

National Planning Framework 4 Team
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National Planning Framework 4 – Invitation to submit ideas and feedback

Dear sir or madam,

With regards to your invitation to submit comments, ideas and feedback on the material you have presented in relation to your National Planning Framework 4 consultation, please find attached our submission that we hope you find to be helpful and constructive.

Should you wish to clarify or discuss anything with us, please consider us to be at your disposal.

Yours faithfully

[Redacted signature block]

Mob:

Email:

General suggestions

We note that despite its relatively supportive planning environment, Scotland has attracted less than its 'fair share' of large-scale solar photovoltaic (PV) developments than elsewhere in the UK. As a niche PV developer active across the UK, we suggest this could be improved by reducing the costs, barriers and risks borne by developers and the investors to compensate for the additional challenges faced by solar PV projects in Scotland (e.g. lower sunlight levels, more challenging terrain, more challenging wind speeds). As we articulate below, we think this can be readily achieved by updating the Government's planning guidance specific to large-scale solar PV projects, and by improving "joined up thinking" across government.

We observe that in relation to renewable energy, the Scottish government's thinking has historically concentrated on wind and hydro, perhaps as these technologies are already commonly deployed throughout Scotland. We would like to urge the Government to now visibly accept and integrate large-scale solar PV technology into their thinking given there is no technical reason for solar PV to not be more widely deployed in Scotland. While annual average sunlight intensity in Scotland is less than further south, projects can still be economically viable if achieved at scale on the right sites, especially as technological advances have made generating equipment more cost-effective and efficient. The key constraints to attracting more large-scale solar are the currently excessive planning application fees for solar that stymie developers by increasing the capital most at risk, and a lack of grid capacity at locations that are suitable for solar.

Despite the government's already very helpful guidance on the presumption to approve renewable developments, the UK government has eliminated subsidies for solar PV somewhat early, resulting in a visible stalling of deployment. For large-scale projects to be successful "subsidy free", project costs must be reduced relative to the past, and yields must be maximised. In Scotland in the near-term, this inevitably means focusing on larger sites with the most suited terrain, fewest commercial and permitting obstacles, lowest technical costs and the most certain grid access. Here we feel that the government can help in two ways:

- (A) Lighten long-term project overheads by formally encouraging local authorities to use their existing discretion to agree arrangements on a case-by-case basis. Examples where this can help include community benefits and non-domestic rates. Solar PV simply cannot afford the levels of community benefits offered by wind projects, but the figure published for wind creates an unachievable expectation and erodes the public's valuation of the other non-financial benefits that solar PV delivers. Also, joined-up thinking between Planning and other government departments is needed to help contain variable and uncertain costs such as non-domestic rates whose level and long-term unpredictability is a serious impediment to investors.
- (B) Ensure the requirements of the planning process are truly appropriate and relevant to large-scale solar PV and hence fit for purpose. We propose that the Government more aggressively reviews the planning process from the perspective of a large-scale ground-mounted solar project to determine whether it truly requires the applicant to undertake all the studies and assessments that are currently required.

Some examples:

- Have environmental studies become 'tick in the box' exercises that just add costs by requiring each applicant to commission costly studies that essentially repeat the same information and come to the same conclusion? For instance, the greatest environmental effect from large-scale solar PV is the disruption occasioned by the very limited construction process typically lasting less than 10-weeks; once complete the site will be essentially undisrupted for the following 30-years. Given the absence of any scientific evidence that such a short-term disruption can have a permanent adverse effect not just on protected but also ordinary species, we propose the government accept this as a principle and so concentrate the environmental studies that it requires each project undertake to just the truly essential issues for which there are genuine concerns.
- We also urge the government to consider reviewing its requirements for ancillary elements such as power cables because the critical lack of grid capacity is to a certain extent affected by the need for year-long bird surveys each time the network operator wishes to install or move an overhead power line. With the number of power cables already installed in Scotland, surely the ecological impacts of these can now be quantified and managed without adding costs and an extra year to each project?
- Current planning guidance on visual impact has been adapted from wind farms but is entirely excessive in relation to ground-mounted solar PV. A static, 3m high solar generator on flat or rolling land has a completely different visual impact to a 150m high rotating structure on the top of a hill. Yet current guidance demands applicants submit zone of theoretical visibility (ZTV) studies generated from terrain maps where

