Campaign to Protect Rural England
Standing up for your countryside

Policy Guidance Note

Solar energy

Summary and introduction

1. The Campaign to Protect Rural England (CPRE) recognises that solar energy has an important role to play in meeting future energy needs. It helps increase energy security and diversity, while making a significant contribution to meeting the UK's targets of producing 15% of our energy consumption from renewable sources by 2020 and an 80% reduction in greenhouse gas emissions by 2050. Climate change is one of the most urgent and complex environmental issues we face. Ambitious policies to reduce energy demand should be the highest priority to further reduce emissions and reduce the need for new infrastructure.

2. CPRE believes that the most suitable and, as yet, largely untapped location for solar technologies is on industrial and other buildings with major roof surfaces. We recognise that there has been rapid growth in ground-mounted solar farms. These can bring benefits, but we wish to ensure that they are located where they do not harm the natural beauty and productivity of the countryside and in ways that provide local benefits. This policy note focuses on solar photovoltaic (PV) technology because of its greater potential impacts on the countryside, rather than on solar thermal, although CPRE supports both technologies in the right locations. Solar PV technology is developing quickly, which will give rise to further deployment opportunities. This note sets out CPRE's position on the provision of solar energy, and recommends the best way to do this, including highlighting the significant opportunities that exist for solar PV and acceptability criteria for its deployment as solar farms.

Opportunities for photovoltaics for buildings

3. CPRE, like the Government, sees great opportunity to use solar energy generation as part of built development, especially on existing and proposed large commercial and agricultural buildings, as well as on public and community buildings. Part 2 of the Government's UK Solar PV Strategy quantified part of this potential estimating that there are currently 250,000 hectares of south-facing commercial roofs in the UK. The potential for significant energy generation, however, should never be a justification for approving a new building that would otherwise be refused.

4. CPRE recognises that PV for buildings is the area where the most rapid technological advances — such as thin-film PV and PV tiling — are being made, allowing ever better integration of energy generation into the built fabric — for example, as sky lights, windows and glass roofs. Very careful siting and sensitive design is already making solar PV acceptable on even the most valued buildings, including Grade 1 listed buildings. However, where rooftop PV is likely to be detrimental to the character of important historic buildings that are not statutorily listed, local planning authorities (LPAs) should consider using "Article 4 Directions". Through advancing technologies, and sensitive design and installation, the opportunities will grow. PV associated with buildings has the added benefit of providing generation at the point of use, thereby reducing transmission and distribution losses, and the impact of associated infrastructure. Local authorities can support rooftop PV through planning conditions to mandate PV on new build and major refurbishments, where practicable.

5. CPRE recognises that there are a number of constraints that stand in the way of maximising the use of buildings for PV and urges the Government to resolve these as soon as possible. These include:

- The complexity of commercial building ownership and leasing: landlords should be given greater incentives to support solar PV — for example, enabling them to become electricity suppliers
- Commercial building valuations not attaching sufficient value to PV: surveyors should give proper regard to the benefits of PV, perhaps supported by updated surveyors' guidance
- Permitted development rules should not unnecessarily constrain opportunities.

Principles for solar farm location and design

6. Solar farms, or solar parks, use ground-mounted solar PV panels to generate electricity. Sites are often surrounded by security fencing, and may have security lighting and CCTV. They will also include the infrastructure to connect to the grid, which can also be prominent. They can cover large areas of land, up to 150 acres (61 hectares) or more — usually in rural locations. Approximately five acres of land is required for every megawatt (MW) of installed capacity.

7. The National Planning Policy Framework (NPPF) emphasises the need to increase the use and supply of renewable and low carbon energy, and states that LPAs should maximise development of this energy while ensuring adverse impacts are addressed satisfactorily[1]. The Planning Practice Guidance (PPG) on "Renewable and low carbon energy" highlights that the need for renewable energy does not automatically override local environmental protections and the planning concerns of local communities. The Government's UK Solar PV Strategy Part 1 recognises that up to 20GW of solar PV is potentially achievable by 2020, but cautions that this ambition must be matched by much greater sensitivity to local environmental impacts.

8. It is essential that the siting, design and landscaping of solar farms avoid adverse impacts on the countryside. To this end CPRE will assess individual solar farm proposals and applications against criteria a. to g. below, all of which should be met.

