

Public Consultation Booklet

2 November – 14 December 2020



Introduction

This booklet sets out our early proposals for Longfield Solar Farm.

We are in the process of developing our proposals for a new solar energy farm, co-located with battery storage, to help meet the country's need for low carbon energy. Longfield Solar Farm proposes to use ground mounted solar panels to generate electricity from the sun, while the batteries would store energy for when it is most needed. It would be located on farmland north east of Chelmsford and north of the A12 between Boreham and Hatfield Peverel. As Longfield Solar Farm would have the capacity to generate more than 50 megawatts (MW) of electricity, it is classified as a Nationally Significant Infrastructure Project (NSIP) requiring a Development Consent Order (DCO) under the Planning Act 2008.

The Planning Act 2008 requires promoters of NSIPs to carry out consultation in a particular way (this is called "statutory consultation"). As we are in the early stages of developing our proposals, this consultation is classed as a "non-statutory consultation", which means it is being carried out before we undertake another round of consultation that will meet the requirements of the Planning Act 2008. This approach is in line with best practice so that we can gain valuable feedback that will help us to prepare our proposals in more detail. Following this consultation, we will consider the feedback and update our proposals for further consultation. For this reason, we are not presenting detailed information on design at this stage.

This is our first round of consultation. We will carry out a further round of consultation in 2021 which will contain a proposed design for the solar farm and the preliminary results of our environmental impact assessment work and our proposed mitigation measures. We set out more information about the planning process and the requirements for consultation later in the booklet.

Due to the ongoing COVID 19 pandemic, this is a remote consultation. We recognise that this presents challenges to how we consult, so we have thought carefully about how we ensure that everyone who is interested in our proposals can respond to the information that we are presenting. We explain how to find out more about our proposals and respond to this consultation later in this booklet.

Who is proposing Longfield Solar Farm?

Longfield Solar Farm is being brought forward by Longfield Solar Energy Farm Ltd, a joint venture between two established developers of renewable energy: EDF Renewables (EDFR) and Padero Solar. The two organisations have brought together a highly experienced project team with an excellent track record in successfully delivering nationally significant infrastructure of this kind. **EDF Renewables** has more than 25 years' worth of experience in delivering renewable energy projects in more than 20 countries around the world. In the UK, it provides much needed new affordable low carbon energy through 36 wind farms and one of the UK's largest battery storage units (together totalling almost 1GW). It has a portfolio of rooftop solar and grid scale solar energy generation in development.

Padero Solar has helped to develop more than 25 Solar Farms in the UK, and this has delivered over 390MWs of renewable energy. Padero Solar is part of a group of three companies. These include; PS Renewables, who are behind a number of solar projects, including Eveley Solar Farm (Hampshire), and PSH Operations, an Operations & Maintenance business managing over 1.3GWs of Solar Farm assets in the UK.

Our goal as project partners is to contribute to a net zero energy future through Longfield Solar Farm. Projects like this are creating business opportunities and economic activity which contribute to the country's green recovery.

Together, we are committed to the communities in which we work and exercise good stewardship over our projects for the long term.



Why is Longfield Solar Farm needed?

The UK is undergoing a major change in the way it meets its energy needs. In 2019, the Government legislated to commit the country to achieving 'net zero' carbon emissions by 2050 in comparison to emissions at 1990 levels.

Energy generation currently makes up a significant amount of the UK's carbon emissions. The UK must reduce this through a variety of measures including the introduction of new, cleaner methods of electricity generation that are able to come online and provide energy to the grid. This will happen at the same time as older, carbon-intensive methods of energy generation are being phased out.

In addition, the ways in which we use electricity are also changing. As we increasingly use electricity to power new modes of transport and industrial activity, it is anticipated that demand for electricity is likely to increase.

This can be seen through the increasing use of electric vehicles. National Grid has predicted that there may be up to 36 million electric vehicles on the UK's roads by 2040. This means that demand and supply for electricity and power flows will become increasingly complex. To meet the national need caused by these trends we need to adapt our infrastructure to offer clean, low carbon sources of energy generation that are fit for the future. Solar energy is one of these sources and we are bringing forward proposals that do just this.

The battery storage element of the scheme would complement the shift towards renewable forms of energy generation. Solar and other forms of renewable energy generation are intermittent by their nature. Battery storage means that electricity can be stored when more is being produced than is needed and released again when it is needed.

Battery storage also has an important role to play in stabilising the National Grid. At times of an excess or shortfall in demand, battery storage facilities can balance the National Grid by making up for any shortfalls or by removing surplus power from the grid and storing it to be released later.

