



# उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

## Uttarakhand Power Corporation Ltd.

(A. Govt. of Uttarakhand Undertaking)

CIN : U40109UR2001SGC025867

Email ID: do.dp.upcl@yahoo.com Website: www.upcl.org

No. 1394 /UPCL./RM/B-29

Dated: 11.03-2026

### BEFORE THE UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

IN THE MATTER OF: Petition for Annual Performance Review for FY 2025-26 and determination of ARR/Tariff for FY 2026-27 alongwith truing up of FY 2024-25.

AND

IN THE MATTER OF: UTTARAKHAND POWER CORPORATION LIMITED.  
.....Petitioner

### INDEX

S. No.	Particulars	Page No.
1.	Reply to deficiency note	1-12
2.	Affidavit verifying the reply	13-14
3.	<b>Annexure -A</b> 1. UPCL's letter no. letter no. 1195 & 1196 dated 02.03.2025 regarding details of HT works 2. Form 18.12	15-17 In soft copy
4.	<b>Annexure -B</b> (Investment approval and physical and financial progress)	In soft copy
5.	<b>Annexure -C</b> (Upcoming Expected Substation in FY 2026-27)	18
6.	<b>Annexure -D</b> (Cost Benefit Analysis)	19-71
7.	<b>Annexure - E</b> (Copies of Circulars from IEX, PXIL)	72-80
8.	<b>Annexure - F</b> (Information of hourly consumption data for Industry consumers (LT industry above 10 kW & all HT Industries) and Non-domestic consumer categories (above 10 kW) for FY 2024-25)	In soft copy
9.	<b>Annexure - G</b> (List of consumers for which bad debts were written-off)	In soft copy
10.	<b>Annexure - H</b> (The details of compensation paid on fatal electrical incidents during FY 2024-25)	In soft copy
11.	<b>Annexure - I</b> (Copies of schedule of rates (SOR) adopted for claiming the expenses)	In soft copy

(Ajay Kumar Agarwal)  
Director (Projects)

File No. ....

Case No. ....

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This is with reference to Hon'ble Commission's letter no. UERC/TF-814/2025-26/2026/1751, dated 24-02-2026 and no. UERC/TF-814/2025-26/2026/1782, dated 27-02-2026 vide which additional deficiencies / shortcomings on the petition dated 10-12-2025. The petitioner is directed to submit the reply on the affidavit. The point wise reply/ information is mentioned herein below and the petitioner most respectfully showeth as follows in the matter:

1. UPCL in reply to Query No. 8 vide letter dated 18.02.2026, has once again submitted that preparation of Form 18.12 for HT works is under progress and shall be submitted to the Commission in due course of time. UPCL is required to submit Form 18.12 for HT works claimed during FY 2024-25 without any further delay, failing which the Commission shall not consider the same while carrying out true up for FY 2024-25.

**Reply**

The Petitioner submits the details of HT works amounting to Rs 211.25 Cr has been submitted to Hon'ble commission vide letter no. 1195 & 1196 dated 02.03.2025 along with Form 18.12. The copies of said letters are attached in hare copy and the form 18.12 in soft copy as **Annexure - A**.

2. UPCL in reply to Query No. 9 vide letter dated 18.02.2026, has not submitted the break-up of the capitalization into HT and LT Works for FY 2024-25. In this regard, UPCL is required to submit the break-up of the capitalization claimed in FY 2024-25 clearly segregating between HT and LT works without any further delay, failing which the Commission shall not consider the same while carrying out the true up for FY 2024-25.









## Reply

The Petitioner submits that UPCL vide letter no. 1195& 1196 dated 02.03.2025 has submitted the break-up of the capitalization of HT and LT works to Hon'ble commission copy of which is attached as Annexure A. The summary of the same is reproduced below:

S. No.	Particulars	Amount (Rs. Cr)
1	HT Total	211.25
2	LT Total	200.07
3	HT + LT Total	411.32

3. UPCL in reply to Query No. 12 vide letter dated 18.02.2026, regarding the variation observed in the number of consumers, connected load, and consumption in EDD (U) Roorkee, has submitted that to avoid any error due to human interventions, UPCL is in the process of developing a system for preparation of the commercial diary in digital mode. Based on the commercial diary prepared in digital mode, UPCL will be in position to reply relevant queries of commission raised on this matter. In this regard, UPCL is required to submit the timelines for digitalization of commercial diary.

## Reply

The Petitioner submits that the digitalization of commercial diary shall be completed by June, 2026.

4. UPCL in reply to Query No. 13 vide letter dated 18.02.2026, regarding detailed analysis for the variations observed in the LT Industry Category, has submitted that to avoid any error due to human interventions, UPCL is in the process of developing a system for preparation of the commercial diary in digital mode. Based on the commercial diary prepared in digital mode, UPCL will be in position to reply relevant queries of commission raised on this matter. In this regard, UPCL is required to submit the timelines for digitalization of commercial diary.

Further, w.r.t the point no. 3 & 4 above, UPCL is also required to submit whether the digital commercial diary will be prepared for FY 2024-25 also, as the queries/explanation sought by the Commission relates to FY 2024-25. Moreover, the commercial diary will point out the anomaly in data, which the Commission has already highlighted, and UPCL was simply required to provide its analysis explaining the reasons for the variations observed. The Commission is unable to understand what purpose the digital commercial diary will serve in FY 2024-25 for analysing the variation, and once again directs UPCL to submit its proper reply in line with the query raised by the Commission.



## Reply

The Petitioner submits that the digitalization of commercial dairy shall be completed by June, 2026. All necessary provisions shall be made while digitalization of commercial dairy to answer any query regarding the commercial data included in the commercial dairy. It is further to submit that the commercial dairy in digital mode shall be prepared from April, 2026.

5. UPCL in response to query no. 14 vide letter dated 18.02.2026, submitted that the damaged items have not been included in the de-capitalization in FY 2024-25. In this regard, the Commission observed that Auditors report for FY 2024-25 states that these damaged items are de-commissioned assets. UPCL is required to submit why the carrying cost of these de-commissioned assets be passed on to the consumers in the form of tariff while carrying out true-up for FY 2024-25.

## Reply

The Petitioner submits that it has not incurred any additional expenditure towards the carrying of the decommissioned assets. Further, no additional cost has been incurred on hiring any extra warehouse space or engaging additional manpower for this purpose.

6. UPCL in reply to Query No. 15 vide letter dated 18.02.2026, regarding source of funding of the balance equity of Rs. 49.18 Crore along with supporting document and detail of equity infused till date in FY 2024-25, has submitted that source of equity is amount received from GoU towards equity and rest is majorly from withholding the payment towards government for state royalty power (i.e. free power), Water Tax and Cess & Royalty payable to Govt. (UJVNL). In this regard, UPCL is required to provide justification as to why RoE should be allowed on the assets created out of the funds withheld towards the payment of Govt. dues.

## Reply

The Petitioner humbly submits that UPCL request GoU to provide the amount of equity against the running projects, however due to non receipt of equity from GoU, UPCL use the amount of payables to GoU for such projects to avoid the delay in the completion of projects and increased cost of the projects. Further, it is also submitted that UPCL is a fully State Government owned Company and any dues of GoU on UPCL may be treated as Equity. It is further to submit in the matter that Hon'ble UERC while truing up for FY 2024-25 has considered the Equity of Rs. 1148.18 Cr. whereas the actual amount of Equity as on 31-03-2024 is Rs. 1604.84 Cr. and as on 31-03-2025 is Rs. 1802.96 Cr. which is much higher than the Equity considered by Hon'ble UERC. Accordingly Hon'ble UERC is requested to kindly allow Return on Equity as claimed by UPCL.



7. UPCL, in reply to Query No. 17 vide letter dated 18.02.2026, has submitted the information in soft copy as Annexure-G. However, it is observed that the file with extension "pdf. PFILE" can't be opened. In this regard, UPCL is required to submit the requisite information in readable file format. Further, w.r.t the information submitted in Annexure-'H', it only mentions the details of upcoming sub-stations and no information regarding associate costs of the same has been provided. UPCL is required to provide complete and correct information.

**Reply**

The Petitioner submits the new PDF file of investment approval and physical and financial progress as **Annexure B** in soft copy. Further, regarding the cost associated with upcoming sub-station it is to mention that costs associated with the projects is under finalization and shall be submitted to Hon'ble commission in due course of time. The same is mentioned in **Annexure -C** as 'note'.

8. UPCL, in reply to Query No. 18 vide letter dated 18.02.2026, has submitted the cost benefit analysis of approved projects as Annexure-I. However, it is observed that the file attached can't be opened as it is in 'pdf. PFILE, format. In this regard, UPCL is required to submit the requisite information in readable file format.

**Reply:**

The Petitioner submits the new PDF file of cost benefit analysis as **Annexure D** in soft copy.

9. UPCL in reply to query no. 21 vide letter dated 18.02.2026, submitted the DPS leviable on Govt. category consumers in FY 2024-25. In this regard, the information considered by UPCL for aforesaid calculation is not tallying with the monthly commercial diaries of FY 2024-25, including opening amount of arrears. UPCL is required to reconcile the same with the audited commercial diary and submit the updated computation for perusal of the Commission.

**Reply**

- i. As regards to the difference in revenue arrears as per Annual Accounts and billing data base, it is submitted that the petitioner had assigned the work of reconciliation of arrears shown differently in various records to M/s KG Somani & Co. LLP Chartered Accountants who submitted his report in June 2023 and pointed out the difference in electricity arrears in various records of UPCL as follows:

The image shows four handwritten signatures or initials in blue ink. From left to right: a signature that appears to be 'SC', a signature that looks like 'A', a signature that looks like 'A', and a signature that looks like 'A'. There is also a small signature on the far right that looks like 'A'.

Particulars	Amount (Rs. Cr)
Arrears as per Audited Accounts	1462.65
Arrears as per Ledger	2910.09
Arrears as per Commercial Diary	2201.53

- ii. As per the report of the Consultant, the arrears as on 31-03-2023 is Rs. 1614.68 Cr. The corrective action on the report of consultant is in progress.
- iii. As per Audit report the summary of the balance which are irrecoverable and to be kept separately apart from normal balances in R-APDRP billing module has been arrived as follows:

a. **Govt. Balances**

Type of Consumer	Amount (Rs. Cr.)
RTS-3A (Public Lamps)	20.77
RTS-3B (Govt. Irrigation System)	320.40
RTS-3C (Public Water Works)	720.35
<b>Total</b>	<b>1061.52</b>

b. **Non-Govt. Balance**

Type of Consumer	Amount (Rs. Cr.)
Non KCC Non Live more than 5 years, Balances less than 1 Lakh	257.88

- iv. The corrective action in the matter is in progress.

10. UPCL in reply to query no. 24 vide letter dated 18.02.2026, submitted the break-up of commission charges paid on account of sale of REC, however, basis of these charges has not been submitted as sought by the Commission. UPCL is required to submit the agreements/contracts alongwith basis for commission paid on sale of REC's.

**Reply**

The Petitioner hereby submits Annexure E with the copies of circulars from IEX, PXIL alongwith respective membership documents and LOA of PTC regarding commission payable to REC which forms basis of charges paid on account of sale to REC. The same is tabulated below for reference:

S No.	Platform	Reference document	Respective clause
1	IEX	Circular No: IEX/MO/2010/2041 dated 08 <sup>th</sup> Apr 2025 And Circular: IEX/MEM/1692/2024 date d12 <sup>th</sup> August 2024	IEX is pleased to inform you that the transaction fee of Rs.10/REC on either side of transactions is further extended till bid date 31 March 2026.  Members are hereby informed that the REC transaction fee will be Rs. 10/REC on either side of transaction with immediate effect and shall remain valid up to 31st March 2025.
2	PXIL	Circular No: - PXIL/ Membership/2024- 2025/445 dated- September 09, 2024	We are pleased to inform that the transactions fees for Renewable Energy Certificate (REC) segment have been revised from Rs. 20 per Certificate to Rs. 10 per Certificate on either side of transaction (Buy and Sell).
3	PTC	LOA No: 1619 dated- 21 <sup>th</sup> March 2024	PTC'S trading charges for providing such services shall be Eighteen (18) Rupees per REC transacted. (Calculated as Exchange Transaction charges (Rs. 20/-) minus incentive by Exchange to UPCL (assuming Rs. 2/-))

11. UPCL, in reply to Query No. 26 vide letter dated 18.02.2026, has submitted the information of hourly consumption data for Industry consumers (LT industry above 10 kW & all HT Industries) and Non-domestic consumer categories (above 10 kW) for FY 2024-25 as Annexure-N. However, it is observed as follows:

- i. The data submitted for Garhwal division has no reference of consumer categories and only pertains entries related to the month of March'25.
- ii. The data submitted for Kumaon division appears to have been submitted for all consumer categories and is for period only from Dec'24 & Jan'25 in one sheet named 'IP\_TP' and from Dec'24 to March' 25 in another sheet named 'IP\_SP'.

The data submitted is not understandable and no inference can be drawn out of the same. Further, the data is spread across more than 8.8 Lakh rows. UPCL is required to submit specific data as sought by the Commission for particular category of consumers compiled as per the query, rather than sending the entire billing data dump to the Commission.

**Reply**

The Petitioner hereby submits the requisite information as Annexure F in soft copy.

12. UPCL, in reply to Query No. 27 vide letter dated 18.02.2026, regarding reconciliation of grant and equity from FY 2001-02 to FY 2024-25, has not submitted the reconciliation of grant and equity from FY 2001-02 to FY 2024-25, for the amounts claimed by the Petitioner, as approved by the Commission, and that appearing in the Audited Accounts. In this regard, UPCL is once again directed to submit proper reconciliation of the same, failing which the Commission may consider the amount of grants and equity as appearing in the books of accounts of the respective FY and balance amount would be considered as loan.

**Reply:**

The Petitioner humbly submits that the preparation of necessary information is under process. Further, Hon'ble commission is requested to allow 04 months of time for submission of desired information.

13. UPCL in reply to query 30 vide letter dated 18.02.2026, has simply submitted the list of consumers for which bad debts were written-off, however the documentary evidence and basis on which the bad debts were written off for consumers falling under RTS-3 Category, i.e., Govt. category consumers, has not been provided by UPCL. UPCL is required to submit proper and complete information as per the query.

**Reply**

The Petitioner hereby submits the requisite information as Annexure G in soft copy.

14. UPCL, in reply to Query No. 31 vide letter dated 18.02.2026, w.r.t. the anomalies pointed out by the Commission on commercial diary for FY 2024-25, has submitted that to avoid any error due to human interventions, UPCL is in the process of developing a system for preparation of the commercial diary in digital mode. Based on the commercial diary prepared in digital mode, UPCL will be in position to reply relevant queries of commission raised on this matter. In this



regard, UPCL is required to submit as to how the proposed digitization of commercial diary answers the specific query raised by the Commission. UPCL is required to submit specific reply to the query pointed out by the Commission rather than providing future improvement measures.

### Reply

The Petitioner submits that the digitalization of commercial diary shall be completed by June, 2026. All necessary provisions shall be made while digitalization of commercial diary to answer any query regarding the commercial data included in the commercial dairy.

15. UPCL, in reply to Query No. 32 vide letter dated 18.02.2026, has submitted that special loans are availed form REC vide letter ref no. - REC/ RO/ DDN/ Sanction / 2020-21/21, PFC letter loan no.-09173001 and new loan REC letter ref no. - REC/ RO/DDN/2023-24/27 was availed by UPCL for meeting power purchase liabilities. In this regard, UPCL was specifically required to submit the reason for availing special loans when it is already availing overdraft facility to meet its power purchase requirement, however, UPCL has not submitted the same. UPCL is required to submit specific reply to the query pointed out by the Commission.

### Reply:

The Petitioner hereby submits the requisite information as below.

#### UTTARAKHAND POWER CORPORATION LIMITED

(Fig in Cr.)

YEAR	OVERDRAFT		POWER PURCHASE LIABILITY AT THE END OF YEAR	REBATE	INTEREST	INT. ON REC LOAN 400 CR (30.12.20), 250 CR (30.06.23) & 150 CR (05.07.23)	INT. ON PFC LOAN 200 CR (13.01.21)	SURCHARGE ON POWER PURCHASE
	BEGINNING	CLOSING		TAKEN	PAID ON OD			
2019-20	800.00	800.00	1,420.91	1.32	56.46	-	-	46.53
2020-21	800.00	250.00	653.19	10.19	3.05	9.58	4.06	44.80
2021-22	250.00	257.75	415.44	37.97	7.05	37.80	19.03	0.22
2022-23	257.75	355.00	1,062.87	60.02	9.89	31.28	16.23	-
2023-24	355.00	600.10	913.99	30.91	32.97	20.47	11.89	0.11
2024-25	600.10	600.10	1,801.20	43.26	34.74	12.74	7.13	30.72

Due to financial crunch UPCL was not able to pay its power purchase dues within due time during the FY 2019-20 & 2020-21 resulting in LPS on Power Purchase dues. Thus to maintain regular power supply in the state, it was decided by the Management that in addition to the overdraft facility, a special loan of Rs. 600 Cr be taken from REC Ltd. (400 Cr) & PFC Ltd. (200 Cr.) respectively to ensure payment of overdue Power Purchase liabilities & timely payment of power purchase bills so that UPCL could avail timely rebate on payments and avoid LPS on default.

16. UPCL, in reply to Query No. 12 vide letter dated 23.01.2026, has submitted the orders of the Electrical Inspector/competent authority with respect to the compensation paid on account of fatal electrical incidents during FY 2024-25. However, it is observed that UPCL has submitted orders amounting to only Rs. 23.66 lakh against the total compensation of Rs. 74.99 lakh. In this regard, UPCL is required to submit the complete information along with supporting orders for the balance amount, failing which, the Commission shall not allow the said expenses being inefficiency on part of the Petitioner.

### Reply

The Petitioner submits the orders of the Electrical Inspector/competent authority with respect to the compensation paid on account of fatal electrical incidents during FY 2024-25 as Annexure H (soft copy). The summary of the same is reproduced below:

S. No.	Name	Division	Amount
1	Vinit kumarjoshi	EDD, Ramnagar	21,739
2	Munawar Ali	EDD, Ramnagar	30,000
3	Yashpal singh	EDD, Ramnagar	60,000
4	Satpal Giri	EDD, Ramnagar	4,00,000
5	Dinesh Bist	Urban Distribution Division (S), D.dun	4,00,000
6	Sajim Ali	Urban Distribution Division (S), D.dun	16,000
7	Makan singh	Elect. Distribution division Shrinagar (G)	15,000
8	Lakshimi devi	EDD, Rudraprayag	4,00,000
9	Leela devi	EDD, Rudraprayag	4,00,000
10	Gauri dutt Mishra	EDD, Rudraprayag	30,000
11	Vijaypal Singh	EDD, Rudraprayag	4,00,000
12	Anjani Devi	EDD, Gopeshwar	30,000
13	Neelam Chauhan	EDD, Gopeshwar	4,00,000
14	Sanjay kausik	EDD, Haridwar	4,00,000
15	Gyanchandra	EDD, Lakshar	12,294
16	Multiple persons in Laksar	EDD, Lakshar	35,748
17	Suraj rana	EDD, (R) Dehradun	30,000
18	Manohar lal	EDD, (R) Dehradun	4,00,000
19	Rajash kumar	EDD, (R) Dehradun	30,000
20	Satya saroop	EDD, (R) Dehradun	30,000
21	Lalit kumar	EDD, Nanital	2,00,000
22	Neeraj Tripathi	EDD, Nanital	12,000
23	Vidhya sagar	EDD, Nanital	4,00,000
24	Sharafathusain	EDD, Haldwani	4,00,000

S. No.	Name	Division	Amount
25	Trilok Singh	EDD (Rural), Haldwani	30,000
26	Hayat singh	EDD (Rural), Haldwani	4,00,000
27	Surender	EDD (Rural), Haldwani	4,00,000
28	Chandan ram	EDD, Almora	4,00,000
29	PankajFarswan	EDD, Bageshwar	3,20,000
30	Dev singh	EDD, Bageshwar	4,00,000
31	Kundan singh	EDD, Ranikhet	4,00,000
32	Bheem Ram	EDD,Pithoragarh	4,00,000
33	Shivaji Rai	EDD, (R) Dehradun	30,000
34	Mustafa	EDD, (R) Dehradun	30,000
35	Jagdish Chandra	EDD, (R) Dehradun	30,000
36	Kamlesh Kumar	EDD,Pithoragarh	4,00,000
	<b>Total</b>		<b>77,92,781.00</b>

17. UPCL, in reply to Query No. 18 vide letter dated 18.02.2026, has submitted the details of scheme-wise capitalization for FY 2024-25 to FY 2026-27. However, it is observed that UPCL has provided details for capitalization amounting to Rs. 27.79 Crore for FY 2024-25, as against the total capitalization of Rs. 996.65 Crore incurred in FY 2024-25. In this regard, UPCL is requested to furnish the complete details of capitalization for FY 2024-25.

**Reply:**

The Petitioner humbly submits the revised details of capitalization incurred in 2024-25. The details of the same is mentioned below:

FY 2024-25	RS. IN CRORE
NEW REC LOAN	31.61
GOU LOAN: SPECIAL ASSISTANCE/MISSING LINK	54.84
GRANT & DEPOSITS	234.46
EQUITY / IR	655.58
<b>TOTAL</b>	<b>976.48</b>

18. UPCL, in reply to Query No. 19 vide letter dated 18.02.2026 regarding expenditure incurred towards reconstruction of assets damaged due to disasters, has submitted a copy of the relief guidelines issued by the Government of India. In this regard, UPCL is also required to furnish its own Schedule of Rates (SOR) adopted for claiming the aforesaid expenses and provide a detailed comparison highlighting the differences between the SOR of UPCL and that of the Government of India with respect to the claimed expenditure.

*(Handwritten signatures and initials)*

Reply:

The Petitioner submits copies of schedule of rates (SOR) adopted for claiming the expenses as **Annexure I** in soft copy.

