

**Ymgyrch Diogelu Cymru Wledig
Campaign for the Protection of Rural Wales**



**CANGEN SIR GAERNARFON
CAERNARFONSHIRE BRANCH**

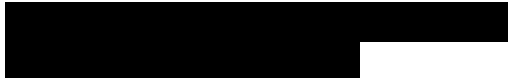
14.11.19

Dear NDF Team,

Please find attached below a response from the Caernarfonshire Branch of CPRW relating specifically to NDF proposals for renewable energy development in Wales, as identified in Policies 10-13. We disagree with these proposals. We are in agreement with most of the other policies and proposals in the NDF and have no detailed comments on these.

Yours sincerely,

Noel Davey
Secretary, CPRW Caernarfonshire Branch



CADEIRYDD/CHAIRMAN: Frances Llewellyn
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Caernarfonshire Branch Comments on Draft NDF Renewable Energy (Spatial Strategy and Policies 10-13)

1. Summary of Our View

We do not agree with the Spatial Strategy to direct large scale wind and solar energy development to 15 Priority Areas covering about 20% of the land area of Wales. Our principal objection is that such large-scale development, particularly wind farms, would impose an unacceptable visual impact on rural landscapes, whether or not these are formally designated protected areas. The wholesale industrialisation of the countryside implied by these proposals would undermine the well-being of residents and would deter visitors who come to enjoy unspoilt landscapes and help sustain rural economies. We accept the need for low carbon energy generation in the right places, but further onshore wind development is not justified by the immense environmental and social costs it imposes through degradation of the countryside. We maintain that targets for carbon emission reduction and renewable energy generation can be met without recourse to the blighting of Welsh landscapes in the way proposed. Further offshore wind development, in particular, offers a less damaging and increasingly competitive alternative in the short to medium term; nuclear small modular reactors and wave and tidal energy both have important potential in the longer term. We support appropriate renewable energy schemes, including solar farms, which are demonstrated to have minimum impact on the landscape and which attract genuine local community support and involvement. We would support limited solar farm development in the south of Priority Area#2 in Gwynedd in line with the Local Plan proposals where there is good natural screening and views from high ground are limited.

2. Renewable Energy Supply/Demand Context

In principle, we support a national target for 70% of electricity consumption to be generated from low carbon energy by 2030, but this needs to be more clearly defined. We also think it is a mistake for Wales to place all its energy 'eggs' in the single 'basket' of onshore renewable wind and solar energy. We are in favour of an acceleration of local community ownership of renewable energy schemes.

Wales already generates twice as much electricity as it consumes. Since energy policy is not devolved, Wales is subject to UK decisions which have resulted in a significant capacity for fossil fuel generation: as a result, Wales now accounts for almost a fifth of UK gas-fired generation capacity, while accounting for only 6% of UK electricity consumption. Wales is also pulling above its weight in renewable energy capacity and seems well on track to meet its targets : renewable energy accounted for 22% of electricity generation in Wales in 2017 and already almost 50% of current electricity consumption. Since 2005 renewable energy generation in Wales has increased by a factor of 5 while consumption has decreased by almost 20%. The increase in renewable capacity needed to meet the 2030 target now appears relatively modest (i.e. less than 2GW).¹

¹ The scale of renewable energy output envisaged for the Priority Areas is not specified in the NDF. However, the underpinning study 'Assessment of onshore wind and solar energy potential in Wales' (Welsh Government/Arup, June 2019) includes a table (E3) relating to grid capacity assessment which implies a total assumed target of 4.3GW capacity from all 15 Priority Areas combined, sufficient to generate about 9TWh annually, compared with an implicit shortfall on the 2030 target of about 2TWh at present consumption levels. The proposed level of overprovision appears excessive even if consumption growth were to resume, for example, as a result of increased electrification of transport and heating, needed as part of a carbon reduction strategy.