In addition to this, the Government has stated that the UK's economic recovery from the COVID-19 pandemic should prioritise the delivery of low carbon projects. The proposed Longfield Solar Farm would play an important part in this national effort.

There is therefore an urgent national need for energy generation and storage of this type. To meet the Government's target of achieving net zero carbon emissions by 2050, the UK requires significant investment in new renewable energy generation at scale and this is one of a number of schemes being brought forward in the UK on that basis.



What is proposed?

Longfield Solar Farm is a proposed new solar energy farm, co-located with battery storage. The proposals include grid infrastructure to connect Longfield Solar Farm to the National Grid and any necessary and appropriate environmental mitigation. We also need to secure development consent for infrastructure needed for building and maintaining Longfield Solar Farm such as construction compounds and site offices.

We have secured a grid connection agreement which would allow us to export or import up to 500MW of electricity to and from the National Grid. The proposed generating capacity of the Longfield Solar Farm means that it will be a Nationally Significant Infrastructure Project (NSIP) and an application for a development consent order will be required – we set out more information on this on page 14.

We are still at an early stage in the design process. The design of the scheme will be subject to a number of stages as we proceed through this process. These will be informed by the feedback that you give us and through the results of our environmental impact assessment activity. We will be able to provide more specific details of our proposals as the design is developed in the coming months, which will then form part of the consultation that we will undertake in 2021.

We currently expect to locate Longfield Solar Farm on around 380 hectares of land. The plan on page 7 shows the current area proposed for development, including land for two different route options for the grid connection infrastructure to connect into the National Grid. This plan is indicative and may change. Within this area, we will look to include:

- Ground mounted solar photovoltaic (PV) panels to generate electricity from the sun;
- Battery storage that will allow Longfield Solar Farm to import, store and export electricity to the National Grid, with priority being given to the solar PV generated electricity;
- Substations, inverters, transformers, switchgear, internal cabling and other electrical infrastructure required to support the solar PV panels and battery storage;
- Grid connection infrastructure which will allow us to export or import up to 500MW of electricity to and from the National Grid, including a new substation;
- Mitigation for environmental impacts that the scheme would have;
- Habitats to enable biodiversity and landscape improvements;
- Other associated infrastructure required for the construction and operation of the site, such as construction compounds, access tracks and welfare facilities.

Location

We are proposing to locate the scheme across an area of farmland north east of Chelmsford and north of the A12 between Boreham and Hatfield Peverel.

The plan on this page shows how the site chosen for Longfield Solar Farm fits into this broader context – including options for the point that it will connect to the National Grid.



Technology

Solar photovoltaic (PV) panels

Longfield Solar Farm will use ground mounted PV panel arrays to generate electricity from the sun. Solar PV is a clean technology. Once set up the panels make use of sunlight to generate electricity. To manage the electricity generated by the panels, our proposals will require localised cabling and solar stations at regular intervals within the array of panels to safely transfer the electricity to substations and onwards to the National Grid and the battery storage facility.

Each solar station involves the following elements:

- Inverter: the inverters convert the direct current (DC) electricity generated by the solar PV panels into alternating current (AC) electricity. This needs to happen to ensure that the electricity generated can be exported to the national electricity transmission system;
- Transformer: transformers are required to control the voltage of the electricity generated at the site before it reaches a substation. From a substation, the electricity is then exported to the national electricity transmission system;
- Switchgear: a switchgear is a combination of electrical disconnect switches, fuses and circuit breakers. They are used to control, protect, and isolate the individual pieces of electrical equipment that make up the scheme.

We are yet to make final design choices on how the solar stations will appear.

Battery storage

We will also include battery energy storage as part of Longfield Solar Farm. This will allow electricity to be stored at times when demand is lower and released to the National Grid at times when it is needed. It will be included primarily to help manage the fact that the solar PV panels will not generate electricity at a constant rate, but it may also take surplus energy from the National Grid.

Battery storage technology is safe and makes use of tried and tested technology, much of which we also use in our day-to-day lives. One of the partners in Longfield Solar Farm, EDF Renewables UK, already operates one of the UK's largest battery storage projects in Nottinghamshire and this has operated safely since 2018.

We are yet to make final design choices on how the battery storage element of the proposals will appear or where it will be located. The plan on page 7 shows the locations we are currently considering for battery energy storage. We will present updated design information at the next stage of consultation.

Components of a typical solar farm

- 1. Solar Energy
- 2. Fencing
- 3. Solar Panels
- 4. Inverter (DC to AC power converter)
- 5. Landscape Area
- 6. Substation
- 7. Battery Storage
- 8. Cables



Figure not to scale and for the indicative purposes only.

