



The Abergelli Power Gas Fired Generating Station Order

9.1 Grid Connection Statement

Planning Act 2008
The Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009

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1. INTRODUCTION

1.1 APL is promoting a new thermal generating station on land at Abergelli Farm, Felindre, near Swansea, Wales (the Project).

1.2 The Power Generation Plant constitutes a Nationally Significant Infrastructure Project (NSIP) by virtue of section 14 (1)(a) and section 15 of the Planning Act 2008 (PA 2008) which includes within the definition of an NSIP any onshore generating station in England or Wales of 50 MWe capacity or more. Under section 31 of the PA 2008 a Development Consent Order (DCO) is required to develop a NSIP. Under section 37 of the PA 2008 this can only be granted if an application is made for it to the Secretary of State (SoS) (the DCO Application).

1.3 The three main elements of the Project comprise:

- An Open Cycle Gas Turbine (OCGT) peaking power generating station, fuelled by natural gas and capable of providing a rated electrical output of up to 299 Megawatts (MW). The Power Generation Plant comprises:
 - Generating Equipment including one Gas Turbine Generator with one exhaust gas flue stack and Balance of Plant (BOP) (together referred to as the 'Generating Equipment') which are located within the 'Generating Equipment Site';
 - An Access Road to the Project Site from the B4489 which lies to the west, formed by upgrading an existing access road between the B4489 junction and the Swansea North Substation (the Substation) and constructing a new section of access road from the Substation to the Generating Equipment Site; and
 - A temporary construction compound for the storage of materials, plant and equipment as well as containing site accommodation and welfare facilities, temporary car parking and temporary fencing (the Laydown Area). A small area within the Laydown Area will be retained permanently (the Maintenance Compound).
 - Ecological Mitigation Area – area for ecological enhancement within the Project Boundary, and
 - Permanent parking and drainage to include: a site foul, oily water and surface water drainage system.
- A Gas Connection in the form of a new Above Ground Installation (AGI) and underground Gas Pipeline to bring natural gas to the Generating Equipment from the National Gas Transmission System; and

- An Electrical Connection in the form of a new underground electrical cable to export power from the Generating Equipment to the National Grid Electricity Transmission System (NETS).

Development Consent under the Planning Act 2008

Power Generation Plant

- 1.4 The Power Generation Plant would have a rated electrical output of up to 299 MW of electricity and is therefore classified as a Nationally Significant Infrastructure Project (“NSIP”) under section 15 of the Planning Act 2008 (as amended) (“PA 2008”).
- 1.5 As such, APL is applying to the Secretary of State (“SoS”) for Business, Energy and Industrial Strategy under section 31 of the PA 2008 for a Development Consent Order (“DCO”) for powers to construct, operate and maintain the Power Generation Plant.

Associated Development

- 1.6 The Gas Connection and Electrical Connection comprise development associated with the NSIP (“associated development”).
- 1.7 The PA 2008 restricts associated development for which consent can be sought under a DCO in Wales to development that is associated with a generating station with a capacity in excess of 350 MW. As the Power Generation Plant would have rated electrical output of up to 299 MW, associated development to the Power Generation Plant cannot be included in any application for DCO under the PA 2008. The application for a DCO therefore only includes the Power Generation Plant and related mitigation as “authorised development” and does not seek development consent for the Gas Connection or the Electrical Connection.

Town and Country Planning Act 1990 and Town and Country Planning (General Permitted Development) Order 2015

- 1.8 APL will seek planning permission for the Gas Connection under the Town and Country Planning Act 1990 (“TCPA 1990”). The Electrical Connection could either be consented through the TCPA 1990 or as permitted development under the Town and Country Planning (General Permitted Development) Order 2015 (“GPDO”).
- 1.9 Paragraph 4.9.1 of the Overarching Energy National Policy Statement for Energy (EN-1) emphasises that it is for the Applicant to ensure that there will be necessary infrastructure and capacity in the transmission and distribution network to accommodate the electricity to be generated by a proposed new power plant.
- 1.10 Section 37 of the PA 2008 governs the content of an application for a development consent order, including the requirements for the necessary accompanying documents specified in the Infrastructure Planning

(Applications: Prescribed Forms and Procedure) Regulations 2009 (APFP Regulations).

- 1.11 This Grid Connection Statement accompanies the DCO Application and has been prepared to comply with Regulation 6(1)(a)(i) of the APFP Regulations, which requires the Applicant to provide a statement of who will be responsible for designing and building the connection to the electricity grid.
- 1.12 A glossary of defined terms is presented in Document Reference 1.4.