trees and houses have been stripped away (e.g. “bare earth”). These ZTV models are entirely unrepresentative and completely overstate the visual impact of a solar PV site, yet they require costly studies. What purpose do they serve? And do other applications such as polytunnels, farm buildings and glasshouses need ZTV studies?

- Current guidance demands that costly photomontages be prepared in a prescribed format, but we observe that technology has moved on since the guidance was prepared. Presently photomontages can only be created using expensive professional ½” CCD cameras and assembled by specialists. However, montages can now also be created using an iPhone and open-source software. Given the very different visual impact of ground-mounted solar PV to wind turbines, we submit that the ordinary person would not be able to distinguish sufficient differences between the recommended form of photomontage and one carefully prepared using less prescriptive methods to change their opinion on the acceptability of a solar PV scheme.

In summary therefore, given the extensive UK and international positive experience with large-scale PVs since the Scottish Government’s original guidance was published, we propose that the needs of both the planning authorities and the public can be met with more streamlined planning requirements.

With regard to the specific documents for which the Government has invited comments:

National Developments

We have separately submitted a suggestion relating to national developments, essentially proposing the government create an “open category” of national development covering any ground-mounted solar PV project in excess of 20MW.

Integrated Impact Assessment

Overall

Impact assessments are desk studies that intentionally simplify complex criteria into some form of comparable measure such as cost or value. In our experience, these can readily misjudge impacts through over- or under-estimation, and often entirely omit difficult to quantify benefits in the interest of simplicity, supposed ‘rigour’, or simply due to a lack of reputable quantification. Large-scale solar PV has historically been adversely affected by such impact assessments in England, notably when contrasting a qualitative measure (typically negative) such as “visual impact” or “landscape character” with more quantitative measures (typically positive) such as “carbon balance”. In preparing its IIA, we urge the government to carefully maintain impartiality and to not hesitate to consult with industry or industry bodies such as the Solar Trade Association to obtain support and evidence as it prepares its assessment.

Item 3.1.2 - Scoring system

We have in the past felt that the wording of impact assessment questions were often biased by leading the reader to look for negative impacts or features and to overlook positive impacts and features. We call your attention to the scoring system described in 3.1.2 (which describes a range from positive to negative), and to the wording of the column labelled, “Example SEA Objectives” in Table 2 where the wording chosen has an inherent negative bias, (e.g. “Avoid adverse impacts”). Some developments can enhance habitats and species, so we would propose that your editors deliberately strip out any unintentional bias throughout your assessment methods and scoring systems. In this example, simply by redacting the words, “Avoid adverse” and leaving, “Impacts to designated habitats and species” would help ensure the reader is not biased to focus on negative impacts.

Item 3.2.1 - Habitats Regulations Appraisal

When considering the effects of any policy change that relates to solar PV, we strongly urge the government to make reference to the very latest scientific evidence, for instance as catalogued by Lancaster University, on the ecosystem effects of solar PV. We observe that historically, assessments took an overly precautionary approach due to the lack of evidence, but that proper scientific evidence is now available to support the lack of adverse effects from solar PV thus obviating the need for excessive precaution.

Item 5.1.3 - Proposed method and scope of assessment

We note that Covid mitigation measures have disrupted the government's engagement programme and so businesses and stakeholders will not have had the same ability to interact with the government in its engagement. We urge the government to remedy this by making provision to discuss with interested stakeholders, and allowing for more sharing and iterations of its drafts as they are prepared.