9. A solar farm is acceptable when it:

Landscape, heritage and protected areas

a. **Avoids harm to landscape character and quality, when viewed from publicly accessible vantage points:** Solar farms should not adversely affect the character of the landscape — characteristics that make a landscape more or less able to accommodate a solar farm are set out in the accompanying campaign tools document. Nor should their siting necessitate the removal of characteristic landscape features such as hedgerows, trees and copses. Solar farms should be located to ensure minimum visibility in the wider landscape, taking advantage of local topography and/or natural vegetation that screens them. Indeed well sited and designed solar farms can have little visual impact. Visual impacts are likely to be greater in hilly and undulating areas and less so in flatter areas where overlooking is less easy. Screening by vegetation though, can be seasonal and may not be in place for the lifetime of the scheme — particularly if not under the control of the same landowner. New planting should take this into account and should be effective from the outset of the scheme.

b. **Avoids cumulative impacts on landscape character and quality, when viewed from publicly accessible vantage points:** Landscape harm is not restricted to the impact of individual schemes. It also arises from the cumulative impact of multiple schemes that in combination can change the character of the countryside. CPRE believes that assessment of cumulative impacts should take account of multiple solar farms, including smaller PV developments and additional increments on existing solar farms. It should also consider other energy infrastructure such as wind farms and shale gas developments visible in the landscape, taking account of simultaneous visibility and sequential effects on visibility. The PPG currently focuses only on cumulative impacts from an individual energy technology. CPRE believes that a broader approach to cumulative impacts should be required by LPAs to ensure that cumulative effects are adequately taken into account. This should be supported by appropriate practical guidance[2].

c. **Avoids harm to valued and special areas, especially those that are nationally and internationally protected:** Nationally protected landscapes — National Parks and Areas of Outstanding Natural Beauty (AONBs) — reduce the degree to which solar farms can be accommodated within or close to them. Proposals will need to demonstrate that they will not compromise the special qualities of these designated areas. They should not harm the purposes of Green Belts or reduce their openness. Nor should they be permitted on, or cause damage to, Sites of Special Scientific Interest (SSSIs) or adversely impact on the site or setting of World Heritage Sites, Scheduled Ancient Monuments, nationally or locally listed buildings, Conservation Areas, Registered Parks and Gardens, or locally valued landscapes and non-designated heritage assets defined in Local Plans and Neighbourhood Plans.

[1] How development proposals are handled in the planning system depends on their installed capacity: those up to 50MW are determined by LPAs guided by the NPPF, the PPG on Renewable and low carbon energy and Local Plans; those over 50MW are determined by the Secretary of State, guided by the National Policy Statements on Energy Infrastructure.

[2] For example, the Guidelines for Landscape and Visual Impact Assessment (GLVIA); part of this assessment includes information on the sensitivity of visual receptors and views, but practically it can only be used for one technology at a time.

Public and residential amenity

d. **Avoids harm to views from publicly accessible land and the surroundings of settlements:** A particular consideration is how solar farms will change the experience of people using this land. Security fencing around solar farms can be visually intrusive, particularly at close quarters. This is especially the case where footpaths cross fields and it is proposed to provide security fencing to either side. Solar farms should not be sited where they are directly overlooked by housing or where they would detract from important views.

Food production and land use

e. **Avoids using the Best and Most Versatile Land (BMVL) — Grades 1, 2, and 3a; CPRE strongly favours the development of brownfield over greenfield sites, but if brownfield land is suitably located for housing it should be used to meet this need, ideally integrating solar PV into the development:** CPRE believes that high-quality agricultural land (Grades 1, 2 and 3a), specifically protected in the NPPF, should not be used for solar farms. This reflects the growing importance of food security. There may also be a case for protecting Grade 3b or other land that makes an important contribution to the local land-based economy, particularly in areas dominated by low grade agricultural land. We recognise that solar farms can increase farm incomes in areas of marginal farming. Higher grades of agricultural land are usually arable so the availability of land within a solar farm for grazing should not be used to justify the loss of such valuable land. CPRE believes robust research and evidence on the effect of solar farms on the productivity of existing grazing land is needed to inform decisions.

f. **Avoids the site being classified as brownfield after decommissioning:** Planning conditions should require that solar sites continue to be classified as agricultural land throughout their life so their agricultural status is sustained.

Biodiversity

g. **Avoids adverse effects on biodiversity and delivers positive biodiversity gains:** Solar farms can impact detrimentally on wildlife — for example, covering bat foraging areas, preventing movement of larger animals and restricting wildlife corridors. However, there are opportunities to increase biodiversity through, for instance, planting suitable hedgerows and increasing native wild flowers which, amongst other things, may increase habitat for pollinating insects[3]. CPRE believes that solar farm developers should maximise these opportunities for biodiversity.

