

1.6 SHORT-TERM OPEN ACCESS CHARGES (STOAC)

Proposed Transmission Charges to be recovered from STOAC

STOA Charges	Amount
Transmission Cost for FY 2023-24 (Rs. Million)	24420.33
Unitary Charges (Rs. Million)	506.32
Total Transmission Charges for FY 2022-23(Rs. Million)	24923.17
Total Energy Transmitted by HVPN for FY 2020-21 (MUs)	54949.57
Proposed Charges (Rs. /unit)	0.45

RECOVERY OF SLDC CHARGES FROM SHORT TERM OPEN ACCESS CONSUMERS (STOA)

The petitioner has submitted that the short-term open access consumers will pay a composite SLDC charges as provided in the HERC (Terms and conditions for grant of connectivity and open access for intra-State transmission and distribution system), Regulations, 2019 as amended from time to time.

In view of the above, the petitioner has prayed that this Hon'ble Commission may kindly approve the SLDC Charges for the FY 2024 as proposed in the present petition under consideration.

In conclusion the petitioner herein, i.e. the transmission licensee / STU and also operating the State Load Dispatch Centre (SLDC) at Sewah (Panipat) has proposed to recover 45 Paise / Unit as a single composite transmission charge from the short-term open access consumers drawing power from sources other than the distribution licensee(s) in Haryana under Open Access mechanism as provided in the HERC Open Access Regulations, 2012 including its subsequent amendments.

CHAPTER 2

PROCEDURAL ASPECTS OF THE ARR FILING

2.1 PUBLIC PROCEEDINGS

In compliance of section 64 (2) of the Electricity Act, 2003, the petitioner i.e. HVPNL, published its petition in an abridged form for inviting comments/objections from the stakeholders/ general public. The public notice was issued by the HVPNL in 'The Tribune' (English) dated 26.11.2022 and 'Dainik Tribune' (Hindi) dated 26.11.2022.

Subsequently, the Commission also issued public notice in The Tribune (English) and Dainik Jagran (Hindi) dated 15.12.2022 inviting comments / objections from the stakeholders/general public. The date of public hearing in the matter was also specified therein;

2.2 PUBLIC HEARING

The Commission, in order to afford an opportunity to the stakeholder / interested person to present their case in person, held a public hearing on the petition filed by HVPNL after intimating the date of public hearing in the newspapers. The date of the public hearing was also posted on the website of the Commission under the heading 'Schedule of Hearing'.

The public hearing was held on 11.01.2023 at 03:30PM, as scheduled. The petitioner made a detailed presentation in the hearing and also responded to various queries / clarifications sought by the Hon'ble Commission. Further, in response to the public notice the Commission received objections from the following: -

Sh. Pankaj Bhalotia, R/o Imperial Tower, Sector-82, Faridabad

The issues raised by the above intervener, HVPNL's reply to the same and Commission's view are as follows: -

1. Despite HERC rescinding the HVPNL Memo No. Ch-40/DSO-434/Vol.III/RAU/F-136 dated 04.09.2014 and declaring it Null and Void from the date of its issue vide its decision in **Appeal No. HERC/PRO 8, 10 & 11 of 2015 on 21.09.2015**, the officials of HVPNL are still demanding the share cost under the said Memo No. Ch-40/DSO-434/Vol.III/RAU/F-136 dated 04.09.2014. The apathetic approach of HVPNL towards the electricity consumer is evident and tantamount to lack of knowledge and overlooking the decision of the Hon'ble HERC and various Rules and Regulations in

place by the officials of HVPNL and causing unnecessary harassment, poor service, mental agony etc that despite the said Memo was rescinded and declared as Null and Void by the Hon'ble HERC on 21.09.2015, HVPNL is still continuing and demanding the share cost in terms of said Memo No. Ch-40/DSO-434/Vol.III/RAU/F-136 dated 04.09.2014. The HERC clearly directed in the said Appeal No. **HERC/PRO 8, 10 & 11 of 2015 on 21.09.2015** that the Share Cost shall only and only be payable in terms of provisions of HERC (Duty to supply electricity on request, Power to recover expenditure incurred in providing supply) Regulations, 2005 along with its amendments and not in terms of any other notification/circular/guideline whatsoever of HVPNL or DHBVN.

2. HVPNL, by adding more than one consumer to an existing Independent Feeder by overlooking and contravening the provisions of Regulation 4.8.2 (i) to (ix) of the HERC (Duty to supply electricity on request, Power to recover expenditure incurred in providing supply) Regulations, 2016 along with its amendments. wherein two (2) additional consumers (one on 13.07.2019 and another one in March 2021) were connected to the Independent Feeder of Original Consumer who has actually paid all the charges and get the independent Feeder erected and all work done under self-execution scheme. A second or more consumers can only be connected to an existing Independent Feeder as envisaged in Regulations 4.8.2 (i) to (ix) of the HERC (Duty to supply electricity on request, Power to recover expenditure incurred in providing supply) Regulations, 2016 along with its amendments and not in any other circumstances whatsoever, but officials of HVPNL overlooked and contravened the said Regulation and Procedure in place and allowed adding two (2) more consumers to an existing Independent Feeder of DHBVN Electricity Account No. 2202690000. Not a single regulation between Regulation 4.8.2 (i) to (ix) of the HERC (Duty to supply electricity on request, Power to recover expenditure incurred in providing supply) Regulations, 2016 was followed and complied with while connecting two (2) more consumers to the existing Independent Feeder. Negligence on the part of HVPNL in joining hands with DHBVN and allowed both the connections to get added to the Independent Feeder of original consumer having DHBVN Electricity Account No. 2202690000.

HVPNL View: -

HVPNL, while responding to the above objection, has submitted as under: -

1. On the issue of demanding of share cost, it is submitted that the HVPNL vide memo no. Ch-22/DSO-439/Vol-I/SE/RAU/F-45 dated 20.11.2015 has already withdrawn

the guidelines for recovery of per MVA share cost for releasing of connections from HVPNL substations issued vide memo no. Ch-40/DSO-434/Vol-III/SE/RAU/F-136 dated 04.09.2014 in compliance of the order of Hon'ble Commission dated 21.09.2015.

2. In respect of objection of connection at the existing independent feeder, it is intimated that the issue of connections at an existing 11 kV & 33 kV independent feeder is in the work domain of DISCOMs. HVPNL has nothing to do regarding the issue of connections at an existing 11 kV & 33 kV independent feeder.
3. All HERC Regulations including HERC (Duty to supply electricity on request, Power to recover expenditure incurred in providing supply) Regulations, 2016 are being followed by HVPNL in its true spirit.

Commission's view:

The Commission has considered the issues raised by the intervener herein as well as the reply filed by the transmission licensee. The issue is not relevant for the determination of transmission ARR / tariff and SLDC charges under consideration of the Commission. However, if certain Regulations / orders of this Commission is not being followed or violated the aggrieved person / party can always approach this Commission as per the procedure prescribed in the HERC (Conduct of Business), Regulation, 2004 including its subsequent amendment(s).

2.3 STATE ADVISORY COMMITTEE (SAC)

The meeting of the State Advisory Committee, constituted under the provisions of section 87 of the Electricity Act, 2003, was held on 25.01.2023 to seek suggestions / comments from the State Advisory Committee Members on the ARR / Tariff proposal of the Haryana Power Utilities including the petitioner herein i.e. HVPNL.

CHAPTER 3

COMMISSION'S ANALYSIS AND ORDER ON TRUE-UP

3.1 TRUE-UP OF ARR FOR THE FY 2021-22

Regulation 13 of the HERC Multi Year Tariff Regulations, 2019 provides for 'True Up' of the previous year ARR based on the audited accounts. Further, Regulation 8 of the said Tariff Regulations, 2019 provides that the baseline values for various financial and operational parameters of the ARR, for the control period, shall be determined after consideration the figures approved by the Commission in the past, actual average figures of last three years, audited accounts and estimated figures for the relevant year.

In the following paragraphs, the Commission has dealt with various components of the ARR for ascertaining the amount eligible for 'true- up' for the FY 2021-22 based on the statute occupying the field and the audited accounts for the year placed on record by the petitioner.

3.1.1 OPERATIONS AND MAINTENANCE EXPENSES

Operations and Maintenance (O&M) Expenses of the petitioner consists of the following elements:

- A. Employee Expenses
- B. Repairs and Maintenance Costs (R&M)
- C. Administrative and General Expenses (A&G)

The employee expenses include salary, dearness allowance, leave encashment and staff welfare expenses etc. Administrative expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits etc. Repairs and Maintenance Expenses go towards the day to day upkeep of the transmission network and form an integral part of the petitioner's efforts towards reliable and quality power supply as also in reduction of losses in the system. Terminal Liability consists of the pensions and other post retirement compensation to the staff. The dispensation on O & M is governed by the Regulation 45.3 of the HERC MYT Regulations 2019. A comparison of approved and actual (O&M) expenses, as per the audited accounts, for the financial year 2021-22 is as follows:

Proposed True Up of O&M Expenses for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual (Audited)	Difference Surplus/(Deficit)
O & M expenses	7,787.19	10,811.66	(3,024.47)
R & M Expenses	529.88	543.61	(13.73)
Employee Expenses	4,947.51	4,801.84	145.67
Terminal Benefits	2,000.00	5,062.04	(3,062.04)
A&G Expenses	309.80	404.18	(94.38)

The Commission has dealt with the submission of the petitioner under each head of O&M expenses in the following paragraphs:-

A. Employee Expenses

A comparison of the approved and actual employee expenses incurred during the FY 2021-22, as filed by HVPNL, is summarized in the table below. The actual figures have been derived and prepared by the petitioner from the Audited Accounts of the FY 2021-22.

Proposed True Up of Employee Expenses for FY 2021-22 (Rs. Millions)

Particulars	Approved by HERC	Actual (Audited)	Difference Surplus/ (Deficit)
Salaries and Wages	4,947.51	3,526.73	145.67
Other Staff Cost		1,212.76	
Staff Welfare Expenses		119.87	
Benefit from Staff Loans		-	
Less: Employee Benefit for SLDC		(57.52)	
Total Employee cost	4,947.51	4,801.84	145.67

It is seen from the table above that as against the Commission's approved employees cost amounting to Rs. 4947.51 Million, the actual amount incurred by the licensee was lower by Rs. 145.67 million i.e. about 3%.

The Commission has considered the submissions of the petitioner that the employee cost for the FY 2021-22 was approved by the Commission vide its order dated 09.03.2021 and now the Commission may consider the actual employee cost of the FY 2021-22, as per the annual audited accounts for the year under consideration. The actual audited employees' cost is of Rs. 4801.84 million which was lower than the approved employees cost of Rs. 4947.51 million in tariff order dated 09.03.2021. In FY 2021-22, Numbers of Retirement of Regular Employees & number of Contractual Employees is more than the Number of recruitments of regular Employee. Hence, the actual Employee Expenses has been lower than that approved by the Hon'ble Commission in Tariff order dated 09.03.2021. It has been prayed that amount now proposed may be approved and also be set as a base for projecting employee cost for the ensuing control period.

The Commission has considered the submissions of the petitioner and approves Rs. 4801.84 million i.e. the actual employees cost of the FY 2021-22. The differences shall be trued-up in line with the HERC MYT Regulations in vogue.

Having approved the "True up" proposed, the Commission is of the considered view that the licensee ought not to lose sight of the Commission's order dated 09.03.2021, as reproduced below:-

"Employees Rationalization: As pointed out earlier also, the sub-station automation system has been embarked upon in all the new / upcoming sub-stations of HVPNL. Resultantly, the manpower required for manning such sub-stations would reduce to a certain extent. Hence, keeping in view modernization and automation, HVPNL was

directed to undertake manpower planning & rationalizations to rein in employees' cost. In this regard, HVPNL submitted that a proposal has been prepared by Technical Committee and considered by the Whole Time Directors, HVPNL in its meeting held on 21.12.2017. Now, the agenda is being put-up for consideration of the BODs, HVPNL. In this regard, HVPNL is directed to submit the final report to the Commission within one month."

The aforesaid direction was reiterated in order dated 21.05.2020 as under:

"The Commission observes that with advancements in technology, a proper long-term manpower planning / budgeting, re-skilling / re-deployment including those from other Power Utilities ought to be undertaken in order to ensure that human resources are gainfully utilized and the overall employees cost in the power sector in Haryana is reined in."

In this regard HVPNL i.e. the petitioner, vide its office memo dated 22.07.2020 and 07.11.2020 has made the following submissions: -

- a) The Board of Directors, HVPNL in its meeting held on 13.12.2019 decided that the restructuring of manpower is required, keeping in view the vacancy position, digitalization, new technology for root survey of transmission lines, cyber security, networking, other new age jobs and desired that necessary steps be initiated so that restructuring exercise with proper justification of each post after having discussion with the concerned employee unions be completed within two months. Accordingly, draft restructuring proposal was prepared and appraised to the Board in its meeting held on 12.06.2020.
- b) Based, on the above appraisal, the board of directors, HVPNL decided to constitute a sub-committee of the members of the board to examine the proposed restructuring policy and submit the report in one month. Accordingly, a sub-committee has been constituted vide office order no. 848/CS/HVPNL/Misc-18/Vol-III dated 30.06.2020.
- c) After constitution of the Sub Committee of Board members, following meetings were held to finalize the restructuring of manpower in HVPNL.

