

Heckington Fen Solar Park

EN010123

Grid Connection Statement

Applicant: Ecotricity (Heck Fen Solar) Limited

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GRID CONNECTION STATEMENT

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1. EXECUTIVE SUMMARY

Heckington Fen Solar Park is a solar park development coupled with energy storage that would deliver electricity to the national electricity transmission network. A grid connection to, and extension at the National Grid Bicker Fen Substation are included within the Order Limits. Ecotricity (Heck Fen Solar) Limited (the Applicant) is proposing to install ground mounted solar photovoltaic (PV) panel arrays to generate electrical energy from the sun and combine these with an Energy Storage System (ESS) which will connect to the National Grid Bicker Fen Substation. This Grid Connection Statement (the 'Statement') has been prepared by the Applicant as part of an application for a Development Consent Order (DCO). The Applicant is required to submit a statement pursuant to Regulation 6(1)(a)(i) of the APFP Regulations, stating who will be responsible for designing and building the connection to the electricity grid. This Statement provides confirmation to the Secretary of State for [Business, Energy Security and Industrial Strategy](#) [Net Zero](#) (the Secretary of State) that a connection to the National Grid Bicker Fen Substation will be provided via 400kV underground cables from the solar park site. The Applicant has, or will have, the ability to procure the necessary land and rights in order to install and operate the off-site cable and upgrade the National Grid Bicker Fen Substation to accommodate the Grid Connection; and as set out in the draft Development Consent Order (document reference 3.1) the Grid Connection forms part of the proposed development for which development consent is being sought.

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2. INTRODUCTION

2.1. INTRODUCTION

2.1.1. This Grid Connection Statement (the Statement) has been prepared by Ecotricity (Heck Fen Solar) Limited (the ‘Applicant’) as part of an application for a Development Consent Order (DCO). The application for the DCO has been submitted to the Planning Inspectorate (on behalf of the Secretary of State), with the ultimate decision whether to grant a DCO being made by the Secretary of State for ~~Business, Energy~~ Security and Industrial Net Zero Strategy (the Secretary of State) pursuant to the Planning Act 2008. Heckington Fen Solar Park is a new solar energy park proposal that would deliver electricity to the national electricity transmission network. It comprises three elements: the solar park with associated development including energy storage (known as the ‘energy park’; the ‘grid connection’ to; and extension at National Grid Bicker Fen Substation.

2.1.2. The proposed development would utilise ground mounted solar photovoltaic (PV) panel arrays to generate electrical energy from the sun and combine these with an Energy Storage System (ESS) before connecting to the Bicker Fen Substation.

2.1.3. The solar panels will comprise photovoltaic modules mounted on a steel structure and connected to an onsite substation for the transmission of renewable power to the National Grid.

2.1.4. The ESS will comprise of up to two compounds of energy storage which allow for the importation, storage and exportation of energy to the National Grid via the onsite substation.

2.1.5. The energy park will be connected to a new generator bay located at the National Grid Bicker Fen Substation using a 400 kilovolt (kV) underground cable(s) of approximately 8.5km in length. The new generator bay will be provided as part of an extension to the National Grid Bicker Fen Substation.

2.1.6. Following submission of the Application, and as a result of ongoing discussions with National Grid Electricity Transmission (NGET), it has become clear that additional works at Bicker Fen Substation are required to enable the grid connection.

2.1.7. These works are necessary as a consequence of the Proposed Development and include:

2.1.7.1. a new section of NGET infrastructure at the substation comprising a busbar extension including a section breaker, a bus coupler and a feeder circuit on land to the south of Bicker Fen Substation, which is owned by NGET; and

2.1.7.2. a new cable sealing end ("CSE") compound on land to the west of Bicker Fen Substation which is owned by NGET.

2.1.8. Accordingly, a larger area (compared to the Application version of the Order Limits (document reference 2.8 / APP-013)) is needed to facilitate the Applicant's connection into the Bicker Fen Substation. Further details on the reason for this change is included in the Change Application cover letter (document reference PreExA.CL.CA.v1).