Connecting to the grid

We have secured a grid connection agreement which would allow us to export or import up to 500MW of electricity to and from the National Grid.

This connection will be established through a new substation built on site at Longfield Solar Farm. This substation will then connect to an existing electricity line running through to the site. We are currently looking at three options for the location of the substation, as well as two options for the cable route connecting to it. These are shown on page 7.

The Solar PV panels, solar stations, battery storage system and the grid connection will be connected by a system of cabling. As we are still at an early stage in the design process, we are exploring options that include both underground cabling and overhead lines.

We would welcome your views on these options. We will present more information on the location and design of the new substation and of the design of our cabling route at the statutory consultation.

Environmental impact assessment

We recognise that, as with any major infrastructure project, our proposals have potential environmental impacts, which need to be understood and managed.

We will conduct a rigorous programme of environmental impact assessments as we prepare our scheme proposals. These will include assessments of the scheme's potential environmental impacts such as cultural heritage, landscape and visual impact, existing infrastructure, flood risk, noise and vibration, socioeconomics, transport and access, air quality, ground conditions and glint and glare. Where appropriate, we will propose mitigation. This may also provide the opportunity for local habitat improvements.

To ensure that these assessments are accurate and capture large amounts of information, we need to carry out these assessments iteratively, over time. During these initial stages of the project, we are engaging with relevant bodies such as local authorities, technical stakeholders and environmental groups, as well as with the local community, to understand the scope and focus of our assessments.



1. Scope

Consult with statutory bodies on the type and method of assessments we need to carry out.



2. Conduct assessments

Including air quality, landscapes and visual amenity, transport, noise, vibration, socioeconomics, cultural heritage, water and flood risk, ecology and nature conservation, and any cumulative effects.



3. Consult

Publish the preliminary results of our findings during the statutory consultation.



4. Consider

Consider all feedback received and finalising our Environmental Statement.



5. Submit

We must submit an Environmental Statement as part of our DCO application.

That means that the information we are sharing with you at this non-statutory consultation includes some details of the types of assessments we plan to carry out, but does not present the preliminary results of our environmental assessment work, which will be presented during the second consultation in 2021. The plan on page 11 shows environmental factors we need to consider in developing our proposals. Following this consultation, we will consider the feedback that we receive and will conduct assessments to allow us to present more detailed information when we next consult.

We are in the process of preparing a Scoping Report for submission to the Planning Inspectorate (PINS). This will set out the areas that we think should be covered by our environmental impact assessments. Once we have submitted our Scoping Report, PINS will publish an opinion on the scoping required which we will use to guide our future environmental impact assessment.

We will prepare and submit an Environmental Statement as part of our DCO application. This will set out the outcomes of our assessments, as well as details of any proposed mitigation. More information will be available during the statutory consultation in 2021 where we will share the preliminary results of our Environmental Impact Assessment (EIA) through a Preliminary Environmental Information Report (PEIR) which you will be able to view and consider as part of the statutory consultation.

Site Features and Concept Masterplan



Construction, operations and management

We are still at an early stage in the design process for Longfield Solar Farm. We need to develop our scheme design in more detail before we can confirm the way we will build and manage Longfield Solar Farm.

As such, we can present information on the techniques we are likely to use in building and managing Longfield Solar Farm, but this is indicative. We will present more information on these topics during the statutory consultation.

Transport

We recognise that the routes that vehicles will take to and from site is a topic of significant interest. We have conducted an initial assessment and plan to use the following routes in construction, operations and decommissioning:

- To/From the A12 J19 (i.e. access to/from the south of the scheme) via the B1137 Main Road, Boreham and Waltham Road/ Boreham Road;
- To/From the A130 Essex Regiment Way (i.e. access to/from the north of the scheme) via Wheelers Hill, Cranham Road and Boreham Road.

We still need to assess these routes in detail. This may impact on our final choice of routes. We will present more information at the next stage of consultation.

Construction

If the scheme were to receive consent, we anticipate that the total construction period would take approximately 36 months to complete.

We would likely use the following techniques while building the scheme:

- Solar PV: the installation of the solar PV panels would require dug foundations. The mountings for the panels would then be inserted into these foundations with the remaining structures being mounted by hand. Some localised trenching would be required to install the necessary cabling and solar stations;
- Battery storage: the construction of the battery storage would require us to dig foundations and install the required cabling and equipment to allow the batteries to export and import electricity to and from the National Grid;
- Cabling: we are still determining the proposed installation method for cabling and will present more information on this at the next consultation.