Sr. No.	Number of meeting	Meeting held on
1	1st Meeting	08.07.2020
2	2 nd Meeting	22.08.2020
3	3 rd Meeting	03.09.2020
4	4 th Meeting	14.09.2020
5	5 th Meeting	03.10.2020

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- d) The Sub-Committee of Board members in its 5th meeting held on 03.10.2020 concluded that the draft report of restructuring of manpower in HVPNL be deliberated with the Management before proceeding further in the matter.
- e) It has been submitted that the draft report submitted by the Sub-Committee of the Board Members is under active consideration of the HVPNL management.

The Commission is constrained to observe that the transmission licensee has not taken the directive in right earnest. The licensee may note that the directives issued by the Commission are well thought out and are intended to provide appropriate direction to the operations of the licensee. Tardy implementation of these directives issued by the Commission from time to time is detrimental not only to the interest of HVPNL but to the power sector as a whole. This has also led to a gap in the projected costs and revenue thereby leading to an additional cost on the amount that may be allowed by the Commission, the trueing up. The entire effort ought to have been directed towards reigning in the cost of employee with proper manpower planning and budgeting. HVPNL should keep the basic objective of restructuring of manpower in mind. **As a last opportunity, the Commission allows a months' time to the licensee to submit the final report, action(s) taken as well as the benefits flowing from the same.**

B. Terminal Benefits (FY 2021-22)

Regulation 8.3.8 (b) of the HERC MYT Regulations 2019 provides that the terminal liability is an 'uncontrollable' element of the ARR. The Petitioner has also submitted that the Hon'ble Appellate Tribunal in its order dated 30th April 2013 in the matter of Appeal No. 100 of 2012, has held that the terminal benefits may be trueed up based on the actual as per the annual audited accounts. Accordingly, the petitioner has sought 'true up' of the terminal liability based on the actual terminal benefits expenses incurred as under:

Proposed True Up of Terminal Liabilities for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual	Gap Surplus/(Deficit)
Terminal Liabilities	2,000.00	5,062.04	(3,062.04)

The Commission has considered the submissions of the petitioner and in accordance with the audited accounts, approves Rs. 5,062.04 million towards terminal benefits for the FY 2021-22. It is observed that the terminal benefits approved and the actual amount incurred are poles apart. The Commission, for the FY 2021-22, had approved aforesaid amount as proposed by the licensee but the actual amount exceeds the amount proposed and approval thereof. This casts serious doubt on the ability of the licensee to estimate or get the same done by the actuary in a reasonable manner. The tolerable error in projection / estimates ought

not to exceed 5% on such issues. Consequently, the licensee, irrespective of the ex-post-facto reasoning/ explanation, advised to gear-up its methodology so that they are able to estimate/project with at least 95% confidence level. The Commission, as a onetime measure, allows true-up in line with the audited accounts of the FY 2021-22 as the same also include Rs. 2010 million brought forward from the FY 2020-21 i.e. recovery of Rs. 6030.10 has staggered over three years. While allowing the true-up based on Audited Accounts it is observed that the actual amount now claimed also includes a substantial amount on account of past liabilities, recovery of which was staggered over a period of three years so as to cushion any sudden spike in the revenue requirement and tariff for transmission business and SLDC.

The Commission reiterates the directive on payment to pension trust issued vide order dated 07.03.2019 as under:

“The Commission directs the licensee to seek prior approval of the Commission for contribution to the pension trust in excess of that proposed by it in the ARR in future in view of the fact that there is no legal hitch in deferring the payment to the trust funds as demonstrated by the proposal of the licensee for the FY 2016-17. The Commission further directs the Licensee to ensure that any payment approved by the Commission in its order towards terminal benefits is duly paid within time and before the close of the relevant financial year.”

Accordingly, the Commission observes that though the terminal benefits cost actually incurred by the licensee is approved for true up, no carrying cost shall be allowed on the difference between the approved cost and the pass-through cost in the light of the ibid directive issued by the Commission to pay only the approved cost during the year. Needless to add that any contribution to the pension trust in excess of the amount approved, has to be with prior approval of the Commission.

C. Administrative and General Expenses (A&G) for the FY 2021-22

The detailed submission of the petitioner while claiming true-up of A&G expenses is based on the audited accounts as under: -

Proposed True Up of A&G Expenses for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual	Gap Surplus / (Deficit)
Administration Expenses			
Rent (inculding lease rent)		2.34	
Insurance		3.48	
Rates and taxes		64.27	
Telephone charges, postage, telegrpm and Telex charges		4.65	
Mobile sets charges		11.68	
Legal and professional		41.70	
Payments to auditors (including out of pocket expenses)		0.74	
Consultancy charges		4.13	
Professional charges		7.13	
Service charges for computerisation		2.37	

Particulars	Approved by HERC	Actual	Gap Surplus / (Deficit)
Conference expenses		-	
Tranning expenses		35.03	
Travelling and conveyance		125.97	
Other expenses		64.78	
Sub total of Administrative Expenses		368.27	
Other charges			
Material related expenses		43.33	
Expenses on photostat on contract basis		1.66	
Impairment loss		-	
Sub total of other charges		44.99	
Less A & G expenses against SLDC		9.08	
Total charges	309.80	404.18	(94.37)

The Commission has considered the submissions of the petitioner and in accordance with the audited accounts, approves Rs. 404.18 million towards A&G expenses for the FY 2021-22. However, the licensee is advised to rein in expenses on account of litigation (legal and professional) as well as on travelling, communication etc. The licensee is advised to avoid frivolous litigation and exercise proper due diligence before litigating.

D. Repairs and Maintenance Expenses (R&M) for the FY 2021-22

The following table provides a comparison of approved and actual R&M Expenses for the FY 2021-22.

Proposed True Up of R&M Expenses for FY 2021-22 (Rs. Millions)

Particulars	Approved by HERC	Actual	Difference Surplus/(Deficit)
Plant and Machinery		315.30	
Building		142.90	
Civil works		47.17	
Lines, Cables Net Works etc.		38.44	
Vehicles		9.42	
Furniture and Fixtures		0.54	
Other Office Equipment's		8.14	
Total		561.90	
Less: SLDC		18.29	
Total R & M Cost	529.88	543.61	(13.73)

The petitioner has submitted that the main reason for increase in the Repair and Maintenance expenses (R&M) for FY 2021-22 is due to release of payment to PGCIL on account of receipt of bills of the previous year's payment of O&M charges towards interstate transmission lines maintained by PGCIL relating to current year and against bills related to previous years which has not been raised by PGCIL during the relevant years. Further, after considering the actual GFA for FY 2021-22 as per the audited accounts and the inflation factor for FY 2021-22 worked out as per the prescribed formula of MYT Regulations, 2019, the actual R&M expenses is within the prescribed limits.

The Commission has examined the true-up of R&M expenses proposed by the licensee as well as their Audited Accounts for the FY 2021-22. The Commission approves

Rs. 516.16 million towards R&M expenses for the FY 2021-22, after considering the average of opening and closing GFA, less consumers contribution, for the FY 2021-22 i.e. 0.5% (as per Regulation) X (101411.99 Opening GFA + 105051.48 Closing GFA / 2).

The licensee is advised to take up preventive and predictive R&M works so as to ensure that the transmission assets are maintained in perfect condition for providing seamless transmission services to the beneficiaries.

3.1.2 CAPITALIZATION OF ASSETS

The Commission observes that 'capitalization of Assets' i.e. transfers of assets from Capital Works in Progress (CWIP) to Fixed Assets Register, as the assets enter into revenue earning stream, has a direct bearing on the ARR as the amount capitalized goes into the base capital / GFA on which RoE, Depreciation, R&M etc. are computed. It is noted that during the FY 2021-22 Rs. 4422.24 million has been capitalized and added to the Gross Fixed Asset / Capital Base of the Transmission Business. The details, as provided by the petitioner, are as under:-

Additions to GFA for FY 2021-22 (Rs. Million)

Particular	Gross fixed assets			
	At the beginning of the year	Addition during the year	Adjustment & deductions	At the end of the year
Land	3791.10	248.01	10.18	4028.93
Building	6361.55	159.49	0.94	6520.10
Plant and Machinery	91763.44	3989.68	496.73	95256.39
Furniture & Fixtures	272.68	25.11	2.87	294.92
Vehicles	133.42	0	14.09	119.33
Sub - Total	102322.19	4422.29	524.81	106219.67
Less: SLDC Assets	910.20	0.04	0	910.24
Less: Depreciation on account of consumer contribution	0	257.95	0	257.95
Total	101411.99	4164.30	524.81	105051.48

3.1.3 DEPRECIATION

The following table provide the details of depreciation amount for the FY 2021-22 as per the audited accounts.

Proposed True Up of Depreciation for Transmission Business for FY 2021-22 (Rs. Millions)

Particular	Provision for Depreciation			
	At the beginning of the year	Addition during year	Adjustment & deduction	At the end of the year
Land	-		-	-
Building	2,220.19	201.44	0.61	2,421.03
Plant & Machinery	36,455.44	4,533.96	346.20	40,643.20
Furniture & Fixtures	160.76	14.79	2.21	173.34
Vehicles	104.95	3.16	12.68	95.42
Less: SLDC assets	-224.63	- 42.05	-	-266.68
Less: Depreciation on account of Consumer Contribution	0	-257.95		
Total	38,716.71	4,453.35	361.70	43,066.31

The petitioner has submitted that the average actual rate of depreciation is different from average depreciation rate considered by the Hon'ble Commission, mainly due to the change in composition of assets with varying life and depreciation rates i.e. substantial share of assets added during the year are depreciable at rate of 5.28% as provided in MYT Regulations 2019.

Further, the impact of actual asset addition being different from the approved asset addition on a projected basis, is evident as the actual depreciation rate during the FY 2021-22 is marginally higher than that approved. While projecting depreciation for FY-2021-22 on the audited figures of FY 2018-19 in the order dated 21.05.2020, the average rate of depreciation was taken @ 4.38%, whereas the actual average rate of depreciation for the FY-2021-22, as per the Audited Accounts of the licensee, works out to 4.391%.

The Commission observes that the petitioner has followed the methodology adopted by the Commission in its True up order and deducted the depreciation chargeable to SLDC assets, generation assets and towards assets financed through consumer contribution and has prayed that this Commission may approve the depreciation for the FY 2021-22 on actual basis, as detailed in the table above.

The Commission has considered the submissions of the petitioner and approves Rs. 4453.35 million i.e. the actual depreciation of the FY 2021-22 as per the audited accounts.

3.1.4 INTEREST AND FINANCE CHARGES FOR THE FY 2021-22

The following table provides a comparison of approved and actual interest and finance charges incurred in the FY 2021-22, as submitted by the petitioner.

Proposed True Up of Interest and finance charges for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual	Gap / Surplus (Deficit)
Rural Electrification Corp.		1,632.96	
Interest on Medium Term Loan from REC		-	
Power Finance Corp.		405.12	
Interest on loan from National Capital Region Plg Board		-	
Interest on World Bank Loan through State Govt. (WB)		62.83	
Interest on loan from NABARD		225.44	
Loan Processing Fee-World Bank Loan		1.70	
Total		2,328.05	
Foreign Exchange Rate Variation		-	
Other Interest & Finance Charges		-	
Total of B		-	
Grand Total of Interest & Finance Charges: A + B		2,328.05	
Less: Interest & Finance Charges Chargeable to Capital Account		(265.92)	
Net Total of Interest & Finance Charges: For Revenue Account: C-D		2,062.13	
Net Interest on Loan	2,532.10	2,062.13	469.97

The Commission has considered the submissions of the petitioner that the actual interest and finance charges are lower than that approved. The petitioner has further submitted that in line with the methodology adopted by the Commission in its previous tariff order(s), the impact of foreign Exchange Risk Variation of Rs. 193.34 million has been separately shown in the ARR. **The Commission accordingly approves Rs. 2062.13 million as Interest and finance charges for the FY 2021-22 as the trued-up amount.**

3.1.5 INTEREST ON WORKING CAPITAL

The following table provides a comparison of interest allowed by the Commission on Working Capital loan and interest thereto as per the HERC MYT Regulations 2019 in vogue for the FY 2021-22 i.e. on normative basis and the actual interest cost incurred by the licensee.