Further, UPCL would like to highlight the following points:

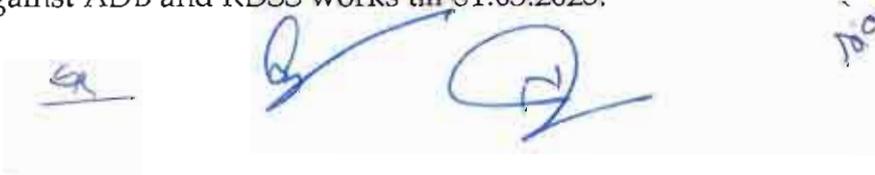
1. Due to Natural calamities almost every year Uttarakhand Power Corporation Ltd. faces heavy losses due to damage of electrical distribution infrastructures.
2. The present rates as per SDRF/NDRF Norms for reconstruction of damaged electricity distribution assets are very less as compared to actual cost of reconstruction during natural disasters. Also, there is no any rate provision for reconstruction of damaged 33 kV line.
3. The current rate of reimbursement under SDRF/NDRF Norms (attached as Annexure ABC) and the actual/proposed rate of reconstruction by UPCL are as follows:

S No	Asset	Current Rate of Reimbursement of Damage as per SDRF/NDRF	Actual/Proposed Rate for reconstruction of Electricity Distribution Assets
1	Electric Pole	Rs 5,000 per pole	Rs 24,250 per pole
2	Distribution Transformer	Rs 1 lakh per transformer	Rs 7 lakh per transformer
3	11 KV & LT Line per km	Rs 0.50 lakh per Km	Rs 11.25 lakh per km
4	33 KV Line per km	Rs 0.00 per km	Rs 15.75 lakh per km

19. UPCL, in reply to Query No. 27 vide letter dated 18.02.2026, has submitted that no amount has been capitalized till 31.03.2025 for works pertaining to ADB and RDSS and has provided the details of Grant pertaining to RDSS and ADB of Rs. 414.56 Crore. In this regard, UPCL is required to confirm whether the aforesaid amount is the total grant received by UPCL against ADB and RDSS.

Reply:

The Petitioner confirms that Rs.414.56 Crore is the total grant received by UPCL against ADB and RDSS works till 31.03.2025.



20. As telephonically desired by the office of Hon'ble Commission, the details of consumers having option of continuous supply in HT industrial category are as follows:

No. of Consumers : 132  
Load : 437 MVA  
Surcharge April, 25 to Jan,26 : Rs. 126.32 Cr.

For and on behalf of  
Uttarakhand Power Corporation Limited

  
(Ajay Kumar Agarwal)  
Director (Projects)

#### Verification

I, Ajay Kumar Agarwal, S/o Late Shri H. M. Agarwal, aged 60 years, working as Director (Project) - Uttarakhand Power Corporation Limited, VCV Gabar Singh Urja Bhawan, Dehradun do hereby verify that the contents of Para- 1 to 20 are derived from official records, which are true to my personal knowledge and that I have not suppressed any material fact.

  
(Ajay Kumar Agarwal)  
Director (Projects)  
Uttarakhand Power Corporation Limited





I, Anil Prasad Ramakoti....., Advocate, do hereby declare that the person making this affidavit is known to me through the perusal of records and I am satisfied that he is the same person alleging to be deponent himself.

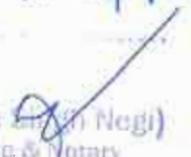
  
(.....)

Advocate  
R.N. 5154/21

Solemnly affirmed before me on this 11<sup>th</sup> day of March 2026..... by the deponent who has been identified by the aforesaid advocate.

I have satisfied myself by examining the deponent that he understood the contents of the affidavit which has been read over and explained to him. He has also been explained about section 193 of Indian Penal Code that whoever intentionally gives false evidence in any of the proceedings of the Commission or fabricates evidence for purpose of being used in any of the proceedings shall be liable for punishment as per law.



This affidavit is sworn before me by  
Shri Ajay Kumar Agarwal  
who is identified by Anil Prasad Ramakoti  
at Dehradun.   
(Rajendra Singh Negi)  
Advocate & Notary

(Notary Public)

## उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

Uttarakhand Power Corporation Ltd.

(A. Govt. of Uttarakhand Undertaking)



पत्रांक 1195 / निदेश(परिचालन)/उपाकालि/ M-1(Capitalization) दिनांक 02/03/2025

सचिव,  
मा० उत्तराखण्ड विद्युत नियामक आयोग,  
देहरादून।

विषय:—वित्तीय वर्ष 2024-25 में उत्तराखण्ड पावर कारपोरेशन लि० द्वारा किये गये एल.टी.  
एवं एच.टी. कार्यों के पूंजीकरण के सम्बन्ध में।

महोदय,

कृपया उपरोक्त विषयक एल०टी० एवं एच०टी० कार्यों के पूंजीकरण हेतु वित्तीय वर्ष 2024-25 में विभिन्न वितरण खण्डों द्वारा उपलब्ध कराये गये ₹० 411.33 करोड़ (एच०टी० ₹० 211.25 करोड़ एवं एल०टी० ₹० 200.08 करोड़) के कार्यों की सूची, एच०टी० कार्यों के क्लीयरन्स सर्टिफिकेट सहित संलग्न कर प्रेषित हैं।

अतः सूचनार्थ एवं आवश्यक अग्रोत्तर कार्यवाही हेतु प्रेषित।

संलग्नक: यथोपरि

भवदीय,

(एम०आर० आर्य)  
निदेशक(परिचालन)

पत्रांक : 1195 / निदेशक(परिचालन)/उपाकालि/ तद्दिनांक  
प्रतिलिपि निम्नलिखित को सूचनार्थ प्रेषित:—

1. प्रबन्ध निदेशक, उपाकालि।
2. निदेशक(वित्त), उपाकालि।

(एम०आर० आर्य)  
निदेशक(परिचालन)

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10/03/25

उत्तराखण्ड पावर कारपोरेशन लि० द्वारा किये गये एल०टी० एवं एच०टी० कार्यों के पूंजीकरण का खण्डवार वितरण  
वित्तीय वर्ष 2024-25

क्र० सं०	विद्युत वितरण खण्ड	वितरण उपसंस्थान		33 एवं 11 क०वी लाईन		एल०टी० लाईन		अन्य कार्य	कुल व्यय (लाख में)
		संख्या	व्यय (लाख में)	एच०टी० लाईन की लम्बाई (कि०मी० में)	व्यय (लाख में)	एल०टी० लाईन की लम्बाई (कि०मी० में)	व्यय (लाख में)	व्यय (लाख में)	
1	बदफोट	48	55.40	42.58	457.36	19.33	63.69	11.13	587.58
2	किच्छ	105	105.13	12.63	252.36	12.55	81.19	666.67	1105.35
3	मोहनपुर	37	458.94	78.97	1490.46	0.00	0.00	206.33	2155.74
4	शितारगञ्ज					48.50	198.60	993.66	1192.26
5	टिहरी	276	1696.00	44.43	966.67	402.34	1362.23	672.17	4697.06
6	रुड़की-मापीण	1	5.18	166.98	3262.78	0.00	0.00	481.03	3748.99
7	खादीगा					176.21	1070.75	139.85	1210.60
8	उत्तरकाशी	11	30.79	24.59	87.89	171.78	781.70	27.00	927.38
9	खोईवाला	43	138.94	109.65	1147.25	4.04	30.23	267.15	1583.57
10	सुबिकेश	80	471.06	4.98	77.27	17.69	107.77	1760.99	2417.09
11	श्रीनगर	3	53.08	76.28	1583.02	419.50	3121.46	38.13	4795.69
12	शायपुर	48	168.79	146.63	2526.77	36.90	690.92	265.81	3652.29
13	विकारगंज			44.51	1522.04	210.00	1620.00	74.88	3216.92
14	देहरादून-खतार	15	245.25	30.49	1173.04	1.01	26.07	256.18	1700.53
15	देहरादून-केंद्रीय	51	1258.38	36.93	621.62	96.16	797.83	2915.15	5592.98
16	सदरगंज	13	97.18	32.57	1172.30	182.74	774.35	554.84	2548.67
	योग	731	4784.11	854.22	16340.84	1798.24	10676.78	9330.97	41132.70

\* वितरण परिचालन पर एच०टी०/एल०टी० लागने कार्य कंपीसीटर बक लगाना, रिटनिंग वॉल, अतिरिक्त फील लगाना इत्यादि।

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# उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

## Uttarakhand Power Corporation Ltd.

(A. Govt. of Uttarakhand Undertaking)



पत्रांक 1196 / निदेशक(परिचालन) / उपाकालि / M-1(Capitalization) दिनांक: 02/03/2025

विषय:- वित्तीय वर्ष 2024-25 में उत्तराखण्ड पावर कारपोरेशन लि० द्वारा पूर्ण किये गये एल.टी. एवं एच.टी. कार्यों के पूंजीकरण के सम्बन्ध में।

सचिव,  
शा० उत्तराखण्ड विद्युत नियामक आयोग,  
देहरादून।

महोदय,

कृपया उपरोक्त विषयक वित्तीय वर्ष 2024-25 में उत्तराखण्ड पावर कारपोरेशन लि० द्वारा पूर्ण किये गये रु० 411.33 करोड़ (एच०टी० रु० 211.25 करोड़ एवं एल०टी० रु० 200.08 करोड़) के कार्यों का विवरण शा० नियामक आयोग की अपेक्षानुसार एच०टी० कार्यों हेतु निर्धारित प्रारूप (Form: F-18.12) पर अंकित कर आपके सादर सूचनाार्थ एवं अग्रोत्तर कार्रवाई हेतु प्रेषित है।  
संलग्नक: यशोपरि

भवदीय,

(एम०आर० आर्य)  
निदेशक(परिचालन)

पत्रांक : 1196 / निदेशक(परिचालन) / उपाकालि / तददिनांक 2/3

प्रतिलिपि निम्नलिखित को सूचनाार्थ प्रेषित:-

1. प्रबन्ध निदेशक, उपाकालि।
2. निदेशक(वित्त), उपाकालि।

(एम०आर० आर्य)  
निदेशक(परिचालन)

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Upcoming Expected Substation In FY 2026-27		
S. No.	Name of Substation	District
1	Circle Office	Haridwar
2	Bnechansyun	Rudraprayag
3	Tola	Pauri
4	Panklu (Gangolihat)	Pithoragarh
5	Barabe	Pithoragarh
6	Bharoni (Nanakmatia)	U.S. Nagar
7	Purnagiri	Champawat
8	Heera Nagar	Nainital
9	Haldua	Nainital
10	Training Centre	Haridwar
11	Nagar Nigam Campus	U.S. Nagar
12	Collectorate Compound	U.S. Nagar
13	Bhikkampur Laksar	Haridwar
14	Gularbhoj	U.S. Nagar
15	Pondha	Dehradun
16	Dunga	Dehradun
17	Suwakholi	Dehradun
18	Guniyal Gaon	Dehradun
19	Kaniya	Nainital
20	COER Roorkee	Haridwar
21	Shri Kedarnath Dham	Rudraprayag
22	Malakawala	Dehradun
23	Srbhawala	Dehradun
24	Nakrunda	Dehradun
25	Akhoda	Tehri Garhwal
26	Kadukhul	Tehri Garhwal
27	Harsil	Uttarkashi
28	Kumrada	Uttarkashi
29	Sumari	Pauri Garhwal
30	Bachelikhul	Pauri Garhwal
31	Kalahatti (Changa Mazri)	Haridwar
32	Himalyan-2	Haridwar
33	Motinnagar	Nainital
34	Majkhali	Almora
35	Behind Design Centre	U.S. Nagar
36	Ridhi Sidhi	U.S. Nagar
37	Tata Vendor Park	U.S. Nagar
38	Kendriya Vidyalaya	U.S. Nagar
39	Banswala-Bhiri	Rudraprayag
40	Nagrasi	Rudraprayag
41	Lata/Malari	Chamoli
42	Mehuwala	Dehradun
43	Langsu (CM Decl. No. 988/2015)	Chamoli
44	Reetha Sahib	Champawat
45	Puffa	Champawat
46	Bhaurola, Malsa Rd.	U.S. Nagar
47	Gethiya Sanatorium	Nainital
48	Heera Nagar	Nainital
49	Purnagiri (CM Decl. No. 1956/2015)	Champawat
50	Alignj, Kashipur Rd.	U.S. Nagar
51	Kashipur Town	U.S. Nagar
52	Amori	Champawat

Note: Funding of above project is under finalization.

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**ABSTRACT OF DETAILED ESTIMATE.**

Construction of 2x5 MVA, 33/11 kV S/s at Sara, Dist-Dehradun and its associated 33 kV & 11 kV line

		Amount in Rs.
1	Base Cost	7,95,96,344.92
	Sub TOTAL	7,95,96,344.92
2	Contengency @ 3%	19,50,867.28
3	Centage charges @15% changes to 2.5% as per MD office order no.7401 dt.01.02.2025	16,74,494.41
4	Labour Cess@ 1%	6,86,542.71
5	Electrical Inspector Fees	27,022.00
6	Road Permission	0.00
7	Cost of Land	0.00
8	TOTAL (Rs.)	8,39,35,271.32
9	Cost Approved by TAC (SI Rs.565.84 & NSI Rs. 239.27)	8,39,35,271.32
10	IDC	50,23,525.99
11	TOTAL (Rs.)	8,89,58,797.31
	TOTAL(Rs. In Cr.)	8.90

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Annex - D

**Construction of 2x5 MVA, 33/11 kV S/s at Sara, Dist-Dehradun and its associated 33 kV & 11 kV line**

**Calculation of IDC**

1. IDC rate 9.50% Compounded annually

2. Drawl Schedule:

1st Year 40.00%  
2nd Year 60.00%

S.No.	Project Description	Project Cost (in Cr.)	Loan (In Cr.)	Equity (In Cr.)	Average Drawl (in Cr)	Cum. Drawl (in Cr)	Fin. Year	Fin. Year	Total IDC (Rs. in Cr.)
1	Construction of 2x5 MVA, 33/11 kV S/s at Sara, Dist-Dehradun and its associated 33 kV & 11 kV line	8.39	5.88	2.52			2025-26	2026-27	
			2.35		1.18	2.35	0.11	0.22	0.33
			3.53		1.76	5.88	-	0.17	0.17
		<b>TOTAL</b>		5.88		2.94		0.11	0.39

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**Calculation of Cost Benefit Analysis**  
**Construction of 2x5 MVA, 33/11 kV S/s at Sara, Dist-Dehradun and its associated 33 kV & 11 kV line**

Total cost of project (Rs)	8,89,58,797.31	Annual Units generated in 1st Year	42,55,836
Anticipated new load (in amp.)	30	Avg. Purchase Cost	5.44
Anticipated Transferred load (in amp.)	390	Avg. Selling Rate	7.67
Anticipated New+Transferred load (in amp.)	420	Power Factor	0.85
Load Growth per annum	5%	Line Loss	14.85%

Year	Total Units (Less AT&C Losses @ 14.85%)	Total cost of energy billed to UPCL (Rs.)	loss saving (units)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depericitation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Interest @ 6.50% (Rs. In lakhs)	Net profit after intt (Rs.)	Cash profit after tax (Rs.)	Cash profit after tax (Rs. in Cr.)	Cumulative Cash Profit (Rs. In Cr.)
A	B	C	D	E	F	G	H= E-C-F-G	I	J= H-I	K= J+G	L	M
1st	3623844	1,97,13,712	1502495	3,93,19,021	26,68,764	47,09,583	1,22,26,962	1,03,19,220.49	19,07,741.31	66,17,324.70	0.66	0.66
2nd	3805036	2,06,99,598	1502495	4,07,08,766	27,75,514	47,09,583	1,25,24,270	91,56,068.48	33,88,201.38	80,97,784.77	0.81	1.47
3rd	3995288	2,17,34,368	1502495	4,21,67,997	28,86,535	47,09,583	1,28,37,511	85,44,492.48	42,95,018.36	90,02,601.74	0.90	2.37
4th	4195055	2,28,21,086	1502495	4,37,00,190	30,01,996	47,09,583	1,31,67,524	79,52,916.48	52,14,607.59	99,24,190.97	0.99	3.36
5th	4404805	2,39,62,140	1502495	4,53,08,993	31,22,076	47,09,583	1,35,15,193	73,61,540.48	61,53,852.09	1,08,63,455.48	1.09	4.45
6th	4625045	2,51,60,247	1502495	4,69,98,235	32,46,959	47,09,583	1,38,81,445	67,69,764.48	71,11,680.83	1,18,21,264.21	1.18	5.63
7th	4856298	2,64,18,260	1502495	4,87,71,940	33,76,838	47,09,583	1,42,67,259	61,78,188.47	80,89,071.02	1,27,98,654.41	1.28	6.91
8th	5099113	2,77,39,173	1502495	5,06,34,331	35,11,911	47,09,583	1,46,73,663	55,86,612.47	90,87,050.71	1,37,96,654.10	1.38	8.29
9th	5354068	2,91,26,131	1502495	5,25,89,840	36,52,388	47,09,583	1,51,01,758	49,95,036.47	1,01,06,701.52	1,48,16,284.71	1.48	9.77
10th	5621772	3,05,82,438	1502495	5,46,43,125	37,98,483	47,09,583	1,55,52,621	-	1,55,52,620.90	2,02,62,204.28	2.03	11.80
11th	5902860	3,21,11,560	1502495	5,67,99,075	39,50,423	47,09,583	1,60,27,509	-	1,60,27,509.11	2,07,37,092.50	2.07	13.87
12th	6198003	3,37,17,138	1502495	5,90,62,822	41,08,439	47,09,583	1,65,27,661	-	1,65,27,661.13	2,12,37,344.52	2.12	16.00
13th	6507903	3,54,02,993	1502495	6,14,39,756	42,72,777	47,09,583	1,70,54,401	-	1,70,54,400.92	2,17,63,984.30	2.18	18.17
14th	6833299	3,71,73,144	1502495	6,39,35,537	44,43,688	47,09,583	1,76,09,121	-	1,76,09,121.07	2,25,18,704.46	2.23	20.41
15th	7174964	3,90,31,802	1502495	6,65,56,107	46,21,436	47,09,583	1,81,93,286	-	1,81,93,286.34	2,29,02,869.73	2.29	22.70
16th	7533712	4,09,83,392	1502495	6,93,07,706	48,06,293	47,09,583	1,88,08,437	-	1,88,08,437.35	2,35,18,020.74	2.35	25.05
17th	7910397	4,30,32,561	1502495	7,21,96,884	49,98,545	47,09,583	1,94,56,194	-	1,94,56,194.49	2,41,65,777.87	2.42	27.46
18th	8305917	4,51,84,189	1502495	7,52,30,521	51,98,487	0	2,48,47,845	-	2,48,47,845.38	2,48,47,845.38	2.48	29.95
19th	8721213	4,74,43,599	1502495	7,84,15,841	54,06,426	0	2,55,66,016	-	2,55,66,015.68	2,55,66,015.68	2.56	32.51
20th	9157274	4,98,15,569	1502495	8,17,60,426	56,22,683	0	2,63,22,174	-	2,63,22,173.90	2,63,22,173.90	2.63	35.14
21st	9615137	5,23,06,347	1502495	8,52,72,340	58,47,590	0	2,71,18,303	-	2,71,18,302.59	2,71,18,302.59	2.71	37.85
22nd	10095894	5,49,21,665	1502495	8,89,59,645	60,81,494	0	2,79,56,487	-	2,79,56,486.79	2,79,56,486.79	2.80	40.65
23rd	10600689	5,76,67,748	1502495	9,28,31,421	63,24,754	0	2,88,38,919	-	2,88,38,919.24	2,88,38,919.24	2.88	43.53
24th	11130723	6,05,51,135	1502495	9,68,96,783	65,77,744	0	2,97,67,906	-	2,97,67,905.90	2,97,67,905.90	2.98	46.51
25th	11687260	6,35,78,692	1502495	10,11,65,417	68,40,854	0	3,07,45,872	-	3,07,45,871.81	3,07,45,871.81	3.07	49.58
<b>Total benefit</b>									<b>19,45,81,155.92</b>	<b>49,58,07,594.79</b>	<b>49.58</b>	<b>0.00</b>

<b>Total Cost (in Rs.)</b>	8,89,58,797.31
<b>Avg. Annual Profit (Rs.)</b>	77,83,246.24
<b>Annual Return on Investment</b>	8.75%
<b>Pay Back Period</b>	9 Years

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## FINANCIAL ANALYSIS

Construction of 2x5 MVA, 33/11 kV S/s at Sara, Dist-Dehradun and its associated 33 kV & 11 kV line

IRR 21.28%

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ( )
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	8.90		3% of capex							
(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	0.212775	(Rs. Cr.)	
1	2	3	4	5	6	7	8	10	11	12
2025-26	1.60	0.00	0.00	0.00	1.60	0.00	-1.60	-1.60	1.00	-1.60
2026-27	1.07	0.00	0.00	0.00	1.07	0.00	-1.07	-1.07	0.82	-0.88
1	0.00	0.62	0.27	1.03	1.92	1.96	0.04	0.04	0.68	0.03
2	0.00	0.62	0.28	0.91	1.81	2.00	0.19	0.19	0.56	0.10
3	0.00	0.62	0.29	0.85	1.77	2.04	0.28	0.28	0.46	0.13
4	0.00	0.62	0.30	0.80	1.72	2.09	0.37	0.37	0.38	0.14
5	0.00	0.62	0.31	0.74	1.67	2.13	0.46	0.46	0.31	0.15
6	0.00	0.62	0.32	0.68	1.62	2.18	0.56	0.56	0.26	0.14
7	0.00	0.62	0.34	0.62	1.58	2.24	0.66	0.66	0.21	0.14
8	0.00	0.62	0.35	0.56	1.53	2.29	0.76	0.76	0.18	0.13
9	0.00	0.62	0.37	0.50	1.49	2.35	0.86	0.86	0.15	0.12
10	0.00	0.62	0.38	0.00	1.00	2.41	1.40	1.40	0.12	0.17
11	0.00	0.00	0.40	0.00	0.40	2.47	2.07	2.07	0.10	0.20
12	0.00	0.00	0.41	0.00	0.41	2.53	2.12	2.12	0.08	0.17
13	0.00	0.00	0.43	0.00	0.43	2.60	2.18	2.18	0.07	0.15
14	0.00	0.00	0.44	0.00	0.44	2.68	2.23	2.23	0.06	0.12
15	0.00	0.00	0.46	0.00	0.46	2.75	2.29	2.29	0.05	0.10
16	0.00	0.00	0.48	0.00	0.48	2.83	2.35	2.35	0.04	0.09
17	0.00	0.00	0.50	0.00	0.50	2.92	2.42	2.42	0.03	0.08
18	0.00	0.00	0.52	0.00	0.52	3.00	2.48	2.48	0.03	0.06
19	0.00	0.00	0.54	0.00	0.54	3.10	2.56	2.56	0.02	0.05
20	0.00	0.00	0.56	0.00	0.56	3.19	2.63	2.63	0.02	0.05
21	0.00	0.00	0.58	0.00	0.58	3.30	2.71	2.71	0.01	0.04
22	0.00	0.00	0.61	0.00	0.61	3.40	2.80	2.80	0.01	0.03
23	0.00	0.00	0.63	0.00	0.63	3.52	2.88	2.88	0.01	0.03
24	0.00	0.00	0.66	0.00	0.66	3.63	2.98	2.98	0.01	0.02
25	0.00	0.00	0.68	0.00	0.68	3.76	3.07	3.07	0.01	0.02
<b>TOTAL</b>	<b>2.67</b>	<b>6.23</b>	<b>11.11</b>	<b>6.68</b>	<b>26.69</b>	<b>67.38</b>	<b>40.68</b>	<b>40.68</b>		<b>0.00</b>
							<b>IRR</b>	<b>21.28%</b>		