2. PROJECT SUMMARY

- 2.1 The Generating Equipment would operate as a OCGT peaking plant and would be designed to provide an electrical output of up to 299 Megawatts electrical (MWe). The plant would be fuelled by natural gas, supplied to the Generating Equipment Site by a new Gas Pipeline connecting the Generating Equipment to the existing National Gas Transmission System. The Gas Connection is described in detail in the Gas Connection Statement (Document Reference: 9.2).
- 2.2 Peaking plants are required to operate when there is a surge in demand for electricity associated with a particular event (e.g. where many people across the country boil kettles following the end of a popular television programme) or where there is a sudden drop in power being generated from plant which are constantly operational (e.g. a sudden outage).
- 2.3 Operating as a Peaking Plant, the Generating Equipment would also help to 'balance out' the grid at times of peak electricity demand and will help to support the grid at times when other technologies (e.g. wind and solar farms) cannot generate electricity due to their intermittent operation and reliance on weather conditions. Peaking Plants are therefore vital in 'evening out' the power in the grid. The Generating Equipment would operate intermittently for up to 2,250 hours per year. This could be at any time during the year and for any length of time up to but not exceeding 2,250 hours and not exceeding 1,500 hours on a 5 year rolling average.
- 2.4 The Generating Equipment will supply electricity to the NETS operated by National Grid Electricity Transmission PLC (NGET), NGET holds a transmission licence issued pursuant to the Electricity Act 1989.
- 2.5 The Project is more fully described in Chapter 3 of the Environmental Statement (Document Reference 6.1).

3. **CONTRACTUAL AGREEMENTS**

- 3.1 NGET owns and manages the NETS in England and Wales.
- 3.2 Applicants must secure a connection with NGET when constructing a generating station if they want the power of that generating station to be distributed across the NETS (certain generating stations are used “on-site” only whilst others connect into the local distribution network).
- 3.3 APL received an offer of a Bilateral Connection Agreement and Construction Agreement from NGET on 23 February 2018 (the Connection Agreement) to connect the Generating Equipment to the NETS.
- 3.4 The Connection Agreement offer provides the Generating Equipment with an export capacity of 299 MW and a connection date to the NETS of 30 September 2022.
- 3.5 APL can confirm that it will enter into the Connection Agreement by 23 May 2018 thereby securing an agreement to export the output of the Generating Equipment to the NETS.

4. RESPONSIBILITIES FOR DESIGNING AND BUILDING THE GRID CONNECTION

4.1 The grid connection consists of the following works:

- The Electrical Connection - a 400 kV underground cable and associated works inside the Substation to connect to the gas-insulated switchgear (GIS) bay at Substation, and which would export electricity from the Generating Equipment to the Substation;
- the GIS bay at the Substation; and
- the Substation extension.

4.2 The Electrical Connection would export electricity from the Generating Equipment to the Substation, which would in turn connect into the existing 400 kV overhead line to complete the connection between the Generating Equipment and the NETS. Each of these three elements is described below.

4.2.1 The connection will be approximately 900 m in length. It will consist of a 400 kV underground cable to the Substation and associated works inside the Substation to connect the cable to a gas-insulated switchgear (GIS) bay (described below). The cable will emerge from the ground within the Substation and into a cable sealing end compound before connecting to the GIS bay at the Substation. These works bringing the cable into the Substation will be undertaken by APL and the 400 kV cable and sealing end will be owned and maintained by APL.

4.2.2 The GIS bay will be required at the site of the Substation to facilitate the connection of the Electrical Connection to the NETS. The GIS bay will be owned by NGET with APL providing and installing a 400 kV cable for termination into the GIS bay as well as installing feeder protection and settlement metering for the GIS Bay.

4.2.3 The Substation is proposed to be extended by NGET. NGET is responsible for securing any necessary planning permissions (although it is currently anticipated that works will be carried out by NGET under Permitted Development rights, including extensions to the 400 kV substation building and main and reserve busbars, to accommodate the GIS bay).

4.3 Further information on the Electrical Connection and the alternatives considered is contained in chapter 5 of the Environmental Statement (Document Reference 6.1). An explanation of consultation feedback received on the Electrical Connection and how it has been taken into account is contained in chapter 5 of the Consultation Report (Document Reference 5.1.0).