Proposed Interest on Working Capital for FY 2021-22 (Rs. Millions)

Particulars	Approved by HERC	Actual (Audited)	Gap/Surplus (Deficit)
Interest on working capital	278.35	43.08	235.27

The petitioner has submitted that the interest on Working Capital approved by the Hon'ble Commission in the ARR was in line with the MYT Regulations 2019 as amended from time to time. It is observed that the normative Interest on working capital, as approved by the Commission, is significantly higher than the amount actually incurred toward interest on working capital.

The petitioner has prayed that this Commission may approve the interest on Working Capital of Rs. 43.08 Million as well as the sharing of gains on account of efficiency in managing cash flows which has resulted in savings in Interest on Working Capital in 60:40 ratio between HVPNL and the beneficiaries of the transmission system.

The Interest on Working Capital for FY 2021-22 on normative basis as proposed by HVPNL is tabulated below:

Normative Interest on Working Capital for FY 2021-22 (Rs. Million)

Particulars	Normative
O&M for 1 Month	900.97
Maintenance spares @15 % of normative O&M	1621.75
Receivables equivalent to 1 month of Fixed costs	1865.88
Total	4388.60
Interest Rate	8.50%
Interest on Working Capital	373.03

The sharing of 60% of the gains amounting to Rs. 329.95 Million for FY 2021-22 on account of Interest on Working Capital proposed by HVPNL is tabulated below:

Sharing of Gains of Interest on Working Capital (Rs. Million)

Particulars	Actual	Normative	# 60% to be Retained
Gains on Interest on working capital	43.08	373.03	197.98

The Commission, after due deliberations, approves the interest on working capital as per actual i.e. in line with the Audited Accounts. Hence, for the purpose of 'True-up' the same shall be pegged at Rs 43.08 Million.

The Commission observes that there is a large gap between normative working capital computation and the actual working capital requirement of HVPNL. The licensee is directed to explain the large variation supported by lead and lag analysis for the year. The analysis should be submitted within three months from the date of the present order.

3.1.6 RETURN ON EQUITY (ROE)

The petitioner has proposed RoE for the FY 2021-22 considering the average of opening and closing equity for the FY 2020-21 as mentioned in the HERC order dated 02.03.2022. The petitioner has estimated RoE in line with the HERC MYT Regulations 2019 and subsequent amendments and as per the methodology proposed in the tariff order with equity share of 30%. The equity portion of assets capitalized is considered for estimating the amount of equity eligible for a return. The petitioner has proposed a return on equity @ 14% for true up purposes, justifying the same as being in line with the MYT Regulations, 2019 and subsequent amendments thereof. The computational details are as under:-

Proposed RoE for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual	Gap/Surplus (Deficit)
Internal Accruals to be considered for Transmission business (opening)		24,614.39	
Add: Internal Accruals portion of GFA added		884.45	
Closing Internal Accrual for RoE		25,498.84	
Average Equity		25,056.61	
Rate of return		14.00%	
RoE- Proposed	2,565.92	3,507.93	(942.01)

The petitioner has prayed that the Commission may allow the normative equity addition as well as return on equity for the FY 2021-22 as a part of the true up.

The Commission has considered the submissions of the licensee and observes that as per the MYT Regulations, 2019, ROE up to 14% can be allowed on the eligible Equity Capital. The Commission, taking a holistic view of the power sector in Haryana including the tariff payable by the electricity consumers, had restricted the RoE to 10% in order to reign cost of delivered power to the consumers. Hence, at the truing-up stage, the rate of return allowed by the Commission and the underlying principles thereto cannot be revisited.

The Commission accordingly approves Rs. 2505.66 million as Return on Equity for the FY 2021-22 as the trued-up amount as against Rs. 2565.92 million approved originally in the tariff order dated 09.03.2021.

3.1.7 INCENTIVES AND PENALTY: SYSTEM AVAILABILITY FOR FY 2021-22

The Commission observes that Regulation 12.2 (c) (i) of the HERC MYT Regulations 2019 provides for the incentives and penalty mechanism linked to the transmission system availability.

Accordingly, 'availability' has been calculated by the petitioner, circle wise and month wise for all circles and then the average has been taken to arrive at the system availability for the year. The month wise availability of each circle is calculated in line with the MYT Regulations in vogue as under: -

Calculation of System Availability for FY 2021-22

Sr. No.	Month	Hours in the month	No. of Transmission Lines (O)	No. of Power T/Fs (Q)	Availability of (O) number of AC lines (AVo)	Availability of (Q) number of Power Transformers (AVq)	Total Numerator (AVo*O+AVq*Q)	Total Denominator (O+Q)	Availability during month in percentage $\{(AVo*O+AVq*Q) / (O+Q)\} * 100$	Cumulative TSA (in %age)
1	Apr-21	720	970	1232	0.99241	0.99588	2189.563212	2202	99.4352	99.4352
2	May-21	744	971	1235	0.99214	0.99554	2192.85969	2206	99.4043	99.4011
3	Jun-21	720	971	1241	0.98232	0.99616	2190.064056	2212	99.0083	99.2644
4	Jul-21	744	971	1244	0.99511	0.99770	2207.387694	2215	99.6563	99.3246
5	Aug-21	744	975	1249	0.99580	0.99733	2216.57829	2224	99.6663	99.3879
6	Sep-21	720	977	1254	0.996	0.9974	2223.8316	2231	99.6777	99.4293
7	Oct-21	744	980	1256	0.994	0.9963	2225.4728	2236	99.5221	99.441
8	Nov-21	720	981	1258	0.9931	0.9974	2228.9603	2239	99.5553	99.4875
9	Dec-21	744	983	1258	0.995	0.9972	2232.5626	2241	99.6257	99.4547
10	Jan-22	744	984	1257	0.9969	0.9975	2234.8071	2241	99.7244	99.4671
11	Feb-22	672	985	1261	0.9973	0.9955	2237.666	2246	99.6276	99.4484
12	Mar-22	744	988	1265	0.9961	0.9963	2244.4663	2253	99.6249	99.577
	Total FY 22 (H1)									
1	Apr-22	720	989	1268	0.9896	0.997	2242.9104	2257	99.379	99.3790
2	May-22	744	989	1268	0.9888	0.9961	2240.978	2257	99.2911	99.2485
3	Jun-22	720	999	1269	0.9938	0.998	2259.2682	2268	99.6155	99.4395
4	Jul-22	744	1002	1272	0.9936	0.9955	2261.8632	2274	99.4657	99.3976
5	Aug-22	744	1002	1275	0.9963	0.9985	2271.3801	2277	99.7507	99.5280
6	Sep-22	720	1008	1275	0.9962	0.9977	2276.2400	2283	99.7039	99.5584
7	Total FY 22 (H1)									

Legend

O=Total no. of Transmission lines for a month

Q=Total no. of Power Transformers for a month

AVo= Availability of (O) number of AC lines

AVq=Availability of (Q) number of Power Transformers

W_i= Weightage factor for each transmission line/ Transformers

where Weightage factor for a transmission line= No. of sub-conductors per phase multiplied by ckt-km of transmission line

Weightage factor for a Transformers= Rated MVA capacity

Annual TSA for the year 2020-21, as per CERC MYT Regulations, 2019 Formula (adopted by HERC) is: $\{(AVo*O+AVq*Q) / (O+Q)\} * 100$

The amount of incentive claimed by the petitioner is reproduced in the table below: -

Incentive/ (Penalty) calculation for System Availability for FY 2021-22 (Rs. Million)

Particulars	Formula	Figures
Annual Transmission Charges	ATC	21,637.85
Actual Transmission Availability	AA	99.5770%
Normative Transmission Availability	TA	99.20%
	$(AA-TA)/TA$	0.003800
Incentives/(Penalties) (Rs. Mn)	$ATC*(AA-TA)/TA$	82.23

The petitioner has submitted that the transmission system availability 99.5770% was higher than the normative availability during the FY 2021-22, for which the incentive of Rs. 87.03 million for the FY 2021-22 has been claimed. The Commission has examined the calculations of incentive as required to be calculated based on the revised ARR for the FY 2021-22 approved by the Commission on true up. **Accordingly, the incentive amount for actual availability, reported by the petitioner, is approved at Rs. 82.23 million for the FY 2021-22 i.e. trued up Annual Transmission Charges (ATC) Rs. 21,637.85 million X 0.003800 (AA-TA)/TA = Rs. 82.23 million.**

3.1.8 FOREIGN EXCHANGE RATE VARIATION (FERV)

The petitioner has proposed recovery of FERV, in line with the Commission's order dated 31.03.2016, para 3.4.11, whereby the principle of recovery based on cash loss due to FERV has been considered. The calculation of FERV, proposed for 'true up' by the licensee is as under: -

Proposed Calculation of FERV for FY 2021-22 (Rs. Millions)

Year	FERV Capitalized	FERV Charged to P&L	Total FERV
2011-12	42.42	15.90	58.32
2012-13	27.77	6.60	34.37
2013-14	79.16	15.80	94.96
2014-15	30.72	13.43	44.15
2015-16	17.38	43.77	61.15
2016-17	(8.52)	(18.22)	(26.74)
2017-18	3.29	9.93	13.22
2018-19	-	80.18	80.18
2019-20	-	112.57	112.57
2020-21		(39.46)	(39.46)
2021-22		37.54	37.54
Total	192.22	278.04	470.26
Less recovery of capitalized FERV from ARR upto 31.03.2021	55.71		
Balance amount of capitalized FERV from ARR upto 31.03.2021	136.51		
Total FERV Capitalization to be recovered in next 35 Instalments	3.90		
Calculation of FERV:			
FERV on instalment paid in 2021-22		UOM	Figures (in million)

Amount received (1st instalment of loan drawl)		USD	27.61
Repayment-up to 31.03.2019		USD	27.61
Balance of 1st instalment		USD	-
Amount received (2nd Instalment of Loan drawl)		USD	21.40
Repayment upto 31.03.2020		USD	21.40
Balance of 2nd instalment		USD	-
Amount received (3rd Instalment of Loan drawl)		USD	14.29
Repayment upto 31.03.2020		USD	5.07
Balance of 3rd instalment as on 31.03.2021		USD	9.22
Repayment during FY2020-21		USD	9.12
Balance of 3rd instalment		USD	0.10
Amount received (4th Instalment of Loan drawl)		USD	18.53
Exchange Rate at the time of receipt of 3rd instalment		INR	45.61
Exchange Rate at the time of receipt of 4th instalment			44.94
Repayment 14th Instalment 2021-22		USD	0.10
Balance Repayment 14th Instalment 2021-22		USD	4.46
Repayment 15th Instalment 2021-22		USD	4.56
Exchange Rate at the time of payment of 14th instalment - in FY 2021-22		INR	74.30
Exchange Rate at the time of payment of 15th instalment - in FY 2021-22		INR	75.10
FERV on 14th instalment		INR	133.81
FERV on 15th instalment		INR	137.53
Less: Recovery of capitalized FERV		INR	78.01
Net FERV on 14th and 15th instalment of loan		INR	193.34

The Net FERV impact which is being claimed with the True-up for the FY 2021-22 is Rs. 193.34 million. **The calculation of FERV, as submitted by the licensee, has been examined by the Commission and found in order. Hence, the same is being allowed as the true up amount. However, the Commission observes that a lot of cash is being burnt due to exchange rate variation each year. This year (FY 2021-22) the same amounts to over Rs. 19 crores. The licensee is directed to submit the details of foreign currency loans, the year it was contracted, the year in which drawl started and the drawl schedule, repayments made so far, loan tenure and net loss up to the FY 2021-22 incurred on account of exchange rate variation. HVPNL may also suggest FX risk mitigation measures other than currency hedging, within three months from the date of the present order.**

3.1.9 NON-TARIFF INCOME FOR FY 2021-22

The details of Non-tariff income submitted by the petitioner has been considered. The Commission observes that the proposed true up of non-tariff income is Rs. 515.41 million. The Commission has examined the actual non-tariff income of the licensee and the same is pegged at Rs. 543.38 million.