Background Information Notes

Delivering Electricity

We note a historical focus on wind with a mention of hydro and battery storage and the absence of any direct reference to solar PV in this note. Large-scale solar PV is benign and more readily integrated near to conurbations where the electricity can be generated locally to where it is used, is more socially acceptable, and solar PV sites can be designed to provide ecosystem benefits that can be enjoyed by nearby populations. We are concerned that the government risks failing to exploit Scotland's solar potential and we strongly recommend that NPF4 take a more balanced approach by truly accepting large-scale solar PV as a useful tool to meet the, "contribution of renewable electricity generation to meeting our net zero target in a sustainable way".

We note the references to concerns about preserving the landscape and the aesthetic of "wild lands". We would like to emphasise that there are only limited areas suited to large-scale solar PV due to terrain, proximity to electricity networks and electricity consumers, and other protected features. Given Scotland's vast endowment of wild lands, we propose that the Government consider focusing its protection of wild landscapes to those areas that are anyway unsuited to large-scale solar PV so that the fewer suitable areas can actually be developed.

Climate Change

We observe that despite Scotland adopting its very sensible climate change targets, not all business sectors have begun to seriously adapt their business models to this new reality. For instance, we have observed housebuilders installing solar panels on the north roof face of their new homes and not making provision for EV charging. In discussions with housebuilders, they are not yet interested in considering district heating schemes and centralised renewable energy generation schemes for their new developments. Industrial and commercial premises are not yet integrating roof-mounted PVs onto all their developments despite it being economically rational for their clients. These are wasted opportunities for Scotland that suggest the need for much more 'signalling' to society by the government. We suggest the planning process is a good 'channel' for more strongly signalling to these segments, and would recommend that the government achieve this by: requiring sectors involved in new construction to more aggressively incorporate PVs (at the correct orientation), simplifying the retrofitting of PVs to existing buildings, and simplifying the process of securing planning consent for larger ground-mounted solar PV developments.

Infrastructure

We observe that the Infrastructure note fails to mention that a key consequence of the government's decarbonisation strategy is the transfer of mobility energy supply away from liquid fuels to electricity. Over time, the Scottish electricity network will become even more critical to not just the economy but also life in general as public mobility will also depend on its availability. Presently the UK government has created a particularly complicated set of rules and regulations, implemented by OFGEM, that strongly affect how this critical infrastructure is financed, operated, and in particular upgraded. It is common knowledge that there are serious concerns within the electricity industry as to how greater electricity demands will be met given that the transmission and distribution infrastructure is in most places, "full" or otherwise subject to technical constraints, and investment in upgrades is constrained.

Under the current regulations, the last applicant wishing to connect new generation is obliged to pay for the cost of any upgrades that may be necessary. The current regulations prevent the network operator from 'pre-investing' in upgrades it can reasonably foresee. Consequently, project developers seeking to create new renewable generation projects in Scotland not only compete for any limited network capacity, but may ultimately be charged to further upgrade network infrastructure that was just upgraded by another project making the total spend higher than had the two been undertaken together.

While the Scottish government does not have devolved powers in this area, we strongly urge the government to specifically consider how it can use the powers it does have to mitigate and de-bottleneck access to the national electrical infrastructure. For instance, due to its simple and modular nature, solar PV is the electricity generation technology that can be most quickly deployed, both at the residential scale and at very large scales. Large-scale solar PV projects can however take much longer than necessary due to the timescales required not just to secure planning consents, but notably grid consents as these too can require separate planning consents as well. Projects that could be deployed in a year may therefore take two or even three if a year-long bird survey is required to support the planning application of a short extension to a distribution cable.

We propose that the government recognise under the infrastructure category that complicated processes relating to infrastructure will have an adverse effect to desirable renewable energy developments, and increase its attention to simplifying and accelerating planning consents for enabling works such as power cables.

