



17.10.2023

Dear Sir/Madam,

LAND SOUTH OF BERRINGTON, SHREWSBURY, SHROPSHIRE, SY5 6HA

We, Econergy International Limited, are the Appellant in respect of the above appeal. The purpose of this letter is to provide further background to the grid application process, and the rationale behind the chosen search area and development considerations.

Grid application process/Search Area

As part of the Distribution Network Operator (DNO) grid connection application process, we undertake a search of suitable and available land. An application cannot be submitted to the DNO until land is identified and an agreement is in place with the landowner. Importantly, if the application is successful and a grid offer is secured, this offer is tied to the identified land (some adjustments to the site boundary are permitted, but the site itself cannot be changed).

From our perspective, it is therefore critical that all potential sites are considered, and we only put forward the most suitable sites, taking account of planning and environmental factors, as well as land negotiations.

In searching for a site, our aim is to always minimise the cable length between the site and the Point of Connection (POC). An on-site POC is the ideal scenario. Failing this, a short cable route has the following benefits:

- **Thermal losses** – longer cable routes result in higher energy efficiency losses, meaning the solar development will ultimately export less renewable energy.
- **Cable Material** – more raw materials are used for longer cable routes i.e. aluminium or copper, which are finite resources.
- **Environmental impact** – any environmental impact of installing a buried underground cable route is likely to be minimised with a short, well considered route.

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- **Construction Disturbance** – the impact to a local community and/or private landowner of installing a cable is likely to be minimised with a shorter route. For example, if a cable route crosses a road, a temporary road closure may be necessary.
- **Land agreements** – additional easements will be required if a cable route crosses multiple private land parcels, which increases risks and costs to a project.

We are aware that cost is not a planning consideration. Notwithstanding this, longer cable routes do cost more in terms of materials and installation. Costs will likely increase further if a cable route needs to cross a waterway or main road.

Our search area therefore always centres around the grid connection. In this instance, the Point of Connection (POC) is the existing Overhead Line (OHL) between the substations at Bayston Hill and Cross Houses. Our search area focuses on the OHL route and extends to 3km either side, which is considered the reasonable maximum distance from the POC for this scheme taking account of the above factors .

As set out in the Sequential Report, other potential sites have been identified, but are not considered preferable in planning or environmental terms. Importantly, a land agreement was also reached with the appeal site owner. The proposed cable route to the appeal site offers the following benefits:

- At 1050m, it is relatively short.
- Most of the cable route runs through land also owned by the appeal site landowner - only c.200m of cable will run along the public highway. This will minimise any disturbance during construction.
- The cable route does not cross any roads, waterways or environmentally sensitive land.
- The POC is an existing Overhead Line directly adjacent to an adopted highway. This ensures that the DNO can access the POC for maintenance purposes.

Development Considerations

The appeal scheme is viable and deliverable. We have a grid connection offer for 2024 and intend to proceed towards construction and connection as soon as possible (subject to the outcome of this appeal).

Like all our developments, we undertake continuous financial modelling to assess the viability of the Berrington scheme. Various costs are considered in the modelling exercise, including connection costs (which are site specific), cabling, materials and construction costs, and operation and management costs. These costs are set against potential energy/revenue generated by the scheme, factoring in site topography, irradiance, energy losses overtime and module technology, including the use of tracker panels. In the absence of any subsidies, the scheme needs to produce an Internal Rate of Return (IRR)



that is considered investable to ensure that the significant capital expenditure required to build the scheme out is forthcoming.

As a result of various design revisions, the appeal scheme would install approximately 27MW of generation (which allows for some oversizing to ensure peak export capacity is achieved as much of the time as possible). Our financial modelling has demonstrated that a scheme of this size is financially viable.

In general, larger schemes can achieve economies of scale which make them more financially viable. Smaller schemes are not able to spread the high cost of development, procurement and construction over so many megawatts, so are more likely to become financially unviable. In this instance, our financial modelling suggests that this scheme would become financially unviable if it were notably below 25MW. Similarly, it would not be financially viable to accommodate the scheme across multiple, separated sites as it would require more electrical infrastructure and result in more energy efficiency losses.

On many of our sites, we seek to co-locate battery storage systems (BESS), which can improve the financial viability of a scheme. However, due to grid constraints, it is not possible to accommodate BESS on this site.

Grid Connection Delays

There are well documented grid capacity issues in the UK. In common with most developers, many of our renewable energy projects are subject to significant connection delays – in fact, several of our DNO connections have been delayed by 10 years or more.

Whilst efforts are currently being made by National Grid to release grid capacity and bring forward connection dates, it is not known how many projects will benefit from earlier connection dates, what those dates will be and whether a project will be subject to curtailment.

At Berrington, we have secured a grid connection date for 2024. Due to grid delays, this is the only UK project that we can build out and connect in next 12 months (from a pipeline of over 30 projects).

As mentioned, our grid agreement is tied to the appeal site. Should the appeal not be successful, we would not be able to change the site. Instead, we would need to re-apply for a grid connection (assuming new land could be found, and a viable project created). We have recently had confirmation from the DNO that any new application for a connection here would be given a connection date of 2034.



This project offers a clear opportunity to generate c.27MW of clean, renewable energy, which can be connected to the grid as soon as it is built out. Current grid capacity issues mean there is a scarcity of projects in the UK with early connection dates. To meet the UK's net zero targets, it is essential that sustainable, policy compliant projects such as this, are supported and allowed to come forward.

Yours faithfully,

Beverley Bateman
Environmental Planner