

JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST LAND

Ghatampur Thermal Power Plant (3x660 MW) is being set up by Neyveli Lignite Corporation to generate electricity & cater to the requirement of electricity of the State of Uttar Pradesh. To evacuate the power proposed to be generated at Ghatampur Thermal Power Plant, Government of Uttar Pradesh appointed REC as the bid processing co-ordinator. In the tariff based competitive bidding, **Ghatampur Transmission Limited** has been entrusted to build, operate and maintain the proposed evacuation system. The proposed evacuation system consists of 400 kV D/C Ghatampur- Kanpur Circuit, 765 kV S/C Ghatampur- Hapur, 765 kV S/C Ghatampur- Agra & 765 kV S/C Agra- Greater Noida Circuit(s)/ Lines.

Transmission line is a linear project where the starting & end point of the project are fixed and the rest of alignment is chosen by keeping in mind, a lot of factors that include technical feasibility, ease of construction, ease of maintenance, distance from Protected Area(s) & Eco- sensitive Zone(s), least involvement of forests, least tree felling, safe distance from habitation, places of archaeological importance & other infrastructure.

A Beeline is the shortest distance between the two points (Starting & End Point). The Beeline for Ghatampur- Hapur 765 kV S/C line is 390.60 Kms. The geographical location of Switchyard of Ghatampur Thermal Power Station at Kanpur & W.U.P.P.T.C.L Sub-station at Hapur is such that the beeline alignment passes through dense Reserve Forest & flood plains of Yamuna River in Kanpur Nagar District & the beeline alignment is also very close to the Eco-Sensitive Zone of Saman Wildlife Sanctuary. It also passes through densely populated habitations of Auraiya, Mainpuri, Aligarh, Bulandshahar & Hapur Districts & Reserve Forest land in Kanpur Dehat, Auraiya, Mainpuri & Aligarh Districts resulting in rejection of the beeline alignment because of environmental & technical concerns.

A number of options were explored before finalizing the proposed route. To avoid/ minimize the Reserve Forests in Kanpur Nagar, Kanpur Dehat, Auraiya & Mainpuri Forest Divisions, the proposed Ghatampur- Hapur 765 kV S/C line is avoiding the Yamuna River & passing through Eleven districts namely Kanpur Nagar, Kanpur Dehat, Auraiya, Etawah, Kannauj, Mainpuri, Aligarh, Kashiram Nagar, Etah & Bulandshahar before terminating at W.U.P.P.T.C.L. Sub Station in Hapur District.



Full Title of The Project: 765 kV S/C Ghatampur-Hapur Transmission Line

File No.: FP/UP/TRANS/42524/2019

Date of Proposal: 22-12-2019

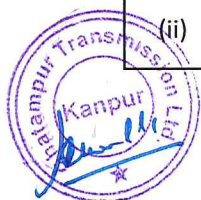
Detailed route survey has been done and the alignment has been finalized keeping in view the abovementioned requirements. An effort has been made to avoid the forest land completely however, in order to connect the two ends (starting & end point), 8 National Highways (NH-34, NH-27, NH-234, NH-92, NH-91, NH-93, NH-24 & NH-2), 4 State Highways (SH-46, SH-21, SH-80, SH-22A, SH-31 & SH-33), 2 Canals (Upper Ganga Canal & Lower Ganga Canal), 6 Major District Roads (MDR-106, MDR 70W, MDR-85C, MDR-134W, MDR-98W & MDR-82W) & 7 Railway Crossings (Jhansi- Kanpur, Howrah-Delhi, Mainpuri-Bhogaon, Aligarh- Chandausi, Hapur- Bulandshahar, Hapur- Ghaziabad & Kasganj Junction-Ajnera Railway Lines) along with some Reserve Forests are unavoidable & will come in all the explored alignments. The side strips of above mentioned National Highways, State Highways except SH-80, SH-22A & SH-31, Major District Roads except MDR-85C, MDR-134 W, MDR-98W, MDR-82W & Canals have been declared as Protected Forests, making it impossible to avoid the forest land completely. A conscious effort has been made to propose the alignments in such a manner that it involves barest minimum forest land & cutting of trees. This has been achieved by minimizing the Reserve Forest Land involvement.

