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West Burton C (Gas Fired Generating Station)

The West Burton C (Generating Station) Order

Land to the north of the West Burton B Power Station, Nottinghamshire

Gas Connection Statement

Applicant: EDF Energy (Thermal Generation) Limited
Date: April 2019

Gas Connection Statement – Contents

1. Executive Summary

1.1 EDF Energy (Thermal Generation) Limited (the Applicant) is seeking development consent for the construction and operation (including maintenance) of an up to 299MW (electrical) OCGT gas-fired generating station near Gainsborough, Nottinghamshire, to be known as West Burton C (WBC). The Application has been submitted to the Planning Inspectorate, with the decision whether to grant a Development Consent Order (DCO) being made by the Secretary of State pursuant to the Planning Act 2008.

1.2 The Proposed Development would use the existing National Transmission System (NTS) offtake point for West Burton B (WBB) gas-fired power station, as there is sufficient 'Exit' capacity in this pipeline to satisfy the supply of gas to both WBB and WBC. As a consequence, it is expected that no major works, or related permissions or consents, would be needed upstream of the WBB connection point to the NTS.

1.3 It is expected that the only additional works needed would be additional meter and telemetry equipment at West Burton, which will be defined in more detail in National Grid's Feasibility Study that is normally carried as part of National Grid's 'modification of an Existing Connection point process'.

1.4 It is the Applicant's intention to submit an application to National Grid for additional works nearer the time of construction commencing.

2. Introduction

2.1 EDF Energy (Thermal Generation) Limited (the Applicant) is seeking development consent for the construction, operation (including maintenance) of a gas-fired peaking plant at the West Burton Power Station site capable of generating a gross electrical output of up to 299MW.

2.2 The Applicant owns and operates the two existing power stations at the West Burton Power Station site, West Burton A (WBA) and West Burton B (WBB), as well as the nearby Cottam Power Station.

2.3 This Gas Connection Statement forms part of the application for development consent that is to be submitted under section 37 of the Planning Act 2008. The Statement has been prepared to comply with Regulation 6(1)(a)(i) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, which requires applicants to provide a statement of who will be responsible for designing and building the gas connection.

2.4 The Proposed Development would comprise a gas-fired power station with gross electrical output capacity of up to 299MW and associated buildings, structures and plant defined in the draft DCO as Work No. 1 and shown on the Works Plans (**Application Document Ref. 3.2**) as **Work No. 1: Sheet 1 of 10**, including:

- Up to five OCGT units and associated generators, potentially housed within building(s), with stack(s), transformer(s), air inlet filter(s) and exhaust gas diffuser(s);
- associated switchgear and ancillary equipment; and
- auxiliary closed loop cooling equipment/systems.

2.5 Additionally, the gas fired power station within the Proposed Development may include:

- a banking compound comprising up to six transformers, overhead busbars, cable sealing ends and associated switchgear and ancillary equipment.

2.6 The Proposed Development would also include:

- a gas receiving area, gas treatment and control facilities, including if required, a compression station, generator and other auxiliary control cabinets (**Work No. 2**);
- electrical connection works (**Work No. 3)** comprising:

  - up to 400kV electrical cables and control system cables to and from the existing West Burton B switchyard **(Work No. 3A**); and
  - works within or adjacent to the existing West Burton B switchyard, including electrical cables, connections to busbars and upgraded or replacement equipment **(Work No. 3B**).

- auxiliary/ancillary buildings, structures and equipment (**Work No. 4**) comprising:
  - emergency diesel generator and associated fuel tank;
  - contained road tanker diesel unloading area;
  - workshop, store, control, administration and welfare building;
  - above ground raw water and fire water storage tanks and associated infrastructure;
  - an area of hardstanding for maintenance laydown and erection of temporary buildings associated with the commissioning, operation and maintenance of the OCGT unit(s);
  - pipework, pipe runs and pipe racks;
  - fire-fighting equipment, buildings and distribution pipework; and
  - other minor infrastructure and auxiliaries/services including chemical storage facilities.
- a new surface water drainage system comprising pond(s) and/or tanks(s) or similar, including connection to an existing water drainage systems on the West Burton Power Station site (**Work No. 5**);
- gas supply pipeline connection works for the transport of natural gas to **Work No. 1** from an existing gas receiving facility within West Burton B including:
  - a high pressure steel pipeline (**Work No. 6A**) of up to 500mm (nominal bore) in diameter and up to 150m in length, which would be installed at ground level or underground; and
  - an extension to the existing WBB gas receiving facility (**Work No. 6B**) comprising:
    - an offtake connection;
    - above and below ground valves, flanges and pipework;
    - an above or below ground remotely operated valve;
    - an above or below ground remotely operated valve bypass;
    - an above or below ground pressurisation bridle;
    - instrumentation and electrical kiosks;
    - telemetry equipment kiosks and communications equipment;