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Annual Financial Cost Sheet

Construction of 2x5 MVA, 33/11 KV S/s at Sara, Dist-Dehradun and its associated 33 KV & 11 KV line

Years	Principal Repay	Cumulative Principal Repay	Principal Reducing	Interest	Depreciation @ 5.28%	O&M@3% of capex for first year thereafter 4% annual inflation	Total Revenue (Units)	Total Revenue (Rs.)	Purchase Cost (Rs.)	Net Revenue	Annual Financial Cost (Rs.)	Earning
A	B	C	D	E	F	G	H	I	J	K	L	M
1	6227115.81	6227115.81	62271158.12	10519220.49	4709583.39	2668763.92	5126539.15	39519021.28	19713712.17	19605309.10	17697567.79	1907741.51
2	6227115.81	12454231.62	49816926.49	9136068.48	4709583.39	2775514.48	5507531.36	40708765.51	20699397.78	20009567.73	16621166.35	3288201.38
3	6227115.81	18681347.44	43589810.68	8544492.48	4709583.39	2886535.06	5497783.17	42167996.95	21754367.67	20433629.28	16140610.92	4295018.36
4	6227115.81	24908463.25	37562694.87	7952916.48	4709583.39	3001996.46	5697547.58	43700189.97	22821086.06	20879103.91	15664496.52	5214607.59
5	6227115.81	31135579.06	31135579.06	7561340.48	4709583.39	3122076.32	5907500.21	45308992.63	23962140.56	21346852.27	15193000.18	6153852.09
6	6227115.81	37362694.87	24908463.25	6769764.48	4709583.39	3246959.37	6127540.47	46998235.43	25160247.38	21837988.06	14726307.23	7111680.83
7	6227115.81	43589810.68	18681347.44	6178188.47	4709583.39	3376857.74	6358792.73	48771940.37	26418259.74	22555680.63	14264609.60	8089071.02
8	6227115.81	49816926.49	12454231.62	5586612.47	4709583.39	3511911.25	6601607.63	50634530.56	27739172.73	22895157.83	13808107.11	9037050.71
9	6227115.81	56044042.31	6227115.81	4995036.47	4709583.39	3652587.70	6856563.27	52589840.25	29126151.57	25465708.88	13357007.56	10106701.52
10	6227115.81	62271158.12	0.00		4709583.39	3798483.21	7124266.68	54643125.43	30582457.94	24060687.50	8508066.60	1552620.90
11					4709583.39	3950422.54	7405355.26	56799074.87	32111559.83	24687515.04	8660005.93	16027509.11
12					4709583.39	4108459.44	7700498.28	59062821.78	33717137.83	25345685.96	8818022.83	16527661.13
13					4709583.39	4272777.02	8010398.44	61439756.04	35402994.72	26056761.52	8982560.41	17054400.92
14					4709583.39	4445688.10	8335795.61	63955537.01	37173144.43	26762392.56	9153271.49	17609121.07
15					4709583.39	4621435.62	8677458.54	66556107.03	39051801.68	27524305.35	9351019.01	18195286.34
16					4709583.39	4806295.05	9056206.72	69307705.55	40983391.76	28324513.79	9515876.44	18808457.35
17					4709583.39	4998544.77	9412892.31	72196883.99	43052561.34	29164322.64	9708128.16	19456194.49
18					0.00	5198486.56	9808412.17	75230521.36	45184189.41	30046331.94	5198486.56	24847845.38
19					0.00	5406426.02	10223708.05	78415840.59	47443398.89	30972441.71	5406426.02	25566015.68
20					0.00	5622683.06	10659768.68	81760425.79	49815568.85	31944856.96	5622683.06	26322173.90
21					0.00	5847590.59	11117632.37	85722240.25	52306547.27	32965892.98	5847590.59	27118302.59
22					0.00	6081494.00	11598589.23	88959645.43	54921664.63	34037980.79	6081494.00	27956486.79
23					0.00	6324753.76	12103183.95	92831420.87	57667747.87	35163675.00	6324753.76	28838919.24
24					0.00	6577743.91	12633218.39	96896785.08	60551135.26	36345649.82	6577743.91	29767905.90
25					0.00	6840853.67	13189754.56	101165417.30	63578692.02	37586725.48	6840853.67	30745871.81
Total	6,22,71,158.12	6,22,71,158.12		6,68,43,640.30	8,00,62,917.58	17,11,43,097.43	11,91,83,875.44	7,61,46,72,621.51	94,08,78,289.00	67,37,94,332.53	25,80,49,655.31	41,57,44,677.21

Capex	88958797.31
Equity	26687639.19
Debt	62271158.12
Capex	88958797.31
Interest %	9.50%
Dividend %	16.50%
Depreciation %	5.28%
Depreciation Amount Upto 90%	80062917.53
Principal to Repay (in Years)	10
Average Purchase Rate (Rs. per unit)	5.44
Average Sale Rate (Rs. per unit)	7.67

-23-

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Weighted Average Cost of Capital (WACC)		
Construction of 2x5 MVA, 33/11 kV S/s at Sara, Dist-Dehradun and its associated 33 kV & 11 kV line		
% of Return on Equity		16.50
% of interest on Loan		6.50
Ratio of Equity % of Total Cost		30%
Ratio of Loan % of Total Cost		70%
WACC is :-		
On Equity	$30 \times 16.50\%$	4.95
On Loan	$70 \times 9.50\%$	6.65
Total WACC		11.60%

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Summary of Financial Analysis		
Construction of 2x5 AUSA, 33/11 kV S/S at Sarai, Dist-Dehradun and its associated 33 kV & 11 kV line		
S.N.	Financial Analysis	Values
1	Pay back Period	9 Years
2	Internal Rate of return (%)	21.28%
3	Return on Investment (%)	8.75%
4	Return on Equity (%)	16.50%
5	Weighted Avg. Cost of Capital (%)	11.60%
6	Interest During Construction (in Cr.)	0.50

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ABSTRACT OF DETAILED ESTIMATE		
Construction of 33/11 kV Sub Station at DAHARIYA		
S.N	Descriptions	Amount in Rs.
1	Supply unit for decnetralize prize and erection, testing & commissioning cartage at both end	19,89,82,852.25
2	Transporation	-
	<b>Total of Material, Erection &amp; transport</b>	<b>19,89,82,852.25</b>
3	GST @ 18%	2,48,03,609.18
	<b>Sub Total (A)</b>	<b>22,37,86,461.43</b>
4	Contingencies + Centage @18.45%	4,12,88,602.13
	<b>Sub Total (B)</b>	<b>26,50,75,063.57</b>
5	Labour Cess @1%	26,50,750.64
6	Electrical Inspector Fees	20,000.00
	<b>Sub Total (C)</b>	<b>26,77,45,814.20</b>
7	IDC	64,97,298.42
	<b>TOTAL (Rs.)</b>	<b>27,42,43,112.63</b>
	<b>TOTAL (Rs.In Cr.)</b>	<b>27.42</b>

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**Construction of 33/11 kV Sub Station at DAHARIYA**

**Calculation of IDC**

Interest During Construction rate		6.50%							
Drawl Schedule:		1st Year	40.00%						
		2nd Year	60.00%						
S.No.	Project Description	Project Cost (in Cr.)	Loan (In Cr.)	Equity (In Cr.)	Average Drawl (in Cr)	Cum. Drawl (in Cr)	F.Y.- 2024-25	F.Y.- 2025-26	Total IDC (Rs. in Cr.)
		26.77	18.74	8.03					
1	Construction of 33/11 kV Sub Station at DAHARIYA		7.50		3.75	7.50	0.04	0.24	0.28
			11.25		5.62	18.74	-	0.37	0.37
<b>TOTAL</b>			<b>18.74</b>		<b>9.37</b>		<b>0.04</b>	<b>0.61</b>	<b>0.65</b>

-27-

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## Calculation of Cost Benefit Analysis

### Construction of 33/11 kV Sub Station at DAHARIYA

Total cost of project (Rs)	27,42,43,112.63	Avg. Selling Rate/ Unit	7.32
Anticipated new load (in amp.)	525	Avg. Purchase Rate/ Unit	5.03
Load Growth per annum	1%	Power Factor	85

Year	Total Units (Less A.T.&C Losses @ 14.66%)	Total cost of energy billed to UPCL (Rs.)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depericlation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Interest/ Dividend @ 6.50% (Rs. In lakhs)	Net profit after Interest/ Dividend (Rs.)	Cash profit (Rs.)	Cash profit (Rs. in Cr.)	Cumulative Cash Profit (Rs. In Cr.)
A	B	C	D	E	F	G=D-C-E-F	H	I=G-H	J=(F+I)	K	L
1st	15238444	7,66,49,371	11,15,45,407	82,27,293	1,45,18,753	1,21,49,989	2,60,53,095.70	-1,39,03,106.42	6,15,646.61	0.06	0.06
2nd	16762288	8,43,14,308	12,26,99,947	85,56,385	1,45,18,753	1,53,10,501	2,39,73,418.76	-86,62,917.64	58,55,835.38	0.59	0.65
3rd	18438517	9,27,45,739	13,49,69,942	88,98,641	1,45,18,753	1,88,06,810	2,29,33,580.29	-41,26,770.66	1,03,91,982.37	1.04	1.69
4th	20282368	10,20,20,313	14,84,66,936	92,54,586	1,45,18,753	2,26,73,284	2,18,93,741.82	7,79,542.51	1,52,98,295.53	1.53	3.22
5th	22310605	11,22,22,344	16,33,13,630	96,24,770	1,45,18,753	2,69,47,763	2,08,53,903.36	60,93,859.88	2,06,12,612.90	2.06	5.28
6th	24541666	12,34,44,378	17,96,44,993	1,00,09,760	1,45,18,753	3,16,71,901	1,98,14,064.89	1,18,57,836.15	2,63,76,589.17	2.64	7.92
7th	26995832	13,57,89,036	19,76,09,492	1,04,10,151	1,45,18,753	3,68,91,552	1,87,74,226.42	1,81,17,325.65	3,26,36,078.67	3.26	11.18
8th	29695415	14,93,67,940	21,73,70,441	1,08,26,557	1,45,18,753	4,26,57,192	1,77,34,387.95	2,49,22,803.67	3,94,41,556.70	3.94	15.12
9th	32664957	16,43,04,734	23,91,07,485	1,12,59,619	1,45,18,753	4,90,24,379	1,66,94,549.48	3,23,29,830.02	4,68,48,583.04	4.68	19.81
10th	35931453	18,07,35,207	26,30,18,234	1,17,10,004	1,45,18,753	5,60,54,270	1,56,54,711.01	4,03,99,558.88	5,49,18,311.90	5.49	25.30
11th	39524598	19,88,08,728	28,93,20,057	1,21,78,404	1,45,18,753	6,38,14,172	1,46,14,872.54	4,91,99,299.87	6,37,18,052.90	6.37	31.67
12th	43477058	21,86,89,601	31,82,52,063	1,26,65,540	1,45,18,753	7,23,78,169	1,35,75,034.08	5,88,03,135.13	7,33,21,888.15	7.33	39.00
13th	47824764	24,05,58,561	35,00,77,269	1,31,72,162	1,45,18,753	8,18,27,794	1,35,75,034.08	6,82,52,759.76	8,27,71,512.78	8.28	47.28
14th	52607240	26,46,14,417	38,50,84,996	1,36,99,048	1,45,18,753	9,22,52,778	1,35,75,034.08	7,86,77,744.15	9,31,96,497.17	9.32	56.60
15th	57867964	29,10,75,859	42,35,93,496	1,42,47,010	1,45,18,753	10,37,51,874	1,35,75,034.08	9,01,76,840.17	10,46,95,593.19	10.47	67.07
16th	63654760	32,01,83,445	46,59,52,846	1,48,16,891	1,45,18,753	11,64,33,758	1,35,75,034.08	10,28,58,723.51	11,73,77,476.53	11.74	78.81
17th	70020236	35,22,01,789	51,25,48,130	1,54,09,566	1,45,18,753	13,04,18,022	1,35,75,034.08	11,68,42,988.00	13,13,61,741.02	13.14	91.94
18th	77022260	38,74,21,968	56,38,02,943	1,60,25,949	0	16,03,55,027	1,35,75,034.08	14,67,79,992.51	14,67,79,992.51	14.68	106.62
19th	84724486	42,61,64,165	62,01,83,238	1,66,66,987	0	17,73,52,086	1,35,75,034.08	16,37,77,052.10	16,37,77,052.10	16.38	123.00
20th	93196935	46,87,80,581	68,22,01,561	1,73,33,666	0	19,60,87,314	1,35,75,034.08	18,25,12,279.92	18,25,12,279.92	18.25	141.25
21st	102516628	51,56,58,639	75,04,21,718	1,80,27,013	0	21,67,36,065	1,35,75,034.08	20,31,61,031.30	20,31,61,031.30	20.32	161.57
22nd	112768291	56,72,24,503	82,54,63,889	1,87,48,093	0	23,94,91,293	1,35,75,034.08	22,59,16,258.61	22,59,16,258.61	22.59	184.16
23rd	124045120	62,39,46,953	90,80,10,278	1,94,98,017	0	26,45,65,308	1,35,75,034.08	25,09,90,273.49	25,09,90,273.49	25.10	209.26
24th	136449632	68,63,41,649	99,88,11,306	2,02,77,938	0	29,21,91,719	1,35,75,034.08	27,86,16,685.27	27,86,16,685.27	27.86	237.12
25th	150094595	75,49,75,814	1,09,86,92,437	2,10,89,055	0	32,26,27,568	1,35,75,034.08	30,90,52,533.48	30,90,52,533.48	30.91	268.02

Total benefit 2,43,34,25,559.33

Total Cost (in Rs.) 27,42,43,112.63

Avg. Annual Profit (Rs.) 9,73,37,022.37

Annual Return on Investment 35.49%

Pay Back Period 10 YEARS 04 MONTHS

105

**FINANCIAL ANALYSIS**

**Construction of 33/11 kV Sub Station at DAHARIYA**

IRR 19.53%

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ( )
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	27.42		3% of capex							
	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)						
1	2	3	4	5	6	7	8	10	11	12
2024-2025	4.94	0.00	0.00	0.00	4.94	0.00	-4.94	-4.94	1.00	-4.94
2025-2026	3.29	0.00	0.00	0.00	3.29	0.00	-3.29	-3.29	0.84	-2.75
1	0.00	1.60	0.82	2.61	5.03	3.49	-1.54	-1.54	0.70	-1.08
2	0.00	1.60	0.86	2.40	4.85	3.84	-1.01	-1.01	0.59	-0.59
3	0.00	1.60	0.89	2.29	4.78	4.22	-0.56	-0.56	0.49	-0.27
4	0.00	1.60	0.93	2.19	4.71	4.64	-0.07	-0.07	0.41	-0.03
5	0.00	1.60	0.96	2.09	4.65	5.11	0.46	0.46	0.34	0.16
6	0.00	1.60	1.00	1.98	4.58	5.62	1.04	1.04	0.29	0.30
7	0.00	1.60	1.04	1.88	4.52	6.18	1.66	1.66	0.24	0.40
8	0.00	1.60	1.08	1.77	4.46	6.80	2.34	2.34	0.20	0.47
9	0.00	1.60	1.13	1.67	4.40	7.48	3.09	3.09	0.17	0.52
10	0.00	1.60	1.17	1.57	4.34	8.23	3.89	3.89	0.14	0.55
11	0.00	1.60	1.22	1.46	4.28	9.05	4.77	4.77	0.12	0.56
12	0.00	1.60	1.27	1.36	4.22	9.96	5.73	5.73	0.10	0.56
13	0.00	0.00	1.32	1.36	2.67	10.95	8.28	8.28	0.08	0.68
14	0.00	0.00	1.37	1.36	2.73	12.05	9.32	9.32	0.07	0.64
15	0.00	0.00	1.42	1.36	2.78	13.25	10.47	10.47	0.06	0.60
16	0.00	0.00	1.48	1.36	2.84	14.58	11.74	11.74	0.05	0.57
17	0.00	0.00	1.54	1.36	2.90	16.03	13.14	13.14	0.04	0.53
18	0.00	0.00	1.60	1.36	2.96	17.64	14.68	14.68	0.03	0.49
19	0.00	0.00	1.67	1.36	3.02	19.40	16.38	16.38	0.03	0.46
20	0.00	0.00	1.73	1.36	3.09	21.34	18.25	18.25	0.02	0.43
21	0.00	0.00	1.80	1.36	3.16	23.48	20.32	20.32	0.02	0.40
22	0.00	0.00	1.87	1.36	3.23	25.82	22.59	22.59	0.02	0.37
23	0.00	0.00	1.95	1.36	3.31	28.41	25.10	25.10	0.01	0.35
24	0.00	0.00	2.03	1.36	3.39	31.25	27.86	27.86	0.01	0.32
25	0.00	0.00	2.11	1.36	3.47	34.37	30.91	30.91	0.01	0.30
<b>TOTAL</b>	<b>8.23</b>	<b>19.20</b>	<b>34.26</b>	<b>40.90</b>	<b>102.59</b>	<b>343.19</b>	<b>240.60</b>	<b>240.60</b>		<b>0.00</b>
							<b>IRR</b>	<b>19.53%</b>		

-29-

108

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Annual Financial Cost Sheet

Construction of 33/11 KV Sub Station at DAHARIYA

Years	Principal Repay	Cumulative Principal Repay	Principal Reducing	Interest Plus Dividend	Depreciation @ 5.28%	O.M.@3% of capex for first year thereafter 4% annual inflation	Total Revenue (InRs.)	Total Revenue (Rs.)	Purchase Cost (Rs.)	Net Revenue	Annual Financial Cost (Rs.)	Earnings
A	B	C	D	E	F	G	H	I	J	K	L	M
1	15997514.90	15997514.00	191970178.84	26053095.70	14518753.02	8227293.38	15238443.53	111545406.64	76649370.96	34896035.68	48799142.10	-13903106.42
2	15997514.90	31995029.81	159975149.03	23973418.76	14518753.02	8556385.11	16762287.88	122609947.31	84514308.05	38385639.25	47048556.90	-8662917.64
3	15997514.90	47992544.71	143977634.13	2293580.29	14518753.02	8898640.52	18438516.67	134969942.04	92745738.86	42234203.18	46350973.83	-4126770.66
4	15997514.90	63990059.61	127980119.23	21893741.82	14518753.02	9254586.14	20282368.34	148466936.24	102020312.74	46446625.50	45667080.99	779542.51
5	15997514.90	79987574.52	111982604.32	20853903.36	14518753.02	9624769.58	22310665.17	163313629.87	112222344.02	51091285.85	44997425.96	6093859.88
6	15997514.90	95985089.42	95985089.42	19814064.89	14518753.02	10009760.37	24541665.69	179644992.85	123444578.42	56200414.43	44342578.28	11857836.15
7	15997514.90	111982604.32	79987574.52	18774226.42	14518753.02	10410150.78	26995832.26	197609492.14	135789036.26	61820455.87	43703150.22	18117325.65
8	15997514.90	127980119.23	63990059.61	17734387.95	14518753.02	10826556.81	29695415.49	217370441.55	149367939.89	68002501.46	43078697.79	24922803.67
9	15997514.90	143977634.13	47992544.71	16694549.48	14518753.02	11259619.09	32664957.03	239107485.49	164304733.88	74802751.61	42472921.59	32329830.02
10	15997514.90	159975149.03	31995029.81	15654711.01	14518753.02	11710003.85	35931452.74	263018234.03	180755207.27	82283026.77	41885467.88	40399558.88
11	15997514.90	175972663.94	15997514.90	14614872.54	14518753.02	1218404.00	39524598.01	289320057.44	198808727.99	90511329.44	41312029.57	49199299.87
12	15997514.90	191970178.84	0.00	13575034.08	14518753.02	12665540.16	43477057.81	318252063.18	218689600.79	99562462.39	40759327.26	58803135.13
13	0.00	0.00	0.00	13575034.08	14518753.02	13172161.77	47824763.59	350077269.50	240558560.87	109518708.63	41265948.87	68252759.76
14	0.00	0.00	0.00	13575034.08	14518753.02	13699018.24	52607239.95	383084996.45	264614416.96	120470579.49	41792835.34	78677744.15
15	0.00	0.00	0.00	13575034.08	14518753.02	14247010.17	57867965.95	423593496.09	291075858.66	132517637.44	42340797.27	90176840.17
16	0.00	0.00	0.00	13575034.08	14518753.02	14816890.58	63654760.34	463952845.70	320183444.52	145769401.18	42910677.68	102858723.51
17	0.00	0.00	0.00	13575034.08	14518753.02	15409566.20	70020236.58	512548130.27	352201788.97	160346341.30	43563353.30	116842988.00
18	0.00	0.00	0.00	13575034.08	0.00	16025948.85	77022260.01	563802943.30	387421967.87	176380975.43	29600982.92	146779992.51
19	0.00	0.00	0.00	13575034.08	0.00	16666986.80	84724186.02	620183237.63	426164164.66	194019072.98	30242020.88	16377052.10
20	0.00	0.00	0.00	13575034.08	0.00	17333666.28	93196934.62	682201561.40	468780581.12	213420980.27	30908700.35	182512279.92
21	0.00	0.00	0.00	13575034.08	0.00	18027012.93	102516628.08	750421717.54	515658639.24	234763078.30	3162047.00	203161031.30
22	0.00	0.00	0.00	13575034.08	0.00	18748093.44	112768290.89	825463889.29	567224503.16	258239386.13	32323127.52	225916258.61
23	0.00	0.00	0.00	13575034.08	0.00	19498017.18	124045119.98	908010278.22	623946953.47	284063324.74	33073051.26	250990273.49
24	0.00	0.00	0.00	13575034.08	0.00	20277937.87	136449631.97	998811306.04	686341648.82	312469657.22	3382971.94	278616685.27
25	0.00	0.00	0.00	13575034.08	0.00	21089055.38	150094595.17	1098692436.64	754975313.70	345716622.94	34664089.46	309052593.48
<b>Total</b>	<b>19,19,70,178.84</b>			<b>40,90,45,029.28</b>	<b>24,68,18,801.37</b>	<b>34,26,39,205.51</b>	<b>1,49,86,56,111.56</b>	<b>10,97,61,62,736.65</b>	<b>7,53,82,40,241.17</b>	<b>3,43,19,22,495.48</b>	<b>99,84,96,936.16</b>	<b>2,43,34,25,559.33</b>

Capex	274243112.63
Equity	82272933.79
Debt	191970178.84
Capex	274243112.63
Interest Rate	6.50%
Dividend Rate	16.50%
Depreciation %	5.28%
Depreciation Amount Upto 90%	246818801.37
Principal to Repay (in Years)	12
Average Purchase Rate (Rs. per unit)	5.03
Average Sale Rate (Rs. per unit)	7.32

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Weighted Average Cost of Capital (WACC)		
Construction of 33/11 kV Sub Station at DAHARIYA		
Return on Equity		16.50%
Interest on Loan		6.50%
Ratio of Equity		30%
Ratio of Loan/ Debt		70%
WACC is :-		
On Equity	$30 * 16.50\%$	4.95
On Loan	$70 * 06.50\%$	4.55
Total WACC		9.50%






(108)

Summary of Financial Analysis		
S.N.	Financial Analysis	Values
1	Pay back Period	10 YEARS 04 MONTHS
2	Internal Rate of Return (%)	19.53%
3	Return on Investment (%)	35.49%
4	Return on Equity (%)	16.50%
5	Weighted Avg. Cost of Capital (%)	9.50%
6	Interest During Construction (in Cr.)	0.65

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**Construction of 33/11 kV S/s at GITI, DAHARIYA and its associated 33 kV line**

Amount in Rs.

