ENGINEERING / CABLE ROUTE

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SCOTLAND TO ENGLAND GREEN LINK 2) COMPULSORY PURCHASE ORDER 2023

SUMMARY STATEMENT
STATEMENT OF EVIDENCE

Damian Spurr
Senior Project Manager
National Grid Electricity Transmission plc

1. QUALIFICATIONS AND EXPERIENCE

1.1 My name is Damian Spurr, and I am a Senior Project Manager with National Grid Electricity Transmission Plc (NGET), specialising in project optioneering, development and project management of overhead power line replacement and Cable replacement schemes. I have a degree in Business Studies.

1.2 Section 1 of my evidence provides an overview of my qualifications and experience.

2. INTRODUCTION AND SCOPE OF EVIDENCE

2.1 The purpose of my evidence is to explain the front-end engineering design (FEED) and scheme design methodology of the Scotland to England Green Link 2 (the **Project**), specifically the southern cable corridor from landfall to the connection at the converter station (including access and construction compounds for the cable installation).

2.2 Although my role focused on the Southern (English end) of the HVDC link for detailed development works, I was responsible as National Grid representative to conduct joint assessment of SEGL 1 and SEGL 2 entire routes alongside Scottish Power and Scottish and Southern Electricity Networks (SSEN) project leads during the development stages of both projects.

3. OVERVIEW OF THE PROJECT

3.1 Section 3 of my evidence provides an overview of the Project.

4. FEED / SCHEME DESIGN WORKS CARRIED OUT TO DATE TO ESTABLISH THE ROUTE ALIGNMENT ON THE SOUTHERN HVDC CABLE ROUTE BETWEEN THE LANDFALL LOCATION AND THE CONNECTION INTO THE EXISITNG 400KV DRAX SUBSTATION.

4.1 FEED design works conducted during the development stages for the project are summarised in section 4 of my evidence.

4.2 Landfall Sites: Several sites were considered for possible landing points at the southern end of the HVDC marine cable. The assessment considered the possible constraints at each site for offshore and onshore conditions for cable transition onto land, implications concerning onwards connectivity alignment for land sections and its implications to impacted stakeholders. The assessment reviewed the offshore conditions of rock profiles, sandbanks and tidal movement profiles, sea land transition e.g., height of transition (cliffs) for ease of cable installation were duly considered. Fraisthorpe, East Riding was selected as most suitable site.

4.3 The alignment of the land section of HVDC cable between Fraisthorpe and Drax Substation was subject of staged constraint assessment starting with environmental assessment of several routes with regards to suitability of routes conditions, existing infrastructure, stakeholders, and accessibility.

4.4 Assessments were conducted as part of the FEED works to determine traffic routeing, expected traffic profiles at various locations and accessibility implications for stakeholders.

4.5 FEED works undertook to minimise use of public roads by limiting the HGV construction traffic to temporarily constructed Haul Road in certain location for the land section of the

HVDC route. The works were carried out in conjunction with stakeholder engagement with the local highways team, with planning requirement required to gain approval of the traffic management plan prior to commencement of the construction works.

4.6 Assessment was carried out during the FEED works to establish Hydrology and drainage implications resulting from the proposed cable alignment and related construction works. Required solutions include drainage channels, holding ponds as initial work, these works will form part of the detailed design works to be carried out by the main works contractor.

4.7 Several sites were considered for the converter station for HVDC connectivity in the proximity of the Drax substation. Following detailed assessment of each site, implications of route alignment for both HVDC and HVAC cables, accessibility and lifecycle maintenance and environmental impact were considered. Based on such assessment, the site adjacent to Drax substation was selected, see converter landscaping layout plan as contained within Richard Gott's statement.

4.8 Connectivity between the converter station and the 400kV Drax substation was subjected to FEED studies for the best solution for the HVAC cable alignment and connectivity with consideration to existing crossings and accessibility implications.

4.9 FEED works undertook impact assessment for stakeholders which includes utility companies, landowners, service providers and other authorities.

4.10 The stage 1 routeing and siting study was commissioned regarding the FEED contractor undertaking an initial review of the engineering and constructability considerations for a series of corridor options proposed by National Grid's Environmental Consultant. Richard Gott's evidence addresses this (section 4.12-4.20 Cable routeing). This resulted in identification of a preferred route corridor, and thereafter a preferred cable alignment (see Figure 1 in my evidence).

4.11 The information was comprehensive, covering several topic headings associated with the scheme ranging from constraint identification, HVDC routing/review of corridor options, landfall site, converter site (CS42) and preferred cable alignment (see figures 2 and 3 in my evidence).

4.12 Stage 2 routing and siting report was commissioned upon completion of the stage 1 study and was completed in October 2022. The scope of Stage 2 was to identify and mitigate project risks associated with information that was outstanding at the end of Stage 1. The activities comprised within this are explained in full within my evidence.

5. OBJECTIONS MADE TO THE ORDER

5.1 Several objections have been raised in relation to the proposed development, in terms of route alignment (including optionality), surveys and investigations, engineering agreements and methodologies.

5.2 Section 5 of my evidence sets out detail related to the following relevant objections: OBJ2, OBJ5, OBJ6, OBJ8(8), OBJ12 and OBJ17.

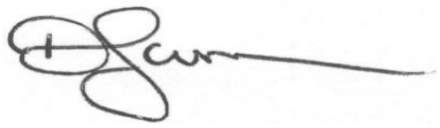
6. SUMMARY AND CONCLUSION

6.1 In my statement of evidence I have described the works carried out from the initial commencement of the FEED works to the subsequent preparation of the scheme design works that were carried out as part of the detailed design and route development works that were carried out on the scheme to date over the approx. 69km of HVDC underground cable route from the landfall location to the converter station and the associated temporary construction compounds, together with the works that are required to construct and/or install those physical components.

6.2 I consider that the front-end engineering design (FEED) and scheme design associated with the southern DC cable route is appropriate and feasible, this can be seen in the level of works caried out from the completion of the initial FEED specification, completion of the initial and detailed engineering optioneering works. Inclusive of recent dialogue prepared and issued in relation to early/side access and the preparation of the drone survey that detailed the routes complexities and challenges established as part of the initial FEED and scheme design works.

7. DECLARATION

7.1 I confirm that the opinions expressed in this proof of evidence are my true and professional opinions.



Damian Spurr

16th February 2024