Response to Consultation "Transmission charging and the GB wholesale electricity market." (Part 2. A DTI consultation on transmission charging, in the context of the Government's policy objectives for growth in renewables.) August 2003.

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2nd October 2003

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Part 2 A DTI consultation on transmission charging, in the context of the Government's policy objectives for growth in renewables.

Paragraph 7.23 (Lower charges for all renewable generators)

To be cost reflective there must be an incentive to consider transmission costs when deciding where to locate generators. The Renewable Obligation subsidy of £45 per MWh should not be taken into account in calculating the true **cost reflective** element. The subsidy is contrary to being "efficient" and "well targeted". German scientists from long term experience have already called for the abolition of subsidies on onshore wind turbines.[1]

The only justification for locating in peripheral areas is the proven, demonstrable high profitability of the renewable technology. No data exists at present to support such a supposition (paragraph 7.8) that the "significant renewable potential" of the Highlands and Islands of Scotland is truly capable of being profitably harnessed by wind turbines to significantly reduce carbon emissions at least cost to customers.

To be well targeted and efficient, any rebates should be earned by the most profitable generators (in terms of recovering the cost of installation and generating electricity output), which is the only justifiable factor for locating in any area. This would prevent millions being squandered on unjustifiable and ultimately costly "peripheral" locations.

Avoidance of "non-discrimination" should not be hi-jacked as a device for supporting a free-for-all rash of developments in supposedly "peripheral" areas.

On these grounds we agree that the following would be disproportionate:
Uniform **charges** for all renewable generators liable for such charges
Uniform **discounts** against published charges for all renewable generators liable for such charges.

Paragraph 7.37
Practicalities and principles of the options 7.24 to 7.33 ***(Lower charges for renewable generators located in peripheral areas.)***

Paragraph 7.25
In our view, charging the real cost of transmission and generation fees "does not discriminate against" a generator. A rebate for such generators is a form of **positive discrimination**, which the EC Renewables Directive does not explicitly call for.

[1] Darmstadt Declaration,1999.

Paragraph 2.6
The definition of "peripheral" based on low population density promotes a false perception of Scottish Highland and Island littoral communities where there are populations of suburban density all around the coast because the inland is uninhabitable. For example, in the island of Lewis and in the northern counties along the shores of the Pentland Firth, the coastal strip is the only habitable part. Suddenly, fortune hunters in the guise of multiple developers of turbine zones, are in competition with man for the use of this land on which human survival depends. (The "profits" are not even real but artificial constructs dependent on the £45 MWh subsidy.)

These are fragile marginal communities where the imposition of an onshore wind-turbine monoculture must be prevented. At a strategic level, turbine zones are "no-go" areas for other more sustainable development, and therefore antagonistic to sustainable land use development.

There are powerful social and environmental reasons why onshore windfarm developers should be prevented from occupying land within ten miles of the coast in these marginal littoral communities. If the "peripheral" definition is retained there must be a qualification to protect marginal littoral crofting communities in the Highlands and Islands of Scotland. The size of onshore windfarms must be rigorously restricted to prevent monstrosities of scale in marginal littoral communities. Schemes such as the six hundred 300-foot high 250 MW wind turbines proposed for Lewis (125 in Pairc[2], 125 in Eishken, 300 on Barvas Moor, and more besides in Galson) are socially and environmentally unacceptable.

In addition, there are no facts on which to base calculation of the cost efficiency of locating onshore wind turbines in the suggested "peripheral" areas. There is therefore no justification for locating large onshore windfarms in the Scottish Highlands and Islands. Therefore the "peripheral" category is entirely redundant. However if it is retained it should be qualified to exclude and protect the fragile, vulnerable littoral communities from political and commercial exploitation.