- 4.4 APL will be responsible for:
 - 4.4.1 providing and installing a 400 kV cable for termination into the 400 kV GIS bay at the Substation and will work with National Grid Electricity Transmission plc to connect the circuit.
 - 4.4.2 Installation of feeder protection and settlement metering for the 400 kV GIS bay at the Substation.
- 4.5 Figure 3.2 of the Environmental Statement (Document Reference 6.1) shows the Electrical Connection, the location of the Substation, and the location of the existing 400 kV overhead lines.

5. CABLE CROSSING AGREEMENTS

Wales and West Utilities Ltd – Underground Distribution Network Gas Pipeline

- 5.1 The APL 400 kV cable will need to cross a distribution gas pipeline owned by Wales and West Utilities Ltd, adjacent to the Felindre Gas Compressor Station. The crossing works would take place in plots 13, 14 and 16 within the Book of Reference (Document reference 4.3).
- 5.2 The cable may go over or under the gas pipeline depending on the depth of the pipeline. An appropriate solution will be determined at detailed design and through further discussion with Wales and West Utilities Ltd.
- 5.3 APL is in active discussions with Wales and West Utilities Ltd over the crossing of this asset. Protective provisions for the benefit of Wales and West Utilities Ltd have been included in the draft DCO and have been sent for agreement.

Western Power Distribution (South Wales) plc (WPD) – Electrical Cables

- 5.4 The 400 kV cable will need to cross underground electrical cables owned by WPD in plot 16 within the Book of Reference (Document Reference: 4.3)
- 5.5 The cable may go over or under the WPD cables depending on the depth of burial. An appropriate solution will be determined during detailed design and through further discussion with WPD. The WPD cable will be crossed above ground with vehicles during construction and subsequently during operations.
- 5.6 APL is in active discussions with WPD over the crossing of these assets. Protective provisions for the benefit of WPD have been included in the draft DCO and have been sent to WPD for agreement.

Dwr Cymru Cyfyngedig – Water Main

- 5.7 The 400 kV cable will need to cross a water main owned by Dwr Cymru Cyfyngedig in plots 11 and 12 within the Book of Reference (Document Reference: 4.3).
- 5.8 Although not exhaustive, the works will include horizontal directional drilling underneath the water main and the crossing of ground above the water main with vehicles during construction and subsequently during operations.
- 5.9 APL is in active discussions with Dwr Cymru Cyfyngedig over the crossing of this asset. Protective provisions for the benefit of Dwr Cymru Cyfyngedig have

been included in the draft DCO (Document Reference 3.1) and have been sent to Dwr Cymru Cyfyngedig for agreement.

BP International Limited – Decommissioned Oil Pipeline

- 5.10 The 400 kV cable will need to cross a decommissioned oil pipeline owned by BP in plot 12 within the Book of Reference (Document Reference: 4.3).
- 5.11 Although not exhaustive, the works will include horizontal directional drilling underneath the pipeline and the crossing of ground above the pipeline with vehicles during construction and subsequently during operations.
- 5.12 APL does not consider that section 127 is engaged in relation to the decommissioned oil pipeline owned by BP International Limited, as BP International Limited is not a statutory undertaker within the meaning of Section 8 of the Acquisition of Land Act 1981. APL has not therefore included any protective provisions within the draft DCO for the benefit of BP International Limited.

6. ACQUISITION OF LAND AND RIGHTS

- 6.1 The draft DCO for the Project (Document Reference 3.1) includes powers to compulsorily acquire land and rights to allow APL to construct, use and maintain the Electrical Connection. These are fully described in the Book of Reference (Document Reference 4.3).
- 6.2 These powers include acquisition of the right for the undertaker and all persons authorised on its behalf:
- 6.2.1 to pass and repass on foot, with or without vehicles, plant and machinery for all purposes in connection with the construction, use and maintenance of the authorised development;
 - 6.2.2 to install, retain, use, maintain, inspect, alter, remove, refurbish, reconstruct, replace, protect and improve 400kV electricity cables up to 120mm in diameter, telecommunications and other ancillary apparatus and any other works as necessary together with the right to fell, trim or lop trees and bushes which may obstruct or interfere with the said cables, telecommunications and other ancillary apparatus;
 - 6.2.3 to construct, use, maintain and improve a permanent means of access and to install, retain, use, maintain, inspect, alter, remove, refurbish, reconstruct, replace, protect and improve sewers, drains, pipes, ducts, mains, wires, cables, conduits, flues, fibre optic cables and other conducting media of whatsoever nature under and/or adjacent to the permanent means of access;
 - 6.2.4 to impose restrictions on erecting buildings or structures, altering ground levels, planting trees or carrying out operations or actions which may obstruct, interrupt, or interfere with the exercise of the said rights;
 - 6.2.5 together with temporary use for the purpose of constructing the said access road, constructing and installing the said cables, telecommunications, other ancillary apparatus and any other works as necessary.
- 6.3 APL has completed an option agreement over certain areas of the Order land (plots 2, 3, 3A, 3B, 4, 4A, 5, 5A, 5B, 6, 6A, 7, 7A, 7B, 7C, 8, 9, 10, 11, 11A, 11B and 12) required for the Power Generation Plant and part of the Gas Connection and Electrical Connection.
- 6.4 However, APL is including this land within the Order land to ensure that land assembly and title to it can be secured with certainty. In addition, there may be unknown rights, restrictions, easements or servitudes affecting that land which also need to be overridden, removed and/or extinguished in order to facilitate the construction and operation of the Project without hindrance.
- 6.5 APL is actively seeking to acquire the remaining land, new rights (including restrictive covenants) over land and temporary possession of land (shown