Accordingly, the Non- tariff income is approved at Rs. 543.38 million for the FY 2021-22. The details of true up proposed and approved by the Commission are as under:

Non-Tariff Income Proposed for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual	Revised approved by HERC
Income from Investment, Fixed & Call Deposits			
Interest on fixed Deposits		47.99	47.99
Interest on staff loans and Advance and advance to supplier/contractor		25.27	25.27
Interest received on Corporate Social Responsibility (CSR) Bank			1.15
Interest on Income Tax refund		4.59	4.59
Sub Total		77.85	79.00
Non-Tariff Income			
Income/Fees/collection against staff welfare activities		177.37	177.37
Miscellaneous Receipts		262.88	262.88
Income from staff Welfare Activities		0.95	0.95
Fines recovered from employees			0.07
Penalty Charges received from contractors			26.75
Sub Total		441.20	468.02
Less:- NTI from SLDC		3.64	3.64
Total	222.80	515.41	543.38

3.2 REVENUE FROM TRANSMISSION TARIFF

As per the audited accounts for the FY 2021-22, by implementing the Transmission Tariff approved by the Commission, the licensee has recovered the following amounts from the beneficiaries of transmission system: -

Transmission Charges Recovered for the FY 2021-22

	As per HERC Order	As per Audited Accounts
Total Wheeling charges	19180.26	17255.46
Unitary charges received		11.31
Connectivity fee for Transmission system		3.66
Total Recovery for the credit of Long-Term Beneficiaries		17270.43

3.3 PROPOSED AND APPROVED ARR FOR TRUE-UP

In accordance with the above analysis and decision of the Commission on various components of the of the ARR, the true-up proposed by the licensee and revised calculations based on the provisions of the MYT Regulations and previous orders of the Commission, the amount to be 'trued-up' is presented in the table below: -

Revised ARR of Transmission Business for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC vide Order dated 09.03.2021	Proposed for True-Up FY 2021-22	Revised approved by the Commission on Truing UP
O&M expenses	7,787.19	10,811.67	10,784.21
R&M Expenses	529.88	543.61	516.16
Employee Expenses	4,947.51	4,801.84	4,801.84
Terminal Benefits	2000.00	5,062.04	5,062.03
A&G Expenses	309.80	404.18	404.18
Depreciation	4,260.11	4,453.36	4453.35
Interest on Term Loans	2,532.10	2,062.13	2,062.13
Impact of Foreign Exchange rate variation	0.00	193.34	193.34
Interest on working Capital	278.35	43.08	43.08
Total Expenditure	14,857.75	17,563.58	17,536.11
Return on Equity	2,565.92	3,507.93	2,505.66

Particulars	Approved by HERC vide Order dated 09.03.2021	Proposed for True-Up FY 2021-22	Revised ARR approved by the Commission on Truing UP
Less Non-Tariff Income	222.80	515.41	543.38
Annual Transmission Charges	17,200.87	20,556.10	19,498.39
Add: Incentive for TSA	-	87.03	82.23
Add: Sharing of Benefits @ 60% - IWC	-	197.97	0
Net ARR	17,200.87	20,841.10	19,580.62
Add: Revenue Gap for FY 2019-20	1536.45	1536.45	1536.45
Add:- Carrying cost on above and GAP of ROE allowed by the Commission order dated 31.03.2022 (RA-5 of 2021) in review Petition filed against order dated 09.03.2021 (2200.84-2180.32)	0	20.52	20.52
Aggregate Revenue Requirement	18,737.32	22,398.07	21,137.59
Transmission Share of SLDC	15.09	12.98	11.87
Unitary Charges for JKTPPL	497.30	488.39	488.39
Transmission ARR	19,249.71	22,899.44	21,637.85
Less: YTC for Lines Operating As ISTS Lines	69.45	0	0
Total Transmission Charges	19,180.26	22,899.44	21,637.85

True Up of Transmission Business for FY 2021-22 (Rs. Million)

Transmission ARR approved by the Commission for True up	21637.85
Total Revenue Recovered as per Audited Accounts	17270.43
Revenue Surplus / (Gap)	(4367.42)
Less terminal benefits on which carrying cost is not to be allowed	5062.03
ARR gap on which carrying cost is to be allowed	0.00

The Commission observes that the revenue recovered by the licensee during the FY 2021-22 is lower by Rs 4367.42. However, the said amount is less than the terminal benefits amounting to Rs 5062.03; hence, no carrying cost is allowed to the petitioner as there has not been any additional liability that may require funding by way of additional borrowings.

The difference between the ARR approved by the Commission in its tariff order for the FY 2021-22 i.e. Rs. 19,180.26 Million and now approved on 'truing up' of the un-controllable expenses i.e. Rs. 21637.85 Million shall be carried over to the ARR of the FY 2023-24 without any holding / carrying cost.

3.4 TRUE-UP OF SLDC BUSINESS

The licensee has prayed to the Commission that the ARR for SLDC Business for the FY 2021-22, based on actual audited figures, may be approved for the true up as Rs. 162.26 Million.

True Up Requirement of SLDC Business for FY 2021-22 (Rs. Millions)

S. No	SLDC Business	Approved by HERC Dated 09.03.2021	True up	Gap/ (Deficit) Surplus
1	Employee Expense	54.45	57.52	-3.07
2	Terminal Benefits	0.00	0.00	0.00
3	A&G Expense	8.92	9.08	-0.16
4	R&M Expense	6.99	18.29	-11.30
5	Depreciation	56.13	42.05	14.08
6	Interest on Loan	24.79	0.00	24.79

S. No	SLDC Business	Approved by HERC Dated 09.03.2021	True up	Gap/ (Deficit)	Surplus
7	Interest on Working Capital	2.62	2.83	-0.21	
8	Return on Equity	0.00	0.00	0.00	
9	Less: Non-Tariff Income	-1.45	-3.64	2.19	
10	Add: Revenue Gap/ Surplus Refund	34.16	34.16	0.00	
11	Carrying Cost	1.97	1.97	0.00	
12	TOTAL	188.58	162.26	26.32	

The Commission has examined the true up proposal submitted by the licensee for its SLDC business in line with the segregated accounts (forming part of the audited accounts for the FY 2021-22) and the principles adopted while determining the ARR for SLDC business vide its order dated 09.03.2021. The revised ARR for SLDC business for the FY 2021-22 is approved at Rs. 162.26 million as against Rs. 188.58 million originally approved by the Commission. Accordingly, the differential amount will be carried over to the ensuing financial year along with the SLDC charges for the FY 2023-24.

The ARR approved by the Commission, true up proposed by the licensee and the amount approved by the Commission for true-up, as under: -

True Up of SLDC Business for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC	Actual (Audited)	Revised ARR approved by the Commission
Employees Expenses	54.45	57.52	57.52
Terminal Benefits	0.00	0.00	0
A&G expenses	8.92	9.08	9.08
R&M Expenses	6.99	18.29	4.55
Depreciation	56.13	42.05	42.05
Interest on loan	24.79	0.00	0.00
Interest on working Capital	2.62	2.83	2.68
Less: Non-Tariff Income	-1.45	-3.64	-3.64
Add: Revenue Gap/Surplus Refund	34.16	34.16	34.16
Carrying Cost	1.97	1.97	1.97
TOTAL ARR	188.58	162.26	148.37

FY 2021-22 average GFA as per Audited Accounts = Rs. 910.22 million 0.5% average GFA = Rs. 4.55 million.

3.5 ANNUAL (MID YEAR) REVIEW PERFORMANCE OF ARR FY 2022-23

HVPNL has submitted that the Hon'ble Commission, vide notification dated 21.05.2020 had issued the MYT order for HVPNL for the control period FY 2020-21 to FY 2024-25. The STU/HVPN is required to file Annual Performance Review (APR) in line with Regulation 11(5) of the MYT Regulations, 2019. The relevant extract of the regulation is as under:

“11.5 The scope of the mid-year performance review shall be a comparison of the performance of the generation company and the licensees for the relevant financial year with the approved forecast of ARR for their respective businesses and the

performance targets specified by the Commission. Upon completion of the mid-year performance review and truing up as per regulation 13, the Commission shall pass an order recording:

- a) The revised approved ARR for such financial year including approved modifications, if any;*
- b) The approved aggregate gain or loss on account of controllable items and sharing of such gains or losses;*
- c) Truing-up or pass through of uncontrollable items of ARR of previous year(s);*
- d) Pass through of variations in controllable items due to force majeure events, if any.*
- e) Pass through of variations in controllable items attributable to uncontrollable factors.*
- f) Tariff applicable for the ensuing year.”*

In view of the above, the petitioner has prayed that the Hon'ble Commission may consider the revised estimates as per the Annual Performance Review for the FY 2022-23 including revised capital expenditure for the FY 2022-23 and proposed Capital Expenditure Plan for the control period FY 2023-24.

3.6 REVISED CAPITAL EXPENDITURE AND CAPITALIZATION FOR FY 2022-23 AND PROPOSED CAPITAL EXPENDITURE PLAN FOR CONTROL PERIOD FY 2023-24

HVPNL has prepared the capex plan considering all the factors which would affect the operations of the company. The capex plan includes details of various capital expenditure schemes and their respective estimates for the FY 2022-23.

That the capital investments of HVPNL can largely be categorized in the following areas:

1. Investments in new transmission infrastructure to support the demand requirements or power evacuation from generation projects.
2. System augmentation and strengthening, including renovation and modernization to maintain the performance of the existing system and to deter investments.

The petitioner has prayed that the Hon'ble Commission may approve the revised capital expenditure for the FY 2022-23 and proposed Capital Expenditure Plan for period of FY 2023-24 as per the following details.

A. Transmission System Business

The capital investment plan for the transmission business has been divided in the following key areas, based on the nature of capital works:

- i. Transmission lines
- ii. Sub station
- iii. Information technology initiatives
- iv. Land & Right of Way expenses
- v. Miscellaneous works including civil works, procurement of thermo-vision cameras, testing equipment, contingency capital works.

The following table provides the work wise expenditure for period of FY 2022-23 and FY 2023-24. The details of the works are provided as part of the Annexure to this Petition.

Work-wise expenditure for period FY 2022-23 and FY 2023-24 (Rs. Million)

Works	FY 2022-23	FY 2023-24
Substations	5839.76	6120.02
Lines	2797.10	4257.18
Information Technology	80.71	149.27
Land	132.07	87.63
Miscellaneous	485.77	225.00
Total Transmission	9335.41	10839.10
SLDC	683.19	1105.39
Total (Transmission + SLDC)	10018.60	11944.49

B. Substations

New substations have been planned to augment the existing system and make it robust. It is submitted that adequate infrastructure is required to ensure that unforeseen breakdowns in system do not have any adverse impact on the availability of overall transmission system. Therefore, the capacity addition and the necessary expenditure are planned in a manner to create enough redundancies in the system considering the state of existing infrastructure and growth in power demand. The expenditure related to proposed substations is summarized in the table below.

Expenditure planned for new substations (in Rs. Million)

Particulars	2022-23	2023-24
Substations	5839.76	6120.02

C. Transmission Lines

HVPNL has submitted that a number of new transmission lines have been proposed together with repair and maintenance activities for the existing lines. The year-wise expenditure planned on the transmission lines in the two zones has been presented in the table below:

Expenditure planned for Transmission lines (in Rs. Million)

Transmission Lines	2022-23	2023-24
Total	2797.10	4257.18

The main purposes for the expenditures on transmission line is to port bulk quantum of power near to the load centers with focus on creating redundancy by means of improvement/ strengthening, supporting the load growth and facilitating the evacuation of power from the newly commissioned generating plants.

D. Information Technology

The expenditure on information technology is planned with the intention of equipping the personnel with tools to monitor and handle the transmission system efficiently and to access real time data for online system monitoring.

Expenditure planned for Information Technology (in Rs. Million)

Information Technology	2022-23	2023-24
Total	80.71	149.27

E. Land

The land acquisition and RoW settlements occupy major proportion of the total capital investment plan. The yearly expenditure is presented in the table below.

Capital Investment plan for Land Acquisition & ROW settlements (in Rs. Million)

2022-23	2022-23	2023-24
Panchkula	73.16	6.31
Hisar	1.72	3.13
NCR	57.19	78.19
Total	132.07	87.63

F. SLDC

The Capital Expenditure planned to be incurred for SLDC is provided below as:

Table 1: Expenditure planned for SLDC (in Rs. million)

SLDC	2022-23	2023-24
Total	683.19	1105.39

G. Miscellaneous Items

The miscellaneous works include civil works, one-time procurement of testing and T&P equipment, replacement of conventional insulator with polymer / Anti Fog insulator, damage of tower etc. due to windstorm and any unseen expenditure / Augmentations etc.

Expenditure planned for miscellaneous items (in Rs. Million)

Miscellaneous	2022-23	2023-24
Total	485.77	225.00

H. Funding Pattern

The licensee has proposed to utilize debt that is available at a low cost to ensure that the burden on the beneficiaries can be minimized. HVPNL has negotiated with the financial institutions and has ensured that the cost of capital is low and the terms of debt are favorable to the Company. The proposed funding arrangement is as under: -

Funding Pattern (in Rs. Million)

Particulars	FY 2022-23	FY 2023-24
Deposit work (Self Execution, DHBVNL, DLF, HSIIDC, Railway, IOCL and other etc)	20.30	19.60
JICA	0.00	11.43
Load Growth	0.00	12.00
NABARD sanctioned & posed to NABARD)	704.43	428.77
NCPRB	0.00	0.00
PFC including posed to PFC)	1068.53	1426.05
Posed to PNB/REC	467.39	476.30
Posed to PNB/SBI/ REC	747.08	717.92
REC (Posed to REC)	3063.57	1469.29
World Bank	129.78	83.93
Yet to pose	1425.66	4529.23
Total	7626.73	9174.53
Equity	1708.68	1664.57
Grand Total	9335.41	10839.10
SLDC	683.19	1105.39
Total after SLDC	10018.60	11944.49

HVPNL has submitted the revised Capex proposal for FY 2021-22 to FY 2024-25 as under:

Capital Investment Plan (Rs. Million)

Particulars	Actual Investment	Proposed	Proposed	Proposed	Proposed	Proposed
Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
HVPNL	4862.31	9335.41	10839.10	14636.93	8450.96	3613.80
SLDC	0.00	683.19	1105.39	197.56	0.00	0.00
Total	4862.31	10018.60	11944.49	14834.49	8450.96	3613.80

The Commission has taken into consideration the Capital Investment projections for the control period for FY 2023-24 only, from the CIP submitted by the HVPNL for the control period FY 2021-22 to FY 2024-25, for the approval of the ARR of the transmission business and SLDC and the transmission and SLDC charges for FY 2023-24. The projection of CIP for FY 2024-25 and onwards shall be considered while considering ARR for FY 2024-25 onwards. The table below shows the capital expenditure projected by HVPNL, approved by HERC & the actual expenditure on capital works

Capex projected by HVPNL, Approved by HERC & Actual Capex.

