Date: 14 March 2019
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Tees CCPP Project Team
Secretary of State for Business, Energy & Industrial Strategy,
c/o the Planning Inspectorate,
Eagle Wing 3/18, Temple Quay House,
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Bristol, BS1 6PN

Sent by email to: TeesCCPP@pins.gsi.gov.uk

Dear Sir/Madam,

EN010082 – THE TEES COMBINED CYCLE POWER PLANT (CCPP) PROJECT – APPLICANT'S RESPONSE TO THE REQUEST FOR COMMENTS FROM THE SECRETARY OF STATE FOR BUSINESS, ENERGY & INDUSTRIAL STRATEGY DATED 11 MARCH 2019

THE PLANNING ACT 2008 (AS AMENDED) & THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010 (AS AMENDED)

I write on behalf of Sembcorp Utilities (UK) Limited (the 'Applicant') in response to the queries raised by the letter from the Department for Business, Energy & Industrial Strategy ('BEIS') dated 11 March 2019 relating to the Tees Combined Cycle Power Plant Project (the 'Project'). The letter follows an earlier request for information (dated 4 February 2019) and a response by the Applicant (dated 18 February 2019).

The BEIS letter follows confirmation by the Applicant in the aforementioned response that the draft DCO [REP8-009] is correct in referring to a nominal net electrical output capacity of up to 1,700 megawatts electrical ('MWe') and, where documents produced by the Applicant refer to 'gross', this is a drafting error and that 'net' should have been used when referring to the electrical capacity of the Proposed Power Plant. The Applicant also provided an explanation as to why the use of net is appropriate within the context of the assessment of the environmental effects of the Proposed Power Plant (set out in the Environmental Statement) and Carbon Capture Readiness ('CCR'). This is on the basis that the air quality assessment and the calculations of carbon dioxide emissions are based on the gross thermal input, and the net and gross electrical outputs are immaterial.

The BEIS letter confirms that although the Secretary of State ('SoS') considers it should be possible to limit the capacity of the Proposed Power Plant by the use of either gross thermal input or net electrical capacity, it would be more consistent with recent grants of development consent if the gross electrical capacity was specified in any DCO that may be granted.

Further explanation is therefore requested in respect of the following:

1. the relationship between the gross electrical capacity, gross thermal input and net electrical capacity;
2. confirmation of the gross electrical capacity figure; and

3. any reasons why it would not be appropriate or possible to use the gross electrical capacity figure in this case, both within the description of the authorised development and in Requirement 29 of the draft DCO.

The remainder of this letter sets out the Applicant's response in respect of matters 1-3 and suggests a proposed solution. It is notable that representatives of BEIS and the Applicant held a telephone conference on 12 March 2019 to discuss matters 1-3, which is referenced where necessary.

Matter 1 – the relationship between the gross electrical capacity, gross thermal input and net electrical capacity

The Applicant's response is as follows (**bold text** added for emphasis):

- In a combined cycle gas turbine ('CCGT') power station, fuel (i.e. gas) is combusted at high pressure with air in a turbine which generates electricity. A heat recovery steam generator ('HRSG') captures exhaust heat from the gas turbine that would otherwise be vented to atmosphere. The HRSG produces steam from the gas turbine exhaust heat and delivers it to the steam turbine, which produces additional electricity. Some of the electricity produced from the gas and steam turbines is used to run the power station (e.g. to supply the cooling system) and is known as the 'parasitic load'. The rest is exported to the electricity grid or other customers.
- The amount of fuel (gas) used in the process is represented as the **gross thermal input**. The total amount of electricity produced, expressed in **MWe gross**, is related to the gross thermal input by the efficiency of the turbines. The electricity available to the grid/customers after the power station has taken some for its own use (parasitic load) is expressed as **MWe net**.
- From an EIA perspective all the air quality modelling work and assessments following from it (including the Habitats Regulations Assessment) are based on the **gross thermal input**. It follows that the **MWe gross** and **MWe net** values are immaterial to these aspects of the EIA. The same logic applies to the CCR assessment work. All EIA assessments that are based on building sizes and footprints (e.g. the landscape and visual impact assessment) are related to power station structures and equipment designed to deliver the **respective MWe gross** value, and the MWe gross and MWe net values are again immaterial.