edged red and shaded pink, blue and yellow respectively on Land Plans) by private treaty, in order to ensure implementation of the Project. However, it has not yet been possible to acquire all of the land, the temporary use of land and the rights required by private treaty.

- 6.6 It is necessary to seek compulsory acquisition powers to secure land, the new rights (including restrictive covenants) over land and other interests and the temporary use of land to enable APL to construct, operate and maintain the Project within a reasonable commercial timeframe. The inclusion of powers of compulsory acquisition in the Order is sought to ensure this can be achieved. In addition, APL requires certain rights and restrictions to be suspended, overridden or extinguished within the Order Land so as to ensure there are no impediments to the construction, operation and maintenance of the Project.
- 6.7 Any land or rights required for the gas-insulated switchgear (GIS) bay at the Substation and the Substation itself are the responsibility of NGET. The Connection Agreement Offer received from NGET confirms that the Substation building will be extended and constructed eastwards to accommodate the new GIS within the site of the Substation.

7. **PLANNING CONSENT FOR THE CONNECTION WORKS**

- 7.1 On 15 March 2018, APL applied for a Generation Licence under the Electricity Act 1989. Upon grant of a Generating Licence to APL, the Electrical Connection could either be consented through the TCPA 1990 or as permitted development under the Town and Country Planning (General Permitted Development) Order 2015 ("GPDO"). A Screening Opinion request will be submitted to CCS prior to the Examination of the DCO Application getting underway.
- 7.2 In relation to the GIS bay, consent will be obtained by NGET through reliance on permitted development rights, a modification to existing planning permission or under the Town and County Planning Act 1990 once the exact location of the GIS bay has been determined.
- 7.3 The extension to the Substation is being made to accommodate the new GIS bay at the eastern end of the site. Permitted development rights conferred by Part 17G of the Town and Country Planning (General Permitted Development) Order may also be relied upon by NGET for ancillary equipment.
- 7.4 Therefore, APL will be able to secure the rights to construct and operate the Electrical Connection.

8. CONCLUSION

- 8.1 APL is required to submit a statement pursuant to regulation 6 of the APFP Regulations confirming "who will be responsible for designing and building the connection to the electricity grid".
- 8.2 APL considers that this statement provides confirmation to the Secretary of State that:
- 8.2.1 APL has received a Connection Agreement Offer from NGET regarding connection of its up to 299 MW output from the Generating Equipment to the NETS, which will be entered into by 23 May 2018;
 - 8.2.2 APL will design and build the 400 kV electrical cable, feeder protection, and settlement metering for termination within the Substation.
 - 8.2.3 NGET will design and build the extension to the 400 kV substation building and main and reserve busbars, to accommodate the GIS bay.
 - 8.2.4 The Connection Agreement Offer provides that NGET will consent the extension of the Substation building to accommodate a new GIS bay and busbar works.
 - 8.2.5 APL is seeking the necessary land and rights through the draft DCO at Document Reference 3.1 to allow the construction of the electrical cable.
 - 8.2.6 APL proposes to secure the requisite planning permission for the construction of the electrical connection through the use of Permitted Development Rights or planning permission under the TCPA 1990, and has submitted a screening request to CCS under the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017
 - 8.2.7 If the draft DCO is made on substantively the same terms as those set out in the draft DCO submitted in May 2018, and APL gains consent through either the TCPA 1990 or, following the grant of a Generation Licence, relies on Permitted Development Rights, then it will have secured the necessary consent for the construction and operation of the Electrical Connection.