FY	Expenditure Projected by HVPNL (Rs. million)	Expenditure approved by HERC (Rs. million)	Actual Expenditure (Rs. million)	% of actual w.r.t. approved expenditure (Rs. million)
2019-20	10113 12002 (Revised)	8500	7356	86.54%
2020-21	12064 8302.64 (Revised)	9250	5804	62.75%
2021-22	9269.21 9304.04 (Revised)	7200	4862	67.53%
2022-23	11757.50 10018.60 (Revised)	9524	4002 (up to Sep. 2022)	

The Commission observes that every year HVPNL has been incurring Capital expenditure, which is less than the Capex approved by Commission. In FY 2021-22, HVPNL projected Capex of Rs. 9269.21 million and Rs. 7200 million were approved by the Commission whereas actual expenditure is reported to be Rs. 4862 million, which is 67.53% of approved Capex. Average percentage of actual expenditure to approved expenditure for last three years is 72%. Licensee has proposed revised Capex of Rs. 10018.60 million for FY 2022-23 and proposed Rs. 11944.49 million during 2023-24. **The Commission, in view of the approves capex of Rs.9500 million for the FY 2023-24 and revised capex for the FY2022-23 will be considered at the time of its true-up. HVPNL is directed to prepare a comprehensive five-year CAPEX plan within three months from the date of this order.**

Intra-State Transmission Losses.

HVPNL has submitted that the transmission losses achieved by HVPNL from FY 2014-15 to FY 2022-23 (up to September, 2022) along with the benchmark fixed by Hon'ble Commission as hereunder:

S. No.	Year	Target Transmission Losses (%)	Actual Transmission Losses (%)
1.	2014-15	2.50	2.615
2.	2015-16	2.48	2.698
3.	2016-17	2.46	2.311
4.	2017-18	2.44	2.259
5.	2018-19	2.42	2.055
6.	2019-20	2.40	2.065
7.	2020-21	2.15	2.115
8.	2021-22 (upto September, 2021)	2.10	1.857
9.	2022-23 (up to September, 2022)	2.05	1.808

I. Trends in Transmission Losses

Reduction in transmission losses is an important objective under section 26(2) (b) and (c) of the Act and tariff determinations will need to take account of such reduction. The plan for reducing losses, together with relevant load flow studies and details of the investment required to achieve the planned reduction required to be presented & substantiated by relevant

analysis as to achievability and cost. It has been submitted that with the system strengthening, average transmission losses are on decline as evident from the table below:

Transmission losses

Period	Target fixed by Hon'ble HERC (in %)	Intra-state Transmission Losses (%)	Energy Handled (in LU)
2005-06	-	2.77	212490
2006-07	-	2.35	238630
2007-08	2.6	2.44	
2008-09	2.1	2.57	284310
2009-10	2.1	2.68	312740
2010-11	2.1	2.63	344020
2011-12	2.1	2.76	363631
2012-13	2.5	2.494	380431
2013-14	2.5	2.737	428485
2014-15	2.5	2.615	464758
2015-16	2.48	2.698	478718
2016-17	2.46	2.311	492195
2017-18	2.44	2.259	508710
2018-19	2.42	2.055	515146
2019-20	2.40	2.065	539731
2020-21	2.15	2.115	529874
2021-22	2.10	1.857	549495
2022-23 (up to September, 2022)	2.05	1.808	360535

* based on provisional energy account of September, 2022)

The month wise Intra-State transmission losses of HVPN during FY 2021-22 and FY 2022-23 are as under:

Intra-State transmission losses FY 2021-22 and FY 2022-23

Month	2021-22			2022-23		
	Total Energy at state Bus from all sources	Intra State Transmission Losses in LU	Intra State Transmission on losses in %	Total Energy at state Bus from all sources	Intra State Transmission) losses	Intra State Transmission losses in %
April	38496.66387	754.46767	1.960	45597.54543	779.69386	1.710
May	41236.95366	579.07548	1.404	56536.04623	999.73151	1.768
June	56025.72435	965.65715	1.724	63716.75589	1155.36232	1.813
July	64736.04775	981.45871	1.516	65250.96678	1187.20518	1.819
Aug	64253.67244	1273.85855	1.983	67500.23276	1251.90718	1.855
Sept	49406.34564	822.12545	1.664	61933.93417	1145.04854	1.849
Oct	46156.43321	828.96353	1.796			
Nov	34669.38259	820.54068	2.367			
Dec	39988.67014	748.86219	1.873			
Jan	37030.99534	772.78827	2.087			
Feb	35173.02417	799.66832	2.274			
March	42321.78659	858.98840	2.030			
Total losses	549495.69974	10206.45440	1.857	360535.48129	6518.94859	1.808

* (Up- to Sep. 2022)

The transmission system has been able to handle energy of the order of 549495.7 LU during the year 2021-22 and 529874 LU in the year 2020-21.

Haryana is a State catering to load through small Transmission Lines but large number of interface points & substations to cater the load & maintain voltage profile as per fixed Norms. In order to achieve further appreciable reduction in Losses, the Petitioner is required to invest

huge additional capital, which may not fulfil the criteria of Cost Benefit Analysis and required lenders and long time to get the additional Plan completed, which does not appear practical. The Petitioner is having view that the Transmission Losses varies with the load and Generation variation from different sources, which is not in control of the Transmission Licensee beyond the certain level.

The Commission observes that HVPNL has improved upon the target for intra state transmission losses fixed for FY 2021-22 i.e. 1.857% against target of 2.10%.

In view of foregoing discussions, the Commission observes that target fixed for transmission losses in the MYT Regulations 2019 are quite realistic and achievable. The licensee must put in sincere and consistent efforts to reign in its transmission losses within prescribed norms.

J. TRANSMISSION SYSTEM AVAILABILITY

The normative annual transmission system availability factor as per the regulations is given here under: -

Normative Annual Transmission System Availability Factor (NATAF) (%)

Norms	1 st MYT Period						2 nd MYT control Period	
FY	2014-15 (%)	2015-16 (%)	2016-17 (%)	2017-18 (%)	2018-19 (%)	2019-20 (%)	2020-21 (%)	2021-22 (%)
NATAF	98.80	99.00	99.20	99.20	99.20	99.30	99.20	99.20

Year wise availability of Transmission system as provided by the HVPNL is tabulated as under: -

Year	Availability in %
2006-07	99.62
2007-08	99.57
2008-09	99.57
2009-10 (April to September)	99.56
2009-10 (October 2009 to March 2010)	99.3935
2010-11	99.5948
2011-12	99.5569
2012-13	99.6724
2013-14	99.690
2014-15	99.1309
2015-16	98.2985
2016-17	99.0425
2017-18	98.9518
2018-19	99.5401
2019-20	99.8531
2020-21	99.3614
2021-22	99.5770
2022-23 (up to September, 2022)	99.5584

The Commission observes that the transmission system availability for the year for FY 2020-21, is 99.36% against the target of 99.20% and in FY 2021-22, the availability has been

99.58% against the target of 99.20%. The licensee has been able to achieve transmission system availability of 99.56% in the FY 2022-23 (ending Sept. 2022). However, it would like to emphasize the need to keep focused attention for the preventive maintenance of the transmission lines and the power transformers to avoid outages/ break downs in the transmission system to maintain the TSA well above 99.20%.

Further, Commission observes as follows:

- i) Voltage of 132 KV side has been found outside the limit i.e. below 122kv during 01/05/2022 to 07/05/2022 & 19/09/2022 to 25/09/2022 at 132kv S/Stn. Ratia.
- ii) Voltage at 400 KV S/Stns. at Kirori was found to be high at different times of the year.
- iii) Outages on 400 KV lines have increased in 2022-23 as compared to 2021-22 even during first six months.

The Commission directs the licensee:

- a. To get the matter investigated whether adequate capacitor banks have been provided or any of the lines feeding Ratia is overloaded.
- b. To take appropriate action to control high voltages.
- c. To take remedial action to prevent outage of 400 KV line as it affects large area.
- d. To maintain the target availability as per norms specified in MYT Regulations, 2019.

FAILURES OF POWER TRANSFORMERS

HVPNL has submitted that there are 1260 Power Transformers installed in HVPNL as on 30.09.2022. Failure of transformers during last 3 years is as enumerated below:

01.04.2019 to 31.03.2020	01.04.2020 to 31.03.2021	01.04.2021 to 31.03.2022	01.04.2022 to 30.09.2022
14	11	21	04

The voltage wise detail of transformer damaged during the current year from 01.04.2022 to 30.09.2022 is as under:

Sr. No.	Voltage rating	Total no. of transformer	Damaged transformer	% of damage
1	400 kV	15	0	0
2	220 kV	231	1	0.43
3	132 kV	616	2	0.32
4	66 kV	398	1	0.25
	Total	1260	4	0.32%

The licensee was advised in previous ARR order to strictly enforce the preventive maintenance schedules, healthiness of the protection system, avoid over loading of the

transformers and implement the findings of the enquiry reports of the Metering and Protection wing of the HVPNL to aim for zero damage rate for Power Transformers.

The Commission observes that the damage rate of Power transformers continues to be high, which should not be more than one percent of its population as being observed in the best performing utilities. The damage rate was 1.18% in FY 2019-20, 0.88% in FY 2020-21, 1.68% in FY 2021-22, and 0.32% during FY 2022-23 (ending Sept, 2022) as reported by the licensee.

In compliance of the Commission's directives, HVPNL has submitted directive wise reply, which is as under:

I. Reason of high transformer damage rate from 01.04.2021 to 30.09.2021 and measures taken to arrest the damage rate:

- There are 19 Nos. Power Transformer damaged during 01.04.2021 to 30.09.2021 and further 2 no. of Power Transformers damaged during the period of 01.10.2021 to 31.03.2021.
- Total damaged transformers during FY 2021-22 are 21. Out of total of 21 damaged T/Fs, 11 No. T/Fs had already outlived useful life of more than 20 years. Remaining 10 no. of power transformers are damaged due to high level electromechanical stress caused by excessive tripping/ breakdowns of 11/33 kV outing feeders which are maintained by the DISCOMs. DISCOM offices are regularly impressed upon to carry out proper maintenance of feeders to minimize the number of tripping.
- Further, 132/11 kV 10/16 MVA T/F has record of frequent damage and poor performance due to direct impact of fault occurred on 11kV side. Now the Nigam has phased out procurement of this rating 132 / 11kV 10 / 16 MVA T/Fs and 16 / 20 MVA T/Fs are being procured.
- All Scheduled preventive maintenance of T/Fs is being adhered. This has reflected in less damaged rate of T/Fs from 01.10.21 to 30.09.2021.
- As a remedial measure, matter is regularly taken up with Discoms for setting right of defective GO Switch, proper earthing and heavy-duty LA's on 1st H-pole of all the 11 KV outgoing feeders. It has also been emphasized to ensure the proper maintenance of 11 KV feeders especially within 2 KMs near the substation.
- Earthing of T/Fs is being ensured as well as measures are being taken for plugging of oil leakage.

- Above mentioned practices helped in improving the situation and only 02 Power T/F damaged during the period from 01.10.2021 to 31.03.2022.

II) To identify the no. of power transformers which have completed useful life and action plan to replace transformers which have out lived and sick transformers:

The details of transformers which have completed useful life 25 years are as under: -

Sr No.	TS Zone	No. of T/Fs which have completed useful life
1	Panchkula Zone	37
2	Hisar Zone	34
3	NCR Gurugram Zone	36
	Total-HVPL as a whole	107

- Transformers having aged more than 25 years and being problematic have been identified.
- All these transformers will be replaced in phased manner, and requirement of transformers as per phases have also been entered in MIS portal by field offices.
- Residual life Analysis (RLA) of T/Fs has already been taken by the Nigam. A priority list is under preparation for procurement of T/Fs to phase out those T/Fs in the first instance which are above 30 years of age.
- Further, updated Action Taken Report in respect of balance 34 no. transformers declared sick/ got damaged during the period of 2018-19 to 31.07.2021 is tabulated as under:

Financial Year	Total damaged/ declared sick Transformers	Transformers got repaired/ surveyed-off	Transformers for which tender has been floated for repair	Under process of survey-off	Miscellaneous
2018-19 to 31.07.2021	34	8	15	10	1*

*Concurrence of replacement of 132/33kV 10/16MVA T/F with 40/50MVA installed at 220 BBMB, Kurukshetra is still pending from BBMB authority. Further necessary action will be taken after getting the Concurrence of BBMB authorities.