Paragraph 7.44 (appropriate definition of renewables)

There is no justification for adopting a definition of renewables which is different from the European Renewables Directive. Scotland already generates 13% electricity from renewable sources, mostly hydro-electricity (by contrast

[2] On the Pairc Estate, a 250 MW windfarm of 125 turbines which will be at least 300 feet high, is planned within a circle of 3 mile radius, with 10 crofting villages of 500 people on the coastal periphery of three distinctive fiords, Loch Erisort to the north, Loch Ouirn and Loch Shell to the south, and the Minch to the east. To the west lies the Eishken Estate where Beinn Mhor Power plans a similar 125-turbine windfarm. The area has significant raptors, red throated divers and is a migratory route for Brent and other species of geese. There are numerous lochs and salmon and trout rivers all of which will be polluted by runoff resulting from a stupendous 38 miles of roads required to build and service the turbines. This will take up most of the common grazing. There is every reason to fear that unbridled greed, power and political ambition will force this insane development through the statutory planning process which circumvents the normal local planning process because of its huge scale.

with England's 1%). The definition of hydro-electricity schemes above 20 MW as **non-renewable** therefore discriminates against Scotland and particularly the Highlands where most UK hydro-electricity is generated. This is particularly discriminatory when the scale of efficiency of hydro-electric generating schemes is so overwhelmingly superior to wind energy. Presumably Sweden allows hydro-electricity to count as renewable?

Scotland has therefore in real terms already attained the 10% by 2010 target for renewables. The question arises of how the Great Britain system operator will reconcile the conflicting and indeed discriminatory requirements set by the Scottish Executive of 20% by 2010 and 40% by 2020 rather than the 20% by 2020 set by the UK government.

As the drive for renewables is following the European directive, and in the absence of UK experiential data on wind energy, there is a responsibility on the Government to put in the public domain the factual statistics of wind energy over the past 20 years from countries like Denmark and Germany. Recent US Government policy regards wind energy as insignificant in short and long-term planning. What about the acceptance of nuclear energy in France, no less subject to European directives than the UK?

An appropriate definition of "renewable" in this context must incorporate in effect a **"weighting"** – an expression of the suitability of the proposed renewable technology for integration into a modern reliable electricity distribution system. Such a system has to be balanced on a second-by-second basis to ensure system security. Wind-generated electricity is particularly problematic in this respect since it is, by nature, intermittent and unpredictable, and therefore encouragement of its production (by subsidies and rebates of various sorts) contradicts the demands of modern electricity grid dynamics.

Therefore **"weighting",** in the definition of "renewable", should be heavily against "intermittent" renewables, such as wind-generated electricity. In addition, since intermittency and unpredictability necessitate switchable back-up (conventional power stations) equal in capacity to the renewable capacity, such a situation cannot fulfil the objective of delivering a "low carbon economy at lowest cost to
consumers".

The **"weighting"** must therefore affect eligibility for rebate or other subsidy.

Concerns relating to changes planned for the Highland and Islands.

The supposition that we must accommodate a "much larger number of renewable power stations some of which are relatively small"[3], once again contradicts the necessity (in the case of wind turbines) for a second-by-second switchable national distribution system with guaranteed reliability.

[3] Appendix 1, par. 1.4

The following problems are envisaged:

