

### 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 Agra- Greater Noida 765 kV S/C line is 147.567 Kms. The geographical location of the Fatehabad Sub-station near Agra & W.U.P.P.T.C.L Sub-station at Gautam Budh Nagar is such that the beeline alignment passes through dense forest & the beeline alignment is also very close to the proposed Zavar Airport. It also passes through densely populated habitations of Agra, Firozabad, Hathras & Aligarh District & Reserve Forest land in Firozabad & Agra 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 the Reserve Forests in Firozabad & Agra Forest Divisions, the proposed 765 kV S/C Agra- Greater Noida transmission line is crossing the Yamuna River three times & passing through seven districts namely Agra, Firozabad, Hathras, Aligarh. Etah, Bulandshahar before terminating at W.U.P.P.T.C.L. Sub Station in Gautam Budh Nagar District.



**Full Title of The Project: Agra- Greater Noida 765 kV S/C Transmission Line**

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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), 2 National Highways (NH-509 & NH-2), 4 State Highways (SH-80, SH-22A, SH-31 & SH-33), 2 Canals (Upper Ganga Canal & Central Ganga Canal), 2 Major District Roads (MDR-106 & MDR 70W) & 4 Railway Crossings (Etah- Barhan, Hathras- Hathras Kila, Kasganj Junction-Ajnera & Dehi-Howrah 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 & 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)	147.567 Kms.	147.567 Kms.	147.567 Kms.
(ii)	Transmission Line Route Length	159.20825 Kms.	162.910 Kms.	163.600 Kms.
(iii)	Angle Points	127	133	138



(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	<b>Environment &amp; Forest</b>			
(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.)	4.3024	15.6032	20.3776
(iv)	Type of Forest	RF & PF (declared alongside NH ( 02 Nos.), Canal (02 Nos.), SH 04 (Nos.) & Railway Lines (4 Nos.)	RF & PF (declared alongside NH ( 02 Nos.), Canal (02 Nos.), SH 04 (Nos.) & Railway Lines (4 Nos.)	RF & PF (declared alongside NH ( 02 Nos.), Canal (02 Nos.), SH 04 (Nos.) & Railway Lines (4 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	<b>Technical Feasibility</b>			
(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 & involves



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				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 0.7918 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: 25/11/2019



Navneet Chadda

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