JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST AREA.

a. Information in brief derived from TABLE – A.

Route/ Line No. – I:

The Length of the transmission Line-I is **29.572 Km** covering **79.845 ha** area which includes R.F. – **0.243 ha**, Revenue Forest – **14.418 ha** and non-forest land **65.184 ha**. The number of Angle Points (AP) are 50 and 116 numbers of towers are to be erected. The involvement of hilly/ ravine area is about 11.634 ha. This line is passing through an undulated land. The estimated cost for this project is **Rs. 21, 35, 92, 689.00** (Rupees Twenty One Crore Thirty Five Lakh Ninety Two Thousand & Six Hundred Eighty Nine) only. **It involves a total area of 79.845 ha, out of which the required forest area is 14.661 ha, only.**

Route/ Line No. – II:

The Length of the transmission Line-II is **26.918 Km c**overing **72.680 ha** area which includes Reserve Forest / Protected Forest of **21.480 ha**, Revenue Forest - **11.500 ha** and non-forest land - **39.700 ha**. The numbers of Angle Points (AP) are 51 and 101 numbers of towers are to be erected. The analysed cost is about **19,09,17,750/-.** (Rupees Nineteen Crore Nine Lakh Seventeen Thousand Seven Hundred Fifty) only. **In toto, this line involves a required area of 72.680 ha, out of which 32.980 ha is forest land & consisting of 22.00 ha of hilly area.**

Route/ Line No. – III:

The Length of the transmission Line-III is **32.285 Km** covering a total area of **87.170 ha**, which includes Reserve Forest / Protected Forest of **31.490 ha**, Revenue Forest **12.600 ha** and non-forest land **43.080 ha**. The number of Angle Points (AP) are 57 and 122 numbers of towers are to be erected. The analysed cost is 22,89,83,562/- (Rupees Twenty Two crore Eighty Nine Lakh Eighty Three Thousand and Five Hundred Sixty Two) only. **The Route/ Line - III involves 44.090 ha of forest land in the total project area of 87.170 ha with 21.700 ha of hilly area.**

(b).Justification for selecting Route/ Line - I:-

Odisha Power Transmission Corporation Limited (OPTCL) is a state public sector undertaking organisation. The proposal is for construction of a 132 KV 2 phase Transmission line from existing 220/132/33 KV Grid sub-station at Therubali to proposed 132/25 KV switch yard of RTSS Bhalumaska in Rayagada District, Odisha over a distance of about 29.572 KM.

During field survey, three alternative Lines were identified. After avoiding reserve forest, dense vegetation, human habitation, forest plantation and hilly terrain, Line No.I is found to be suitable with involvement of barest minimum forest land covering an area of **14.661 ha.**

EHT Transmission line can't take frequent turn because of limitation of (maximum 60^0) turn and other technical constraints. The project will supply electric power to the traction substation, which will result in plying locomotives through electric power instead of conventional diesel fuel. This will save huge quantity of mineral oils and will help in preserving the depleting oil sources. The main advantages in the electric traction system are: Ease in control, wide range of flexibility in speed & control, high power-to-weight ratio, less pollution, no use of non-renewable fuels, less cost in running and faster acceleration.

Further, electric locomotives use a unique system of 'regenerative braking', where the kinetic energy of the train is converted during braking to electrical energy and pushed back into the system. Besides, supply at EHT voltage will also ensure uninterrupted power supply to the railway station, which will prevent undesirable power supply outages and inconveniences to the passengers. Uninterrupted power supply will also help railway authorities to provide better amenities in the station such as lift and escalators, purified drinking water system etc.

(Sri. Nihar Ranjan Ray)