

### Executive Summary

CPRE Northamptonshire considers that:

- renewable energy can make an important contribution to reducing carbon emissions and reducing the need to import energy, and solar PV can form part of the mix
- unless subsidy levels for solar PV are reduced in line with falling panel costs it is likely that there will be a rapid increase in applications for solar farms
- the most suitable location for solar PV is within the built environment and that Government targets for solar PV could be met without the need for solar farms in the open countryside
- solar farms in the open countryside should be granted planning permission only where:
  - (a) sites are where the local topography limits the visual impact of the scheme;
  - (b) sites do not harm views in valued or sensitive landscapes;
  - (c) sites do not harm views from settlements or Public Rights of Way
  - (d) sites do not significantly affect the setting of settlements; and
  - (e) there is minimal impact on food production.
- applications for planning consent for solar farms in the open countryside must include information that allows the above factors to be fully assessed
- where solar farms are approved, the consent must include appropriate planning conditions to limit their visual impact and should be time limited to enable sites to be fully restored to their previous use
- any community fund should be legally enforceable and targeted towards those most affected

## 1. Introduction

1.1 Northamptonshire is seeing a number of proposals coming forward for large scale solar installations in the open countryside. This policy statement outlines the position of CPRE Northamptonshire and will be used to guide our response to individual proposals.

1.2 The Government's Feed in Tariff (FiT) was introduced in April 2010 as a financial incentive to introduce renewable electricity-generating technologies, including solar panels. The subsidies for large scale solar farms (over 50kW) were cut back in 2011 to focus on the funding of small scale installations. However, a substantial decline in panel costs has once again made large scale solar an attractive investment even at the lower subsidy levels.

1.3 There is a significant danger that unless subsidy levels are further reduced that a large number of solar farm applications will come forward across the county many of which will be in unsuitable locations.

## 2. Background considerations

2.1 As with all planning applications there are competing impacts and benefits that must be weighed in the balance when considering whether or not to support or oppose any development. There are a number of key considerations that we have taken into account when framing this policy:

- the need for renewable energy
- the case for schemes in the open countryside
- government and local planning policy
- landscape and cumulative impacts
- food security

### **The need for renewable energy**

2.2 CPRE Northamptonshire is concerned about the impacts of climate change and the need to ensure energy security. We believe that renewable energy can make an important contribution to reducing carbon emissions and reducing the need to import energy.

2.3 Solar PV is one of the eight renewable energy technologies identified in the Government's *UK Renewable Energy Road Map*<sup>1</sup>. This set targets for Solar PV and outlines the route by which targets might be achieved.

---

<sup>1</sup> DECC (2013) UK Renewable Energy Roadmap Update 2013  
<https://www.gov.uk/government/publications/uk-renewable-energy-roadmap-second-update>

## The case for schemes in the open countryside

2.4 Unlike many renewable technologies Solar PV is ideal for use within the built environment where the electricity would be generated close to the point of use minimising transmission and distribution losses. If large scale urban schemes such as Blackfriars Bridge (1.1MW) and the Bentley Motor's factory in Crewe (5MW) were widely replicated it would be possible to meet Government targets without creating any solar farms in the open countryside.

2.5 CPRE Northamptonshire would seek to direct Solar PV development towards the built environment where it would have less impact. However we accept that it would be unrealistic to expect that solar farms in the open countryside will not form a part of the overall portfolio of Solar PV schemes.

## Government and local planning policy

2.6 Whether or not a scheme gains planning permission is ultimately determined by planning policy. CPRE Northamptonshire has considered Government and local planning policies when framing our policy. Our responses to applications focus on material planning concerns.

2.7 The Government policy is set out in *Solar PV Strategy Part 1: Roadmap to a Brighter Future*<sup>2</sup>. The guiding principles of this seek to ensure that Solar PV delivers genuine and cost-effective reductions in carbon emissions in a way that maintains public support by respecting considerations such as landscape and visual impact and local amenity.

2.8 Solar PV is also addressed in *Planning practice guidance for renewable and low carbon energy*<sup>3</sup> issued by DECC in July 2013. This highlights among other things the importance of local topography and raises concerns about cumulative impact and effects on designated landscapes.

2.9 It is notable that Government support for large scale solar farms in the countryside is distinctly lukewarm. In part this can be attributed to a desire to maintain the current public support for the technology. A secondary factor could be that, in contrast to wind turbine developments, there is no shortage of locations where Solar PV can be viable; this means that the case for a locally harmful scheme has to be proportionately stronger, since there can be a better alternative. A third consideration could be that as solar PV production increases the relatively high subsidies paid to producers<sup>4</sup> will exacerbate pressure on energy prices at a time when conventional energy prices are already rising.

2.10 CPRE Northamptonshire welcomes the Government's policy that requires that schemes should be sited appropriately and that considerations of landscape and visual impact and impact on amenity should be given proper weight when deciding schemes.

2.11 Local policies, where they exist, differ across Northamptonshire. All authorities have generic policies that are intended to protect the countryside from development but these do not specifically address solar energy. The county would benefit from specific policies because these would carry more weight in planning decisions and appeals.

