



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड

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ANNEXURE-V

JUSTIFICATION FOR LOCATING IN FOREST LAND

During route alignment feasibility survey for proposed Transmission Line, we have found following four option by doing Walk-over survey from the identified source APTRANSCO's Kalpakka substation to HPCL refinery and the area surveyed is as under:

- Emanating from Kalapaka Substation, proposed line passes across the hill, Peddakonda, part of Nadupuru Reserve Forest, and continues across revenue lands under villages of Kalapaka, Desapatruni Palem, up to 220kV VSS Switching Substation.
- Area around 220kV VSS Switching Substation adjoins sprawling 33,000 acres Vizag Steel Plant area, wherein lies existing corridors of 220kV and 400kV circuits, including 220kV circuit cutting across steel plant area to Gangavaram port area, culminating at Gangavaram 220/132KV Substation.
- From Gangavaram S/S, 132kV circuits have been laid across a hilly region and culminate at 132kV Malkapuram Substation, in close proximity to HPCL Refinery.
- For identifying possible route alternatives, routes have been explored in parallel to existing corridors, and following roads and highways as much as possible.

All options were explored during survey, further desk studies were performed, and in consultation with APTRANSCO and RINL authorities, the following alternatives were identified.

Alternative I

- (i) Kalapaka SS -- VSS--Gangavaram Tapping Tower (GTT) OH - 10.42 km
- (ii) GTT --Peda Gantyada--BC Road--GNT Road--Malkapuram-HPCL UG Cable - **10.35 km**

Alternative II

Kalapaka SS--Desapatruni palem--Nehru Road, Steel Plant--Telugu Talli Jn--Kanithi Rd--Karnevani Palem--Peda Gantyada--Balachervu Rd--Zinc (GNT Road)--Malkapuram-HPCL
UG Cable - 23.07 km

Alternative III

- (i) Kalapaka SS - VSS - Gangavaram Tapping Tower (GTT) **OH - 10.42 km**
- (ii) GTT -Peda Gantyada -Gangavaram SS -Yathapalem :--> **UG Cable - 4.74 km**
- (iii) Yathapalem-Yarada Hill Range - Navy Installation--Kranthi Nagar **OH - 5.95 km**
- (iv) Kranthi Nagar-- GNT Rd--HPCL **UG Cable - 2.0 km**

Alternative IV

- (i) Kalapaka SS -- VSS--Hill Top Guest House --Railway Gate--Steel Plant --Kapparikonda--BC Gate Flyover Bridge **OH - 11.52 km**
- (ii) Gate Flyover Bridge --BC Road-Peda Gantyada--GNT Road-- Malkapuram --HPCL
UG Cable -8.97 km



**Key Observations pertaining to Alternative I, II & III & IV in context of forest area.
Kalpakka-VSS Line route**

1. 400/220 kV Kalpakka Substation is situated in close proximity to the Reserve Forest area.
2. There is an existing 220 kV double circuit line emanating from Kalpakka Substation to VSS in the extreme left boundary of reserve forest area (when seen from Kalpakka –VSS).
3. The proposed 220 KV new line to HPCL should start from the bays which are in the right hand side of the VSS Line bays and due to electrical clearance constraints, the proposed new line has to be constructed on the right hand side of the existing Kalpakka-VSS Line, thereby the new line falling in the reserve forest area.
4. Although, the line passing through the forest area is minimized to an extent by aligning the line route close to the existing line maintaining sufficient electrical clearances to utilize the existing corridor.

VSS S/S – Steel Plant VIP Road via Old MRS line

1. There is an old MRS line, which is non operational and an existing 220 kV Gajuwaka-Ganavaram Transmission Line passing through the same route.
1. It was decided in mutual consultation with APTRANSCO official(s) along with RINL authorities for dismantling the old MRS line and erecting a multi-circuit corridor and using this new corridor for power transformation for both HPCL and Vizag Steel, thereby optimizing the Row requirements.
2. However, old MRS Line is situated on the right hand side of the existing 220 kV Gajuwaka-Ganavaram Transmission Line (when seen from VSS to Gangavaram) and constructing on the left hand of the existing Gajuwaka-Ganavaram Transmission Line is ruled out due to proximity to road & buildings inside steel plant and electrical clearance constraints near VSS-substation.
3. Some of the corridor of old MRS Line is falling in the forest area, and due to constraints in constructing the line to the left of existing Gajuwaka-Ganavaram Transmission Line, old MRS line corridor is proposed to be utilized for the construction of new transmission line, which is in the extreme left of reserve forest area.

Due to the reasons aforementioned, the line corridor is proposed in the reserve forest area along the route **Kalpakka-VSS -Steel Plant VIP Road via Old MRS line.**

Alternative-II is ruled out due to Row Problems along the line route, as the route pass through the populated area, narrow roads thereby resulting in constructional and maintenance issues, which compromises the reliability of the system which is the essence of this project.

Further, above four routes have been inspected by APTRANSCO and keeping in view of technical requirements, ROW issues, need to minimise passing of line through Forest Area, AP Transco has approved the proposed Alternative-I.

From all the above options and observations, it is clear that ROUTE –I is the only best option available among all the four routes, hence the proposed transmission line is located in forest area.

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