

Forest Diversion Proposal under FC Act, 1980

(Construction of 400 kV D/C Bongaigaon Nangalbibra Transmission Line)

JUSTIFICATION FOR LOCATING OF THE PROJECT IN FOREST AREA

1. PROJECT BACKGROUND

The project is for establish transmission system for “Establishment of new 220/132kV substation at Nangalbibra” in the states of Assam and Meghalaya. Presently, the state of Meghalaya has one 400/220kV S/s at Byrnihat (MePTCL) and one 132kV S/s at Khlierhat (POWERGRID) to meet its power requirement from ISTS network. The both ISTS-STU interconnection points are on eastern part of Meghalaya. Due to increasing power demand and for providing reliable power supply in the western parts of Meghalaya, necessity of a 220kV substation in the East Garo Hills district of Meghalaya was felt. In the absence of the same, the power flow on BTPS – Agia 220kV D/c line of AEGCL has been increasing due to additional loading on Agia (Assam) – Mendipather (Meghalaya) 132kV S/c line and it is also resulting in poor voltage profile in western part of Meghalaya.

In order to relieve the above loading, improve the voltage profile and to provide reliable power supply to western part of Meghalaya, a new 200/132kV S/s at Nangalbibra under ISTS has been agreed which would be fed from Bongaigaon (POWERGRID) 400/220kV substation through a 400kV D/c line (initially operated at 220kV). Further, for the drawal of power from Nangalbibra (ISTS), MePTCL would implement Nangalbibra (ISTS) – Nangalbibra (Meghalaya) 132kV (Single Moose) D/c line. In addition, MePTCL would also implement Nangalbibra (ISTS) – Mawngap 220kV D/c line so that Bongaigaon (POWERGRID) – Nangalbibra (ISTS) – Mawngap (MePTCL) – Byrnihat (MePTCL) – Bongaigaon (POWERGRID) ring would be completed for smooth and reliable power in the state of Meghalaya. The Nangalbibra (ISTS) – Mawngap 220kV D/c link would also provide a second source to New Shillong 220/132kV S/s, which would provide reliable and uninterrupted power to the state capital. The Nangalbibra (ISTS) 220/132kV S/s would be upgraded to 400kV at a later date.

Bongaigaon Nangalbibra Transmission Line is passing through East & North Garo Hills (T) Division in the state of Meghalaya.

2. JUSTIFICATION

Three alternative route corridors were studied largely by maximizing linear sighting opportunities, such as following existing roadways and power line corridors, negotiation with river, railway, road, electric power, and telephone line crossing and least crossing of notified/ protected/ reserved

forest areas. All efforts have been made to provide minimum numbers of angle points and utmost care have been taken on the ground with possible angle of deviation. Similarly, power line crossings have been fixed as close as possible to the right angle but not less than the 60-degree crossing.

The line passes through East & North Garo Hills (T) Division in the state of Meghalaya. Every effort has been made to avoid forest area but considering the technical feasibility of the alignment, the forest area could not be avoided completely. The alignment with minimum crossing of the forest & having minimum length has been selected as the proposed alignment. After detailed analysis, it was observed that Alternative-1 among the 3 alternative routes has the minimum involvement of forest area and is best suitable for construction point of view. Alternative-1 is also best in terms of approachability for construction as well as maintenance purpose. Keeping the above points in consideration, Alternative - 1 is proposed as the final route alignment.

Comparative Statement for Alternative-1, 2, 3 Routes: -

Comparative Statement of 3 Alternative Routes			
Description	ALT-1 (Proposed Route)	ALT-2	ALT-3
Bee Line Length (Km)	49.079 Km.	49.079 Km.	49.079 Km.
Total Line Length (Km)	52.934 Km.	53.203 Km.	53.079 km.
Length of Transmission Line in Forest Area (Km)	6.867 Km.	11.156 Km.	14.523 km.
Forest Area (Ha.)	31.588 (Ha.)	51.32 (Ha.)	66.81 (Ha.)
Density of Forest Area	Low/ Moderate	Moderate	Moderate
Protected Area	NA	NA	NA
Places of Archaeological Importance	NIL	NIL	NIL
Places of historical / cultural / religious / tourist importance	NIL	NIL	NIL
Line Pass through any Town/ City	NO	NO	NO
Line Pass through any Defense establishments	NO	NO	NO

3. LEGAL FRAMEWORK

The Prior approval of the Government of India under Section 68 of the Electricity (Supply) Act, 2003 for the subject project has been obtained vide MoP's letter dated 05th Apr 2021 and LOI was issued by the PFC Consulting Ltd on 14th Oct 2021. It is proposed to execute the transmission scheme as provision contained in the Indian Electricity Act, 2003 and the rules made there under and the Electricity (Supply) Act, 1910 and 1948, in so far as these are applicable.

4. ENVIRONMENTAL RISK

Transmission line Projects are environment friendly and do not involve any disposal of solid effluents and hazardous substance in land, air and water. Moreover, in forest area trees are felled at the tower spotting area and below each conductor to facilitate tower erection and stringing work. On completion of construction activity, only one strip is maintained for O&M purpose and natural regeneration of vegetation is allowed in rest of the corridor area. Therefore, the actual loss of forest is minimal as it is restricted to some selected area only. However, as per the requirement of Forest (Conservation) Act, 1980 approval of Ministry of Environment, Forests & Climate Change, Govt. of India, for diversion of forest land shall be taken before construction of line in forest area. Further, compensatory afforestation shall be done in double the degraded forest land to compensate the loss of vegetation, due to diversion of forest.

5. CONCLUSION

The route alignment has been made with a goal of avoiding the Forest and Wildlife area up-to possible extent. After detailed analysis, it is observed that the Alternative-1 (Proposed Route) has the least route length and forest area involvement. **Hence, the Alternative -1 (Proposed Route) has been selected as final route as it contains minimum forest area and has least No. of trees to be felled.**

Place : Goalpara

Date : 15.05.2022

Signature & Seal :

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