for consideration of applications, and to allow proper time for public comment.

Local authorities have been encouraged to create frameworks for Wind Energy applications and have now created Spatial Maps by which these can be considered. Similarly Local landscape designations are being updated which could also create a tighter framework. These have designated preferred or less preferred areas for development. This should now be reflected in guidance in terms of permitted locations, and such local guidance should be reflected at a national level, otherwise it simply renders the process a waste of time, and a massive waste of resource.

There is currently a 2kms buffer guideline from communities in planning guidance, though quite why this has been established remains unclear, given that it seems to be totally ignored in the process, with many wind turbines sited far closer than the suggested buffer. More recent health and environmental studies, and the imposition of firm guidelines in other countries suggests that the Scottish Government is losing the opportunity to set an example by establishing firm set back distances which put it at the forefront of environmental policy while also taking into account interests of the individual.

At the same time as setting up a minimum exclusion zone, the notification process within planning applications could also be revisited. Even with single turbine application some of these are so large that a formal neighbour notification system should be required using the LVIA applicable for the height of the turbine to tip, as laid down in planning guidance.

The appeal process currently is felt to lack credibility
After rejection at local council level, which may also have been accompanied by opposition from individuals and local community councils, the developer can appeal to a Scottish Government appointed Reporter who then can permit a scheme which has been opposed at every step beforehand.

The appeal process should be turned over to an arm of the Judiciary, so the process is seen to be more arms length.

Many of the changes suggested above would help to restore credibility and trust to the process, something it currently lacks.

Community benefits
Community benefits lie outside the planning process, along with other factors that are not considered. Encouragement should be given for greater local community participation, so that some of the significant financial returns are spread beyond the applicants. At a local authority level there should also be a set tariff on all schemes to provide a regional benefit. The involvement of the Scottish Government and local authorities in educating communities as to the potential opportunities is sensible, but there is the risk that if taken too far , and even potentially taking direct financial participation, there is a risk of muddying the water further when weighed against the
planning process. A set percentage regional contribution would prevent any suggestion of preference on schemes.

**Access to Finance**
There are several reasons why access to finance is not straightforward. Without subsidies, despite being most advanced of the renewable technologies, wind Turbines would be unprofitable, and would not be constructed. Hence the whole economic return to investors becomes dependent on the level of subsidies in operation. As has become clear in tougher economic times, a power source that cannot be relied upon because of its intermittency, and where subsidies are deemed to be too high, can have them reduced. This creates an element of uncertainty about the potential future return, and hence makes investment decisions less clear. For other less developed technologies subsidy levels seem to be set at a reasonable level to encourage further investment.

It is also worth reflecting on the general perception of the wind energy industry. A number of countries are reducing, or removing the subsidies that have been in place to encourage wind energy schemes, and this has led to some significant reductions in expectations for the manufacturers. The share prices of Vestas, Gamesa and Nordex, all leading European manufacturers of Wind Turbines have fallen heavily from their 2008 peaks, with Nordex down more than 80% and Vestas and Gamesa down over 90%. That hardly signifies an industry in a major growth phase. There have been a succession of profit warnings, job cuts, and competition has also accelerated from low cost manufacturing locations in the Far East.

To create a more stable funding environment, one not only needs to have some clarity on the potential return, predictability in energy production, and a goal of creating energy efficiency. With that backdrop renewable energy schemes will be able to attract more funding.

The current approach to renewable energy seems akin to buying a Hybrid car, with one intermittent form of energy already being installed at breakneck pace, and a hope that the required alternative power sources will appear in due course, with no real estimate of how much extra that might cost.

A more balanced energy policy with some longer term sensible goals would attract more finance. The issue of the independence vote, and doubts about the funding of subsidies in an Independent Scotland is bound to create further funding uncertainties. Until that uncertainty is removed access to certain forms of finance will become more difficult.

**Energy market reform and the subsidy regime**
Are the reforms of the energy markets and the subsidy regimes at both the UK and EU level sufficient to meet the challenge of the Scottish Government's renewable targets?

As suggested before the current renewable targets are questionable, and also one should strongly question any targets that require renewable schemes that are dependent on subsidies to create the goals to achieve them, that would not be built otherwise. With early stage technologies this is perhaps understandable, but with developed ones it isn’t,
In the latest consultation on the levels of banded support the Scottish Energy market was preferentially treated compared to that in England and Wales when the numbers provided by Arup are taken into account.

The current ROC of 1 per Mwh will be reduced to 0.9 across the UK. For large wind farms according to assumed average load factors based on historical data, a range of 0.6 to 1.6 ROCs is required for England and Wales. 0.3 to 1.2 for Scotland, and 0 to 0.8 for Northern Ireland.

By setting a ROC band of 0.9 for Scotland, the same as the rest of the UK, that deliberately tilts the process towards developments north of the border, whilst also indicating that every scheme still requires subsidies

At this point it might well is worth asking what happens to those subsidies, if Scotland should become independent. The energy policy of an Independent Scotland with the inherent funding obligations is one subject that needs to be tackled, and clarified very quickly.

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