- water supply and pipeline (**Work No. 7**) from the Proposed Development Site to an existing water supply within West Burton B;
- low voltage electrical, control, metering and other cables and associated switchgear and ancillary equipment and cabinets required to connect the Proposed Development with West Burton B (**Work No. 8**);
- a rail offloading area comprising an offloading area from the existing rail loop 'merry-go-round' that is present on the West Burton Power Station site (**Work No. 9**); and
- a Landscaping and Biodiversity Management and Enhancement Area (**Work No. 10**).

The Proposed Development Site

2.7 The Proposed Development site (the 'Site') comprises land within the boundary of the existing West Burton Power Station site near Gainsborough, Nottinghamshire. The land is within the ownership of the Applicant. The Site is centred on national grid reference 480275, 386241 (the middle of the Proposed Power Plant Site).

2.8 The Site encompasses an area of approximately 32.8 hectares (ha) of which approximately 16.3ha comprises the built development and construction laydown area, with a further approximately 16.5ha of land proposed for landscaping and biodiversity management and enhancement works. The proposed generating station itself would occupy an area of approximately 3.4ha.

The Purpose and Structure of this Document

2.9 The purpose of this document is to meet the requirements of Regulation 6(1)(a)(i) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, which requires an applicant to provide a statement setting out who will be responsible for designing and building the proposed Gas Connection to the Proposed Development.

2.10 This Gas Connection Statement has been prepared to satisfy the requirements of Regulation 6(1)(a)(i) and to demonstrate that there is no reason why a gas connection would not be possible.

2.11 The gas supply connection would be from the existing gas receiving facility within the WBB site. The exact details of the connection into the Proposed Development are not known until the design is finalised. However, the provision for tie-in is secured through the scope and parameters detailed in the draft DCO. Final details would be required for submission and approval

through the discharge of the relevant requirements imposed on a Development Consent Order for the Project.

2.12 Section 3 of this document describes the gas connection route and connection point. Section 4 confirms the contractual agreements that are in place. Section 5 details the responsibilities for designing and building the gas connection. Section 6 explains the acquisition of rights required. Section 7 deals with the consent required for the connection works. Section 8 sets out the conclusions.

3. The Proposed Gas Connection

3.1 The Applicant owns the High Pressure gas pipeline that currently supplies gas from the National Grid AGI at Grayingham, approximately 15 miles away, to the Gas Reception Facility (GRF) at the WBB CCGT power station. The gas supply for the Proposed Development would utilise spare capacity in the gas supply pipeline, therefore, there is no requirement to install a new gas pipeline from the National Grid system or alter it.

3.2 The gas supply for the Proposed Development would be taken from the existing WBB GRF, located close to the northern boundary of the WBB site, via a new pipeline of up to 150m length. The Proposed Development adjoins the northern boundary of the existing WBB power station.

3.3 The pipeline would be up to 250mm nominal bore. The route is within the Proposed Development Site; and entirely within land owned by the Applicant

Gas Pipeline Route

3.4 At this stage, development and design of a definitive route for the gas pipeline cannot be determined. However, the pipeline would be installed within a nominally 40 metre wide construction corridor (i.e. **Work No. 6**).

Connection Point

3.5 The new pipeline would connect into the existing WBB gas receiving facility that is supplied from the NTS Feeder via the Grayingham offtake.

4. Contractual Agreements

4.1 The Applicant has engaged with National Grid to determine whether there is sufficient gas capacity to supply the Proposed Development.

4.2 From this engagement, the following has been determined:

- The Proposed Development would use the existing NTS offtake point for the WBB gas-fired power station, as there is sufficient 'Exit' capacity in this pipeline to satisfy the supply of gas to both WBB and WBC; the size of the pipe and meter offtake rate (MNEPOR) is 34% larger than the needs of WBB. The current MNEPOR rate is 89GWh/d, whereas WBB only needs 66GWH/d at full offtake rates.