---

<sup>2</sup> *Solar PV Strategy Part 1: Roadmap to a Brighter Future*, DECC, October 2013

<https://www.gov.uk/government/publications/uk-solar-pv-strategy-part-1-roadmap-to-a-brighter-future>

<sup>3</sup> *Planning practice guidance for renewable and low carbon energy*, DECC July 2013

<https://www.gov.uk/government/publications/planning-practice-guidance-for-renewable-energy>

<sup>4</sup> *Renewables Obligation banding levels: 2013-17* <https://www.gov.uk/calculating-renewable-obligation-certificates-rocs>

## Landscape and cumulative impact

2.12 The Northamptonshire landscape has already suffered an onslaught by the large scale wind industry. This has had two effects. First, because significant areas of the countryside have already been sacrificed to renewable energy schemes this makes the remaining unspoilt countryside even more precious to residents. Second, the impacts of solar PV were initially underestimated by decision makers because by comparison they were seen as less harmful than industrial scale wind developments. This has resulted in permission being granted for schemes that would probably now be refused such as that alongside the A43 south of Towcester.

2.13 The highly visible large scale solar farms that have been developed in Northamptonshire and elsewhere are already changing public attitudes. The visual impact of these schemes is substantial and they are generally perceived by both the public and decision makers as an unwelcome industrialisation of the countryside. If public support for solar PV is to be maintained as the Government wishes it is important that further schemes are subjected to greater scrutiny.

2.14 CPRE Northamptonshire would particularly seek to avoid harm to sensitive and locally valued landscapes regardless of whether they are protected by a formal designation.

2.15 It is important to note that well sited schemes can have little visual impact if they take advantage of local topography that naturally screens them from view. Screening by existing hedgerows and other native planting can substantially reduce the visual impact of some schemes but it is important to note that the effectiveness of screening can be seasonal and that screening cannot be relied upon to remain in place for the lifetime of a scheme – particularly when this is provided by short-lived species of trees or shrubs or trees due to be harvested for timber or if the screening is not under the control of the same landowner.

2.16 Sites are surrounded by security fencing and have security lighting. Although fencing is visually permeable it is nevertheless an alien industrial intrusion into the open countryside. Whilst fencing can be selected to reduce its visual impact when viewed from a distance, it can be particularly intrusive at close quarters particularly on the borders of settlements and from nearby Public Rights of Way. Light pollution in the intrinsically dark countryside is an alien intrusion and should be avoided.<sup>5</sup>

2.17 New planting is often proposed to mitigate the impact of schemes but it is important to understand that the effectiveness of screening is dependent upon its maturity and the local topography. Planting can take many years to become effective and as a result unacceptable visual impacts can occur for a significant proportion of the lifetime of a scheme. To provide effective mitigation planting should be consistent with hedgerows within the local landscape to ensure that it does not form an alien structure within the landscape.

2.18 Landscape harm is not restricted only to the impact of an individual scheme; it also arises from the cumulative impact of schemes. Whereas an isolated scheme might be seen as merely an unwelcome detraction from the quality of the countryside, multiple schemes can change the entire character of the countryside by creating the perception that it has been industrialised.

---

<sup>5</sup> NPPF para 125

2.19 Consideration of cumulative impact should not take into account only multiple solar farms but also take other industrial intrusions into the countryside such as wind turbine developments. CPRE Northamptonshire considers that the unspoilt countryside between wind turbine developments is of increasing importance because it provides areas of respite from industrialisation.

### Food security

2.20 There is as much concern over food security as there is over energy security. Food security is considered in detail in the Cabinet Office publication *Food Matters: Towards a strategy for the 21st Century*<sup>6</sup>. This expresses concerns about the loss of food production to solar farms.

2.21 Current solar PV technology requires a land take of approximately 2.2ha (5 acres) per MW of installed capacity. This generates electricity equivalent to that consumed in approximately 200 homes<sup>7</sup> (or the total electricity footprint of 60 homes<sup>8</sup>). The same amount of productive land would be expected to yield approximately 16 tonnes of wheat per annum<sup>9</sup>. CPRE Northamptonshire considers that the loss of such a significant volume of food production cannot be justified by the modest amount of renewable energy that would be produced by a solar PV scheme on Grade 1, 2 or 3 agricultural land<sup>10</sup>.

2.22 The loss of food production is difficult to quantify for a solar farm on land that is currently used for grazing because, as most applications are keen to point out, sheep can graze underneath solar panels. However because the solar panels absorb much of the sunlight that is necessary to drive photosynthesis, the grass growth within solar farms will be low. It is therefore inevitable that there would be a significant reduction in the number of sheep that could be supported within a solar farm compared with undeveloped pasture. CPRE Northamptonshire therefore considers that the conversion of pasture to solar PV schemes also causes a significant loss of food production.