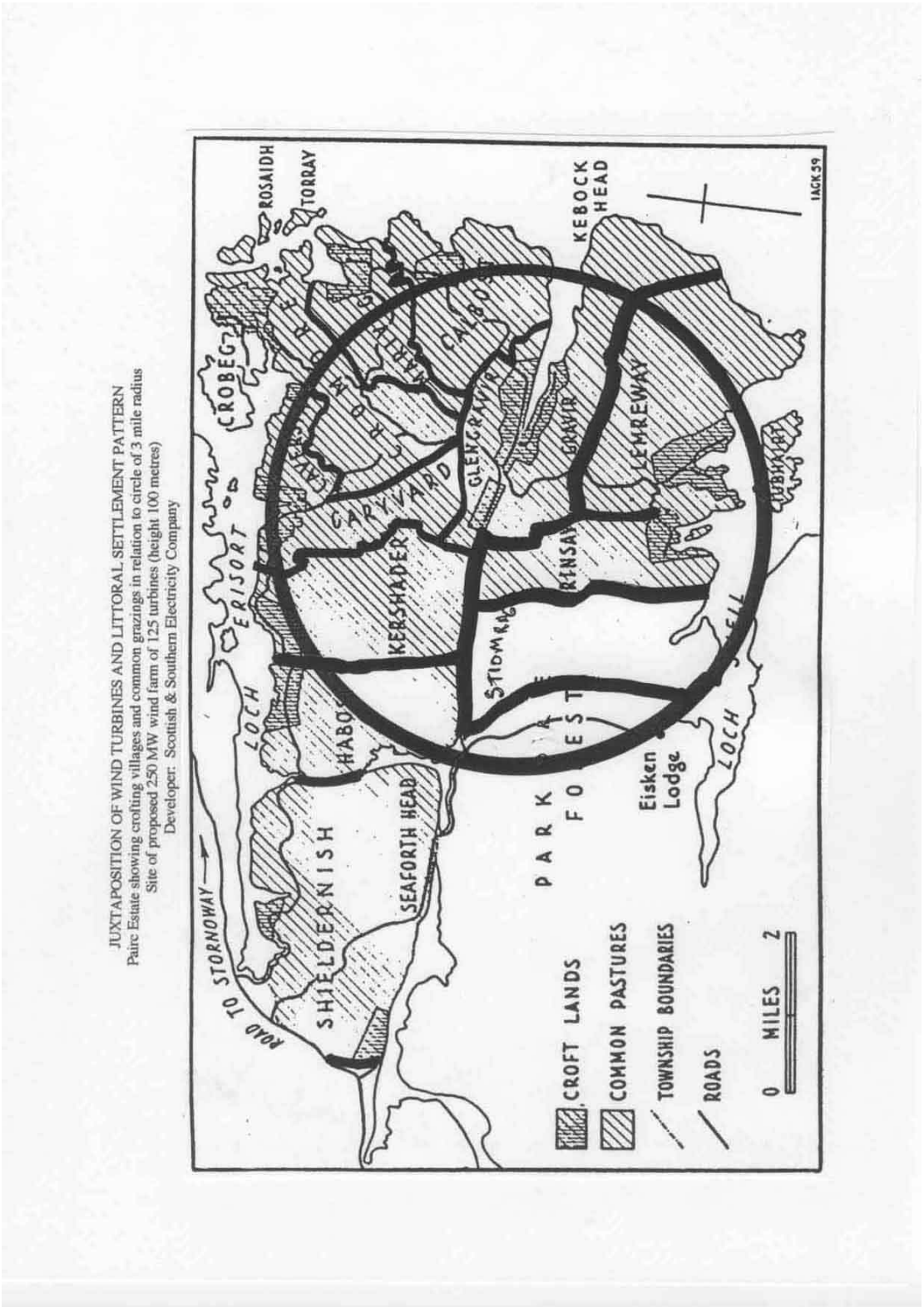
- Inability to co-ordinate multitudinous fluctuation in input from small units. (The Lewis-Harris-Skye system already has the greatest number of switches in the UK.)
- Lack of the obvious advantages of scale of large, regular, predictable flows of electricity into the system.
- Necessity for equivalent total backup capacity in a state of instant readiness.
- A windfarm cannot be described as a "small power station"[4] when each turbine is surrounded by one hectare of land.
- Widespread geographical dispersion of turbines necessitates excessive duplication of infrastructure and maintenance.
- An unprecedented number of communities are being blighted and disrupted for an insignificant and uneconomic reduction in carbon emissions.
- There is plenty of evidence that promises of heavily subsidised (but in reality uneconomic) wind-energy income is being used as a trigger for community crofting estate buy-outs across the Highlands and Islands, giving rise to the suspicion that politicians, both in the Scottish Executive and Westminster, are blinded by their pursuit of land reform rather than engaged in a properly planned, reliable, cost-effective energy policy.

There are too many unsupported presuppositions such as the north of Scotland's "massive potential for onshore wind."[5] We do not believe that this document gives a real insight into the enormity of the scale and impact of the proposals for radical, unwelcome and uninvited change across the Highlands and Islands of Scotland. It is, we believe, based on a monumental error of judgement surpassing many times the folly of the Millennium Dome and the new Scottish Parliament building in Edinburgh where costs have multiplied to astronomical proportions.

The involvement of the office of the Depute Prime Minister in devising the proposed "Policy Planning Statement 22" is an ominous development[6]. Our experience is that developers already have unassailable powers over the population of the island of Lewis who have never been democratically consulted about the drastic changes to the ambience and quality of life that "the largest (three) windfarms in the world" will create. Yet the common people have no say in the planning process now under way, which will be decided under Section 36 by civil servants in the Central belt. It augurs ill for the well-being of the community.

In our view a revolution is being triggered in Scotland, by government manipulation of the energy policy.

[4] Appendix 1: par. 1.4
[5] Appendix 1: par. 1.6
[6] Appendix 1: par. 1.9



Map illustrating f.n. on P.3