On Successful commissioning of this transmission line the electricity availability in the State of Uttar Pradesh will improve resulting in lesser load shedding which will in turn bring about social & economic development of the area, business opportunities to local people especially in the area of small engineering works, spare shops, hotel & restaurant etc.

Construction of this transmission line will entail employment of about 15 engineers & average 300 people in various supervisory, administration & workers role for a period of two years. Around 5 engineers & 30 workers in supporting roles such as technicians & supervisors will be required for the entire life cycle of the transmission line.

The reasons for choosing the proposed alignment are tabulated below:

| S. No. | Description | Route 1 (Proposed Route) | Route 2 | Route 3 |
|--------|---|--------------------------|--------------|--------------|
| 1 | Route Details | | | |
| (i) | Transmission Line Bee Line (Shortest Distance between Origin & termination Point) | 390.6 Kms. | 390.6 Kms. | 390.6 Kms. |
| (ii) | Transmission Line Route Length | 411.3240Kms. | 427.835 Kms. | 419.725 Kms. |

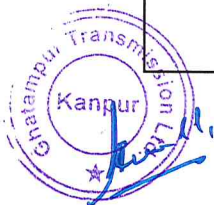


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| (iii) | Angle Points | 271 | 295 | 283 |
| (iv) | Terrain | Mostly plain, not susceptible to land erosion | Mostly plain with three sections susceptible to land erosion | Mostly plain, not susceptible to land erosion |
| 2 | Environment & Forest | | | |
| (i) | Protected Areas involved (WLS, NP, BR etc.) | NIL | NIL | NIL |
| (ii) | Eco –Sensitive Zone/ Buffer Zone | NIL | NIL | NIL |
| (iii) | Forest Area involved (Ha.) | 16.5761 | 18.96990 | 21.58260 |
| (iv) | Type of Forest | RF & PF (declared alongside NH (07 Nos.), Canal (04 Nos.), SH 03 (Nos.), & Railway Lines (4 Nos.), MDR (2 Nos.) | RF & PF (declared alongside (07 Nos.), Canal (04 Nos.), SH 03 (Nos.), & Railway Lines (4 Nos.), MDR (2 Nos.) | RF & PF (declared alongside NH (07 Nos.), Canal (04 Nos.), SH 03 (Nos.), & Railway Lines (4 Nos.), MDR (2 Nos.) |
| (v) | Tree Cutting in Forest Land | 324 Nos. | 381 Nos. | 723 Nos. |
| (vi) | Tree Cutting in Private Land | Most of the trees coming in this alignment are of small height (dwarf species) but a few trees may require pollarding. Although this requirement is lowest in this alignment. | Most of the trees coming in this alignment are of small height (dwarf species) but a few trees may require pollarding/ cutting. These include Ficus religiosa. | Most of the trees coming in this alignment are of small height (dwarf species) but a few trees may require cutting/ pollarding. These include Ficus religiosa. |
| 3 | Technical Feasibility | | | |
| (i) | Ease of Construction | Good roads, least forest land involved, away from habitation & orchards | Good roads, most forest land involved, away from habitation but near orchards. | Good Roads, least forest land involved, away from habitation but near orchards & |



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| | | | | involves maximum forest land. |
| (ii) | Ease of Maintenance | Easiest alignment to maintain because of good roads, least forest land involvement, being away from habitation & orchards | Easy to maintain because of good roads, being away from habitation & orchards but involvement of forest land is high & the tree removal requirement is also higher than Route 1. | Easy to maintain because of good roads, being away from habitation & orchards but the involvement of forest land & tree removal is highest amongst the routes. |
| 4 | Conclusion | Since all three proposed routes have to cross the same NH, SH, Canals & Railway Lines whose both sides have been declared as Protected Forest, the route having least Reserve Forest is preferred. Route 1 involves least forest land & also involves only 10.002 Ha. of reserve forest land. Because of this reason, Route 2 & 3 having higher Reserve Forest requirement are rejected. Route 1 involves least forest land & requires least number of trees to be removed, is easiest to construct & maintain & is away from habitation & orchards. Hence route 1 is the preferred route | | |
| 5 | Recommendation | Route 1 is proposed for construction in view of the above. | | |

Place: Kanpur

Date: 11/03/2020



Navneet Chadda

Senior Manager