III) The status of Division-wise M&P observations pending as on 31.03.2022

Circle wise M&P observations pending as on 31.03.2022

Sr. No.	Name of Circle	Total No. of M&P Observations	No. of M&P Observations attended	No. of M&P Observations pending
1	Panchkula	864	463	401
2	Karnal	1187	760	427
3	Rohtak	694	540	154
4	Gurugram	873	511	362
5	Faridabad	595	400	195
6	Hisar	1212	822	390
Grand Total- HVPL		5425	3496	1929

The Commission observes that the damage rate of power T/Fs in TS circle Faridabad and Gurugram in the year 2021-22 is quite high and needs analysis and 1929 M&P observations are pending.

The Commission directs that M&P observations relating to system protection be attended within two months of the order as attending the observations can go a long way in reducing the outages/damage.

Identification of defective LAs/GO Switches/defective earthing on 1st H-pole for 11 KV feeders emanating from HVPNL substations:

HVPNL has submitted status report of replacement of defective LA, GO switch, Earthing is as under:

Sr. No.	Name of TS Circle	Total No. of 11 kv feeder	Balance as on 31.07.2021			Balance up to 31.03.2022		
			GO Switch	LAs	Earthing	GO Switch	LAs	Earthing
1	Faridabad	885	93	595	115	266	1010	127
2	Gurugram	1129	193	884	163	170	1536	179
3	Hisar	715	109	517	133	115	585	105
4	Panchkula	1079	62	420	33	103	227	60
5	Karnal	530	94	339	8	101	182	48
6	Rohatak	423	50	510	48	97	162	62
Total		4761	601	3265	500	852	3702	581

Further, in response of the directives, HVPNL has submitted as follows:

1) Replacement Defective LAs, Go Switches and Earthing's:

It is pertinent to mention here that these works are to be carried out and in the scope of DISCOMs only and HVPNL has to pursue with DISCOMs on regular basis.

- To impress upon DISCOMS for replacement of defective LAs, GO switches, and earthings, matter is regularly being taken up by HVPNL offices with concerned DISCOM officers citing the need to do the replacement work of defective LAs, GO switches, and earthings in the interest of the safety of transmission equipment.
- Various Coordination Meetings with DISCOMs are being held regularly for replacement work of defective LAs, GO switches, and earthings and DISCOMs authorities are insuring that the work is in progress and will be completed at the earliest.

2) Mechanism to monitor the Tan Delta and other parameters to arrest the damage rate of CTs:

- The Tan delta of CTs is being checked by M&P team during tri-annual audit to monitor rate of rise of tan delta. Primary & Secondary connections of CTs are

being checked during maintenance & got properly tightened to avoid damaged rate of CT

- As per policy of Nigam, the higher tan delta values CTs will be replaced in a phased manner.
- Accordingly, CTs having tan delta values more than 10 have been replaced.
- The replacement of CTs having tan delta value between 5 to 10 are in process in a phased manner.
- After replacement of CTs having tan delta value between 5 to 10, CTs having value between 1 to 5 will also be replaced in a phased manner.
- The requirement of CTs has also been entered in IMS portal by field offices. Regular Maintenance of CTs is being done as per maintenance schedule or as and when required.

The Commission observes that as on 31.07.2021, 601 GO switches, 3325 LAs and 500 earthings were pending for replacement and Nigam has reported that as on 31.03.2022, 852 GO switches, 3702 LAs and 581 earthings are pending, which reveals that there is no progress in replacement of defective GO switches and earthing's and the count of defective GO switches, LAs and earthings has increased and therefore, above reply submitted by licensee is not satisfactory. HVPNL is required to monitor the replacement of defective LAs, GO switches, defective earthing and ensure complete replacements in coordination with the DISCOMs to avoid interruption of supply and damage of costly equipment.

Commission directs the licensee:

- i) to develop a monitoring system for replacement defective Lightning Arrester (LAs), GO switches and earthings with the involvement of Discoms and ensure that defects are removed within two months to minimize outage of system and give more reliable supply.**
- ii) Progress of replacement of CTs viz-a-viz total CTs having tan delta more than 1 in the FY 2022-23 may be intimated to the Commission within 3 months of issue of order.**

K. Fatal and Non-Fatal Accidents

HVPNL has supplied data of fatal and Non-Fatal accidents to human beings for the year 2020-21, 2021-22 & 2022-23 (up to 30.09.2022) as tabulated below:

Fatal and Non-Fatal Accidents

Category	2020-21	2021-22	2022-23 (till 30.09.2022)
(A) Fatal			
Human beings	0	1	1
Non-human beings	0	0	0
(B) Non-Fatal			
Human beings	3	0	1
Non-human beings	0	0	0

The Commission observes that fatal/non-fatal accidents have increased in FY 2022-23 in comparison of FY 2021-22. The licensee is directed to adhere safety rules, so that the accident(s) could be avoided in future.

L. PLANS FOR IMPROVING THE SYSTEM POWER FACTOR

The status of total capacitors installed in the Transmission System as on 31.03.2022 is tabulated as under:

Sr. No.	Name of TS Zone	Total Capacitors in MVAR installed as on 30.09.2021	Total Capacitors in MVAR installed as on 31.03.2022
1	TS Zone Panchkula	3232.195	3118.867
2	NCR Gurugram	-	1843.706
3	TS Zone Hisar	3065.722	1375.526
Total		6297.917	6338.099

The circle-wise status of faulty capacitor banks repaired / rehabilitated up to 31.03.2022 is tabulated as under: -

Sr No	Name of TS Circle	Total installed capacity as on 31.03.2022 (in MVAR)	Faulty capacitor banks as on 31.07.2021 (in MVAR)	Faulty capacitor as on 31.03.2022 (in MVAR)	Repaired/ Rehabilitated capacity upto 31.03.2022 (in MVAR)	Addition of New capacitor banks upto 31.03.2022 (in MVAR)
TS Zone NCR Gurugram						
1	Faridabad	465.01	44.400	38.40	6.00	0.00
2	Gurugram	1378.696	24.555	24.148	-0.407	36.00
	Total	1843.706	68.955	62.548	5.593	84.78
TS Zone Panchkula						
3)	Panchkula	1067.599	3.568	1.60	1.968	63.00
4)	Karnal	946.136	10.044	10.240	-0.196	103.284
5)	Rohtak	1105.132	87.712	44.150	43.562	86.936
	Total	3118.867	101.324	55.99	45.334	253.22
TS Zone Hisar						
6)	Hisar	1375.526	43.378	37.554	5.824	48.78
Total- HVPNL		6338.099	213.657	156.092	57.565	386.78

Progress of installation of new capacitors and revival of damaged capacitors is being closely monitored by Northern Region Power Committee (NRPC) via Operation Co-ordination Sub-Committee (OCC) meetings held on monthly basis & Implementation of directions issued during OCC Meeting are strictly monitored by SLDC Haryana.

The above data reveals that HVPNL has a total installed capacity of 6338.099 MVAR capacity as on 31.03.2022, added new 386.78 MVAR of capacitors (up to March, 2022) & rehabilitated 57.565 MVAR of capacitor banks. Capacitors of 156 MVAR are still to be repaired/rehabilitated by HVPNL.

The Commission directs the licensee:

- i) To expedite the repair of defective capacitor banks and ensure the healthiness of the capacitor banks installed in the system**
- ii) To intimate to the Commission list of power T/Fs where capacitor Bank is yet to provided, where Capacitor Bank is provided for less than 20% of rated capacity and where Capacitor Bank has been provided but is defective.**

M. ENERGY ACCOUNTING

HVPNL has submitted that the information on energy received at interface points of HVPNL with CTU and energy supplied to the distribution licensees and Railways at LV side of the transformers in the HVPNL Sub Stations is being accounted for.

Regarding metering of interface points with DISCOMs/Railways, HVPNL has submitted that there are 1426 interface points between HVPNL and the Distribution licensees i.e. UHBVNL, DHBVNL and the Railways and at all the interface points Special Energy Meters (SEMs) of 0.2s class accuracy have been installed.

The monthly energy account is prepared by HVPNL after considering the energy measured and recorded by energy meters installed at the interface points of the DISCOMs at 11KV or 33 KV side of each Power Transformer feeding the distribution area. Additionally, the energy fed directly from the Sub Stations of HVPNL at 66kV and above pressure to the consumers of DISCOMs is accounted for in the monthly energy accounts.

HVPNL has further submitted that they, as a transmission licensee, have to install and maintain the interface meters for recording the flow of power from HVPNL to the distribution licensees i.e. UHBVN, DHBVN & Railways. As far as interstate metering (at Haryana boundary) is concerned, the meters are installed and maintained by Central Transmission Utility (Power Grid Corporation of India Ltd.). Adequate backup systems also exist to avoid metering issues.

The Commission directs HVPNL to provide the list of defective Special Energy Meters (SEMs) installed at the inter-utility points.

3.7 EMPLOYEE RECRUITMENT AND RETIREMENT

The total number of employees being retired, and recruitment envisaged for the FY 2022-23 and FY 2023-24 has been provided by the licensee as under: -

Retirements and Recruitments (Nos)

Financial Years	Retirement	Proposed addition of Employees	Effective	Cumulative
FY 2022-23	147	19	(128)	(128)
FY 2023-24	121	0	(121)	(249)

3.8 AGGREGATE REVENUE REQUIREMENT

In accordance with the the revised estimates of individual items, the licensee has proposed the revised APR for the FY 2022-23 vis-à-vis those approved by the Commission for the FY 2022-23. The same is reproduced below:

Transmission ARR for FY 2021-22 (Rs. Million)

Particulars	Approved by HERC 02.03.2022	Proposed for APR for FY-2022-23	Gap Surplus/ (Deficit)
Expenditure			
O&M expenses	8906.99	9305.82	-398.83
<i>Employee Expenses</i>	4578.85	4899.35	-320.50
<i>Terminal Benefits</i>	3443.90	3443.90	0.00
<i>A&G Expenses</i>	312.58	416.02	-103.44
<i>R&M Expenses</i>	571.66	546.56	25.11
Depreciation	5091.50	4622.96	468.54
Interest on term Loans	2928.11	2536.70	391.41
Impact of Foreign Exchange Risk Variation			
Interest on working Capital	316.19	323.82	-7.63
Total Expenditure	17242.79	16789.30	453.50
Return on Equity	2678.82	3080.87	-402.05
Less: Non Tariff Income	-222.80	-222.80	0.00
Annual Transmission Charges	19698.81	19647.37	51.44
Add: Revenue Gap 2019-20	1884.43	1884.43	0.00
Add: Carrying cost on above			0.00
Aggregate Revenue Requirement	21583.24	21531.80	51.44
Transmission Share of SLDC Charges	13.17	12.10	1.07
Unitary Charges for JKTPPL	488.76	488.76	0.00
Less YTC for lines Operating as ISTS Lines for FY 2022-23	0.00	3.45	-3.45
Total Transmission Charges	22085.17	22029.21	55.97

3.9 REVENUE GAP AND CARRYING COST

The petitioner has submitted that as the past precedence set by the Hon'ble HERC in its consecutive tariff order(s), the Hon'ble Commission may not approve the revised estimates for APR of the FY 2022-23. The petitioner has prayed that the Hon'ble Commission may

approve the Annual Performance Review for the FY 2022-23 based on the true-up of the FY 2021-22 and revised ARR (APR) of the FY 2022-23. It has been further submitted that the petitioner has computed carrying cost on the revenue gap for the FY 2021-22, FY 2022-23 and FY 2023-24, considering the applicable SBI base rate and appropriate margin rate as provided in the table below: -

Proposed Revenue Gap with Carrying Cost for FY 2021-22 (Rs. Million)

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Approved ARR	19,180.26	22,085.17	22,769.28
Proposed Revised ARR	22,899.44	22,029.22	24,923.17
Opening Revenue Gap	-	3,877.25	4,206.81
Addition in Revenue Gap	3,719.18	-	2,153.89
Closing Revenue Gap	3,719.18	3,877.25	6,360.70
Interest Rate	8.50%	8.50%	9.200%
Carrying Cost	158.07	329.57	243.05
Closing Revenue Gap with Carrying Cost	3,877.25	4,206.81	6,603.75

The Commission has examined the half yearly accounts made available by the petitioner up to September 2022, and observes that though the employees' cost has shown an upward trend, it appears to exceed the approved cost on close of the financial year.