- It is expected that no major works, or related permissions or consents, would be needed upstream of the WBB connection point to the NTS.

- It is expected that the only additional works needed would be additional meter and telemetry equipment at West Burton, but this will be defined in more detail in National Grid's Feasibility Study that is normally carried as part of National Grid's 'modification of an Existing Connection point process' (also called the A20 process – see link below[1]). It is the Applicant's intention to submit an application to National Grid for such works nearer the time of construction commencing.

- The contract which governs this connection and offtake rules is called the Network Exit Agreement (NExA), of which one is currently in place for WBB. It is not envisaged that this NExA would need to be amended, however this will be confirmed at the time of the feasibility study conducted as part of the A20 process.

[1] https://www.nationalgrid.com/uk/gas/industrial-connections/existing-connections

5. Responsibilities for Designing and Building the Gas Connection

5.1 The gas demand for the Proposed Development could only be met from the National Grid NTS. There are three considerations to take into account in the supply of natural gas for a generating station:

- the maximum energy flow in the system;
- the maximum allowable ramp rate of the generating station; and
- the minimum supply pressure requirements.

5.2 Only the NTS can meet the minimum supply pressure requirements for the proposed generating station technology.

5.3 Further information on the Proposed Gas Connection, including the proposed route corridor between the Proposed Power Plant Site and the WBB connection point at the existing WBB GRF, is detailed in Chapter 4 of the Environmental Statement (Volume I) (**Application Document Ref. 5.2**).

5.4 The Applicant will be responsible for the construction of the gas pipeline and the new WBC GRF and metering station.

Gas Pipeline Construction

5.5 It is envisaged that where the Proposed Gas Connection pipeline is underground it would be constructed through the use of an 'open cut' method, whereby a trench would be excavated and the pipe laid at least 1.2m below ground to the top of the pipe. This depth is in accordance with standard methodology for the construction and installation of below ground pipelines. If the construction is above ground this would be undertaken in accordance with the requisite National Grid Electricity Transmission (NGET) specifications and requirements.

Gas Connection Operation and Maintenance

5.6 The Applicant would be responsible for the operation and maintenance of the gas pipeline and GRF compounds.

5.7 It is not envisaged that the WBC GRF would be permanently manned, although periodic inspections and maintenance activities would be undertaken. The GRF would be secured through fencing and locked gates. Telemetry would be used to interface with the generating station control room.

6. Acquisition of Land and Rights

6.1 The Applicant owns the freehold interest in the land on which the gas supply connection would be made. The freehold land from the WBB GRF to the Site is also owned by the Applicant, as is the Site itself.

6.2 **Work Number 6** in Schedule 1 to the draft DCO (Application Document Ref. 2.1) covers the proposed gas supply pipeline connection works from the WBB GRF for the installation and operation of the gas pipeline and associated apparatus.

6.3 From preliminary discussions with National Grid, they have indicated that WBB's NExA would not need amending. However, WBC would be connecting upstream of the current metering. Therefore, new additional metering would be installed for the Proposed Development and a Modification Application (Mod App) to the existing connection would have to be made. The Mod App would confirm any metering and gas quality monitoring arrangements needed along with the scope, cost and timescales for any alteration work needed. National Grid has indicated that any meter alterations would take up to 1 year.

7. Consent for the Gas Connection Works

7.1 The gas connection forms part of the works included within this application for development consent (the Application), therefore no separate planning permission is required. Article 6 of the draft DCO (Application Document Ref. 2.1) provides that the Applicant has the benefit of the provisions of the DCO, and also that NGET has the benefit of the provisions of the DCO in relation to **Work No. 6**.

8. Conclusions

8.1 This Gas Connection Statement has been prepared to satisfy the requirements of Regulations 2009 (6(1)(a)(i)) and to demonstrate that there is no reason why a gas connection would not be possible for the Proposed Development.

8.2 The Statement has demonstrated that the Proposed Gas Connection (pipeline and GRF) included within the Application, and assessed as part of the associated Environmental Impact Assessment are technically and environmentally feasible. It has also confirmed that the necessary agreements for connection and capacity would be secured through agreements between the Applicant and National Grid, and that appropriate powers are included in the draft DCO (Application Document Ref. 2.1) to facilitate the delivery of the gas connection and associated pipeline.