2.2. PURPOSE AND STRUCTURE OF THIS STATEMENT

2.2.1. This Statement is part of a suite of documents which must accompany the DCO application pursuant to Section 55 of the Planning Act 2008 and Regulations 5 and 6 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (APFP Regulations).

2.2.2. This Statement has been prepared in accordance with Regulation 6(1)(a)(i) of the APFP Regulations, which requires an applicant for a DCO in respect of an onshore generating station to provide a statement of who will be responsible for designing and building the connection to the electricity grid.

2.2.3. The Statement is structured as follows:

- Section 1: Executive Summary;
- Section 2: Introduction;
- Section 3: Connection Agreements;
- Section 4: Responsibilities for Designing and Building the Grid Connection;
- Section 5: Consent for the Grid Connection Works; and
- Section 6: Conclusion.

2.2.4. 'Work Nos.' are referred to throughout this Statement. These refer to Schedule 1 of the draft DCO (document reference 3.1). The draft DCO (document reference 3.1) should be referred to for the precise terminology and full details of each work.

2.2.5. The location of each Work No. is defined by the Work Plans (document reference 2.2).

2.2.6. The Work Nos. particularly relevant to the NGET grid connection site (ie the National Grid Bicker Fen Substation) and the 400kV grid connection route are as follows:

- Work No, 5: Cable route between the Energy Park Onsite Substation and the National Grid Bicker Fen Extension;
- Work No. 6: National Grid Bicker Fen Substation Extension including subgroups 6A, 6B and 6C;
- Work No. 7: Temporary laydown areas relating to Work Nos. 5 and 6.

2.2.7. The above Work Nos. will form the infrastructure that is used to transport the electricity from Work No. 1 (the solar PV panel arrays), Work No. 2 (the ESS), and Work No. 4 (the Energy Park Onsite Substation), to the National Grid via the Bicker Fen Substation (Work No:s 6 A-C).

2.2.8. The construction, operation and (where relevant) decommissioning of all the elements of the grid connection have been assessed as part of the Environmental Impact Assessment which is reported by the Environmental Statement (document reference 6.1).

2.2.9. The construction, operation and (where applicable) decommissioning of all elements of the grid connection will be undertaken (respectively) in accordance with the Outline Construction Environmental Management Plan (document reference 7.7) and the Outline Decommissioning and Restoration Plan (document reference 7.9).

3. CONNECTION AGREEMENT

3.1.1. The solar PV panel arrays and ESS will supply electricity to the System Operator (National Grid Electricity System Operator (NGESO)) via the infrastructure owned by the Transmission Owner (NGET). NGESO and NGET are both National Grid group companies and are owned and operated as two distinct legal entities (from April 2019).

3.1.2. Ecotricity Generation Limited has entered into a Bilateral Connection Agreement (BCA) with NGESO Ltd on 19th July 2022, reference A/NGET/ECOT/22/HECK-EN(0). The agreement currently allows for an export capacity of 400MW and an import capacity of 250MW. NGESO have allocated a new generator bay in the south west part of the National Grid Bicker Fen Substation.

3.1.3. Although Ecotricity Generation Limited is not the Applicant, it is part of the same corporate company group as the Applicant and under the same ultimate control as the Applicant. The Applicant and Ecotricity Generation Limited will therefore work together to novate the BCA in time for exporting energy to the National Grid.

3.1.4. As such the Applicant confirms that the electricity generated by Work No. 1 (the solar PV arrays), and the electricity stored by Work No. 2 (the ESS) will be exported to the National Grid, via the National Grid Bicker Fen Substation, owned and operated by NGET.

4. RESPONSIBILITIES FOR DESIGNING, GAINING CONSENT AND BUILDING THE GRID CONNECTION

4.1. RESPONSIBILITIES OF THE APPLICANT

4.1.1. Under the bilateral connection agreement, the Applicant and its appointed contractors will be responsible for designing, gaining consent and building and commissioning the following elements relevant to the grid connection:

- Construction of the Energy Park Onsite Substation and associated cabling (Work No. 4);
- Construction of a temporary laydown area relating to the delivery of the grid connection (Work No. 7);
- The cabling between the Energy Park Onsite Substation and National Grid Bicker Fen Substation (Work No. 5);
- Equipment within the assigned generator bay for terminating the connection to National Grid infrastructure. This will include cable sealing ends, switchgear and associated structures (Work No. 6A); and
- The protection, control, communication, monitoring and metering systems contained within a control building (Work No. 6A).