The Commission is of considered view that it would not be appropriate to replace one set of estimated figures for the FY 2022-23 with another set of estimates now proposed in the absence of Audited figures for the FY 2023-24. Further, in view of the facts that the year is almost over now, it would be appropriate to examine the financial impact at the time of 'true up' only when the audited figures would be available.

3.10 REVIEW OF SLDC CHARGES

The petitioner has submitted that the computation of expenses for SLDC business is done in accordance with the HERC MYT Regulations 2019. The petitioner has prayed that the Commission may approve the revised ARR as submitted below: -

Proposed ARR for FY 2022-23 (Rs. Million)

Particular	Approved by HERC FY 22-23	Revised Estimates for FY 22-23	Gap Surplus/Deficit)
Employee Expense	54.55	59.21	-4.66
Terminal Benefits	0.00	0.00	0.00
A&G Expense	9.14	9.35	-0.21
R&M Expense	7.05	6.26	0.79
Depreciation	67.98	54.97	13.01
Interest on Loan	24.81	20.32	4.49
Interest on Working Capital	2.57	2.55	0.02
Return on Equity	0.00	0.00	0.00
Less: Non-Tariff Income	-1.45	-1.45	0.00

Add: Revenue Gap/ Surplus Refund	0.00	0.00	0.00
Carrying Cost	0.00	0.00	0.00
TOTAL	164.65	151.21	13.44

The summary of approved and revised estimates for SLDC business along with surplus/ (deficit) is provided below:

Summary of Surplus/ (Deficit) of SLDC Business for FY 2022-23 (Rs. Million)

SLDC Business	Approved by HERC	Revised Estimates	Surplus/ (Deficit)
TOTAL	164.65	151.21	13.44

The petitioner has requested that the Commission may approve the revised estimate of Rs. 151.21 Million and allow to recover the same along with True-up Gap for the FY 2021-22 and the ARR of FY 2023-24.

The Commission does not find it appropriate to revise the ARR for the SLDC for the FY 2022-23 on the basis of an estimated figure. Hence, the same shall be taken up for true up on the closure of the financial year as per the enabling provisions and terms of the MYT Regulations, 2019 in vogue.

CHAPTER 4

ANNUAL REVENUE REQUIREMENT, ANNUAL TRANSMISSION CHARGES & SLDC CHARGES FOR THE FY 2023-24

4.1. BRIEF BACKGROUND

In line with the HERC MYT Regulations 2019, the petitioner has submitted the Annual Revenue Requirement for the FY 2023-24 and proposed Annual Transmission & SLDC charges for the FY 2023-24 as per following details.

4.2. OPERATION & MAINTENANCE EXPENSES (O&M)

A. EMPLOYEE COST

The petitioner has submitted that employee cost of the FY 2021-22 has been considered as per audited accounts. Further, the inflation factor has been considered as per methodology, approved by the Commission in the MYT Regulations in vogue i.e. 2.93% per annum. In addition to the employee cost, arrived after considering the inflation factor, the terminal benefits estimate for the MYT control period is based on the actuarial valuation as per the report of the actuary.

HVPNL estimates of Employee Cost for FY 2023-24 (in Rs. Million)

Particulars		HERC	HVPNL	HVPNL
	Actual for FY 2021-22	Approved by HERC T.O 09.03.2021 FY 2021-22	Revised Estimates for FY 2022-23 considering inflation at 2.93%	Proposed for FY 2023-24 considering inflation at 2.93%
Salaries and Wages	3526.72	4,947.51	3,630.07	3,736.43
Other Staff Cost	1212.76		1,248.29	1,284.87
Staff Welfare Expenses	119.87		123.39	127.00
Benefit from Staff Loans	0		0	0
Add:- Employees cost for employees to be engaged in New S/Stn	0	0	0	48.00
Add: Employee Cost for Additional Employees (Net of Retires and New Joinees)	0		-43.19	-84.02
Less: Employee Benefit for SLDC	57.52		59.21	60.94
Total Employee Cost	4801.83	4947.51	4,899.35	5,051.34
Terminal Benefits	5062.04	2,000.00	3,443.90	2,814.80
Total Employee Cost Incl Terminal Benefits	9863.87	6947.51	8343.25	7866.14

Particulars	HERC Approved by HERC T.O 21.05.2020 FY 2023-24	HVPNL Proposed	HERC approval
Salaries and Wages	2893.20	3736.43	3736.41
Other Staff Cost	1207.72	1284.87	1284.87
Staff Welfare Expenses	107.80	127.00	127.00
Benefit from Staff Loans	3.45	0	0.00
Add:- Employees cost for employees to be engaged in New S/Stn		48.00	0.00

Particulars	HERC Approved by HERC T.O 21.05.2020 FY 2023-24	HVPNL Proposed	HERC approval
Add: Employee Cost for Additional Employees (Net of Retires and New Joinees)	94.25	-84.02	-84.02
Less: Employee Benefit for SLDC	48.29	60.94	60.94
Total Employee Cost	4258.13	5051.34	5,003.32
Terminal Benefits	(81.60)	2814.80	2814.80
Total Employee Cost Incl Terminal Benefits	4176.53	7866.14	7818.12

It has been submitted that the terminal liability for the FY 2023-24 has been claimed by HVPNL based on the projection made by the actuary and may change at time of actual valuation due to change in assumptions/other parameters. The terminal liability of Rs. 2814.80 million including Rs. 2010 million pertains to the segregated liability for the FY 2021-22. Accordingly, the petitioner has prayed that this Hon'ble Commission may approve the terminal liability for the FY 2023-24 as per the actuarial computations subject to true up based on the audited accounts. The Commission has examined the computations filed by the petitioner, as the same is in line with the HERC MYT Regulations in vogue and also previous order(s) of this Commission, approves the same. The aberration is on account of disallowance of Rs. 48 Million proposed by the petitioner towards employees to be engaged at new sub-stations. The Commission has not considered the same in the absence of details and justifications.

B. REPAIR AND MAINTENANCE EXPENSES (R&M)

The petitioner has submitted that as per the MYT Regulations 2019, the R&M expenses have been approved as percentage of GFA with K factor being 0.5% for the entire control period. The R&M expenses for the FY 2023-24 have been proposed, considering the revised opening GFA for FY 2021-22 and projected addition in GFA during FY 2022-23 and FY 2023-24.

R&M Cost for FY 2023-24 (In Millions)

Particulars	FY 21-22	FY 22-23	FY 23-24
Opening GFA	101411.99	1,05,309.43	1,13,313.53
Closing GFA	105309.43	1,13,313.53	1,23,382.28
Average GFA	103360.71	1,09,311.48	1,18,347.91
% of GFA for R&M Expenses	0.50%	0.50%	0.50%
R&M Expenses	516.80	546.56	591.74

The Commission has examined the R&M calculations proposed by the licensee and finds the same in accordance with the MYT Regulations. **The Commission directs the licensee to examine the factor used for calculation of normative R&M expenses and submit a proposal to the Commission for rationalizing the same, after considering, both predictive and preventive maintenance.**

C. ADMINISTRATIVE & GENERAL EXPENSES (A&G)

In line with the MYT Regulations 2019, the petitioner has projected the A&G expenses for the FY 2023-24 considering an inflation factor as specified by the Commission and has submitted that the proposed A&G expenses may be allowed by the Commission, as these are reflective of true A&G expenses likely to be incurred.

Proposed A&G Expenses for FY 2023-24 (In Millions)

S. No.	Particulars	ARR Projection
A)	Administration Expenses	
1	Rent (Including Lease Rent)	2.48
2	Insurance	3.68
3	Rates and taxes	68.09
4	Telephone charges, Postage, Telegram and Telex Charges	4.92
5	Mobile sets Charges	12.38
6	Legal and professional	44.17
7	Payments to auditors (Including out of pocket expenses)	0.79
8	Consultancy charges	4.37
9	Professional charges	7.55
10	Service charges for computerisation	2.51
11	Conference Expenses	-
12	Training Expenses	37.11
13	Travelling and conveyance	133.46
14	Other Expenses	68.63
	Sub-Total of Administrative Expenses	390.16
B)	Other Charges	
1	Material Related Expenses	45.91
2	Expenses on Photostat on Contract Basis	1.76
	Sub-Total of other charges	47.66
C)	Less: A&G Expenses against SLDC	9.62
D)	Total Charges	428.21

The Commission has examined the projected O&M expenses filed by the licensee, for the period under consideration, and observes that the Commission has considered and approved A&G expenses amounting to Rs. 404.18 million for the FY 2021-22 as part of true up. The same cost is adjusted for the proposed inflation factor of 2.93% p.a. to arrive at the approved A&G expenses for the FY 2023-24 amounting to Rs 428.21 for the FY 2023-24.

4.3. DEPRECIATION

The petitioner has proposed depreciation for the FY 2023-24 considering the existing assets and assets likely to be added during the year, in view of the revised capitalization schedule. The actual depreciation rate works out to be 4.39% and the same has been considered for computation of depreciation for the FY 2023-24.

Depreciation for FY 2023-24 (In Rs. Million)

Gross Fixed Assets						Provision for Depreciation				
S. No	Particulars	At Beginning of Year	Addition During Year	Adjustments & Deduction	At End of Year	Rate of Depre.	At Beginning of Year	Addition During Year	Adjustments & Deduction	At End of Year
1	Land & Land rights	4,028.95	-	-	4,028.95		-	-	-	-
2	Building and Civil Works	15,207.40	11,174.13	-	26,381.53	4.39%	2,898.06	913.08	-	3,811.14
3	Plant & Machinery	95,256.39		-	95,256.39	4.39%	44,825.91	4,182.71	-	49,008.62
4	Furniture & Fixtures	294.91		-	294.91	4.39%	186.29	12.95	-	199.24
5	Vehicles	119.33		-	119.33	4.39%	100.66	5.24	-	105.90
6	Total Balance	1,14,906.97	11,174.13		1,26,081.10		48,010.92	5,113.98		53,124.90
7	Less: Generation Assets – BBMB	5,544.68	-	-	5,544.68	-	242.86	-	-	242.86
8	Less: SLDC assets	1,593.44	1,105.39		2,698.82	4.39%	321.65	94.24		415.89
9	Less: Dep. on account of Consumer Contribution							257.95		
10	Total Transmission	1,13,313.53	10,068.75	-	1,23,382.28	(0.04)	47,689.27	4,761.80	-	52,709.01

The Commission has examined the projected depreciation filed by the licensee for the MYT Control Period and finds the same in accordance with the MYT Regulations. Accordingly, the Commission approves Rs. 4761.80 million towards depreciation, net of consumers contribution for the FY 2023-24.

4.4. INTEREST & FINANCE CHARGES

The interest charges, in line with the computation of interest on loans, has been proposed by the licensee as per the methodology specified in the MYT Regulations with combination of interest on existing loans at prevailing rates and new loans at SBI base rate + 1.5% on 80% of the capitalized assets for each year and are provided as below:

Interest and Finance Charges Proposed for FY 2023-24 (In Rs. Million)

Sr No	Particulars	ARR
A	Interest and Finance Charges on Long Term Loans / Credits from the FIs/banks/organisations approved by the State Government	
i	Rural Electrification Corp.	2,068.61
ii	Interest on Medium Term Loan from REC	
iii	Power Finance Corp.	
iv	Interest on loan from National Capital Region Plg Board	
v	Interest on loan from NABARD	
vi	Interest on loan from Market Committee	
vii	Interest on World Bank Loan through State Govt. (WB)	
viii	Loan Processing Fee-World Bank Loan	
	Total of A	2,068.61
B	Interest on Loan on New Capex (Net of Repayments)	914.81
	Total of C	914.81
C	Grand Total of Interest & Finance Charges: A + B +C	2,983.42
D	Less: Interest & Finance Charges Chargeable to Capital Account	-
E	Net Total of Interest & Finance Charges: For Revenue Account: C-D	2,983.42
	Net Interest on Loan	2,983.42

The licensee has submitted that interest computed on 'New Loans' is net of repayments made i.e. the loan component of newly capitalized assets are net-off with the repayments expected for the year. The Commission approves Interest and Finance Charges for the FY 2023-24, as per the following details.

