



COST BENEFIT ANALYSIS AS PER GUIDELINES ISSUED UNDER FOREST CONSERVATION ACT 1980 IN PRESCRIBED FORMAT, WHENEVER APPLICABLE

Title of Project: Laying of 400kV Double Circuit Transmission Line from BALCO 1200MW Power Plant to 765/400kV PGCIL Pooling Station at Bhaisma, Uрга in Korba for evacuation of power.

1. Project Cost: Rs. 55.0 Cr

2. Benefits from Project :-
 - a) Power Transfer Capacity of the line : 1000 MW (For 400kV D/C Line)
 - b) Power to be transferred : 600MW
 - c) Load factor : 80%
 - d) Line loss : 2.5%
 - e) Line Availability : 97.5%
 - f) Average cost of energy transfer per unit : Rs 0.2 per kWh
 - g) KWH per year : $600 \times 1000 \times 0.8 \times 24 \times 365 \times 0.975 = 4099680000 \text{ KWH/year}$
 - h) Transmission charges/supply cost per year : $0.2 \times 4099680000 = \text{Rs. } 81,99,36,000 = \text{Rs. } 82 \text{ Cr/Year}$
 - i) Operational Cost & Interest charges per year (Manpower/Line maintenance etc) : Rs. 5 Cr/Year
 - j) Net Transmission charges per year (g-h) : 77 Cr/Year
 - k) Transmission charges against power transfer in 25 years : $77 \times 25 = \text{Rs. } 1925 \text{ Cr}$

- Net Benefit from Transmission System in 25 years = 1925 Cr

3. Cost Benefit Ratio = 55 : 1925 = **1 : 35.0**

The benefit from the transmission line is more than R. 77.0 Cr per year to the nation or Rs. 1925 Cr in 25 Years if flow of power is continued through this transmission system whereas the cost of project including the compensation against forest area involved, interest during construction and other misc. expenditure is Rs. 55.0 Cr which is very less compared to profit from this transmission line project.

Date: 09.02.15
Place: Korba

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