Offshore wind is not considered in the NDF analysis, even though it already accounts for 30% of renewable energy production in Wales. According to 'Prosperity for All: A Low Carbon Wales' (March 2019) there is potential to add 1.8-1.9GW of offshore capacity by 2030 which could generate 4TWh, twice the present shortfall needed to meet the renewable target. Recent UK auctions for windfarm development in the North Sea have brought offshore costs down to less than £40/MWh capacity, less than the wholesale price of electricity, indicating that offshore wind is now one of the most competitive sources of subsidy-free energy. We consider the visual impact of offshore schemes to be considerably less problematic than onshore wind, provided schemes are situated well away from the coast and that connecting transmission lines are routed sub-sea direct to consuming areas.

There is no mention of encouraging installation of photovoltaic solar panels on the rooftops of commercial and public buildings. This should be a priority in developing further solar energy.

These assessments make no allowance for existing hydro pumped storage capacity of 2GW established to meet peak load demand. The currently postponed Wylfa nuclear power scheme could also affect the assessment if it were to proceed, contributing up to 3GW, equivalent to present renewable generation capacity. The NDF makes only brief mention (policy22) of the potential for nuclear small modular reactors (SMRs) which appear to have potential to offer an effective source of reliable, flexible, safe and economic decarbonised energy. The NDF makes virtually no mention of the potential for nascent wave and tidal technology for which suitable schemes might in the longer term make major contributions to renewable energy.

There is growing evidence that a high dependence on renewable wind and solar energy, which is intrinsically intermittent and unpredictable, is leading to instability and interruptions in electricity supply, which require expensive solutions to resolve.

We see no justification for setting aside such a large part of the country for wind farms when there are alternative means of achieving low carbon energy targets economically in both the medium and long term without imposing the same degree of damage on the landscape. Policy 13 states briefly that '*energy technologies other than wind and solar are supported in principle*', but does not suggest that these will be given serious consideration as an alternative to onshore wind energy.

The NDF should include more detailed and explicit assumptions and scenarios for future energy supply and demand in Wales to demonstrate how its proposed spatial strategy for renewable energy can be justified.

3. Planning Approach

We do not agree with the proposed dirigiste approach to rolling out large-scale wind farms across large tracts of the Welsh countryside. The implication is that top-down decisions - the '*Welsh Government will use its policy levers*' - will ride roughshod over democratic consultation processes, irrespective of local opinion. The proposed '*presumption in favour of large-scale onshore wind and solar energy development*' in Priority Areas and the '*significant weight*' to be given to proposals' contribution to energy targets, suggest that valid objections will not be heeded. The NDF acknowledges that there will be adverse impacts to be identified but these are to be '*minimised*' through mitigation, rather than refusal, failing to recognise that there are few practical ways of mitigating the impact of giant wind turbines. Outside the Priority Areas ('amber' areas and Policy 11 in the NDF) planning approval would require '*no unacceptable adverse effects*', implying that unacceptable effects **would** be tolerated within Priority Areas.

The proposed strategy rests on there being '*an acceptance of landscape change*' in the targeted areas. Who is doing the accepting? We doubt if local residents would welcome these projects.

4. Definition of Priority Areas

The identification of Priority Areas ('green' areas in the NDF) targeted for large-scale wind and solar energy schemes is based on a strategic review of opportunities and constraints for development throughout Wales with particular reference to landscape and visual impact (Arup ,op.cit.). This is entirely a desk-based study which suffers from a lack of ground surveys to support its analysis and conclusions. We consider its framing brief to be inappropriate: it starts with a permissive approach, considering the whole of Wales as a candidate for development and reducing this by giving progressive weight to defined constraints to the point where there are enough areas left to meet pre-conceived targets, rather than asking at the outset which areas of Wales would genuinely be most suitable for large-scale renewable energy development of different types.