Mitigation

10. If acceptability criteria a. to g. are met then any remaining local environmental risks should be mitigated. LPAs should ensure this by attaching conditions to any planning permissions (see campaign tools document). Critically these permissions should be time-limited with conditions to ensure that the site is fully restored to its original quality, retaining any landscape or biodiversity enhancements, either when permission expires or when generation ceases. Conditions should also make financial guarantees for the costs of decommissioning, to ensure that sites are not abandoned.

Providing clear local policy supported by evidence

11. **Evidence:** Problems with the planning process arise where there is poor evidence – especially on landscape and agriculture impacts. Landscape sensitivity studies can provide useful extra evidence to help site energy infrastructure appropriately. Reflecting the diversity of landscapes, CPRE recommends that these use a 5-point landscape sensitivity scale, rather than a cruder 3-point scale.

12. **Policy framework:** The local planning policy framework should deal adequately with solar PV. Local Plans and Neighbourhood Plans should consider solar PV and solar farms in line with this policy guidance note — encouraging it in appropriate locations, but discouraging it where inappropriate.

[3] BRE National Solar Centre biodiversity guidance for solar developments — developed with the Solar Trade Association and NGOs.

13. CPRE branches, their members and interested individuals can campaign in a number of ways, assisted by the information in the accompanying campaign tools document, by:

- **Influencing Local Plans:** LPAs are at different stages in their Local Plan production. There are opportunities to incorporate the policy principles set out in this note as part of a renewable energy policy within the Local Plan. Several authorities have developed a Local Plan policy on solar energy (often based on a landscape sensitivity study) to define where and what type of development is acceptable. Again the principles in this note can be used to influence these.
- **Exploring the use of Neighbourhood Plans:** Decisions on the acceptability and location of solar PV are within the scope of Neighbourhood Plans, which your community may be drawing up. Neighbourhood Plan policies must generally conform with the strategic Local Plan policies.
- **Commenting on individual proposals:** The solar farm summary checklist, based on our acceptability criteria, and the information on planning conditions — in the campaign tools document — can be used to inform comments on solar farm proposals and applications.

14. **Assessment of individual planning applications**: Screening for whether an Environmental Impact Assessment (EIA) is needed must be done robustly by the LPA against the selection criteria in the EIA Regulations. In nearly all cases of greenfield development, a landscape and visual impact assessment (LVIA) should be carried out to assess the effects of change on the landscape[4].

15. CPRE also wishes to ensure that where schemes are proposed in the open countryside the application clearly identifies all the infrastructure associated with the site, including construction and maintenance impacts, and is accompanied by[5]:

- An LVIA that includes:
  - Zone of Theoretical Visibility diagrams that demonstrate the visibility of the scheme
  - Accurate photomontages from sensitive viewpoints
  - A cumulative impact assessment showing the scheme in conjunction with other energy infrastructure
- Evidence of a recent independent assessment of the agricultural grade of the land. Where this is not provided the LPA should require the developer to test it independently and include this with the planning application. If not demonstrated otherwise, it should be assumed to be the BMVL
- An assessment of the overall impact on biodiversity
- Information on the installed capacity, capacity factor and useful electricity produced
- Evidence that the proposed site is located near to the existing electricity distribution network to minimise the need for new lines and other grid infrastructure; where new cables are needed these should be undergrounded where possible
- An assessment of the noise levels produced by the inverters and substation equipment.

Community engagement and benefits

16. Prior to making applications for solar farms, developers should provide full information to affected local communities and elicit their views to help identify and, if possible, resolve potential problems.

17. The Government's Solar PV Strategy states that local communities must be willing partners in solar expansion; not just consulted, but respected and wherever possible, financial partners in local projects. This is reinforced by the Government's first Community Energy Strategy[6]. We welcome these commitments, but they need to be delivered consistently in practice.

18. We encourage community-led and owned projects, provided they adhere to the principles and approach set out in this note. We welcome the support provided by the Community Energy Strategy, but believe that there is a long way to go if communities are to overcome the financial and regulatory barriers they face to get projects up and running. CPRE has concerns about developers offering "goodwill" payments to communities, which can bring the planning system into disrepute. Nor is it good public policy to secure the support of the immediate community through such one-off payments when developments potentially affect a landscape enjoyed by a much wider population, including future generations.

August 2014

[4] Appendix A of BRE National Solar Centre's planning guidance for solar farms includes guidance on information that should be provided in a landscape and visual impact assessment.
[5] BRE National Solar Centre's planning guidance for solar farms includes a list of planning application considerations and Appendix B sets out the information on the electricity generating capacity that should be provided.
[6] The Government's Community Energy Strategy.