S. no.	Name of work	Cost of Transformer (2x12.5 MVA)	Cost of Substation (Excluding Transformer)	Cost of 33 kV BAY (will be prepared by PTCUL)	Cost of 33 kV Line (9.1 km)	Cost of Civil Works (SGR, Land Development etc.)	Cost of 11 kV Line (10 km)	Cost of Land	Total
A	Centralized material	2,41,19,068.00	44,77,410.19	0.00	3,25,88,545.26	0.00	0.00	0.00	6,11,85,023.45
B	De-Centralized material	0.00	5,60,85,070.00	0.00	25,14,080.00	0.00	0.00	0.00	5,85,99,150.00
C	Cartage erection etc	0.00	4,59,82,975.10	0.00	3,32,15,703.70	0.00	0.00	0.00	7,91,98,678.80
D	Sub Total (D=B+C)	0.00	10,20,68,045.10	63,02,521.01	3,57,29,783.70	0.00	0.00	0.00	14,41,00,349.81
E	GST @18% on Sub Total D	0.00	1,83,72,248.12	0.00	64,31,361.07	0.00	0.00	0.00	2,48,03,609.18
F	Total Cost including GST (F=A+D+E)	2,41,19,068.00	12,49,17,703.41	63,02,521.01	7,47,49,690.03	0.00	0.00	0.00	23,00,88,982.44
G	Contingency Charges @3% on Sub Total (F)	7,23,572.04	37,47,531.10	1,89,075.63	22,42,490.70	0.00	0.00	0.00	69,02,669.47
H	Contage Charges @15% on Sub Total (F)	36,17,860.20	1,87,37,655.51	9,45,378.15	1,12,12,453.50	0.00	0.00	0.00	3,45,13,347.37
I	Labour Cess @1% on Sub Total (F)	2,41,190.68	12,49,177.03	63,025.21	7,47,496.90	0.00	0.00	0.00	23,00,889.82
J	Electrical Inspector Fee	0.00	10,000.00	0.00	10,000.00	0.00	0.00	0.00	20,000.00
K	Road Permission	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Cost (F+G+H+I+J)	2,87,01,690.92	14,86,62,067.06	75,00,000.00	8,89,62,131.13	83,12,369.08	0.00	0.00	27,38,25,889.11
L	Say (Rs. In Lakh)	287.02	1486.62	75.00	889.62	83.12	0.00	0.00	2,821.38

-33-

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ABSTRACT OF DETAILED ESTIMATE

Construction of 2x5 MVA, 33/11 kV S/s at Akari Barjula, Kirtinagar under EDD Srinagar (G)  
and its associated 33 kV Bay, 33 kV line

		Amount in Rs.
1	Base Cost	7,42,01,564.47
2	Total Civil Works including GST	1,64,78,845.38
	<b>Sub TOTAL</b>	<b>9,06,80,409.85</b>
3	Contengency @ 3%	27,20,412.30
4	Centage Charges @ 15%	1,40,10,123.32
5	Labour Cess@ 1%	9,06,804.10
6	Electrical Inspector Fees	20,000.00
	<b>TOTAL</b>	<b>10,83,37,749.57</b>

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Construction of 2x5 MVA, 33/11 kV S/S at Akari Barjula, Kirtinagar under EDD Srinagar (C) and its associated 33 kV Bay, 33 kV line

Rs. in Crores

		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Capex	10.83										
Equity (0%)	3.25										
Debt (100%)	7.58										
Principal to pay	10 Yrs										
Principal Repay					0.76	0.76	0.76	0.76	0.76	0.76	0.76
Cumulative Principal Repay					0.76	1.52	2.28	3.03	3.79	4.55	5.31
Principal Reducing		7.58	7.58	7.58	7.58	6.83	6.07	5.31	4.55	3.79	3.03
Interest Rate	0.00%	-	-	-	-	-	-	-	-	-	-
Capex excluding land	10.83										
Depreciation %	5.28%										
Depreciation 90%	9.75										
Depreciation	5.72	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57

		11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
Principal Repay		0.76	0.76	0.76							
Cumulative Principal Repay		6.07	6.83	7.58							
Principal Reducing		2.28	1.52	0.76							
Interest Rate	0.00%	-	-	-							
Capex excluding land	10.83										
Depreciation %	5.28%										
Depreciation 90%	9.75										
Depreciation	9.75	0.57	0.57	0.57	0.57	0.57	0.57	0.60			

-35-

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NOTE - Capex @ final project cost.

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Interest	-	-	-	-	-	-	-	-	-	-
Depreciation	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
O&M @ 3% of capex for first year thereafter 3% annual inflation	0.33	0.34	0.35	0.37	0.38	0.40	0.41	0.43	0.44	0.46
IWC @ 13.70% (Tariff Order)	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.15
Receivable 2 month	0.71	0.75	0.78	0.82	0.86	0.90	0.94	0.98	1.03	1.08
O&M 1 month	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
<b>Total Revenue (units)</b>	<b>63,77,194.29</b>	<b>66,69,487.45</b>	<b>69,76,395.27</b>	<b>72,98,648.49</b>	<b>76,37,014.36</b>	<b>79,92,298.53</b>	<b>83,65,346.91</b>	<b>87,57,047.70</b>	<b>91,68,333.54</b>	<b>96,41,073.59</b>
<b>Total Revenue (Rs. In Crore)</b>	<b>6.72</b>	<b>4.29</b>	<b>4.48</b>	<b>4.69</b>	<b>4.90</b>	<b>5.13</b>	<b>5.37</b>	<b>5.62</b>	<b>5.88</b>	<b>6.28</b>
Estimated Purchase Cost @ 4.84 p.u.	4.84	2.83	2.97	3.12	3.28	3.44	3.61	3.79	3.98	4.26
Net Revenue	1.46	1.51	1.57	1.63	1.69	1.76	1.83	1.90	1.98	2.01
AFC (Rs. Crore)	1.00	1.02	1.03	1.05	1.07	1.09	1.12	1.14	1.16	1.18
Earning	0.46	0.49	0.53	0.58	0.62	0.67	0.71	0.76	0.82	0.83
Tax @ 17.47% MAT	-	-	-	-	-	-	-	-	-	-
Post Tax ROE @ 16.5%	-	-	-	-	-	-	-	-	-	-

	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
Interest	-	-	-	-	-	-	-	-	-	-
Depreciation	0.57	0.57	0.57	0.57	0.57	0.57	0.60			
O&M @ 3% of capex for first year thereafter 4% annual inflation	0.48	0.50	0.52	0.54	0.56	0.59	0.61			
IWC @ 13.70% (Tariff Order)	0.15	0.15	0.15	0.15	0.16	0.16	0.16			
Receivable 2 month	1.06	1.07	1.08	1.09	1.10	1.11	1.12			
O&M 1 month	0.04	0.04	0.04	0.05	0.05	0.05	0.05			
<b>Total Revenue (units)</b>	<b>94,29,171.01</b>	<b>95,18,149.41</b>	<b>96,08,017.60</b>	<b>96,98,784.46</b>	<b>97,90,459.00</b>	<b>98,83,050.28</b>	<b>99,76,567.47</b>			
<b>Total Revenue (Rs. In Crore)</b>	<b>6.72</b>	<b>6.34</b>	<b>6.40</b>	<b>6.46</b>	<b>6.52</b>	<b>6.58</b>	<b>6.64</b>	<b>6.70</b>		
Estimated Purchase Cost @ 4.84 p.u.	4.84	4.31	4.35	4.39	4.44	4.48	4.53	4.57		
Net Revenue	2.03	2.05	2.06	2.08	2.10	2.12	2.13			
AFC (Rs. Crore)	1.20	1.22	1.25	1.27	1.29	1.32	1.37			
Earning	0.83	0.82	0.82	0.81	0.81	0.80	0.76			

- 36 -

**FINANCIAL ANALYSIS**

Project Construction of 2x5 MVA, 33/11 kV S/s at Akari Barjula, Kirtinagar under EDD Srinagar (G) and its associated 33 kV Bay, 33 kV line

IRR 28.49%

NPV=0=

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ()
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	10.83		3% of capex							
	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)						
1	2	3	4	5	6	7	8	10	11	12
2023-2024	3.25	0.00	0.00	0.00	3.25	0.00	-3.25	-3.25	1.00	-3.25
1	0.00	0.00	0.33	0.00	0.33	1.46	1.13	1.13	0.78	0.88
2	0.00	0.00	0.34	0.00	0.34	1.51	1.17	1.17	0.61	0.71
3	0.00	0.00	0.35	0.00	0.35	1.57	1.22	1.22	0.47	0.57
4	0.00	0.76	0.37	0.00	1.12	1.63	0.51	0.51	0.37	0.19
5	0.00	0.76	0.38	0.00	1.14	1.69	0.55	0.55	0.29	0.16
6	0.00	0.76	0.40	0.00	1.15	1.76	0.61	0.61	0.22	0.13
7	0.00	0.76	0.41	0.00	1.17	1.83	0.66	0.66	0.17	0.11
8	0.00	0.76	0.43	0.00	1.19	1.90	0.72	0.72	0.13	0.10
9	0.00	0.76	0.44	0.00	1.20	1.98	0.78	0.78	0.10	0.08
10	0.00	0.76	0.46	0.00	1.22	2.01	0.79	0.79	0.08	0.06
11	0.00	0.76	0.48	0.00	1.24	2.03	0.79	0.79	0.06	0.05
12	0.00	0.76	0.50	0.00	1.26	2.05	0.79	0.79	0.05	0.04
13	0.00	0.76	0.52	0.00	1.28	2.06	0.78	0.78	0.04	0.03
14	0.00	0.00	0.54	0.00	0.54	2.08	1.54	1.54	0.03	0.05
15	0.00	0.00	0.56	0.00	0.56	2.10	1.53	1.53	0.02	0.04
16	0.00	0.00	0.59	0.00	0.59	2.12	1.53	1.53	0.02	0.03
17	0.00	0.00	0.61	0.00	0.61	2.13	1.52	1.52	0.01	0.02
<b>TOTAL</b>	<b>3.25</b>	<b>7.58</b>	<b>7.70</b>	<b>0.00</b>	<b>18.54</b>	<b>31.91</b>	<b>13.38</b>	<b>13.38</b>		<b>0.00</b>

IRR 28.49%

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-37-

### Calculation of Payback Period

Construction of 2x5 MVA, 33/11 kV S/s at Akari Barjula, Kirtinagar under EDD Srinagar (G) and its associated 33 kV Bay, 33 kV line

Total cost of project (Rs.)	10,83,87,749.57
Anticipated new load (in amp)	43 Amp
Anticipated Transferred load (in amp)	58 Amp
Anticipated New+Transferred load (in amp)	101 Amp

Year	Anticipated new 11 kV load in KVA	Total Anticipated 11 kV Load In KVA	Total Units	Total cost of energy billed to UPCL (Rs.)	Expected Savings in Line Losses (units)	Cost of Energy savings in line losses (Rs.)	Total Revenue generated by UPCL (Rs.)	OD&M charges @ 3% (Rs.)	Depreciation (assuming 17 yrs of useful life) (Rs.)	Annually Profit Generated before interest (Rs.)	Interest @ 9.50% (Rs.)	Net profit (Rs.)	Cash profit (Rs.)	Cash profit after tax (Rs. In Lakh)
A	B	C	D= UXP.F.XSupply hrs per day X days in year	E= DXAvg. Purchase Rate	F	F= FXAvg. sale rate	G= DXAvg. sale rate	H	I	J= G-F-E-H-I	K	L=H-J	M	N
1st	819	1924.25	5845863	2,82,93,978	5,31,331	35,70,544	3,92,84,201	32,50,132	57,35,528	55,75,107	-	55,75,107	1,13,10,638	113.11
2nd	860	1965.21	6138156	2,97,08,677	5,31,331	35,70,544	4,12,48,411	33,80,138	57,35,528	59,94,613	-	59,94,613	1,17,30,141	117.30
3rd	903	2068.22	6445064	3,11,94,111	5,31,331	35,70,544	4,33,10,852	35,15,343	57,35,528	64,36,394	-	64,36,394	1,21,71,922	121.72
4th	948	2053.38	6767317	3,27,53,817	5,31,331	35,70,544	4,54,76,374	36,55,957	57,35,528	69,01,616	-	69,01,616	1,26,37,144	126.37
5th	996	2100.80	7105683	3,43,91,507	5,31,331	35,70,544	4,77,50,192	38,02,195	57,35,528	73,91,506	-	73,91,506	1,31,27,034	131.27
6th	1046	2150.59	7460968	3,61,11,083	5,31,331	35,70,544	5,01,37,702	39,54,283	57,35,528	79,07,352	-	79,07,352	1,36,42,380	136.43
7th	1098	2202.87	7834016	3,79,16,637	5,31,331	35,70,544	5,26,44,587	41,15,454	57,35,528	84,50,512	-	84,50,512	1,41,86,040	141.86
8th	1153	2257.76	8225717	3,98,12,469	5,31,331	35,70,544	5,52,76,816	42,76,953	57,35,528	90,22,411	-	90,22,411	1,47,57,929	147.58
9th	1210	2315.40	8637003	4,18,03,092	5,31,331	35,70,544	5,80,40,657	44,48,031	57,35,528	96,24,550	-	96,24,550	1,53,60,078	153.60
10th	1271	2375.92	9068853	4,38,93,247	5,31,331	35,70,544	6,09,42,690	46,25,952	57,35,528	1,02,58,507	-	1,02,58,507	1,59,94,038	159.94
11th	1334	2439.47	9522295	4,60,87,909	5,31,331	35,70,544	6,39,89,824	48,10,990	57,35,528	1,09,25,942	-	1,09,25,942	1,66,61,469	166.61
12th	1401	2506.19	9998410	4,83,92,305	5,31,331	35,70,544	6,71,89,316	50,03,430	57,35,528	1,16,28,598	-	1,16,28,598	1,73,64,120	173.64
13th	1471	2576.25	10498331	5,08,11,920	5,31,331	35,70,544	7,05,48,781	52,03,567	57,35,528	1,23,68,311	-	1,23,68,311	1,81,03,839	181.04
14th	1545	2649.81	11023247	5,33,52,516	5,31,331	35,70,544	7,40,76,220	54,11,709	57,35,528	1,31,47,011	-	1,31,47,011	1,88,82,539	188.83
15th	1622	2727.05	11574499	5,60,20,142	5,31,331	35,70,544	7,77,80,031	56,28,178	57,35,528	1,39,66,728	-	1,39,66,728	1,97,02,258	197.02
16th	1703	2808.15	12153130	5,88,21,149	5,31,331	35,70,544	8,16,69,033	58,53,305	57,35,528	1,48,29,596	-	1,48,29,596	2,05,65,124	205.65
17th	1788	2895.31	12760786	6,17,62,206	5,31,331	35,70,544	8,57,52,485	60,87,437	57,35,528	1,57,37,858	-	1,57,37,858	2,14,73,386	214.73
Total benefit													15,15,79,317.41	1515.79
Total cost of Project (Cr.)													108.48	
Payback period (Yrs.)													8 Year 4 month	

NOTE:- THE FOLLOWING ASSUMPTIONS ARE MADE:

Power factor	0.85	Average supply hour/day	23
Average Purchase Rate	4.84	Average Sale Rate	6.22
Load Growth per annum	5%	Depreciation of Project in Yrs	17

The total units saved in line loss and units required as per load is provided by Director Project office



### Calculation of Cost Benefit Analysis

Construction of 2x5 MVA, 33/11 KV S/S at <sup>at</sup> Akari Barjola, Kirtinagar under EDD Srinagar (C) and its associated 33 KV Bay, 33 KV line

Total cost of project (Rs) -	10,83,37,749.57
Anticipated new load (in amp.)	43 Amp
Anticipated Transferred load (in amp.)	58 Amp
Anticipated New + Transferred load (in amp.)	101 Amp

Year	Anticipated new load in KVA	Total Anticipated Load in KVA	Total Units	Total cost of energy billed to UPCL (Rs.)	loss saving (units)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depreciation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Net profit after intt (IN Lakhs) (Rs.)
A			B	C	D	E	F	G	H=E-C-F-G	
1	819	1924	58,45,863	2,82,93,978	5,31,331	4,28,54,746	32,50,132	57,35,528	55,75,107	55.75
2	860	1965	61,38,156	2,97,08,677	5,31,331	4,48,18,956	33,80,138	57,35,528	59,94,613	59.95
3	903	2008	64,45,064	3,11,94,111	5,31,331	4,68,81,376	35,15,343	57,35,528	64,36,394	64.36
4	948	2053	67,67,317	3,27,55,817	5,31,331	4,90,46,918	36,55,957	57,35,528	69,01,616	69.02
5	996	2101	71,05,683	3,42,91,507	5,31,331	5,13,20,737	38,02,195	57,35,528	73,91,506	73.92
6	1046	2151	74,60,968	3,61,11,083	5,31,331	5,37,08,246	39,54,283	57,35,528	79,07,332	79.07
7	1098	2203	78,34,016	3,79,16,637	5,31,331	5,62,15,131	41,12,454	57,35,528	84,50,512	84.51
8	1153	2258	82,25,717	3,98,13,469	5,31,331	5,88,47,361	42,76,955	57,35,528	90,22,411	90.22
9	1210	2315	86,37,003	4,18,03,092	5,31,331	6,16,11,201	44,48,031	57,35,528	96,24,550	96.25
10	1235	2346	88,09,743	4,26,39,154	5,31,331	6,27,72,015	46,25,952	57,35,528	97,71,381	97.71
11	1247	2352	88,97,840	4,30,65,546	5,31,331	6,33,64,029	48,10,990	57,35,528	97,51,966	97.52
12	1259	2364	89,86,818	4,34,96,204	5,31,331	6,39,61,964	50,03,430	57,35,528	97,26,805	97.27
13	1272	2377	90,76,687	4,39,31,163	5,31,331	6,45,65,878	52,03,567	57,35,528	96,95,620	96.96
14	1285	2390	91,67,453	4,43,70,475	5,31,331	6,51,75,832	54,11,709	57,35,528	96,58,119	96.58
15	1298	2403	92,59,128	4,48,14,180	5,31,331	6,57,91,834	56,28,178	57,35,528	96,13,999	96.14
16	1311	2416	93,51,719	4,52,62,321	5,31,331	6,64,14,098	58,53,305	57,35,528	95,62,944	95.63
17	1324	2429	94,45,236	4,57,14,945	5,31,331	6,70,42,533	60,87,437	57,35,528	95,04,624	95.05
<b>Total benefit</b>										1445.90
<b>Total cost of Project (Cr.):</b>										1083.38

Return on Investment (assuming consistent profitability and efficiency ratios) (Rs. In Lakhs)	
Cost =	1083.38
Average Annual Profit =	85.65
<b>Annual ROI =</b>	<b>7.85</b>

1. Average Purchase rate has been considered as Rs.4.84/kWh.
2. Average selling rate has been considered as Rs. 6.72/Unit.
3. Cost of project is Rs 1083.38 Lakhs without IFC, as intimated by project wing

-39-

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ABSTRACT OF DETAILED ESTIMATE		
Construction of 33/11 kV Sub Station at JAIPUR PADALI		
S.N	Descriptions	Amount in Rs.
1	Supply unit for decenteralize prize and erection, testing & commissioning cartage at both end	22,61,89,664.95
2	Transporation	-
	<b>Total of Material, Erection &amp; transport</b>	<b>22,61,89,664.95</b>
3	GST @ 18%	3,07,95,635.79
	<b>Sub Total (A)</b>	<b>25,69,85,300.74</b>
4	Contingencies + Centage @18.45%	4,74,13,787.99
	<b>Sub Total (B)</b>	<b>30,43,99,088.73</b>
5	Labour Cess @1%	30,43,990.89
6	Electrical Inspector Fees	20,000.00
	<b>Sub Total (C)</b>	<b>30,74,63,079.61</b>
7	IDC	74,61,104.07
	<b>TOTAL (Rs.)</b>	<b>31,49,24,183.68</b>
	<b>TOTAL (Rs.in Cr.)</b>	<b>31.49</b>

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-40-

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**Construction of 33/11 kV Sub Station at JAIPUR PADALI**