In order to define Priority Areas the Arup study considered four scenarios applying different levels of defined variable constraints including Landmap areas of outstanding and high visual sensory value, historic landscapes, buffer areas around Parks and AONBs, etc . A high constraint scenario, i.e '*with the lowest risk of facing objection*' (Stage 1 p15 and B3) led to little land being identified as suitable for large-scale renewables development. A lower constraint scenario which ignored most of the variable constraints was finally adopted as a basis for further refinement of priority areas to allow for '*more flexible development..thus enabling Welsh Government to make progress towards its renewable energy targets*'.

We agree with the early decision to rule out the National Parks and AONBs where '*large-scale onshore wind and solar energy development is not appropriate*' (the 'red' areas and Policy 12 in the NDF). However, much of the Arup study concerns the way that proposed schemes are treated close to these designated areas to '*demonstrate that the development will not undermine the objectives that underpin the purposes of the designation*'. When realistically defined buffer areas related to visibility of 150-250m high wind turbines were applied systematically in refining the Priority Areas, the results indicated that there were few parts of Wales where such turbines would not be visible from the protected landscapes (Arup Stage 2 p.18-19) . '*Refining the draft priority areas to the extent that no turbines within the priority areas would be visible from nationally designated landscapes would reduce the area of the priority areas to such that, when considered with other constraints, the priority areas would be unlikely to deliver Welsh Energy Government renewable energy targets.*'

This sums up the problem. These giant structures are simply not appropriate for rural areas in such a small country as Wales. Landscape and other genuine constraints are present almost everywhere.

The final refinement of proposed Priority Areas allowed in practice for potential turbines to be inter-visible from up to 25% of the area of National Parks and AONBs, considerably weakening the level of protection. More subjective refinements were also applied, for example, in the case of Anglesey (Priority Area #1) '*less weight was given to the inter-visibility analysis because the AONB surrounding this area is important due to the views outward across the sea rather than into the priority area*'. (Arup Stage 2 section 9.5.2 p.46). This flies in the face of overwhelming hostility in the island to the smaller turbines that have already been sited here.

The buffer area inter-visibility approach was not applied in the case of solar farms which makes them vulnerable to views from high ground within nearby protected areas.

The finally proposed Priority Areas in most cases incorporate the earlier TAN8 Search Areas but are considerably larger. Even if only parts of these areas were eventually taken up, this strategy in effect imposes an unacceptable blight on the prospects of the whole of the Priority Areas with the threat that they may be subject to such development at some point over the next 20 years.

5. Adverse Impacts

The NDF (p37) acknowledges that *'wind and solar renewable energy development can be visually prominent.'* It then states that the *'strategic review of landscape and visual impact identified the Priority Areas... as the most appropriate locations to accommodate landscape change. There is, therefore, an acceptance of landscape change in these areas.'* The review did not do this – it picked the areas with slightly fewer constraints in order to meet a preconceived target capacity, but it did not demonstrate that these were appropriate for landscape change, nor is there evidence of any acceptance of such change, except perhaps in the minds of Welsh Government officers.

The size of the structures needed to provide economic onshore wind power are now enormous, 150-250m in height with acknowledged significant line of sight visibility over distances of 15-24km. Their industrial scale, dynamic motion, noise, flicker and predominant white colouring are all undeniable causes of adverse impact on the landscape, sense of rural tranquillity, and risks to health and well-being of local residents, as well as birdlife, which no amount of attempted mitigation can remedy. Identified adverse impacts of proposals are supposed to be *'minimised'* but they will not stop projects going ahead in the target areas.

The Welsh Government report *'Future Landscapes: Delivering for Wales'* (2017) advocated greater recognition for all landscapes, while *'Valued and Resilient'* (2018) made the point that *'The intrinsic link between people and place forms an important cornerstone of well-being in Wales. Landscapes in all their forms shape the feelings and identity of individuals, community and the nation.'* How do these statements sit with the NDF proposals to ravage a fifth of our land area which it deems to have little value?

