



Factsheet

Site Selection

June 2024

About Us

As an established trade association working for and representing the entire solar and energy storage value chain, Solar Energy UK represents a thriving member-led community of over 400 businesses and associates, including installers, manufacturers, distributors, large-scale developers, investors, and law firms.

Our underlying ethos has remained the same since our foundation in 1978 – to be a powerful voice for our members by catalysing their collective strengths to build a clean energy system for everyone's benefit.

Our mission is to empower the UK solar transformation. Together with our members, we are paving the way for solar to deliver 70GW by 2035 by enabling a bigger and better solar industry.

Site selection factsheet

This note outlines the main factors that influence the selection of a solar farm site, both in policy and practical terms. This is intended to be a useful factual guide for Local Planning Authorities in their decision making or input to nationally significant infrastructure projects.

Introduction

1.1 Site selection is a critically important component in the delivery of utility scale solar projects. Sites will need to be:

- Large enough to meet individual project aims to contribute toward legal decarbonisation targets.
- Financially viable and technically feasible within a time period that responds to the urgent need for solar projects. This will include considerations such as the ability to connect into the National Electricity Transmission System (NETS) via a Point of Connection (PoC), topography and irradiation levels.
- Capable of accommodating a scheme where the benefits outweigh the adverse impacts.

1.2 The availability of a connection to NETS and sufficiently high irradiance levels are fundamental to the site selection process and are typically the main drivers for an area being identified for potential solar development.

1.3 These connection offers are limited to specific locations where there is current or projected spare capacity on NETS. It is partly for this reason that it is common to see an apparent clustering of large solar developments in certain parts of the country, typically following the closure of a coal-fired power station or an aging nuclear power plant.

1.4 The physical connection to NETS is achieved via a Grid Supply Point, which could be either an existing or a future National Grid substation. This is known as the Point of Connection (PoC).

1.5 Land is then identified within a suitable distance of the PoC, generally aiming to keep the development nearby to minimise the length of the required grid connection works and associated environmental disruption. This means that the site selection process is limited to a given radius, which is ideally under 2km for 132kV and 5km for 33kV. The distance varies depending on numerous variables including grid costs, which differ from project to project depending on the level of contestable and non-contestable works. Therefore, substantial parts of the country are not currently feasible for utility scale solar development.

1.6 A high-level desktop assessment is then undertaken, typically including:

- Agricultural land classification and land type, recognising that land type should not be a predominating factor in determining the suitability of the site location and ground-mounted solar will likely use some agricultural land¹. Solar development is not prohibited on Best and Most Versatile (BMV) land, but its use is less preferable than poorer quality land².
- Accessibility, to ensure the site has, or could have, suitable construction and operational access routes.
- Other planning and environmental factors such as biodiversity, landscape and visual amenity, cultural heritage and flood risk.

1.7 Landowners of sites with good development potential are then approached to ascertain if the land is potentially available to accommodate a solar farm development. If the land is available, preliminary technical assessments would then be commissioned to establish site specific opportunities and risks to further scope in or out and refine potential development areas. Where landowners are not interested or commercial agreements cannot be reached, the land is deemed not available for development.

1.8 Taken together, the typical criteria illustrated here for selecting an individual site substantially limits the amount of suitable land across the UK. In response to this and the recognition in policy that there is a critical national priority for the provision of nationally significant low carbon infrastructure (including solar)³, developers may choose to promote sites that either comprise consolidated or dispersed land parcels. Either approach is potentially suitable.

1.9 It is important to note that it is not necessary for a selected site to result in fewer adverse impacts than the development of similar infrastructure on another suitable site. Planning policy is clear that decision making should regard all suitable sites for solar infrastructure as appropriate, on the basis that they all may be needed for future proposals⁴. In this sense it is not necessary to find the best site in any given location as long as it remains a suitable site in the light of relevant planning policy and legislation.

[1] National Policy Statement EN-3, Para 2.10.29

[2] National Policy Statement EN-3, Para 2.10.31

[3] National Policy Statement EN-1, Para 4.2.4

[4] National Policy Statement EN-1, Para 4.3.24





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