Operations

While the scheme is operational, activity across the sites would be minimal and largely restricted to monitoring, maintenance, and the management of the visual and ecological mitigation features.

Decommissioning

Solar farms are temporary and typically have an operational lifespan of 40 years. Once Longfield Solar Farm reaches the end of its lifespan, its infrastructure can be dismantled and the site returned to its previous condition. This will be funded through the operational lifetime of the solar farm.

Community

We are committed to helping secure local economic benefits from the scheme and will engage with education providers about the potential for Longfield Solar Farm to support local skills development initiatives. We want to hear your views on how this could work in practice and welcome your feedback as part of this non-statutory consultation.

The companies behind Longfield Solar Farm have a proud history of investing in the communities in which they work and establishing community benefits for the duration of a project's operating life.



The planning process

The scheme is classified as a Nationally Significant Infrastructure Project (NSIP) because its generating capacity would be more than 50MW. NSIPs are major developments which require development consent to be granted by the relevant Secretary of State through a Development Consent Order (DCO). This is a process established by the Planning Act 2008.

Unlike local planning permissions, which are considered by local authorities, DCO applications are made to the Planning Inspectorate (PINS). PINS administers the application process on behalf of the Secretary of State. In this case, the relevant Government Department is the Department for Business, Energy and Industrial Strategy (BEIS).

This current consultation is non-statutory consultation. We are carrying this out before our statutory consultation because we want to gain valuable feedback that will allow us to develop a better scheme and to ensure that later consultation is appropriate and effective.

You can find out more about the DCO process at the Planning Inspectorate's website: https://infrastructure.planninginspectorate.gov.uk/



Timeline

This non-statutory consultation is the first round of public consultation on our proposals for Longfield Solar Farm. We will conduct a further, statutory, round of public consultation before we submit our DCO application. Our indicative project timescales are outlined on the timeline on this page.



Responding to the consultation

We want as many people as possible to share their views on our proposals as part of this consultation. We are consulting at a time when it is not possible to meet in person, due to the COVID-19 pandemic. We are putting in place a detailed package of measures to ensure we can continue with the consultation.

We are very aware of how important it is to make sure that anyone in the community who wants to find out more or share their views on the proposals, is able to do so. We're providing a range of ways to do this.

Find out more

You can find out more about our proposals by:

- Viewing a virtual public exhibition on our website: longfieldsolarfarm.co.uk
- Viewing a series of online presentations we will give about our proposals. These will also offer the opportunity to ask questions. The details of the times and dates for the webinars are on our website: longfieldsolarfarm.co.uk
- Booking an appointment to talk to us individually about the proposals by Freephone using the contact details on the following page;
- Contacting us directly using the details in this booklet.

Share your views

The consultation will take place between 2 November 2020 and 14 December 2020.

- Fill in a consultation questionnaire on our website: longfieldsolarfarm.co.uk
- Complete a questionnaire and return it to info@longfieldsolarfarm.co.uk or Longfield Solar Farm consultation, FREEPOST reference RTRB-LUUJ-AGBY, Sky Light City Tower, 50 Basinghall Street, London, EC2V 5DE
- Write to us at info@longfieldsolarfarm.co.uk or Longfield Solar Farm consultation, FREEPOST reference RTRB-LUUJ-AGBY, Sky Light City Tower, 50 Basinghall Street, London, EC2V 5DE

We will consider all written responses that we receive by the consultation deadline of 14 December 2020.

Following this non-statutory consultation, we will consider all the views that we receive and continue to develop our proposals for Longfield Solar Farm ahead of the statutory consultation which we anticipate holding in 2021.

Our final DCO application will include a Consultation Report setting out how we have had regard to the responses received during this non-statutory consultation and all the responses received during the statutory consultation.

Any comments received will be analysed by Longfield Solar Energy Farm Ltd and any of its appointed agents. Copies may be made available in due course to the Secretary of State, the Planning Inspectorate and other relevant statutory authorities so that feedback can be considered as part of the DCO process. We will request that any personal details are not placed on public record and will be held securely by Longfield Solar Energy Farm Ltd and its agents in accordance with the data protection law and will be used solely in connection with the consultation process and subsequent DCO application and, except as noted above, will not be passed to third parties.





Contact us

For further information, please contact us by:

- Visiting our website: longfieldsolarfarm.co.uk
- Calling 08000194576
 (9:00am to 5:00pm, Monday to Friday)
- Emailing info@longfieldsolarfarm.co.uk
- Writing to us at Longfield Solar Farm consultation, FREEPOST reference RTRB-LUUJ-AGBY, Sky Light City Tower, 50 Basinghall Street, London, EC2V 5DE