4.2. RESPONSIBILITIES OF NGESO/NGET

4.2.1. Under the bilateral connection agreement, NGESO and NGET are responsible for designing, gaining consent and building the enabling and reinforcement works in

accordance with the System Security and Quality of Supply Standard (SQSS), the enabling reinforcement works (attributable) are:

- Construction of a temporary laydown area relating to the delivery of the extension works at the National Grid Bicker Fen Substation (Work No. 7);
- Extension of the National Grid Bicker Fen 400kV substation and ~~provision~~ groundworks of for a new generator bay; (Work No. 6B) and
- Transposing of 400kV circuit at the National Grid Bicker Fen Substation – West Burton 1 to new feeder bay at the National Grid Bicker Fen Substation (Work No. 6B and Work No. 6C).
- Cable-sealing end and bus-coupler section at National Grid Bicker Fen Substation (Work No. 6B and 6C).

4.2.2. Under the draft DCO (document reference 3.1), Article ~~3233~~ specifies that the power to carry out Work No. 6 (A-C) and Work No. 7 is for the benefit of both the Applicant and NGET.

5. ACQUISITION OF LAND AND RIGHTS

5.1.1. The Applicant is seeking to negotiate an option for easement with affected landowners for the grid connection (Work No. 5). As shown in the Schedule of Negotiations with Statutory Undertakers and Landowners (document reference 4.4), Heads of Terms have been issued to the relevant affected landowners with 1 secured (at the time of writing). As such the Applicant will require powers of compulsory acquisition to acquire the easement that it requires to install, maintain and operate the grid connection.

5.1.2. The National Grid Bicker Fen Substation extension (Work No. 6A-C) is within land owned by NGET.

5.1.3. As shown in the Schedule of Negotiations with Statutory Undertakers and Landowners (document reference 4.4), the Applicant has successfully negotiated a voluntary option agreement for a leasehold interest to allow for the construction, operation and maintenance and decommissioning of the energy park site.

6. CONSENT FOR THE GRID CONNECTION WORKS

6.1.1. The grid connection and the National Grid Bicker Fen Substation extension (Work Nos. 5 and 6A-C) form part of the DCO application. As such, it is considered that if the draft DCO (document reference 3.1) is granted, development consent for the grid connection and extension at National Grid Bicker Fen Substation (as set out at section 2.2.7 of this Statement) will have been secured.

~~6.1.1.~~

7. CONCLUSION

7.1.1. The Applicant is required to submit a statement pursuant to Regulation 6(1)(a)(i) of the APFP Regulations, stating who will be responsible for designing and building the connection to the electricity grid.

7.1.2. It is considered that this Statement provides confirmation to the Secretary of State of the requirement above, namely:

- A group company of the Applicant has received a grid connection offer from NGENSO to connect the Energy Park to the National Grid and that offer has been accepted;
- A connection to the National Grid Bicker Fen Substation will be provided via a 400kV underground cable(s) from the Energy Park Onsite Substation (Work No. 5), located within the energy park;
- The Applicant will be responsible for designing and building the Energy Park Onsite Substation (Work No. 4) and the grid connection route (Work No. 5). NGET will be responsible for designing and building the majority of the National Grid Bicker Fen Substation extension (Work No. 6) - exception equipment in the assigned generator bay (which is the responsibility of the Applicant);
- The Applicant has, or will have, the ability to procure the necessary land and rights in order to install the grid connection and extend the National Grid Bicker Fen Substation to accommodate the grid connection; and
- As stipulated in the draft DCO (document reference 3.1) the grid connection forms part of the proposed development for which development consent is being sought.