



**OFFICE OF THE EXECUTIVE ENGINEER,
TRANS. LINE MAINTT. DIVISION-I, JKPTCL, JAMMU**

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No: TLMD-I/JKPTCL/J/-70-74

Dated: -11-04-2022

The Divisional Forest Officer,
Jammu Forest Division,
Jammu

**Subject : EDS-Cost benefit Analysis for Construction of LILO of 220 kV
Udhampur-Gladni Transmission Line on D/C Tower at Nagrota GSS-reg**

Ref : Your letter DFO-J/FCA/15-18 dt 08.04.2022

Sir,

This is in reference to your communication vide your letter mentioned in reference above through Parivesh Portal. In this connection cost benefit analysis as sought by yourself is enclosed herewith as Annexure-1 for your kind perusal.

Yours faithfully,

Executive Engineer,

Trans. Line Maintt. Div-I,
JKPTCL, Janipur, Jammu.

Copy to the:-

1. Chief Conservator of Forest and Wildlife, UT of J&K
2. Chief Engineer, (Transmission), JKPTCL, Jammu for information.
3. Superintending Engineer, O&M Circle-I, JKPTCL, Jammu for information.
4. Range Officer , Jammu for needful please.

COST BENEFIT ANALYSIS

Name of the Project: LILO of 220 kV Udhampur-Gladni S/C Transmission Line at Nagrota GSS (New)

Construction of LILO of 220 kV Udhampur-Gladni S/C Transmission Line at Nagrota GSS will off load already overloaded Grid Station at Janipur and Barn.

Nagrota is fast developing with two institutes of national importance i.e IIT Jammu and IIM Jammu situated in the area. Project shall be essential to provide uninterrupted, reliable and quality grid power supply to upcoming and existing load at Nagrota and its adjoining areas

1. Estimated Project Cost: 64.63 Cr
2. Energy Transfer from Project
 - a) Power Transformation Capacity S/Stn = 100 MVA
 - b) Transmission Line availability factor = 98%
 - c) Average Power Factor of Load = 0.8
 - d) Average load factor = 70%
 - e) Power Transfer Capability of Transmission Line = $100 \text{ MVA} \times 0.8 \times 0.98 \times 0.7$
= 54.88 MW = 54880 KW
 - f) Energy Transferred in a year = $54880 \times 24 \times 365 = 480748800 \text{ KWH /year}$
3. Tariff / Income from the Project: Tariff charges are decided based on actual/nominal project by regulatory commission
Project Cost : 64.63 Cr
Equity : 19.39 Cr (30 % of project cost as investment)
Loan 45.24 Cr (70% to be considered as Loan)
Tariff as calculated for 25 years (as per CERC Guidelines) = 82.49 Cr

Investment Benefit Ratio: $19.39/82.49 = 1:4.5$

It may be seen that the project shall cater additional energy demand of 480748800 KWH /year which shall be vital for socio economic development of public residing in area. In terms of tariff JKPTCL shall be receiving around 4.5 times of its investment. However primary purpose is not profit but to supply the power in the area providing socio-economic benefits to people residing in the area.

The appraisal of the project has been carried out by CEA and the project is approved by Ministry of Power, Govt of India to achieve ultimate goal of 24x7 power for all.


Executive Engineer
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Jammu