**Calculation of IDC**

Interest During Construction rate		6.50%							
Drawl Schedule:		1st Year	40.00%						
		2nd Year	60.00%						
S.No.	Project Description	Project Cost (in Cr.)	Loan (In Cr.)	Equity (In Cr.)	Average Drawl (in Cr)	Cum. Drawl (in Cr)	F.Y.- 2024-25	F.Y.- 2025-26	Total IDC (Rs. in Cr.)
		30.75	21.52	9.22					
1	Construction of 33/11 kV Sub Station at JAIPUR PADALI						F.Y.- 2024-25	F.Y.- 2025-26	
			8.61		4.30	8.61	0.05	0.28	0.33
			12.91			6.46	21.52	-	0.42
<b>TOTAL</b>			<b>21.52</b>		<b>10.76</b>		<b>0.05</b>	<b>0.70</b>	<b>0.75</b>

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-117-

## Calculation of Cost Benefit Analysis

### Construction of 33/11 kV Sub Station at JAIPUR PADALI

Total cost of project (Rs)	31,49,24,183.68	Avg. Selling Rate/ Unit	7.32
Anticipated new load (in amp.)	525	Avg. Purchase Rate/ Unit	5.03
Load Growth per annum	1%	Power Factor	85

Year	Total Units (Less AT&C Losses @ 14.66%)	Total cost of energy billed to UPCL (Rs.)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depericiation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Interest/ Dividend @ 6.50% (Rs. In lakhs)	Net profit after Interest/ Dividend (Rs.)	Cash profit (Rs.)	Cash profit (Rs. in Cr.)	Cumulative Cash Profit (Rs. In Cr.)
A	B	C	D	E	F	G=D-C-E-F	H	I=G-H	J=(F+I)	K	L
1st	13684220	6,88,31,624	10,01,68,487	94,47,726	1,66,72,457	52,16,680	2,99,17,797.45	-2,47,01,117.08	-80,28,660.30	-0.80	-0.80
2nd	15052641	7,57,14,787	11,01,85,335	98,25,635	1,66,72,457	79,72,458	2,75,29,622.39	-1,95,57,164.78	-28,84,707.99	-0.29	-1.09
3rd	16557906	8,32,86,265	12,12,03,869	1,02,18,660	1,66,72,457	1,10,26,487	2,63,35,534.86	-1,53,09,047.73	13,63,409.05	0.14	-0.95
4th	18213696	9,16,14,892	13,33,24,256	1,06,27,406	1,66,72,457	1,44,09,501	2,51,41,447.33	-1,07,31,946.22	59,40,510.56	0.59	-0.36
5th	20035066	10,07,76,381	14,66,56,681	1,10,52,503	1,66,72,457	1,81,55,341	2,39,47,359.80	-57,92,018.52	1,08,80,438.26	1.09	0.73
6th	22038572	11,08,54,019	16,13,22,350	1,14,94,603	1,66,72,457	2,23,01,271	2,27,53,272.27	-4,52,001.03	1,62,20,455.75	1.62	2.35
7th	24242430	12,19,39,421	17,74,54,585	1,19,54,387	1,66,72,457	2,68,88,320	2,15,59,184.74	53,29,135.46	2,20,01,592.24	2.20	4.55
8th	26666673	13,41,33,363	19,52,00,043	1,24,32,562	1,66,72,457	3,19,61,661	2,03,65,097.21	1,15,96,563.89	2,82,69,020.68	2.83	7.38
9th	29333340	14,75,46,699	21,47,20,047	1,29,29,865	1,66,72,457	3,75,71,027	1,91,71,009.68	1,84,00,016.95	3,50,72,473.73	3.51	10.88
10th	32266674	16,23,01,369	23,61,92,052	1,34,47,059	1,66,72,457	4,37,71,167	1,79,76,922.15	2,57,94,244.70	4,24,66,701.48	4.25	15.13
11th	35493341	17,85,31,506	25,98,11,257	1,39,84,942	1,66,72,457	5,06,22,353	1,67,82,834.62	3,38,39,518.15	5,05,11,974.94	5.05	20.18
12th	39042675	19,63,84,657	28,57,92,383	1,45,44,339	1,66,72,457	5,81,90,930	1,55,88,747.09	4,26,02,183.14	5,92,74,639.92	5.93	26.11
13th	42946943	21,60,23,122	31,43,71,621	1,51,26,113	1,66,72,457	6,65,49,929	1,55,88,747.09	5,09,61,182.20	6,76,33,638.99	6.76	32.87
14th	47241637	23,76,25,435	34,58,08,783	1,57,31,157	1,66,72,457	7,57,79,735	1,55,88,747.09	6,01,90,987.59	7,68,63,444.37	7.69	40.56
15th	51965801	26,13,87,978	38,03,89,662	1,63,60,404	1,66,72,457	8,59,68,823	1,55,88,747.09	7,03,80,076.18	8,70,52,532.97	8.71	49.26
16th	57162381	28,75,26,776	41,84,28,628	1,70,14,820	1,66,72,457	9,72,14,576	1,55,88,747.09	8,16,25,828.41	9,82,98,285.20	9.83	59.09
17th	62878619	31,62,79,453	46,02,71,491	1,76,95,413	1,66,72,457	10,96,24,168	1,55,88,747.09	9,40,35,420.84	11,07,07,877.62	11.07	70.16
18th	69166481	34,79,07,399	50,62,98,640	1,84,03,229	0	13,99,88,012	1,55,88,747.09	12,43,99,264.85	12,43,99,264.85	12.44	82.60
19th	76083129	38,26,98,139	55,69,28,504	1,91,39,358	0	15,50,91,007	1,55,88,747.09	13,95,02,259.80	13,95,02,259.80	13.95	96.55
20th	83691442	42,09,67,952	61,26,21,354	1,99,04,933	0	17,17,48,469	1,55,88,747.09	15,61,59,721.99	15,61,59,721.99	15.62	112.17
21st	92060586	46,30,64,748	67,38,83,490	2,07,01,130	0	19,01,17,612	1,55,88,747.09	17,45,28,864.86	17,45,28,864.86	17.45	129.62
22nd	101266645	50,93,71,222	74,12,71,839	2,15,29,175	0	21,03,71,441	1,55,88,747.09	19,47,82,693.86	19,47,82,693.86	19.48	149.10
23rd	111393309	56,03,08,345	81,53,99,022	2,23,90,342	0	23,27,00,336	1,55,88,747.09	21,71,11,588.46	21,71,11,588.46	21.71	170.81
24th	122532640	61,63,39,179	89,69,38,925	2,32,85,956	0	25,73,13,790	1,55,88,747.09	24,17,25,042.55	24,17,25,042.55	24.17	194.99
25th	134785904	67,79,73,097	98,66,32,817	2,42,17,394	0	28,44,42,326	1,55,88,747.09	26,88,53,578.87	26,88,53,578.87	26.89	221.87
<b>Total benefit</b>								<b>1,93,52,74,877.40</b>			
<b>Total Cost (in Rs.)</b>								<b>31,49,24,183.68</b>			
<b>Avg. Annual Profit (Rs.)</b>								<b>7,74,10,995.10</b>			
<b>Annual Return on Investment</b>								<b>24.58%</b>			
<b>Pay Back Period</b>								<b>12 YEARS 10 MONTHS</b>			

-42-

97

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**FINANCIAL ANALYSIS**

**Construction of 33/11 kV Sub Station at JAIPUR PADALI**

IRR 14.62%

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ( )
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	31.49		3% of capex							
	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)						
1	2	3	4	5	6	7	8	10	11	12
2024-2025	5.67	0.00	0.00	0.00	5.67	0.00	-5.67	-5.67	1.00	-5.67
2025-2026	3.78	0.00	0.00	0.00	3.78	0.00	-3.78	-3.78	0.87	-3.30
1	0.00	1.84	0.94	2.99	5.77	3.13	-2.64	-2.64	0.76	-2.01
2	0.00	1.84	0.98	2.75	5.57	3.45	-2.13	-2.13	0.66	-1.41
3	0.00	1.84	1.02	2.63	5.49	3.79	-1.70	-1.70	0.58	-0.99
4	0.00	1.84	1.06	2.51	5.41	4.17	-1.24	-1.24	0.51	-0.63
5	0.00	1.84	1.11	2.39	5.34	4.59	-0.75	-0.75	0.44	-0.33
6	0.00	1.84	1.15	2.28	5.26	5.05	-0.22	-0.22	0.38	-0.08
7	0.00	1.84	1.20	2.16	5.19	5.55	0.36	0.36	0.34	0.12
8	0.00	1.84	1.24	2.04	5.12	6.11	0.99	0.99	0.29	0.29
9	0.00	1.84	1.29	1.92	5.05	6.72	1.67	1.67	0.26	0.43
10	0.00	1.84	1.34	1.80	4.98	7.39	2.41	2.41	0.22	0.54
11	0.00	1.84	1.40	1.68	4.91	8.13	3.21	3.21	0.19	0.62
12	0.00	1.84	1.45	1.56	4.85	8.94	4.09	4.09	0.17	0.69
13	0.00	0.00	1.51	1.56	3.07	9.83	6.76	6.76	0.15	1.00
14	0.00	0.00	1.57	1.56	3.13	10.82	7.69	7.69	0.13	0.99
15	0.00	0.00	1.64	1.56	3.19	11.90	8.71	8.71	0.11	0.98
16	0.00	0.00	1.70	1.56	3.26	13.09	9.83	9.83	0.10	0.97
17	0.00	0.00	1.77	1.56	3.33	14.40	11.07	11.07	0.09	0.95
18	0.00	0.00	1.84	1.56	3.40	15.84	12.44	12.44	0.07	0.93
19	0.00	0.00	1.91	1.56	3.47	17.42	13.95	13.95	0.07	0.91
20	0.00	0.00	1.99	1.56	3.55	19.17	15.62	15.62	0.06	0.89
21	0.00	0.00	2.07	1.56	3.63	21.08	17.45	17.45	0.05	0.87
22	0.00	0.00	2.15	1.56	3.71	23.19	19.48	19.48	0.04	0.84
23	0.00	0.00	2.24	1.56	3.80	25.51	21.71	21.71	0.04	0.82
24	0.00	0.00	2.33	1.56	3.89	28.06	24.17	24.17	0.03	0.80
25	0.00	0.00	2.42	1.56	3.98	30.87	26.89	26.89	0.03	0.77
<b>TOTAL</b>	<b>9.45</b>	<b>22.04</b>	<b>39.35</b>	<b>46.97</b>	<b>117.81</b>	<b>308.19</b>	<b>190.38</b>	<b>190.38</b>		<b>0.00</b>
							<b>IRR</b>	<b>14.62%</b>		

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-43-

Annual Financial Cost Sheet

Construction of 33/11 kV Sub Station at JAIPUR PADALI

Years	Principal Repay	Comm Principal Repay	Principal Reducing	Interest Plus Dividend	Depreciation @ 5.28%	O&M@3% of capex for first year thereafter 4% annual inflation	Total Revenue (Rupee)	Total Revenue (Rs.)	Purchase Cost (Rs.)	Net Revenue	Annual Financial Cost (Rs.)	Earning
A	B	C	D	E	F	G	H	I	J	K	L	M
1	18370577.38	18370577.38	220446928.58	29917797.45	16672456.78	9447725.51	13684219.50	100168486.76	68831624.10	31356862.66	56037979.74	-24701117.08
2	18370577.38	36741154.76	183705773.81	27529622.39	16672456.78	9824634.53	15052641.45	110185335.44	75714786.51	34470548.93	54027715.70	-19557164.78
3	18370577.38	55111732.14	165335196.43	26335534.86	16672456.78	10218659.91	16557905.60	121203868.98	85286265.16	37517603.82	53226651.36	-15309047.73
4	18370577.38	73482309.53	146961619.05	25141447.33	16672456.78	10627406.31	18213696.16	13532455.88	91614891.68	41709364.20	5241310.42	-10731946.22
5	18370577.38	91852886.91	128594041.67	23947359.80	16672456.78	11052502.56	20035065.77	146656681.47	100776380.84	45880300.62	51672319.14	-5792018.52
6	18370577.38	110223464.29	110223464.29	22753272.27	16672456.78	11494602.66	22038572.35	161322449.61	110854018.95	50468330.68	50920331.72	-452001.03
7	18370577.38	128594041.67	91852886.91	21559184.74	16672456.78	11954386.77	24242429.59	177454584.57	121939420.82	55515163.75	50186028.29	5329155.46
8	18370577.38	14696419.05	73482309.53	20365097.21	16672456.78	12432562.24	26666672.55	195200043.03	134133362.90	61066680.13	49470116.23	11596563.89
9	18370577.38	165335196.43	55111732.14	19171009.68	16672456.78	12929864.75	29333339.80	214720047.33	147546699.19	67173348.14	48773331.19	18400016.95
10	18370577.38	183705773.81	36741154.76	17976922.15	16672456.78	13447059.32	32266673.78	236192052.07	162301369.11	73890682.96	48096438.25	25794244.70
11	18370577.38	202076351.19	18370577.38	16782834.62	16672456.78	13984941.69	35409341.16	239811257.27	178531506.02	81279751.25	47440253.10	33839518.15
12	18370577.38	220446928.58	0.00	15588747.09	16672456.78	14544339.36	39042675.27	285792385.00	196384656.63	89407726.38	46805543.24	42602183.14
13	0.00	0.00	0.00	15588747.09	16672456.78	15126112.93	42946942.80	314371621.30	216025123.29	98348499.01	4738716.81	50961182.20
14	0.00	0.00	0.00	15588747.09	16672456.78	15731157.45	47241637.08	345808785.43	237625434.52	108183348.92	47992361.35	60190987.59
15	0.00	0.00	0.00	15588747.09	16672456.78	16360403.75	51965800.79	380389661.78	261387977.97	119001683.81	48621607.62	70380076.18
16	0.00	0.00	0.00	15588747.09	16672456.78	17014819.90	5762380.87	418428627.95	287526775.77	130901852.19	49276023.77	81625828.41
17	0.00	0.00	0.00	15588747.09	16672456.78	17695412.70	62978618.95	460271490.75	316279455.34	143992037.41	49956616.57	94035420.84
18	0.00	0.00	0.00	15588747.09	0.00	18405229.20	69166480.85	506208639.82	347907398.68	158391241.15	33991976.30	124399264.85
19	0.00	0.00	0.00	15588747.09	0.00	19139358.37	76085128.94	556928503.81	382698138.54	174230565.26	34728105.46	139502259.80
20	0.00	0.00	0.00	15588747.09	0.00	19904932.71	83691441.83	612621354.19	420967952.40	191653401.79	35493679.80	156159721.99
21	0.00	0.00	0.00	15588747.09	0.00	20701130.01	92060586.91	679835489.61	469064747.64	210818741.97	36289877.11	174528864.86
22	0.00	0.00	0.00	15588747.09	0.00	21529175.22	101266644.61	741271838.57	509571222.40	231900616.16	37117922.31	194782693.86
23	0.00	0.00	0.00	15588747.09	0.00	22390342.22	111395309.07	815399022.42	560308344.64	255090677.78	37979089.32	217111588.46
24	0.00	0.00	0.00	15588747.09	0.00	23283955.91	122532639.98	896938924.66	616239179.11	280599745.56	38874703.01	241725042.55
25	0.00	0.00	0.00	15588747.09	0.00	24217594.15	134785903.98	986632817.13	677975007.02	308259720.11	3986141.24	268855378.87
Total	22,04,46,928.58			46,97,22,541.80	28,34,31,765.31	99,34,59,110.13	1,34,58,02,748.75	9,85,12,76,120.89	6,76,93,87,826.20	3,08,18,88,294.83	1,14,66,13,417.24	1,95,52,74,877.40

Capex	314924183.68
Equity	94477255.10
Debt	220446928.58
Capex	314924183.68
Interest Rate	6.50%
Dividend Rate	16.50%
Depreciation %	5.28%
Depreciation Amount Upto 90%	283431765.31
Principal to Repay (in Years)	12
Average Purchase Rate (Rs per unit)	5.03
Average Sale Rate (Rs per unit)	7.32

16

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<b>Weighted Average Cost of Capital (WACC)</b>		
Construction of 33/11 kV Sub Station at JAIPUR PADALI		
Return on Equity		16.50%
Interest on Loan		6.50%
Ratio of Equity		30%
Ratio of Loan/ Debt		70%
WACC is :-		
On Equity	$30 * 16.50\%$	4.95
On Loan	$70 * 06.50\%$	4.55
Total WACC		9.50%

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Summary of Financial Analysis		
S.N.	Financial Analysis	Values
1	Pay back Period	12 YEARS 10 MONTHS
2	Internal Rate of Return (%)	14.62%
3	Return on Investment (%)	24.58%
4	Return on Equity (%)	16.50%
5	Weighted Avg. Cost of Capital (%)	9.50%
6	Interest During Construction (in Cr.)	0.75

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**Construction of 33/11 kV S/s at JAIPUR PADALI and its associated 33 kV line.**

Amount in Rs.

S. no.	Name of work	Cost of Transformer (2x)2.5 MVA)	Cost of Substation (Excluding Transformer)	Cost of 33 kV BAY	Cost of 33 kV Line (13 km)	Cost of Civil Works (SGR Land Development etc.)	Cost of 11 kV Line (8 km)	Cost of Land	Total
A	Centralized material	2,41,19,068.00	44,77,510.19	0.00	2,65,06,221.26	0.00	0.00	0.00	5,51,02,799.45
B	De-Centralized material	0.00	5,60,85,070.00	0.00	4,37,54,240.00	0.00	0.00	0.00	9,98,39,310.00
C	Cartage erection etc	0.00	4,59,82,975.10	0.00	2,52,64,580.40	0.00	0.00	0.00	7,12,47,555.50
D	Sub Total (D=B+C)	0.00	10,20,68,045.10	63,02,521.01	6,90,18,820.40	0.00	0.00	0.00	17,73,89,386.51
E	GST @18% on Sub Total D	0.00	1,83,72,248.12	0.00	1,24,23,387.67	0.00	0.00	0.00	3,07,95,635.79
F	Total Cost including GST (F=A+D+E)	2,41,19,068.00	12,49,17,803.41	63,02,521.01	10,79,48,429.33	0.00	0.00	0.00	26,32,87,821.75
G	Contingency Charges @3% on Sub Total (F)	7,23,572.04	37,47,534.10	1,89,075.63	32,38,452.88	0.00	0.00	0.00	78,98,634.65
H	Contage Charges @15% on Sub Total (F)	36,17,860.20	1,87,37,670.51	9,45,378.15	1,61,92,264.40	0.00	0.00	0.00	3,94,93,173.26
I	Labour Cess @1% on Sub Total (F)	2,41,190.68	12,49,178.03	63,025.21	10,79,484.29	0.00	0.00	0.00	26,32,878.22
J	Electrical Inspector Fee	0.00	19,000.00	0.00	1,000.00	0.00	0.00	0.00	20,000.00
K	Road Permission	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L	Total Cost (F+G+H+I+J+K)	2,87,01,690.92	14,86,71,186.06	75,00,000.00	12,84,59,630.91	1,25,36,319.05	0.00	0.00	31,33,32,507.88
	Say (Rs. In Lakh)	287.02	1486.71	75.00	1284.60	125.36	0.00	0.00	3258.69

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-84-

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ABSTRACT OF DETAILED ESTIMATE		
Construction of 33/11 kV Sub Station at KATHGODAM		
S.N	Descriptions	Amount in Rs.
1	Supply unit for decenteralize prize and erection, testing & commissioning cartage at both end	11,93,69,405.61
2	Transporation	-
	<b>Total of Material, Erection &amp; transport</b>	<b>11,93,69,405.61</b>
3	GST @ 18%	1,80,77,706.92
	<b>Sub Total (A)</b>	<b>13,74,47,112.53</b>
4	Contingencies + Centage @18.45%	2,53,58,992.26
	<b>Sub Total (B)</b>	<b>16,28,06,104.79</b>
5	Labour Cess @1%	16,28,061.05
6	Electrical Inspector Fees	20,000.00
	<b>Sub Total (C)</b>	<b>16,44,54,165.84</b>
7	IDC	39,90,754.42
	<b>TOTAL (Rs.)</b>	<b>16,84,44,920.26</b>
	<b>TOTAL (Rs.in Cr.)</b>	<b>16.84</b>

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**Construction of 33/11 kV Sub Station at KATHGODAM**

**Calculation of IDC**

Interest During Construction rate		6.50%							
Drawl Schedule:		1st Year	40.00%						
		2nd Year	60.00%						
S.No.	Project Description	Project Cost (in Cr.)	Loan (In Cr.)	Equity (In Cr.)	Average Drawl (in Cr)	Cum. Drawl (in Cr)	F.Y.- 2024-25	F.Y.- 2025-26	Total IDC (Rs. in Cr.)
		16.45	11.51	4.93					
1	Construction of 33/11 kV Sub Station at KATHGODAM		4.60		2.30	4.60	0.02	0.15	0.17
			6.91		3.45	11.51	-	0.22	0.22
<b>TOTAL</b>			<b>11.51</b>		<b>5.76</b>		<b>0.02</b>	<b>0.37</b>	<b>0.40</b>

-49-

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## Calculation of Cost Benefit Analysis

### Construction of 33/11 kV Sub Station at KATHGODAM

Total cost of project (Rs)	16,84,44,920.26	Avg. Selling Rate/ Unit	7.32
Anticipated new load (in amp.)	525	Avg. Purchase Rate/ Unit	5.03
Load Growth per annum	1%	Power Factor	85