The NDF (p36) acknowledges that there are risks of *'significant cumulative impacts'* from numerous wind farms, but states that communities will be protected *to 'avoid significant impacts whereby smaller settlements could be potentially surrounded by large wind schemes.'* Given the large scale of the development proposed, it is hard to see how this protection could be achieved in practice. Experience with single wind turbine planning in NW Wales suggests that the issue of cumulative development has not been handled satisfactorily.

6. Grid Implications

The Arup study takes some account of grid generation capacity in refining the Priority Area boundaries which suggests that present grid capacity and fault levels may not be limiting factors in meeting pre-set renewable energy targets in some areas. However, the NDF (p36) states that *'The development of Priority Areas will assist in coordinating strategic action, bringing a critical mass of new renewable developments together to build the case for new or reinforced grid infrastructure'*. This implies that the Welsh Government cannot say at this stage what and where additional grid infrastructure would be needed as a result of these proposals. Indeed, the NDF makes no further mention of high voltage transmission lines. Yet, lines of pylons themselves cause enormous damage to rural landscapes. Experience of recent wind farm development in mid-Wales has demonstrated that they tend to be costly afterthoughts. The direct cost of providing power connections and their indirect costs on the landscape should be established clearly at the outset and factored in as part of

the total costs of any proposed schemes. The NDF should address the issue of grid infrastructure needs explicitly as part of a 20 year national spatial plan.

7. Proposals for Gwynedd

Gwynedd is assigned Priority Area #2 which is proposed for solar farms only. This covers a roughly triangular area of about 30 sq.km in the Bryncir Corridor within Eastern Dwyfor, lying north of Porthmadog and Criccieth, and tapering to a point north of Pant Glas. The Snowdonia National Park lies immediately to the east and the northern section of the Llŷn AONB lies immediately to the west.

The original Priority Area, before refinement, extended north to the Menai Strait within Arfon. The latter portion was excluded later due to a high level of visibility from Snowdonia National Park and due to the proposed North-West Wales Slate World Heritage Site². A southern portion extending to the Llŷn coast was excluded to minimise impact on listed buildings, parks and gardens. The remainder of the Priority Area was deemed suitable for solar only given that it is small and sits between two designated areas. An area north-east of the A487 was excluded due to views of Snowdonia from the road. We consider these adjustments to be sensible and acceptable.

The Joint Local Development Plan (JLDP) for Gwynedd already defines a priority area for solar farm development covering about 4 sq.km around Rhoslan in the south of the Priority Area. This was based on a detailed study of renewable potential and constraints and took into account in particular proximity of the high voltage transmission lines connecting the former nuclear power station at Trawsfynydd and the Ffestiniog pumped storage plant, as well as a 32kv line serving Llŷn. We supported this proposal.

Gwynedd already hosts a number of solar farms of around 5MW capacity. In general, these are naturally well-screened by hedges and trees in relatively low-lying locations and are not significantly overlooked by high ground. As a result of this experience we are broadly supportive of solar farms that also meet these criteria.

We believe the defined Priority Area could accommodate some solar development. The landscape of the Bryncir Corridor has to some extent already been degraded by electricity pylons, medium-scale single wind turbines and opencast quarrying. Our main concern is the potential visibility of mass solar panels from the high ground of the protected areas either side of the Priority Area, particularly in the north where there is a gap of only 3-4km width between the AONB and Park boundaries, while the boundary of the proposed Priority Area runs only 250-500 metres away in places. The central part of the Priority Area is relatively open making effective screening of solar farms more difficult, other than through variations in local terrain. If the entire Priority Area were to be covered in solar farms (e.g. 10 or more 5-10MW units), then the visual impact would clearly be unacceptable. We would support more limited development in and around the JLDP search area where there is more existing vegetation cover and greater distance from high ground.

² The ARUP study also refers to the Pontcysyllte Aqueduct WHS, which is probably an error, possibly a confusion with the 'Castles and Town Walls of King Edward in Gwynedd' WHS, including Caernarfon Castle.