Valuing the Natural Environment and Preserving Peatland

As indicated previously in this submission, we urge the government to recognise the existing and credible body of scientific evidence confirming that large-scale solar PV is both ecologically benign and often beneficial. We further emphasise that solar PV does not require exclusive occupation of land, for instance being completely compatible with continued grazing by sheep or the establishment of biodiversity havens. We believe that the necessary science has not yet been carried out to confirm the compatibility of large-scale solar PV with certain types of peatlands, but extrapolating from other studies, would expect the two to be compatible. For instance, it may be that a large-scale solar PV development on degraded peatland could be deliberately designed to support the restoration of that peatland. For this reason, we urge the government to entertain the possibility that some renewable technologies, notably solar PV, may not only be compatible with, but possibly enhance and support the government's objectives stated in this background information note.

We also note the following statement in the Preserving Peatland paper:

"The Climate Change Committee's evidence to ECCLR Committee, on 14 May 2019, emphasised the need for increased afforestation targets and action at UK level, and substantial changes in approach to land-use in Scotland – around 20% of lowland pasture needs to be repurposed for forestry and/or bioenergy."

We re-emphasise the point made earlier that large-scale ground-mounted solar PV is entirely compatible with pasture and, subject to the availability of electricity network capacity, merits equivalent consideration to forestry and bioenergy when considering the repurposing of any lowland pasture.

Vacant and Derelict Land

We believe large-scale ground-mounted solar PV is completely compatible with the re-use and possible rehabilitation of vacant and derelict land. We would urge the government to consider generically recognising large-scale solar PV projects on vacant and derelict land, for instance as National Projects, and for an expedited planning process to be implemented for solar PV projects on vacant and derelict land.

Sustainability

We strongly urge the government to extend the presumption in favour of sustainable development for the next 10-years, and if possible, further enhance this with respect to solar PV for the reasons described earlier in this submission.

Digital Mapping

We strongly urge the government to increase the availability of digital mapping resources to the public. Notably, we invite the government to publish all shape files that it or local authorities use in their decision-making so that developers can more readily and accurately make use of these when planning developments. Presently certain geomatic data are only available to local authorities or public bodies, while other are freely available; there appears to be no consistent rationale for limiting access so we propose that the government make all geomatic data that underpins any national, regional or local plans freely available.

Joined up thinking

While not directly relevant to the Planning discipline within the government, we raise the following example here under “joined up thinking” as it is an impediment to achieving the Scottish government’s climate change goals.

With regards to solar PV, there is an impediment that the Agriculture and Rural Economy Directorate (ARED) has already indicated it is not willing to reconsider. ARED claims it does not wish to confuse farmers with a change in policy even though this would benefit farmers, and the current position appears to be technically unjustified.

In summary, scientific evidence now exists indicating that solar PV can be designed compatible with the objectives of the basic payment scheme (BPS), agro-environment climate scheme (AECS) and less favoured area support scheme (LFASS).

The ARED position is:

“Land parcels with solar panels on them will not be eligible for the Basic Payment Scheme (BPS) or Agri-Environment Climate Scheme (AECS) or indeed Less Favoured Area Support Scheme (LFASS). This includes the land between, underneath and around the panels, even if it is being grazed, or is accessible for grazing.

This also means that farmers cannot count this land, or any features on it (such as buffer strips), as an Ecological Focus Area (EFA).

If the solar panels are concentrated in a single area within a land parcel (for example, a corner or one end), and the farmer wants to claim for payment on the rest of the land, they must fence off the panels. The 2 areas will then need to be mapped as separate land parcels. The land parcel containing the solar panels will not be eligible and removed from the Land Parcel Identification System. What we are looking at, is the principle use of the land, in the described scenario it is non-agricultural.”

The consequence of this position is that candidate land for solar PV projects is being unjustifiably sterilised by ARED because if farmers wish to host a solar PV project on land that is receiving a farm subsidy, they need to repay all the subsidy previously received on that land at once, even though the solar PV does not interfere with the objectives of the subsidy.

The ARED position appears to be that implementing PVs renders the land “non-agricultural”. This is neither technically correct nor justified, and inconsistent with ARED allowing agro-forestry schemes to receive both agricultural and forestry subsidies for the same land.

Discussions with the Scottish government and ARED have not resolved this illogicality, and ARED has simply refused to reconsider its position.