Year	Total Units (Less AT&C Losses @ 14.66%)	Total cost of energy billed to UPCL (Rs.)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depericlation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Interest/ Dividend @ 6.50% (Rs. in lakhs)	Net profit after Interest/ Dividend (Rs.)	Cash profit (Rs.)	Cash profit (Rs. in Cr.)	Cumulative Cash Profit (Rs. in Cr.)
A	B	C	D	E	F	G=D-C-E-F	H	I=G-H	J=(F+I)	K	L
1st	4734381	2,38,13,935	3,46,55,667	50,53,348	89,17,672	-31,29,288	1,60,02,267.42	-1,91,31,555.42	-1,02,13,883.17	-1.02	-1.02
2nd	5207819	2,61,95,329	3,81,21,234	52,55,482	89,17,672	-22,47,249	1,47,24,893.45	-1,69,72,142.16	-80,54,469.91	-0.81	-1.83
3rd	5728601	2,88,14,861	4,19,33,357	54,65,701	89,17,672	-12,64,877	1,40,86,206.46	-1,53,51,083.93	-64,33,411.68	-0.64	-2.47
4th	6301461	3,16,96,348	4,61,26,693	56,84,329	89,17,672	-1,71,656	1,34,47,519.47	-1,36,19,175.42	-47,01,503.17	-0.47	-2.94
5th	6931607	3,48,65,982	5,07,39,362	59,11,702	89,17,672	10,44,005	1,28,08,832.48	-1,17,64,827.07	-28,47,154.82	-0.28	-3.23
6th	7624768	3,83,52,581	5,58,13,298	61,48,170	89,17,672	23,94,875	1,21,70,145.49	-97,75,270.20	-8,57,597.95	-0.09	-3.31
7th	8387244	4,21,87,839	6,13,94,628	63,94,097	89,17,672	38,95,020	1,15,31,458.50	-76,36,438.25	12,81,234.00	0.13	-3.18
8th	9225969	4,64,06,622	6,75,34,091	66,49,861	89,17,672	55,59,935	1,08,92,771.51	-53,32,836.20	35,84,836.05	0.36	-2.82
9th	10148566	5,10,47,285	7,42,87,500	69,15,855	89,17,672	74,06,688	1,02,54,084.52	-28,47,396.81	60,70,275.44	0.61	-2.22
10th	11163422	5,61,52,013	8,17,16,250	71,92,489	89,17,672	94,54,075	96,15,397.53	-1,61,322.52	87,56,349.73	0.88	-1.34
11th	12279764	6,17,67,214	8,98,87,875	74,80,189	89,17,672	1,17,22,799	89,76,710.54	27,46,088.56	1,16,63,760.81	1.17	-0.18
12th	13507741	6,79,43,936	9,88,76,662	77,79,396	89,17,672	1,42,35,658	83,38,023.55	58,97,634.02	1,48,53,062.7	1.48	1.31
13th	14858515	7,47,38,330	10,87,64,328	80,90,572	89,17,672	1,70,17,754	83,38,023.55	86,79,730.79	1,75,97,403.04	1.76	3.07
14th	16344366	8,22,12,162	11,96,40,761	84,14,195	89,17,672	2,00,96,731	83,38,023.55	1,17,58,707.78	2,06,76,380.03	2.07	5.13
15th	17978803	9,04,33,379	13,16,04,837	87,50,763	89,17,672	2,35,03,023	83,38,023.55	1,51,64,999.86	2,40,82,672.11	2.41	7.54
16th	19776683	9,94,76,717	14,47,65,321	91,00,794	89,17,672	2,72,70,139	83,38,023.55	1,89,32,115.21	2,78,49,787.45	2.78	10.33
17th	21754352	10,94,24,388	15,92,41,853	94,64,825	89,17,672	3,14,34,967	83,38,023.55	2,30,96,943.92	3,20,14,616.17	3.20	13.53
18th	23929787	12,03,66,827	17,51,66,039	98,43,418	0	4,49,55,793	83,38,023.55	3,66,17,769.66	3,66,17,769.66	3.66	17.19
19th	26322765	13,24,03,510	19,26,82,642	1,02,37,155	0	5,00,41,978	83,38,023.55	4,17,03,954.08	4,17,03,954.08	4.17	21.36
20th	28955042	14,56,43,861	21,19,50,907	1,06,46,641	0	5,56,60,405	83,38,023.55	4,73,22,381.14	4,73,22,381.14	4.73	26.09
21st	31850546	16,02,08,247	23,31,45,997	1,10,72,507	0	6,18,65,244	83,38,023.55	5,35,27,220.09	5,35,27,220.09	5.35	31.45
22nd	35035601	17,62,29,071	25,64,60,597	1,15,15,407	0	6,87,16,118	83,38,023.55	6,03,78,094.87	6,03,78,094.87	6.04	37.48
23rd	38539161	19,38,51,979	28,21,06,657	1,19,76,023	0	7,62,78,655	83,38,023.55	6,79,40,631.14	6,79,40,631.14	6.79	44.28
24th	42393077	21,32,37,176	31,03,17,322	1,24,55,064	0	8,46,25,082	83,38,023.55	7,62,87,058.01	7,62,87,058.01	7.63	51.91
25th	46632385	23,45,60,894	34,13,49,055	1,29,53,267	0	9,38,34,894	83,38,023.55	8,54,96,870.03	8,54,96,870.03	8.55	60.46

<b>Total benefit</b>	45,29,58,151.17
<b>Total Cost (in Rs.)</b>	16,84,44,920.26
<b>Avg. Annual Profit (Rs.)</b>	1,81,18,326.05
<b>Annual Return on Investment</b>	10.76%
<b>Pay Back Period</b>	17 YEARS 11 MONTHS

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**FINANCIAL ANALYSIS**

**Construction of 33/11 kV Sub Station at KATHGODAM**

IRR 7.58%

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ( )
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	16.84		3% of capex							
(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	0.075800	(Rs. Cr.)	
1	2	3	4	5	6	7	8	10	11	12
2024-2025	3.03	0.00	0.00	0.00	3.03	0.00	-3.03	-3.03	1.00	-3.03
2025-2026	2.02	0.00	0.00	0.00	2.02	0.00	-2.02	-2.02	0.93	-1.88
1	0.00	0.98	0.51	1.60	3.09	1.08	-2.00	-2.00	0.86	-1.73
2	0.00	0.98	0.53	1.47	2.98	1.19	-1.79	-1.79	0.80	-1.44
3	0.00	0.98	0.55	1.41	2.94	1.31	-1.63	-1.63	0.75	-1.21
4	0.00	0.98	0.57	1.34	2.90	1.44	-1.45	-1.45	0.69	-1.01
5	0.00	0.98	0.59	1.28	2.85	1.59	-1.27	-1.27	0.65	-0.82
6	0.00	0.98	0.61	1.22	2.81	1.75	-1.07	-1.07	0.60	-0.64
7	0.00	0.98	0.64	1.15	2.78	1.92	-0.85	-0.85	0.56	-0.48
8	0.00	0.98	0.66	1.09	2.74	2.11	-0.62	-0.62	0.52	-0.32
9	0.00	0.98	0.69	1.03	2.70	2.32	-0.38	-0.38	0.48	-0.18
10	0.00	0.98	0.72	0.96	2.66	2.56	-0.11	-0.11	0.45	-0.05
11	0.00	0.98	0.75	0.90	2.63	2.81	0.18	0.18	0.42	0.08
12	0.00	0.98	0.78	0.83	2.59	3.09	0.50	0.50	0.39	0.19
13	0.00	0.00	0.81	0.83	1.64	3.40	1.76	1.76	0.36	0.63
14	0.00	0.00	0.84	0.83	1.68	3.74	2.07	2.07	0.33	0.69
15	0.00	0.00	0.88	0.83	1.71	4.12	2.41	2.41	0.31	0.75
16	0.00	0.00	0.91	0.83	1.74	4.53	2.78	2.78	0.29	0.80
17	0.00	0.00	0.95	0.83	1.78	4.98	3.20	3.20	0.27	0.86
18	0.00	0.00	0.98	0.83	1.82	5.48	3.66	3.66	0.25	0.91
19	0.00	0.00	1.02	0.83	1.86	6.03	4.17	4.17	0.23	0.97
20	0.00	0.00	1.06	0.83	1.90	6.63	4.73	4.73	0.22	1.02
21	0.00	0.00	1.11	0.83	1.94	7.29	5.35	5.35	0.20	1.07
22	0.00	0.00	1.15	0.83	1.99	8.02	6.04	6.04	0.19	1.12
23	0.00	0.00	1.20	0.83	2.03	8.83	6.79	6.79	0.17	1.18
24	0.00	0.00	1.25	0.83	2.08	9.71	7.63	7.63	0.16	1.23
25	0.00	0.00	1.30	0.83	2.13	10.68	8.55	8.55	0.15	1.28
<b>TOTAL</b>	<b>5.05</b>	<b>11.79</b>	<b>21.05</b>	<b>25.12</b>	<b>63.01</b>	<b>106.63</b>	<b>43.61</b>	<b>43.61</b>		<b>0.00</b>
							<b>IRR</b>	<b>7.58%</b>		

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-51-

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Annual Financial Cost Sheet

Construction of 33/11 kv Sub Station at KATHGODAM

Years	Principal Repay	Cumu Principal Repay	Principal Reducing	Interest Plus Dividend	Depreciation @ 5.28%	O&M @ 5% of capex for first year thereafter 4% annual inflation	Total Revenue (Units)	Total Revenue (Rs.)	Purchase Cost (Rs.)	Net Revenue	Annual Financial Cost (Rs.)	Earning
A	B	C	D	E	F	G	H	I	J	K	L	M
							(Total from BOM)	(at 1.75% p.a.)	(BOM @ 2.05% p.a.)			
1	9825953.68	9825953.68	117911444.18	16002267.42	8917672.25	5053347.61	4734380.72	34655666.90	23813935.04	10841731.86	29973287.28	-19131555.42
2	9825953.68	19651907.36	98259536.82	14724893.45	8917672.25	5255481.51	5207818.80	38121233.59	26195328.55	11925905.05	28598047.21	-16972142.16
3	9825953.68	29477861.05	88433583.14	14086206.46	8917672.25	5465700.77	5728600.68	41933366.95	28814861.40	13118495.55	28469579.48	-15351083.93
4	9825953.68	39303814.73	78607629.46	13447519.47	8917672.25	5684328.80	6301460.74	46126692.65	31696347.54	14430345.10	28049520.52	-13619175.42
5	9825953.68	49129768.41	68781675.77	12808832.48	8917672.25	5911701.96	6931606.82	50739361.91	34865982.50	15873379.62	27638206.68	-11764827.07
6	9825953.68	58955722.09	58955722.09	12170145.49	8917672.25	6148170.03	7024767.50	55813298.11	38352580.53	17460717.58	27235987.77	-9775270.20
7	9825953.68	68781675.77	49129768.41	11531458.50	8917672.25	6394096.84	8387244.25	61394627.92	42187838.58	19206789.33	26843227.58	-7636438.25
8	9825953.68	78607629.46	39303814.73	10892771.51	8917672.25	6649860.71	9225968.68	67534090.71	46406622.44	21127468.27	26460364.47	-5332834.20
9	9825953.68	88433583.14	29477861.05	10254084.52	8917672.25	6915855.14	10148565.54	74287499.78	51047284.68	23240215.09	26087611.91	-2847396.81
10	9825953.68	98259536.82	19651907.36	9615397.53	8917672.25	7192489.34	11163422.10	81716249.76	56152013.15	25564236.60	25725559.12	-161322.52
11	9825953.68	108085490.50	98259536.82	8976710.54	8917672.25	7480188.92	12279764.31	89887874.73	61767214.47	28120660.26	25374571.71	2746088.56
12	9825953.68	117911444.18	0.00	8338023.55	8917672.25	7779596.47	13507740.74	98876662.21	67943935.91	30952726.29	25035092.27	5897634.02
13	0.00	0.00	0.00	8338023.55	8917672.25	8090572.33	14858514.81	108764328.43	74758329.51	34025998.92	25346268.13	8679730.79
14	0.00	0.00	0.00	8338023.55	8917672.25	8414195.23	16244566.29	119640761.27	82212162.46	37428598.81	25669891.03	11758707.78
15	0.00	0.00	0.00	8338023.55	8917672.25	8750763.03	17978802.92	131604837.40	90433378.70	41171458.69	26006458.84	15164999.86
16	0.00	0.00	0.00	8338023.55	8917672.25	9100795.56	19776683.22	144765321.13	99476716.57	45288604.56	26356489.56	18932115.21
17	0.00	0.00	0.00	8338023.55	8917672.25	9464825.30	21754351.54	159241853.25	109424388.23	49817465.02	26720521.10	23096943.92
18	0.00	0.00	0.00	8338023.55	0.00	9843418.31	23929786.69	175166038.57	120366827.05	54799211.52	18181441.86	36617769.66
19	0.00	0.00	0.00	8338023.55	0.00	10237155.04	26322765.36	192682642.43	132403509.76	60279132.67	18575178.59	41703954.08
20	0.00	0.00	0.00	8338023.55	0.00	10646641.24	28955041.90	211950906.67	145643860.73	66307045.94	18984664.80	47322381.14
21	0.00	0.00	0.00	8338023.55	0.00	11072506.89	31850546.08	233445997.34	160208246.81	72937750.53	19410530.45	53527220.09
22	0.00	0.00	0.00	8338023.55	0.00	11515407.17	35055600.69	256460597.08	176229071.49	80231525.59	19853430.72	60378094.87
23	0.00	0.00	0.00	8338023.55	0.00	11976023.46	38539160.76	282106656.78	193851978.64	88254678.15	20314047.01	67940631.14
24	0.00	0.00	0.00	8338023.55	0.00	12455064.39	42393078.84	310317322.46	213237176.50	97080145.96	20793087.95	76287058.01
25	0.00	0.00	0.00	8338023.55	0.00	12953266.97	46632384.52	341319054.71	234560894.15	105768160.56	21291250.52	85496870.03
Total	11,79,11,444.18			25,12,42,617.11	15,16,00,428.24	21,04,51,251.02	46,56,12,422.50	3,40,82,82,932.74	2,34,20,30,483.20	1,06,62,52,447.54	61,32,94,296.36	49,29,58,151.17

Capex	168444920.26
Equity	50533476.08
Debt	117911444.18
Capex	168444920.26
Interest Rate	6.50%
Dividend Rate	16.50%
Depreciation %	5.28%
Depreciation Amount Upto 90%	151600428.24
Principal to Repay (in Years)	12
Average Purchase Rate (Rs. per unit)	5.03
Average Sale Rate (Rs. per unit)	7.32

-52-

29

<b>Weighted Average Cost of Capital (WACC)</b>		
Construction of 33/11 kV Sub Station at KATHGODAM		
Return on Equity		16.50%
Interest on Loan		6.50%
Ratio of Equity		30%
Ratio of Loan/ Debt		70%
WACC is :-		
On Equity	$30 * 16.50\%$	4.95
On Loan	$70 * 6.50\%$	4.55
Total WACC		<b>9.50%</b>







(30)



**Construction of 33/11 kV S/s at KATHGODHAM and its associated 33 kV line**

Amount in Rs.

S. no.	Name of work	Cost of Transformer (2x12.5 MVA)	Cost of Substation (Excluding Transformer)	Cost of 33 kV BAY	Cost of 33 kV Line (0.4 km)	Cost of Civil Works (SGR, Land Development etc.)	Cost of 11 kV Line (14 km)	Cost of Land	Total
A	Centralized material	1,20,59,534.00	44,77,410.19	0.00	24,00,756.32	0.00	0.00	0.00	1,89,37,700.51
B	De-Centralized material	0.00	5,37,30,450.00	0.00	45,800.00	0.00	0.00	0.00	5,37,76,250.00
C	Cartage erection etc	0.00	4,52,09,975.10	0.00	14,45,480.00	0.00	0.00	0.00	4,66,55,455.10
D	Sub Total (D=B+C)	0.00	9,89,40,425.10	0.00	14,91,280.00	0.00	0.00	0.00	10,04,31,705.10
E	GST @18% on Sub Total D	0.00	1,78,09,276.52	0.00	2,68,430.40	0.00	0.00	0.00	1,80,77,706.92
F	Total Cost including GST (F=A+D+E)	1,20,59,534.00	12,12,27,111.81	0.00	41,60,466.72	0.00	0.00	0.00	13,74,47,112.53
G	Contingency Charges @ 3% on Sub Total (F)	3,61,786.02	36,36,813.35	0.00	1,24,814.00	0.00	0.00	0.00	41,23,413.38
H	Contage Charges @1.5% on Sub Total (F)	18,08,930.10	1,81,84,066.77	0.00	6,24,070.01	0.00	0.00	0.00	2,06,17,066.88
I	Labour Cess @1% on Sub Total (F)	1,20,595.34	12,12,271.12	0.00	41,604.67	0.00	0.00	0.00	13,74,471.13
J	Electrical Inspector Fee	0.00	19,000.00	0.00	1,000.00	0.00	0.00	0.00	20,000.00
K	Road Permission	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L	Total Cost (F+G+H+I+J)	1,43,50,845.46	14,42,79,263.05	0.00	49,51,935.40	76,79,448.67	0.00	0.00	16,35,82,063.91
I.	Say (Rs. In Lakh)	143.51	1442.79	0.00	49.52	76.79	0.00	0.00	1,712.62

-55-

(2)

**Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line**

Amount in Rs.										
S. no.	Name of work	Cost of Transformer	Cost of Substation (Excluding Transformer)	Cost of Civil Works (SGR, Land Development etc.)	Cost of 33 kV bay	Cost of 33 kV Line Dada Jalalpur to Lodhiwala	Cost of 33 kV Line Pيران Kallyar to Dada Jalalpur	Cost of 11 kV Line	Cost of Land	Total
A	Centralized material	2,30,08,984.92	93,20,023.26	1,11,41,332.00	8,68,637.30	1,39,65,319.28	2,08,01,000.51	34,72,240.00	-	8,25,77,537.26
B	De-Centralized material	0.00	71,63,410.00	0.00	3,46,790.00	4,03,86,164.00	3,12,13,083.00	1,58,72,143.56	-	9,49,81,590.56
C	Carriage Erection etc	0.00	48,52,324.05	0.00	6,35,501.05	1,45,59,229.60	1,05,72,558.40	49,53,353.84	-	3,55,72,966.94
D	GST @18 % on (B+C)	0.00	21,62,832.13	0.00	1,76,812.39	98,90,170.85	75,21,415.45	37,48,589.53	-	2,34,99,820.35
E	Total Cost including GST (E=A+B+C+D)	2,30,08,984.92	2,34,98,589.43	1,11,41,332.00	20,27,740.74	7,88,00,883.72	7,01,08,057.36	2,80,46,326.93	-	23,66,31,915.11
F	Contingency charges @3% on Sub Total (E)	6,90,269.55	7,04,957.68	3,34,239.96	60,832.22	23,64,026.51	21,03,241.72	8,41,389.81	-	70,98,957.45
G	Labour cess @1% on Sub Total (E)	2,30,089.85	2,34,985.89	1,11,413.32	20,277.41	7,88,008.84	7,01,080.57	2,80,463.27	-	23,66,319.15
H	Electrical inspector Fee	0.00	25,960.00	0.00	0.00	0.00	25,960.00	0.00	-	51,920.00
I	Road permission	0.00	0.00	3,342.40	0.00	0.00	0.00	0.00	-	3,342.40
J	Cost of Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,80,760.00	12,80,760.00
K	Total Cost (K=E+F+G+H+I+J)	2,39,29,344.32	2,44,64,493.01	1,15,86,985.28	21,08,850.37	8,19,52,919.07	7,29,38,339.66	2,91,68,180.00	12,80,760.00	24,74,29,871.71
	Say (Rs. In Lac)	239.29	244.64	115.87	21.09	819.53	729.38	291.68	12.81	2474.30

\* Contage Charges didn't consider as funding is done through Internal Resources.

-56-

Dada

**ABSTRACT OF DETAILED ESTIMATE**

**Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhaqwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line**

	Amount in Rs.
1 Base Cost (Inclusive of control room building, approach road, boundary wall etc.+GST as applicable)	23,66,31,915.11
<b>Sub TOTAL</b>	<b>23,66,31,915.11</b>
2 Contengency @ 3%	70,98,957.45
3 Centage charges @15%	0.00
4 Labour Cess@ 1%	23,66,319.15
5 Electrical Inspector Fees	55,262.40
6 Cost of Land	12,80,760.00
7 TOTAL (Rs.)	24,74,33,214.11
8 IDC	98,72,585.24
9 TOTAL (Rs.)	25,73,05,799.35
TOTAL(Rs. In Cr.)	25.73

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3/12

## Calculation of Payback Period

**Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line**

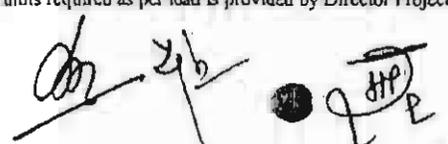
Total cost of project (Rs) -	25,73,05,799.35
Anticipated new load (in amp.)	163
Anticipated Transferred load (in amp.)	120
Anticipated New+Transferred load (in amp.)	283

Year	Anticipated new 11 kV load in KVA	Total Anticipated 11 kV Load in KVA	Total Units	Total cost of energy billed to UPCL (Rs.)	Expected Saving in Line Losses (units)	Cost of Energy savings in line losses (Rs.)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depreciation (assuming 17 yrs of useful life) (Rs.)	Annually Profit Generated before Interest (Rs.)	Interest @ 9.50 % (Rs.)	Net profit (Rs.)	Cash profit after tax (Rs.)	Cash profit after tax (Rs. In Lakh)
A	B	C	D= BXP.F.XSupply hrs.per dayXdays in year Less AT&C Losses @ 15.25%	E= DXAvg. Purchase Rate	F	F= FXAvg. sale rate	G= DXAvg. sale rate	H	I	J=G+F-E-H-I	K	L=H-J	M	N
1st	3105	5392	18780516	9,08,97,695	16,62,908	1,11,74,742	12,62,05,065	77,19,174	1,36,22,072	2,51,40,865	1,71,10,836	80,30,030	2,16,52,101	216.52
2nd	3416	5702	20658567	9,99,87,465	16,62,908	1,11,74,742	13,88,25,571	77,19,174	1,36,22,072	2,86,71,602	1,71,10,836	1,15,60,767	2,51,82,838	251.83
3rd	3758	6044	22724424	10,99,86,211	16,62,908	1,11,74,742	15,27,08,128	77,19,174	1,36,22,072	3,25,55,413	1,71,10,836	1,54,44,577	2,90,66,649	290.67
4th	4133	6420	24996866	12,09,84,832	16,62,908	1,11,74,742	16,79,78,941	77,19,174	1,36,22,072	3,68,27,605	1,53,99,752	2,14,27,852	3,50,49,924	350.50
5th	4547	6833	27496553	13,30,83,316	16,62,908	1,11,74,742	18,47,76,835	77,19,174	1,36,22,072	4,15,27,015	1,36,88,669	2,78,38,347	4,14,60,419	414.60
6th	5001	7288	30246208	14,63,91,647	16,62,908	1,11,74,742	20,32,54,519	77,19,174	1,36,22,072	4,66,96,367	1,19,77,585	3,47,18,782	4,83,40,854	483.41
7th	5502	7788	33270829	16,10,30,812	16,62,908	1,11,74,742	22,35,79,970	77,19,174	1,36,22,072	5,23,82,654	1,02,66,501	4,21,16,153	5,57,38,225	557.38
8th	6052	8338	36597912	17,71,33,893	16,62,908	1,11,74,742	24,59,37,967	77,19,174	1,36,22,072	5,86,37,570	85,55,418	5,00,82,152	6,37,04,224	637.04
9th	6657	8943	40257703	19,48,47,283	16,62,908	1,11,74,742	27,05,31,764	77,19,174	1,36,22,072	6,55,17,978	68,44,334	5,86,73,643	7,22,95,715	722.96
Total benefit													39,24,90,949.53	3,924.91
Total cost of Project (Cr.):														2573.06
Payback period (Yrs.):													7 year 6 days	