Furthermore, it is notable that the Planning Act 2008 and other relevant legislation does not stipulate between stating net or gross and previous DCOs granted by the SoS, have referred to net, including the Knottingley Power Plant Order 2015. This matter was raised by the Applicant during the aforementioned telephone conference and was acknowledged by the representatives of BEIS.

Notwithstanding the above, the representatives of BEIS reiterated that comments made in terms of stating gross electrical capacity in any DCO are aimed at achieving consistency with other more recent DCOs.

Matter 2 – confirmation of the gross electrical capacity figure

The MWe gross figure for the Proposed Power Plant is 1,748 MWe. The additional 48 MWe, which takes the figure above 1,700 MWe, comprises the parasitic load. The MWe net is therefore 1,700 MWe, which is the gross MWe minus the parasitic load.

Matter 3 – any reasons why it would not be appropriate or possible to use the gross electrical capacity figure in this case, both within the description of the authorised development and in requirement 29 of the draft DCO

The Applicant, during the aforementioned telephone conference with BEIS, expressed concerns regarding the potential for misunderstanding in the local community and the consequent impact on the Applicant's reputation in a scenario where the gross MWe figure (1,748 MWe) is stated in the DCO, notwithstanding that this is in fact immaterial when considering the EIA and CCR work (as noted previously).

The Applicant's concerns however, have been allayed to some extent on the basis that BEIS confirmed that this matter could be fully explained in the decision letter/report issued by the SoS, making it clear that the use of net or gross is immaterial when considering the EIA and CCR work that has been carried out to assess the impacts and requirements of the Project, and that reference to gross in some application documents was merely a drafting error that has now been rectified.

Proposed solution

It remains the Applicant's preference to refer to nominal net electrical output capacity (only) in any DCO and to continue referring to net (only) in Requirement 29. This is on the basis of the information set out in this letter, including that the Planning Act 2008 does not stipulate between the use of net or gross, and that the use of net or gross when considering the EIA and CCR work is immaterial.

Notwithstanding the above, BEIS suggested during the telephone conference that a compromise could be to state both the net and gross figures in any DCO (Schedule 1) and in Requirement 29 (Schedule 2). The Applicant would accept this, subject to the use of appropriate wording. We suggest that the description of Work No.1 in Schedule 1 of the draft DCO is therefore amended to read as follows (additional/amended text is underlined):

'a nominal net electrical output capacity of up to 1,700 MWe (1,748 MWe gross) at ISO Conditions'

We suggest that the wording of Requirement 29 in Schedule 2 of the draft DCO is amended to read as follows (additional/amended text is underlined):

'29.—(1) The authorised development must not be operated to generate a net electrical output of more than 1520MWe (1,563MWe gross) unless and until sub-paragraph (2) has been satisfied.

(2) The authorised development must not be operated at a net electrical output of more than 1520MWe until the undertaker submits a scheme to demonstrate there is sufficient space within the Order limits to comply with the land footprint requirement for the retrofitting of appropriate capture equipment for a generating station with a net electrical output of up to 1700MWe (1,748MWe gross). The scheme shall be submitted to and approved in writing by the relevant planning authority in consultation with the Environment Agency. The scheme shall include as a minimum—

(a) information required by the form "Environment Agency verification of CCS Readiness New Natural Gas Combined Cycle Power Station Using Post-Combustion Solvent Scrubbing," as outlined in Annex C of the DECC Guidance for a generating station with a net electrical output of more than 1520MWe (1,563MWe gross) and up to 1,700MWe (1,748MWe gross); and

(b) details demonstrating how the capture equipment will fit into the space allocated for the plant including the submission of engineering design details.'

I trust that this letter provides the information required by the SoS in order to address the queries set out in the letter from BEIS dated 11 March 2019. We trust that BEIS will inform the Applicant if any further information or clarification is required or if the proposed solution is not acceptable to the SoS.

I would be grateful if you could confirm receipt of this letter.

Yours sincerely

[redacted]

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