## 3. CPRE Northamptonshire Policy

3.1 CPRE Northamptonshire considers that solar PV should be installed primarily within the built environment where there are wide opportunities for small and medium scale schemes. There are generally fewer opportunities for large scale schemes in the built environment but in Northamptonshire there are opportunities for installations on the roofs of large buildings such as warehousing and shopping or office complexes and as canopies over car parks. Schemes within the urban environment in particular have the advantage of providing generation at the point of use thereby reducing transmission and distribution losses.

<sup>6</sup> *Food Matters: Towards a strategy for the 21st Century*, Cabinet Office, July 2008

[http://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/strategy/work\\_areas/food\\_policy.aspx](http://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/strategy/work_areas/food_policy.aspx)

<sup>7</sup> UK solar PV schemes average a 10% capacity factor (*Solar Photovoltaic Generation in the UK*, Renewable Energy Foundation, June 2013, <http://www.ref.org.uk/publications/297-solar-photovoltaic-generation-in-the-united-kingdom>) thus a 1MW scheme would generate approximately 875 MWh per annum. based on 4,227kWh pa from *Energy Consumption in the UK (2013)*, DECC <https://www.gov.uk/government/collections/energy-consumption-in-the-uk>

<sup>8</sup> Domestic electricity accounts for only 30% of overall electricity consumption. *Digest of UK Energy Statistics*, July 2013 <https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>

<sup>9</sup> *Farming Statistics Final Crop Areas, Yields, Livestock Populations and Agricultural Workforce at 1 June 2013, United Kingdom*, DEFRA: <https://www.gov.uk/government/publications/farming-statistics-final-crop-areas-yields-livestock-populations-and-agricultural-workforce-at-1-june-2013-uk>

<sup>10</sup> NPPF para 112 highlights the value of best and most versatile land (Grades 1, 2 and 3a). Land grades are described in *Agricultural Land Classification of England and Wales, MAFF 1988* <http://publications.naturalengland.org.uk/file/4424325>

3.2 Within the countryside there are opportunities to install solar PV on buildings provided that any scheme does not adversely impact upon the character or setting of listed buildings or of the surrounding countryside. In some applications there can be synergy between the use of solar PV and farming practice where the panels can provide shade for buildings such as chicken houses while generating electricity.

3.3 When selecting a site for a large scale scheme in the countryside developers should:

- a) choose sites with a local topography that contains the visual impact of the scheme
- b) ensure that sites do not harm views in valued or sensitive landscapes
- c) avoid schemes that harm views from settlements and Public Rights of Way
- d) avoid schemes that significantly affect the setting of settlements; and
- e) avoid the use of Grade 1, 2 or 3 agricultural land.

3.4 Where schemes are proposed in the open countryside the application should include a Landscape and Visual Impact Assessment which includes:

- a) Zone of Theoretical Visibility diagrams to demonstrate the visibility of the scheme
- b) photomontages from sensitive viewpoints
- c) a cumulative impact assessment showing the scheme in conjunction with other renewable energy schemes

3.5 Planning applications should also contain:

- a) an assessment of the amount of electricity that will be produced
- b) details of the current and historic use of the land

3.6 Schemes should be designed so that they minimise their impact upon the countryside and Local Planning Authorities should ensure this by attaching conditions to any planning permissions that require that:

- a) panels are coated in a non-reflecting material to minimise glare and visual impact
- b) where appropriate the development is screened with planting that is consistent with local hedgerows
- c) security fencing is specified that is of a design and of a colour that will minimise its visual impact
- d) any infrastructure (such as inverter cabinets, transformer stations, lighting and CCTV) is selected and sited so that it minimises visual impact
- e) any lighting is infra-red or, if not, designed to minimise light spill and be motion-activated but not susceptible to false triggers
- f) new roads and access tracks are kept to a minimum
- g) the connection to the grid is by underground cable or, if not, overhead cable runs are designed to minimise landscape impact by following best practice considerations such as those contained in the Holford Rules



3.7 Schemes should be reversible so that the site can be restored to its previous condition and use at the end of the life of the scheme. CPRE Northamptonshire recommends that Local Planning Authorities make permissions time limited and have planning conditions attached to ensure that the site is fully restored either when permission expires or when generation ceases (whichever is sooner). Consideration should also be given to the need to attach a condition making financial provision for the costs of decommissioning so that sites are not abandoned due to lack of funds.

3.8 There are cases where schemes have been developed and not connected to the grid. CPRE Northamptonshire recommends that either Local Planning Authorities require developers to demonstrate that they have an agreement in place to connect the scheme to the grid or that a Grampian condition is attached to any permission that requires that a grid connection must be agreed before any development takes place.

### **Community Funds**

3.9 Where solar farms have an adverse effect on a community, CPRE Northamptonshire considers that the community should be entitled to some compensation. Although CPRE Northamptonshire is uneasy about the effect that community funds have on the transparency of the planning process we acknowledge that these are accepted practice for energy schemes. As this is a national issue CPRE Northamptonshire awaits action by central government to devise a suitable scheme. Where such schemes are offered it is important that they are legally enforceable by using instruments such as unilateral Section 106 agreements.