NOTE :- THE FOLLOWING ASSUMPTIONS ARE MADE:

Power factor	0.85	Average supply hour/day.	23
Average Purchase Rate	4.84	Average Sale Rate	6.72
Load Growth per annum	10%	Depreciation of Project in Years	17

The total units saved in line loss and units required as per load is provided by Director Project office



-58-

## FINANCIAL ANALYSIS

**Project** Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line

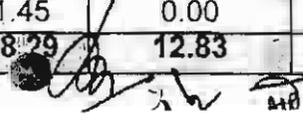
IRR 32.30%

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ( )
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	25.73		3% of capex							
	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)						
1	2	3	4	5	6	7	8	10	11	12
2023-2024	4.63	0.00	0.00	0.00	4.63	0.00	-4.63	-4.63	1.00	-4.63
2024-2025	3.09	0.00	0.00	0.00	3.09	0.00	-3.09	-3.09	0.76	-2.33
1	0.00	0.00	0.77	1.71	2.48	4.65	2.17	2.17	0.57	1.24
2	0.00	0.00	0.80	1.71	2.51	5.00	2.49	2.49	0.43	1.07
3	0.00	0.00	0.83	1.71	2.55	5.39	2.84	2.84	0.33	0.93
4	0.00	1.80	0.87	1.54	4.21	5.82	1.61	1.61	0.25	0.40
5	0.00	1.80	0.90	1.37	4.07	6.29	2.21	2.21	0.19	0.41
6	0.00	1.80	0.94	1.20	3.94	6.80	2.87	2.87	0.14	0.40
7	0.00	1.80	0.98	1.03	3.80	7.37	3.57	3.57	0.11	0.38
8	0.00	1.80	1.02	0.86	3.67	8.00	4.33	4.33	0.08	0.35
9	0.00	1.80	1.06	0.68	3.54	8.69	5.14	5.14	0.06	0.31
10	0.00	1.80	1.10	0.51	3.41	9.44	6.03	6.03	0.05	0.28
11	0.00	1.80	1.14	0.34	3.29	10.28	6.99	6.99	0.03	0.24
12	0.00	1.80	1.19	0.17	3.16	11.19	8.03	8.03	0.03	0.21
13	0.00	1.80	1.24	0.00	3.04	12.20	9.16	9.16	0.02	0.18
14	0.00	0.00	1.29	0.00	1.29	13.31	12.02	12.02	0.02	0.18
15	0.00	0.00	1.34	0.00	1.34	14.53	13.19	13.19	0.01	0.15
16	0.00	0.00	1.39	0.00	1.39	15.87	14.48	14.48	0.01	0.12
17	0.00	0.00	1.45	0.00	1.45	17.34	15.90	15.90	0.01	0.10
<b>TOTAL</b>	<b>7.72</b>	<b>18.01</b>	<b>18.29</b>	<b>12.83</b>	<b>56.86</b>	<b>162.15</b>	<b>105.29</b>	<b>105.29</b>		<b>0.00</b>
							<b>IRR</b>	<b>32.30%</b>		

59

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100



### Calculation of Cost Benefit Analysis

**Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line**

Total cost of project (Rs) -	25,73,05,799.35
Anticipated new load (in amp.)	163
Anticipated Transferred load (In amp.)	120
Anticipated New+Transferred load (In amp.)	283
Load Growth per annum	10%

Year	Anticipated new load in KVA	Total Anticipated Load in KVA	Total Units (BXP.F.XSupply hrs.per dayXdays in year Less AT&C)	Total cost of energy billed to UPCL (Rs.)	loss saving (units)	Total Revenue generated by UPCL (Rs.)	O&M charges @3% (Rs.)	Depericiation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Interest@ 9.50 % (Rs. In lakhs)	Net profit after intt (Rs.)
A			B	C	D	E	F	G	H=E-C-F-G	I	J=H-I
1st	3105	5392	18780516	9,08,97,695	1662908	13,73,79,806	77,19,174	1,36,22,072	2,51,40,865	1,71,10,835.66	80,30,029.65
2nd	3416	5702	20658567	9,99,87,465	1662908	15,00,00,313	80,27,941	1,36,22,072	2,83,62,835	1,71,10,835.66	1,12,51,999.61
3rd	3758	6044	22724424	10,99,86,211	1662908	16,38,82,870	83,49,059	1,36,22,072	3,19,25,528	1,71,10,835.66	1,48,14,692.59
4th	4133	6420	24996866	12,09,84,832	1662908	17,91,53,683	86,83,021	1,36,22,072	3,58,63,758	1,53,99,752.09	2,04,64,005.50
5th	4547	6833	27496553	13,30,83,316	1662908	19,59,51,577	90,30,342	1,36,22,072	4,02,15,848	1,36,88,668.53	2,65,27,179.07
6th	5001	7288	30246208	14,63,91,647	1662908	21,44,29,260	93,91,555	1,36,22,072	4,50,23,986	1,19,77,584.96	3,30,46,400.90
7th	5502	7788	33270829	16,10,30,812	1662908	23,47,54,712	97,67,218	1,36,22,072	5,03,34,611	1,02,66,501.39	4,00,68,109.38
8th	6052	8338	36597912	17,71,33,893	1662908	25,71,12,709	1,01,57,906	1,36,22,072	5,61,98,838	85,55,417.83	4,76,43,420.07
9th	6657	8943	40257703	19,48,47,283	1662908	28,17,06,506	1,05,64,223	1,36,22,072	6,26,72,929	68,44,334.26	5,58,28,594.81
10th	7323	9609	44283473	21,43,32,011	1662908	30,87,59,682	1,09,86,792	1,36,22,072	6,98,18,808	51,33,250.70	6,46,85,557.63
11th	8055	10341	48711821	23,57,65,212	1662908	33,85,18,176	1,14,26,263	1,36,22,072	7,77,04,630	34,22,167.13	7,42,82,462.52
12th	8860	11147	53583003	25,93,41,733	1662908	37,12,52,520	1,18,83,314	1,36,22,072	8,64,05,401	17,11,083.57	8,46,94,317.84
13th	9746	12033	58941303	28,52,75,906	1662908	40,72,60,298	1,23,58,646	1,36,22,072	9,60,03,673	-	9,60,03,673.36
14th	10721	13007	64835433	31,38,03,497	1662908	44,68,68,853	1,28,52,992	1,36,22,072	10,65,90,292	-	10,65,90,292.47
15th	11793	14079	71318977	34,51,83,847	1662908	49,04,38,264	1,33,67,112	1,36,22,072	11,82,65,234	-	11,82,65,234.24
16th	12972	15259	78450874	37,97,02,231	1662908	53,83,64,617	1,39,01,796	1,36,22,072	13,11,38,517	-	13,11,38,517.37
17th	14270	16556	86295962	41,76,72,454	1662908	59,10,83,604	1,44,57,868	1,36,22,072	14,53,31,210	-	14,53,31,209.88
										<b>Total benefit</b>	<b>1078665696.89</b>
										<b>Total cost of Project (Cr.):</b>	<b>257305799.35</b>

Return on Investment (assuming consistent profitability and efficiency ratios) (Rs. In Lakh)	
Cost =	257305799.35
Annual Profit	63450923.35
Annual ROI =	24.66

1. Average Purchase rate has been considered as Rs.4.84/kWh.
2. Average selling rate has been considered as Rs. 6.72/Unit.
3. Cost of project is Rs 2481.58 Lakhs with out IDC intimated by project wing



**Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line**

**Calculation of IDC**

1. IDC rate 9.50% Compounded annually  
 2. Drawl Schedule:

1st Year 40.00%  
 2nd Year 60.00%

S.No.	Project Description	Project Cost (in Cr.)	Loan (In Cr.)	Equity (In Cr.)	Average Drawl (in Cr)	Cum. Drawl (in Cr)	F.Y.- 2023-24	F.Y.- 2024-25	Total IDC (Rs. in Cr.)
1	Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line	24.74	17.32	7.42			F.Y.- 2023-24	F.Y.- 2024-25	
			6.93		3.46	6.93	0.16	0.33	0.49
			10.39		5.20	17.32	-	0.49	0.49
<b>TOTAL</b>			<b>17.32</b>		<b>8.66</b>		<b>0.16</b>	<b>0.82</b>	<b>0.99</b>

**Notes:**

IDC is calculated for (12 months)  
 Rate of interest for calculation of IDC has been considered @9.5%

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-19-

Weighted Average Cost of Capital (WACC)		
Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhiwala, Bhagwanpur (Haridwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalalpur line		
% of Return on Equity		16.50
% of interest on Loan		9.50
Ratio of Equity % of total Cost		30
Ratio of Loan % of Total Cost		70
WACC is :-		
On Equity	30 * 16.5%	4.95
On Loan	70 * 9.5%	6.65
Total WACC		11.60%

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Summary of Financial Analysis		
S.N.	Financial Analysis	Values
1	Pay back Period	7 year 6 days
2	Internal Rate of return (%)	32.30%
3	Return on Investment (%)	24.66%
4	Return on Equity (%)	16.50%
5	Weighted Avg. Cost of Capital (%)	11.60%
6	Interest During Construction (in Cr.)	0.99

The image contains several handwritten signatures and initials. At the top, there are three black ink signatures. Below them, there are three blue ink signatures. To the right, there are some blue ink initials.

Annual Financial Cost Sheet

Construction of 2x2.15 MVA, 33/11 kV S/s at Lodhwala, Bhagwanpur (Hardwar) and its associated 33 kV line (2 Km. U/G + 10 Km. O/H) & 33 kV "Bay" at 33/11 kV S/s Dada Jalajpur line

Years	Principal Repay	Current Principal Repay	Principal Reducing	Interest	Depreciation @ 5.28%	O&M@3% of capex for first year (thereafter 4% annual inflation)	Total Revenue (Units)	Total Revenue (Rs.)	Purchase Cost (Rs.)	Net Revenue	Annual Financial Cost (Rs.)	Excluding
A	B	C	D	E	F	G	H	I	J	K	L	M
							(Taken from RCI)	(M=6.72 Rs./U)	(R=101.70, L=2.24 Rs./U)		(Rs./KVA)	
1	0.00	0.00	180114059.55	17110835.66	13622071.73	7719173.98	20443423.56	137379806.33	90897695.32	46482111.01	38452081.37	8030029.65
2	0.00	0.00	180114059.55	17110835.66	13622071.73	8027940.94	22321475.12	150000312.79	99987464.85	50012847.94	38760848.33	11251999.61
3	0.00	0.00	180114059.55	17110835.66	13622071.73	8349058.58	24387331.83	163882869.89	109986211.33	53896658.56	39081965.96	14814692.59
4	18011405.95	18011405.95	162102653.59	15399752.09	13622071.73	8683020.92	26659774.21	179153682.70	120984832.46	58168850.24	37704844.74	20464005.50
5	18011405.95	36022811.91	144091247.64	13688668.53	13622071.73	9030341.76	29159460.83	195951576.80	137083331.57	62868261.09	36341082.01	26527179.07
6	18011405.95	54034217.86	126079841.68	11977584.96	13622071.73	9391555.43	31909116.12	214429260.30	146391647.28	68037613.02	34991212.12	33046400.90
7	18011405.95	72045623.82	108068435.73	10266501.39	13622071.73	9767217.64	34933736.93	234754712.15	161030812.01	73723900.14	33655790.77	40068109.38
8	18011405.95	90057029.77	90057029.77	8555417.83	13622071.73	10157906.35	38260819.82	257112709.19	177133893.21	79978815.98	32335395.91	47643420.07
9	18011405.95	108068435.73	72045623.82	6844334.26	13622071.73	10564222.60	41920611.00	281706505.94	194447282.53	86859223.41	31030628.60	55828594.81
10	18011405.95	126079841.68	54034217.86	5133250.70	13622071.73	10986791.51	45946381.30	308759682.36	214332010.79	94427671.57	29742113.91	64685557.63
11	18011405.95	144091247.64	36022811.91	3422167.13	13622071.73	11426263.17	50374728.63	338518176.42	235765211.86	102752964.55	28470502.03	74282462.52
12	18011405.95	162102653.59	18011405.95	1711083.57	13622071.73	11883313.70	55245910.70	371252519.88	259541733.05	111910786.83	27216468.99	84694317.84
13	18011405.95	180114059.55	0.00	0.00	13622071.73	12358646.24	60604210.97	407260297.69	285275906.36	121984391.34	25980717.97	96003673.36
14					13622071.73	12852992.09	66498341.26	446868853.29	313803496.99	133065356.29	26475063.82	106590292.47
15					13622071.73	13367111.78	72981884.59	490438264.44	345183846.69	145254417.75	26989183.51	118265234.24
16					13622071.73	13901796.25	80113782.25	538364616.71	379702231.36	158662385.35	27523867.98	131138517.37
17					13622071.73	14457868.10	87958869.67	591083604.20	417672454.50	173411149.70	35079939.89	145331209.88
Total	18,01,14,059.55	18,01,14,059.55		12,83,31,267.43	23,15,75,219.42	18,29,25,221.04	78,97,19,858.70	5,30,69,17,451.07	3,68,54,20,046.51	1,62,14,97,404.77	54,28,31,707.88	1,07,86,65,696.89

Capex	257305799.35
Equity	77191739.81
Debt	180114059.55
Capex excluding Land	257305799.35
Interest %	9.50%
Depreciation %	5.28%
Depreciation Amount Upto 90%	231575219.42
Principal to Repay	10 years
Average Purchase Rate (Rs. per unit)	4.84
Average Sale Rate (Rs. per unit)	6.72

Adrian

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-64-

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ABSTRACT OF DETAILED ESTIMATE

Construction of 2x5 MVA, 33/11 kV S/s at Pakhi, Dist-Chamoli and its associated 33 kV & 11 kV Line

	Amount in Rs.
1 Base Cost	8,90,43,006.32
Sub TOTAL	8,90,43,006.32
2 Contengency @ 3%	26,71,290.19
3 Centage charges @15% changes to 2.5% as per md order no. 741 dt.01.02.2025	22,92,857.41
4 Labour Cess@ 1%	7,03,196.14
5 Electrical Inspector Fees	29,560.00
6 Road Permission	0.00
7 Cost of land	0.00
8 TOTAL (Rs.)	9,47,39,910.07
9 Cost	9,47,39,910.1
10 IDC	56,70,183.62
11 TOTAL (Rs.)	10,04,10,093.68
TOTAL(Rs. In Cr.)	10.04

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36

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ANNEXURE-A5

**Construction of 2x5 MVA, 33/11 kV S/s at Pakhi, Dist-Chamoli and its associated 33 kV & 11 kV Line**

**Calculation of IDC**

1. IDC rate 9.50% Compounded annually  
 2. Drawl Schedule:

1st Year 40.00%  
 2nd Year 60.00%

S.No.	Project Description	Project Cost (in Cr.)	Loan (In Cr.)	Equity (In Cr.)	Average Drawl (in Cr)	Cum. Drawl (in Cr)	Fin. Year	Fin. Year	Total IDC (Rs. in Cr.)
1	Construction of 2x5 MVA, 33/11 kV S/s at Pakhi, Dist-Chamoli and its associated 33 kV & 11 kV Line	9.47	6.63	2.84			2025-26	2026-27	
			2.65		1.33	2.65	0.13	0.25	0.38
			3.98		1.99	6.63	-	0.19	0.19
		<b>TOTAL</b>		<b>6.63</b>		<b>3.32</b>		<b>0.13</b>	<b>0.44</b>

-99-

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*Handwritten notes: 1/50, 1/10, 1/10*

**Calculation of Cost Benefit Analysis**  
**Construction of 2x5 MVA, 33/11 kV S/s at Pakh, Dist-Chamoli and its associated 33 kV & 11 kV Line**

Total cost of project (Rs)	10,04,10,093.68	Annual Units generated in 1st Year	58,16,309
Anticipated new load (in amp.)	41	Avg. Purchase Cost	5.44
Anticipated Transferred load (in amp.)	97	Avg. Selling Rate	7.67
Anticipated New+Transferred load (in amp.)	138	Power Factor	0.85
Load Growth per annum	5%	Line Loss	14.85%

Year	Total Units (Less AT&C Losses @ 14.85%)	Total cost of energy billed to UPCL (Rs.)	loss saving (units)	Total Revenue generated by UPCL (Rs.)	O&M charges @ 3% (Rs.)	Depreciation (assuming 17 yrs of useful life) (Rs.)	Profit before intt generated annually (Rs.)	Interest @ 6.50% (Rs. In lakhs)	Net profit after intt (Rs.)	Cash profit after tax (Rs.)	Cash profit after tax (Rs. In Cr.)	Cumulative Cash Profit (Rs. In Cr.)
A	B	C	D	E	F	G	H= E-C-F-G	I	J= H-I	K= J+G	L	M
1st	4952587	2,69,42,073	1246861	4,75,49,766	30,12,303	53,15,828	1,22,79,562	1,16,47,570.87	6,31,990.72	59,47,819.21	0.59	0.59
2nd	5200216	2,82,89,177	1246861	4,94,49,083	31,32,795	53,15,828	1,27,11,283	1,03,12,116.62	23,99,166.31	77,14,994.80	0.77	1.37
3rd	5460227	2,97,03,636	1246861	5,14,43,366	32,58,107	53,15,828	1,31,65,795	96,44,389.50	35,21,405.76	88,37,254.25	0.88	2.25
4th	5733239	3,11,88,818	1246861	5,35,37,363	33,88,431	53,15,828	1,36,44,286	89,76,662.58	46,67,623.94	99,83,452.43	1.00	3.25
5th	6019900	3,27,48,258	1246861	5,57,36,060	35,23,968	53,15,828	1,41,48,005	83,08,935.25	58,39,069.92	1,11,54,898.41	1.12	4.36
6th	6320895	3,43,85,671	1246861	5,80,44,692	36,64,927	53,15,828	1,46,78,265	76,41,208.13	70,37,057.22	1,23,52,885.70	1.24	5.60
7th	6636940	3,61,04,955	1246861	6,04,68,756	38,11,524	53,15,828	1,52,36,448	69,73,481.01	82,62,967.11	1,35,78,795.60	1.36	6.96
8th	6968787	3,79,10,203	1246861	6,30,14,022	39,63,985	53,15,828	1,58,24,006	63,05,753.88	95,18,252.11	1,48,34,080.60	1.48	8.44
9th	7317227	3,98,05,713	1246861	6,56,86,552	41,22,544	53,15,828	1,64,42,466	56,38,026.76	1,08,04,439.61	1,61,20,268.10	1.61	10.05
10th	7683088	4,17,95,999	1246861	6,84,92,709	42,87,446	53,15,828	1,70,93,435	-	1,70,93,435.36	2,24,09,263.85	2.24	12.29
11th	8067242	4,38,85,798	1246861	7,14,39,173	44,58,944	53,15,828	1,77,78,602	-	1,77,78,601.82	2,30,94,430.31	2.31	14.60
12th	8470604	4,60,80,088	1246861	7,45,32,960	46,37,302	53,15,828	1,84,99,742	-	1,84,99,741.59	2,38,15,570.08	2.38	16.98
13th	8894135	4,85,34,093	1246861	7,77,81,437	48,22,794	53,15,828	1,92,58,722	-	1,92,58,721.92	2,45,74,550.40	2.46	19.44
14th	9338841	5,08,05,297	1246861	8,11,92,338	50,15,706	53,15,828	2,00,57,506	-	2,00,57,506.18	2,53,73,334.67	2.54	21.98
15th	9805784	5,33,45,462	1246861	8,47,73,783	52,16,334	53,15,828	2,08,98,159	-	2,08,98,158.78	2,62,13,987.27	2.62	24.60
16th	10296073	5,60,10,635	1246861	8,85,34,301	54,24,987	53,15,828	2,17,82,850	-	2,17,82,850.28	2,70,98,678.77	2.71	27.31
17th	10810876	5,88,11,167	1246861	9,24,82,845	56,41,987	53,15,828	2,27,13,863	-	2,27,13,862.90	2,80,29,691.59	2.80	30.11
18th	11351420	6,17,51,726	1246861	9,66,28,816	58,67,666	0	2,90,09,425	-	2,90,09,424.63	2,90,09,424.63	2.90	33.01
19th	11918991	6,48,39,312	1246861	10,09,82,086	61,02,373	0	3,00,40,401	-	3,00,40,401.33	3,00,40,401.33	3.00	36.02
20th	12514941	6,80,81,277	1246861	10,55,53,019	63,46,468	0	3,11,25,274	-	3,11,25,273.93	3,11,25,273.93	3.11	39.13
21st	13140688	7,14,85,341	1246861	11,05,52,499	66,00,326	0	3,22,66,831	-	3,22,66,831.11	3,22,66,831.11	3.23	42.36
22nd	13797722	7,50,59,608	1246861	11,58,91,953	68,64,339	0	3,34,68,005	-	3,34,68,004.74	3,34,68,004.74	3.35	45.70
23rd	14487608	7,88,12,589	1246861	12,06,83,379	71,38,913	0	3,47,51,877	-	3,47,51,877.18	3,47,51,877.18	3.47	49.18
24th	15211989	8,27,53,218	1246861	12,62,39,577	74,24,470	0	3,60,61,689	-	3,60,61,688.97	3,60,61,688.97	3.61	52.78
25th	15972588	8,68,90,879	1246861	13,20,73,174	77,21,448	0	3,74,60,847	-	3,74,60,846.92	3,74,60,846.92	3.75	56.53
Total benefit									21,07,64,851.52	56,52,98,784.67	56.53	0.00
Total Cost (in Rs.)									10,04,10,093.68			
Avg. Annual Profit (Rs.)									84,30,594.06			
Annual Return on Investment									8.40%			
Pay Back Period									9 Years			

38

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**FINANCIAL ANALYSIS**

Construction of 2x5 MVA, 33/11 kV S/s at Pakhi, Dist-Chamoli and its associated 33 kV & 11 kV Line

IRR 19.90%

Year Ending 31st March	Construction Cost				Total Cost	Net Revenue	Net financial benefits	Net financial benefits after tax	Discounted value of Rs. 1 @ FIRR	Discounted value of the investment and inflows ( )
	Capital expenditure		O&M Cost	Interest on Outstanding Loan						
	Equity	Loan Repayment								
	10.04		3% of capex							
	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)						
1	2	3	4	5	6	7	8	10	11	12
2025-26	1.81	0.00	0.00	0.00	1.81	0.00	-1.81	-1.81	1.00	-1.81
2026-27	1.20	0.00	0.00	0.00	1.20	0.00	-1.20	-1.20	0.83	-1.00
1	0.00	0.70	0.30	1.16	2.17	2.06	-0.11	-0.11	0.70	-0.08
2	0.00	0.70	0.31	1.03	2.05	2.12	0.07	0.07	0.58	0.04
3	0.00	0.70	0.33	0.96	1.99	2.17	0.18	0.18	0.48	0.09
4	0.00	0.70	0.34	0.90	1.94	2.23	0.30	0.30	0.40	0.12
5	0.00	0.70	0.35	0.83	1.89	2.30	0.41	0.41	0.34	0.14
6	0.00	0.70	0.37	0.76	1.83	2.37	0.53	0.53	0.28	0.15
7	0.00	0.70	0.38	0.70	1.78	2.44	0.66	0.66	0.23	0.15
8	0.00	0.70	0.40	0.63	1.73	2.51	0.78	0.78	0.20	0.15
9	0.00	0.70	0.41	0.56	1.68	2.59	0.91	0.91	0.16	0.15
10	0.00	0.70	0.43	0.00	1.13	2.67	1.54	1.54	0.14	0.21
11	0.00	0.00	0.45	0.00	0.45	2.76	2.31	2.31	0.11	0.26
12	0.00	0.00	0.46	0.00	0.46	2.85	2.38	2.38	0.09	0.23
13	0.00	0.00	0.48	0.00	0.48	2.94	2.46	2.46	0.08	0.19
14	0.00	0.00	0.50	0.00	0.50	3.04	2.54	2.54	0.07	0.17
15	0.00	0.00	0.52	0.00	0.52	3.14	2.62	2.62	0.05	0.14
16	0.00	0.00	0.54	0.00	0.54	3.25	2.71	2.71	0.05	0.12
17	0.00	0.00	0.56	0.00	0.56	3.37	2.80	2.80	0.04	0.11
18	0.00	0.00	0.59	0.00	0.59	3.49	2.90	2.90	0.03	0.09
19	0.00	0.00	0.61	0.00	0.61	3.61	3.00	3.00	0.03	0.08
20	0.00	0.00	0.63	0.00	0.63	3.75	3.11	3.11	0.02	0.07
21	0.00	0.00	0.66	0.00	0.66	3.89	3.23	3.23	0.02	0.06
22	0.00	0.00	0.69	0.00	0.69	4.03	3.35	3.35	0.02	0.05
23	0.00	0.00	0.71	0.00	0.71	4.19	3.47	3.47	0.01	0.04
24	0.00	0.00	0.74	0.00	0.74	4.35	3.61	3.61	0.01	0.04
25	0.00	0.00	0.77	0.00	0.77	4.52	3.75	3.75	0.01	0.03
<b>TOTAL</b>	<b>3.01</b>	<b>7.03</b>	<b>12.55</b>	<b>7.54</b>	<b>30.13</b>	<b>76.62</b>	<b>46.49</b>	<b>46.49</b>		<b>0.00</b>
							<b>IRR</b>	<b>19.90%</b>		

-89-

(89)

89

89

Annual Financial Cost Sheet

Construction of 2x5 MVA, 33/11 KV S/S at Pakhl, Dist-Chamoli and its associated 33 KV & 11 KV Line

Years	Principal Repay	Comm Principal Repay	Principal Reducing	Interest	Depreciation @ 5.25%	O&M@3% of capex for first year thereafter 4% annual inflation	Total Revenue (Units)	Total Revenue (Rs.)	Purchase Cost (Rs.)	Net Revenue	Annual Financial Cost (Rs.)	Earning
A	B	C	D	E	F	G	H	I	J	K	L	M
1	7028706.56	7028706.56	7028706.56	11647570.87	5315828.49	3012302.81	6199448.00	47549766.19	26942075.30	20607692.89	19975702.17	631990.72
2	7028706.56	14057413.12	56229652.46	10312116.62	5315828.49	3132794.92	6447077.55	49449085.31	28289176.97	21159906.34	18760740.03	2399166.31
3	7028706.56	21086119.67	49260945.91	9644389.50	5315828.49	3258106.72	6707088.17	51443366.28	29703635.82	21739730.46	18218324.71	3521405.76
4	7028706.56	28114826.23	42172239.35	8976662.38	5315828.49	3388430.99	6980099.53	55557365.40	31188817.61	22348545.79	17680921.85	4667623.94
5	7028706.56	35143532.79	35143532.79	8308955.25	5315828.49	3523968.25	7266761.46	55736060.38	32748258.49	22987801.89	17148731.97	5839069.92
6	7028706.56	42172239.35	28114826.23	7641208.13	5315828.49	3664926.96	7567756.48	58044692.21	34385671.41	23659020.79	16621963.58	7037057.22
7	7028706.56	49200945.91	21086119.67	6973481.01	5315828.49	3811524.04	7885801.25	60468755.82	36104954.98	24563800.64	16100833.53	8262967.11
8	7028706.56	56229652.46	14057413.12	6305753.88	5315828.49	3963985.00	8215648.27	63014022.21	37910202.73	25105819.48	15585567.57	9518252.11
9	7028706.56	63258359.02	7028706.56	5638026.76	5315828.49	4122544.40	8564087.65	65686552.13	39805712.87	25880839.26	15076399.65	10804439.61
10	7028706.56	70287065.58	0.00		5315828.49	4287446.17	8929948.96	68492708.54	41795998.51	26696710.03	9603274.66	17093435.36
11					5315828.49	4458944.02	9314103.36	71459172.77	43885798.44	27553374.53	9774772.51	17778601.82
12					5315828.49	4637501.78	9717465.48	74532960.22	46080088.36	28452871.86	9953150.27	18499741.59
13					5315828.49	4827953.85	10140995.70	77781437.04	48584092.78	29397344.26	10138622.54	19248721.92
14					5315828.49	5015705.61	10585702.44	81192537.69	50805297.42	30389040.28	10331534.09	20057506.18
15					5315828.49	5216333.83	11052644.51	84773783.39	53343462.29	31450521.10	10532162.32	20898158.78
16					5315828.49	5424987.18	11542933.68	88534301.56	56010655.40	32523665.96	10740815.67	21782850.28
17					5315828.49	5641986.67	12057737.32	92482845.24	58811167.17	33671678.06	10957815.16	22713862.90
18					0.00	5867666.14	12598281.15	96628816.30	61751725.53	34877090.77	5867666.14	29009424.63
19					0.00	6102372.78	13165852.14	100982085.95	64839311.81	36142774.12	6102372.78	3004401.33
20					0.00	6346467.69	13761801.70	105550109.05	68081277.40	37471741.63	6346467.69	31125273.93
21					0.00	6600326.40	14387548.73	110552498.79	71485341.27	38867157.52	6600326.40	32266831.11
22					0.00	6864339.46	15044583.12	115391952.53	75059608.33	40552344.20	6864339.46	33468004.74
23					0.00	7138913.04	15734469.23	120683378.97	78812588.75	41870790.21	7138913.04	34731877.18
24					0.00	7424469.56	16458849.64	126239576.12	82753218.19	43486158.53	7424469.56	36061688.97
25					0.00	7721448.34	17219419.07	132073174.36	86890879.10	45182295.26	7721448.34	37460546.92
Total	7,02,87,065.58			7,54,48,144.39	9,08,69,084.32	12,54,50,086.58	14,91,73,299.61	2,05,20,63,510.61	1,28,58,66,994.97	76,61,96,515.64	29,12,67,315.29	47,49,29,200.35

Capex	100410095.68
Equip	30123028.11
Debt	70287065.58
Capex	100410095.68
Interest %	9.50%
Dividend %	16.50%
Depreciation %	5.25%
Depreciation Amount Upto 90%	90369084.32
Principal to Repay (in Years)	10
Average Purchase Rate (Rs.per unit)	5.44
Average Sale Rate (Rs.per unit)	7.67

-69-

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Handwritten signature 'Dra'.

Handwritten initials 'MD' in a circle.

Handwritten signatures 'Dra' and 'Dra'.

Handwritten signature 'Dra'.

Weighted Average Cost of Capital (WACC)		
Construction of 2x5 MVA, 33/11 kV S/s at Pakhi, Dist-Chamoli and its associated 33 kV & 11 kV Line		
% of Return on Equity		16.50
% of interest on Loan		6.50
Ratio of Equity % of Total Cost		30%
Ratio of Loan % of Total Cost		70%
WACC is :-		
On Equity	30*16.50%	4.95
On Loan	70*9.50%	6.65
Total WACC		<b>11.60%</b>

(41)

Summary of Financial Analysis		
Construction of 2x5 MVA, 33/11 kV S/s at Pakh, Dist-Chamoli and Its associated 33 kV & 11 kV Line		
S.N.	Financial Analysis	Values
1	Pay back Period	9 Years
2	Internal Rate of return (%)	19.90%
3	Return on Investment (%)	8.40%
4	Return on Equity (%)	16.50%
5	Weighted Avg. Cost of Capital (%)	11.60%
6	Interest Durlng Construction (In Cr.)	0.57

(42)



Circular: IEX/MEM/1692/2024

Date: 12<sup>th</sup> August 2024

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**Sub: REC Transaction fee**

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Dear Members,

In pursuance of Rules, Bye-Laws and Business Rules of the Exchange, and taking into account the present market conditions in the Renewable Energy Certificate (REC) market, Members are hereby informed that the REC transaction fee will be Rs. 10/REC on either side of transaction with immediate effect and shall remain valid up to 31<sup>st</sup> March 2025.

All Members and Clients are requested to take note of the same.

For and on behalf of Indian Energy Exchange Limited

Sd/-  
Amit Kumar  
Executive Director  
(Market Operations)

A large, stylized handwritten signature in blue ink, appearing to be "Amit Kumar".

Amit

**Power Exchange India Limited**  
**CIRCULAR**

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**Circular No** : PXIL/ Membership/2024-2025/445  
**Date of Issue** : September 09, 2024  
**Subject** : Revision of PXIL Transaction Fee for REC Segment from Rs. 20 to Rs. 10.

Dear Member (s),

We are pleased to inform that the transactions fees for Renewable Energy Certificate (REC) segment have been revised from Rs. 20 per Certificate to Rs. 10 per Certificate on either side of transaction (Buy and Sell).

The applicable revised transaction fee is given in the table below:

<b>Product</b>	<b>Current Transaction fee</b>	<b>Revised Transaction fee Effective from 11-09-2024</b>
Renewable Energy Certificate	Rs. 20 per Certificate	Rs. 10 per Certificate

The revised transaction fee will be effective from trading day September 11, 2024. All the members are kindly requested to take note of the same.

For further details or any other assistance, feel free to get in touch with Membership Department on below contact details:

Tel No: - +91-22-40096654/43 Email: - clearing.settlement@pxil.co.in

**For and on behalf of**  
**Power Exchange India Limited**

Sd/-  
**Mukti Marchino**  
VP & Head (Market Operations, Membership and Clearing & Settlement)

  
- 73 -



Circular No: IEX/MO/2010/2041

Date: 08 April 2025

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## REC Transaction Fee

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Dear Members,

In pursuance of Rules, Byelaws and Business Rules of the Exchange, the members may kindly note the following: -

This is in reference to our earlier circular no. IEX/MEM/1692/2024 dated 12 August 2024, regarding REC transaction fee applicable for clients participating in REC segment till 31 March 2025. Considering the present market conditions in the Renewable Energy Certificate (REC) Market, IEX is pleased to inform you that the transaction fee of Rs.10/REC on either side of transactions is further extended till bid date 31 March 2026.

For and on Behalf of Indian Energy Exchange Limited.

**For and on behalf of  
Indian Energy Exchange Limited**

(Sd\)-  
**Amit Kumar**  
Executive Director  
(Market Operations)

----- Corporate office -----  
Indian Energy Exchange Limited  
Plot No. C-001/A/1, 9th Floor, Max Towers, Sector 16B, Noida, Uttar Pradesh-201301  
Phone: 0120 - 4648100 | [www.iexindia.com](http://www.iexindia.com)  
CIN: L74999DL2007PLC277039

*SK*

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*10/04*



# उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

## Uttarakhand Power Corporation Ltd.

(A Govt of Uttarakhand Undertaking)

CIN : U40109UR2001SGC025067

Email ID: cgmpocl@yahoo.com, Website: www.upcl.org

Letter No. /- / /CE(Contrl.)/UPCL/REC

Date: /03/2024

Shri Anupam Vadehra,  
Assistant Vice President-BD,  
PTC India Limited,  
2<sup>nd</sup> Floor, NBCC Tower,  
15 Bhikaji Place, Conna Place,  
New Delhi-110066

Sub: Regarding Letter of Award for Bilateral Sale of Renewable Energy Certificates (RECs) with PTC India Limited.

Regarding above mentioned subject, it is to inform that UPCL accepts to trade RECs bilaterally with PTC India Limited on the Terms & Conditions as mentioned below:

- Reference price (R):** Price discovered in last trading session of power exchange would be the reference price for UPCL. Considering multiple power exchanges, the exchange with highest volume shall be taken as the reference.
- Incentive offered by Exchange (I):** Any incentive offered by Exchange to UPCL for trading of REC's in Exchange in the last trading session shall be applicable to UPCL for bilateral trading with PTC India limited.
- Trading charges of PTC (T):** PTC's trading charges for providing such services shall be Eighteen (18) Rupees per REC transacted. (Calculated as Exchange Transaction Charges (Rs. 20/-) minus Incentive by Exchange to UPCL (assuming Rs. 2/-)).
- Effective Trading charges payable by UPCL to PTC (Te)-** If Transaction charges of Exchange i.e Rs.20 minus Incentive offered by exchange (if any) is less then Rs.18 per REC, in that case effective Trading Charges payable to PTC shall be these charges rather than Rs. 18 per REC.
- Bilateral REC Trade Value:** Calculation of Price of REC(s) for sale from UPCL to PTC on bilateral basis:  
$$(P) = (R) - (T \text{ or } Te)$$
- For sale of REC, by UPCL, PTC shall send a transaction report to UPCL through e-mail based on the above Price (P) and volume of REC sold and the details of the buyers ( Name, GST Number & any other relevant information) within 2 days of transaction so that GST invoice can be generated by UPCL as per the terms & conditions mentioned herein.
- Due Date**

Amount due to UPCL shall be remitted in UPCL current account No. (to be intimated separately) by PTC through electronic transfer within two (2) working days of issue of invoice from UPCL.



## उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

### Uttarakhand Power Corporation Ltd.

(A. Govt. of Uttarakhand Undertaking)

CIN : U40109UR2001SGC025867

Email ID: cgmupcl@yahoo.com, Website: www.upcl.org

#### 8. PAYMENT SECURITY MECHANISM (Letter of Credit):

- (a) PTC India Limited will open a Letter of Credit (LC) with a public sector bank/ scheduled bank prior to the commencement of trading of RECs with UPCL which would be exercised by the UPCL only in case of default in the payments by the PTC India Limited beyond the due date as mentioned in S.No. 7 All the bank charges for opening/maintaining LC shall be borne by the PTC India Limited.
- (b) The LC shall be kept valid at all the time during the validity of this Agreement. The amount of LC shall be reviewed quarterly and if needed LC may be increased as per the trading volume of RECs.
- (c) The amount of LC during the first year of agreement shall be for an amount equivalent to 105% of the monthly average of the monetary value of 5000 RECs .

#### Illustration:

Number of RECs Traded

Monthly - 5000 no.

Cost Per REC(in Rs.)(F) - Rs. 282

Total Monthly Cost - Rs.(5000\*282)  
(Rs. 14,10,000)

Total Yearly Cost - Rs.(5000\*282\*12)  
(Rs.1,69,20,000)

Amount of LC -  $\{[1,69,20,000/12]*105\}$   
= Rs. 14,80,500.00

- (d) However, after lapse of first year of agreement, LC shall be renewed for an amount equivalent to 105% of the monthly average of the value of 5000 RECs or higher as per the value reviewed on quarterly basis.

#### 9. Force Majeure

Any restriction imposed by NLDC shall be treated as Force Majeure without any liability on either side.

As In case of change in law or restriction imposed by electricity regulator (Central or State) and/or Government (Central or state) and/or Appellate Tribunal on any aspect for sale of REC, the same shall be binding on both the parties.



## उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

### Uttarakhand Power Corporation Ltd.

(A Govt. of Uttarakhand Undertaking)

CIN : U40109UR2001SGC025867

Email ID: cgimupcl@yahoo.com, Website: www.upcl.org

10. PTC/ UPCL shall not be liable for any Compensation or Penalty under any circumstances under this Agreement.

11. Any disputes or difference, arising under, out of, or in connection with this agreement shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications thereto. Notwithstanding the existence of any disputes and differences referred to arbitration, the parties hereto shall continue to perform their respective obligations under this Agreement.

The decision of the Arbitrator shall be subject to the exclusive jurisdiction of High Court of Uttarakhand at Nainital only.

#### 12. Termination of Agreement:

Either Party can terminate this Agreement by giving 30 days notice to the other Party. After the expiry of such notice period, this Agreement shall be terminated and no Party shall be liable for any claims/liabilities arising out of acts/deeds/transactions done by other Party after such termination. However, the Parties shall remain liable for all acts/deeds/transactions undertaken or done before the date of termination of this Agreement.

#### 13. Period of Contract

The contract between PTC India Ltd and UPCL for trading of Bilateral RECs will be valid for a period of 1 year and can further be extended on mutually agreed terms & conditions.

#### 14. Applicability

The terms & conditions of this LoA shall remain applicable only in cases, where transaction charges payable to PTC remains equal to Rs. 18 or less. In case any increment in transaction charges of Exchange results in increase in Trading Charges payable by UPCL to PTC beyond Rs. 18 per REC, in that case PTC shall not be allowed to carry out the transactions of RECs on behalf of UPCL.

#### 15. Acceptance

You are required to send the acceptance of this LoA within 3 working days by signing each and every page along with seal of company on each page.

  
  
  
(D.S. Khafi)  
Chief Engineer (Commercial)



# Certificate of Membership

*This is to certify that*

**Uttarakhand Power Corporation Limited**

*is admitted as a*

**Electricity Proprietary**

*of Indian Energy Exchange Ltd. on*

**26<sup>th</sup> Feb. 2022**

*IEX Membership Code*

**N2UA0UKP0000**

*Given this day under the seal of Indian Energy Exchange Ltd.*

*Place: Noida*

*Date: 20<sup>th</sup> March 2022*



*For Indian Energy Exchange Ltd.*

*Amrit Kumar*  
*(Authorised Signatory)*

This Certificate supersedes the previously issued Membership Certificates, if any.  
This certificate is the property of the Exchange. It should be returned to the Exchange on termination/cancellation of membership.

Pkt No - C-001/A/1, 9th Floor, Max Towers, Sector 16B, Noida, UP-201301, India | Tel: +91-120-4648100 | info@iexindia.com | www.iexindia.com

*SK*

*[Handwritten signature]*

*[Handwritten initials]*



# PXIL

Transforming Power Markets

## MEMBERSHIP CERTIFICATE

*This is to certify that*

**Uttarakhand Power Corporation Limited (UPCL)**

*has been admitted as a*

**Proprietary Member (PM)**

*of*

**Power Exchange India Limited (PXIL)**

*on*

**07<sup>th</sup> March 2022**

*and is entitled to*

*all the rights & privileges*

*associated with the above mentioned*

*Membership category*

**Membership Number: S1046**

*This certificate shall be valid till the Membership  
is continued under the rules of PXIL*

*Authorized signatory*

**07<sup>th</sup> Mar 2022**

*SR*

*[Handwritten initials]*

*105*



# उत्तराखण्ड पावर कारपोरेशन लि०

(उत्तराखण्ड सरकार का उपक्रम)

## Uttarakhand Power Corporation Ltd.

(A Govt. of Uttarakhand Undertaking)

CIN: U40109UR2001SGC025067

Email ID: cgmtupcl@yahoo.com, Website: www.upcl.org

No. 875 /UPCL/Comm/PXIL/Membership

Dated: 02-02-2022

To,

Power Exchange India Limited,  
Sumer Plaza, 9th floor, Unit no - 901,  
Marol Maroshi Road, Andheri(East),  
Mumbai-400 059, India.

Dear Sir/Madam,

Sub: Authorization Letter by Client of AM/ Member applicant

Member Id/ Client Id		AM Name & ID for Client of AM	
Name of Member/Client		UTTARAKHAND POWER CORPORATION LTD.	
Bank Account Number		40400306104	
Bank A/c held in the name of (Beneficiary Name)		UPCL	
Bank Name	S.B.I. MAIN BRANCH	Bank Location (City)	DEHRADUN
Branch Name	MAIN BRANCH	Branch Code	0000030
IFSC code of Bank Branch	SBIN0000630		

I/We hereby applied as Client of Advisory Member (AM)/ Member of Power Exchange India Limited (PXIL), With reference to the financial clearing and settlement of trade obligations generated from the trades executed on PXIL trading platform, we request PXIL to allow us to settle the financial obligation with PXIL through our account specified above directly.

We further confirm to abide by the below mentioned points:

1. The undersigned undertakes that the required amount for financial clearing and settlement of trade obligations generated from the trades executed on PXIL trading platform shall be transferred from the above mentioned account number only to PXIL Margin Account with State Bank of India (SBI), A/c no: 30509215950, IFSC Code: SBIN0011777 in Capital Market Branch, Fort Mumbai- 400001.
2. The undersigned agrees that PXIL shall have a first and paramount lien on deposit or such sums or other sums lying with PXIL for any or all sums due to PXIL arising out of or incidental to any dealings made on PXIL platform.
3. The undersigned also agrees that they shall provide account statement reflecting the transactions with PXIL on request from PXIL.
4. The undersigned indemnifies and keeps indemnified PXIL against any loss/damage suffered by it whether legal or otherwise arising due to the non-compliance of the requested arrangement.
5. We hereby affirm and confirm that all the details provided above are correct. Further, we confirm that we will continue to abide by the Rules, Bye-Laws and Business Rules of PXIL.

Yours faithfully,

(G.S. Kunwar)

Chief Engineer (Commercial)

Uttarakhand Power Corporation Limited

(Kamal Sharma)

Dy. General Manager (Finance)

Uttarakhand Power Corporation Limited