Interest and Finance Charges approved for FY 2023-24 (In Rs. Million)

Particulars	2023-24
Opening Balances	36320.98
REC	16360.93
PFC	4723.03
NIDA	3757.18
World Bank	11479.84
Additions	3584.49
REC	2454.14
PFC	566.77
NIDA	563.58
World Bank	0.00
Repayments	2947.00
REC	1651.37
PFC	425.12
NIDA	142.26
World Bank	728.25
Closing Balances	36958.47
REC	17163.70
PFC	4864.68
NIDA	4178.50
World Bank	10751.59
Average Loan during Financial Years from FY 2021-22 to FY 2023-24 (projected for FY 2022-23 & FY 2023-24)	36639.73
Average Rate of Interest during Financial Years. For FY 2023-24, the rate of interest on World Bank Loan just only @ 0.50 % whereas RoI of loan than World bank is @ 8.72 % and after inclusive of World bank Loan, the RoI reduced to @ 6.65 % (approx).	8.14%
Rate of Interest according to the Institution wise since loan taken	8.50 % to 10.25 %
Interest Cost on Loans	2983.42
REC	1359.67
PFC	382.13
NIDA	211.45
World Bank	115.36
Loan Processing Fee World Bank Loan	0.00
Additions of interest on loan on New Capex	914.81
Less Interest and Finance Charges Chargeable to Capital Account	0.00
Interest and Finance Charges for the respective Financial Years Net of IDC	2983.42

4.5. INTEREST ON WORKING CAPITAL

The interest on working capital has been calculated by the licensee, based on the principles set out in the MYT Regulations 2019. The interest rate shall be considered at MCLR of relevant financial year plus 150 basis points, which comes out to be 8.50%. The Commission has examined the methodology adopted by the licensee for calculating interest on working capital and finds the same in accordance with the MYT Regulations. However, since the individual items as proposed by the licensee have been approved by the Commission with certain changes, the

amount of approved interest cost on working capital, based on the interest rates as proposed by the licensee, works out as under: -

Interest on Working Capital for FY 2023-24 (in Rs. Millions)

Sr. No.	Particulars	HVPNL Proposed for FY 2023-24	HERC Approved for FY 2022-23
1	O&M for 1 month	740.51	736.51
2	Maintenance spares	1332.91	1325.71
3	Receivables	1668.34	1639.51
4	Total	3741.75	3701.73
5	Interest Rate	8.50%	8.50%
6	Interest on Working Capital	318.05	314.65

Accordingly, the Commission approves Rs 314.65 Million towards interest on working capital requirement for the FY 2023-24.

4.6. RETURN ON EQUITY (TRANSMISSION BUSINESS)

The return on equity has been estimated by the licensee based on the expected equity contribution on the new capex proposed to be incurred by the petitioner. The rate of return considered for the return on equity is 11% in line with the MYT Regulations, 2019 as amended from time to time i.e., 2nd amendment dated 31.01.2022. New Equity has been computed on 20% of the capitalized assets of FY 2022-23 as the assets may not be fully commissioned and put to use during the same year. The details provided are as under:-

Return on Equity Proposed for FY 2023-24 (in Rs. Millions)

S. No.	Particulars	FY 22-23 APR	FY 23-24 ARR
1	Equity to be considered for Transmission business (Opening)	25,498.84	27,099.66
2	Add: Equity portion of GFA added	1,600.82	2,013.75
3	Closing Equity for RoE	27,099.66	29,113.41
4	Rate of Return	11.00%	11.00%
5	Average Internal Accruals	28,007.92	29,771.11
6	RoE - Proposed	3,080.87	3,274.82

The Commission has considered the submissions made by the licensee and observes that as per the MYT Regulations, 2019, ROE up to 14% can be allowed; the same was amended vide 2nd Amendment to Bank Rate + 4.5% with a ceiling of 11%, on the eligible equity capital deployed in the transmission business. Accordingly, the Commission, taking a holistic view of the financial burden that may be passed on to the electricity consumers of Haryana, approves the rate of Return on Equity at 10.67% computed on average equity utilized in the transmission business during the FY 2023-24 as per MYT Regulation, 2019.

Accordingly, ROE approved by the Commission for the FY 2023-24 is Rs. 2998.97 Million.

4.7. NON-TARIFF INCOME

The Petitioner submits that in the MYT Tariff Order for the Control Period FY 2020-21 to

FY 2024-25, the Hon'ble Commission has approved the Non-tariff Income for FY 2023-24 as Rs. 222.80 million. The same has been considered by the Petitioner as given below and requests the Hon'ble Commission to approve the same.

Non-Tariff Income for FY 2023-24 (Rs. Million)

Particulars	FY 2023-24
Non-Tariff Income	222.80

The Commission has considered the non-tariff income as proposed by the licensee largely comprising of interest earned from investments, Fixed and Call deposits and income from sale of scrap etc. and approves the same i.e., Rs 222.80 million.

4.8. ARR FOR THE FY 2023-24

As discussed in the preceding paragraphs, the revenue requirement for the transmission business proposed by the petitioner and that approved by the Commission for the FY 2023-24 is as per following table.

Annual Revenue Requirement for FY 2023-24

Particulars	FY 2023-24	FY 2023-24	FY 2023-24
	HERC Approved as per Order dated 21.05.2020	HVPNL Proposal	HERC Revised Approval
O&M expenses	5167.32	8886.07	8838.07
R&M Expenses	608.61	591.74	591.74
Employee Expenses	4258.14	5051.34	5003.32
Terminal Benefits	-81.60	2814.80	2814.80
A&G Expenses	382.17	428.19	428.21
Depreciation	5232.70	4761.80	4761.80
Interest on term Loans	2326.35	2983.42	2983.42
Interest on working Capital	195.84	318.05	314.65
Share of SLDC Charges	13.58	18.66	18.66
Total Expenditure	12935.79	16968.00	16916.60
Return on Equity		3274.82	2998.97
Less: Non Tariff Income	-222.80	-222.80	-222.80
Annual Transmission Charges	12712.99	20020.019	19692.76

In addition to the annual transmission cost as approved above, other components forming part of computation of aggregate revenue requirement for the FY 2023-24 are discussed hereunder.

4.9. UNITARY CHARGES

The Commission has granted project specific transmission license, set up under Public Private Partnership (PPP) mode, to M/s Jhajjar KT Transco Private Ltd on 26th October, 2010. The above transmission works stands completed and the concessionaire has achieved Commercial Operation on 12th March 2012.

As per Transmission Service Agreement (TSA Clause 26.8.2); the applicable monthly unitary charges are being paid by HVPNL to concessionaire. The base Unitary charge for the accounting year, in which COD occurs (i.e. 2011-12), was Rs. 4,50,00,000/-, and the same is being revised

annually by decreasing the base unitary charge for the immediately preceding accounting year by 3% thereof and the escalation to reflect 40% of the variation in WPI in accordance with the provisions of the TSA approved by the Commission.

The computation of monthly unitary charges for the FY 2023-24, as submitted by HVPNL, is presented below: -

Unitary Charges (FY 2023-24)

Sr. No.	Description	Amount	Amount
		Proposed by HVPNL	Approved by HERC
1	Base Unitary Charge as per Clause 26.2.1 of TA (Rs)	4,50,00,000.00	4,50,00,000.00
2	Yearly reduction (%)	3%	3%
3	Monthly Base Unitary Charge for 2022-23	3,21,88,563	3,21,88,563
4	WPI for April 2010 (Base Accounting Year) (Published by the Ministry of Industry (Office of Economic Advisor), GOI	135.20	135.20
5	WPI for Jan-2022 preceding the accounting year (WPI base year 2011-12)	143.80	143.80
6	Linking factor of all commodities WPI (based 2004-05) for 2011-12	1.60	1.60
7	WPI for Jan'22 preceding the Accounting Year	229.7924	229.7924
8	Increase in WPI (%)	69.9648%	69.9648%
9	WPI Index (40 % of WPI increase) (%) as per clause 26.3	27.9859%	27.9859%
10	Increase in Base Unitary Charge linked with WPI (Rs)	90,08,265	90,08,265
11	Indexed Unitary Charge (Rs) (Sl.No.3+10)	4,11,96,828	4,11,96,828
12	System Availability (%)	99.86%	99.86%
13	Normative Availability (%)	98.00%	98.00%
14	Incentive due to System Availability	7,81,899	7,81,899
15	Incentive due to less Transmission Losses (commutative incentive due to less Transmission Losses for FY 2021-22 taken for reference)	2,14,640	2,14,640
16	Unitary Charge + Incentives (Sl.No.11+14+15)	4,21,93,367	4,21,93,367
17	Monthly Unitary Charges (In Millions)	42.19	42.19

As estimated by the licensee, the expected 'Unitary Charges' for the FY 2023-24 is likely to be about Rs 42.19 Million per month. Keeping in view the expected increase in WPI and yearly reduction of base unitary charge by 3%, HVPNL has prayed that the Commission may approve the same as part of annual transmission charges for the FY 2023-24.

Accordingly, unitary charges Rs. 42.19 million per month is approved for the FY 2023-24. However, the incentive component may be checked and verified by HVPNL w.r.t the actual system availability and transmission loss including the methodology adopted for calculating and claiming the same.

4.10. YEARLY TRANSMISSION CHARGES (YTC) FOR TRANSMISSION LINES INCIDENTAL TO INTER-STATE TRANSMISSION (ISTS) OF ELECTRICITY

The petitioner has submitted that the CERC vide its order dated 25.06.2022 has allowed the transmission tariff for Asset-I i.e. 220 KV S/C Bhiwadi-Rewari (Ckt-I) only for the Tariff period 2019-24 in compliance of petition i.e. 159/TT/2021 filed by Petitioner.

The Petitioner has submitted that a review petition stand filed in Hon'ble CERC on dated 04.08.2022 to review his order dated 25.06.2022 in Petition no. 159/TT/2021. As per CERC website, the said review petition is under preliminary scrutiny before registration. As such the exact amount which shall be disbursed by PGCIL in lieu of remaining ISTS lines owned by the petitioner for the period 2019-24 shall be discovered after CERC decides the aforesaid petition. However, Transmission Charges amounting to Rs. 3.473 million were approved by the Hon'ble CERC vide order dated 25.06.2022 for the Asset-I i.e. 220 KV S/C Bhiwadi -Rewari (Ckt-I) only for Tariff period 2019-24 under Tariff Regulation 2019. Accordingly, the Commission approves the same i.e as proposed by the licensee on the basis of order issued by the Central Commission in the matter.

4.11. AGGREGATE REVENUE REQUIREMENT

As per the foregoing discussions, the proposed ARR of HVPN for the FY 2023-24, as filed by the petitioner and that approved by the Commission is presented in the table below.

Particulars	FY 23-24 Approved by HERC as per Order dated 21.05.2020	FY 23-24 Proposal by HVPNL	FY 2023-24 HERC Approved ARR
O&M Cost	5167.32	8886.07	8838.07
Employee Expense	4258.14	5051.34	5003.32
Terminal Benefits	-81.60	2814.80	2814.80
A&G Expense	382.17	428.19	428.21
R&M Expense	608.61	591.74	591.74
Interest on Loan	2326.35	2983.42	2983.42
Impact of Foreign Exchange Risk Variation	0.00	0.00	0.00
Depreciation	5232.70	4761.80	4761.80
Interest on Working Capital	195.84	318.05	314.65
Total Expenditure	12922.21	16949.34	16897.94
Return on Equity	0.00	3274.82	2998.97
Less: Non-Tariff Income	-222.80	-222.80	-222.80
Annual Transmission Charges	12699.41	20001.36	19674.10
Add: Incentive for TSA	0.00	0.00	0.00
Add: Sharing of Benefits @ 60% - Saving in IoWC	0.00	0.00	0.00
Net ARR	12699.41	20001.36	19674.10
Add:- Revenue Gap FY 2021-22	0.00	3719.16	2457.59
Add:- Carrying cost on gap of FY 2020-21 in FY 2020-21	0.00	0.00	0.00
Add:- Carrying cost on gap of FY 2020-21 in FY 2021-22	0.00	681.14	0.00
Add:- Carrying cost on gap of FY 2020-21 in FY 2022-23	0.00	0.00	0.00
Aggregate Revenue Requirement	12699.41	24401.66	22131.70
Transmission Share of SLDC Charges	13.58	18.66	18.66
Unitary Charges for JKTPPL	0.00	506.32	506.32
Less:- YTC for lines Operating as ISTS Lines FY 20-21	0.00	3.47	3.47
Annual Revenue Requirement	12712.99	24923.17	22653.21

4.12. SLDC ARR (FY 2023-24)

The licensee has submitted that the computation of expenses for SLDC business has been done in accordance with the MYT Regulations 2019. The revenue gap claimed in the FY

2020-21 is without any carrying cost. The Aggregate Revenue Requirement of SLDC for the FY 2023-24 has been projected by HVPNL as under: -

Aggregate Revenue Requirement for SLDC for FY 2023-24 (in Rs. Million)

SLDC Business	FY 23-24
Employee Expense	60.94
Terminal Benefits	0.00
A&G Expense	9.62
R&M Expense	10.73
Depreciation	94.24
Interest on Loan	55.92
Interest on Working Capital	3.27
Return on Equity	0.00
Less: Non-Tariff Income	-1.45
TOTAL	233.27

At the onset the Commission observes that, as per the existing arrangement, SLDC functions have been entrusted to the State Transmission Utility i.e. HVPNL. The Commission, from time to time beginning with its order dated 18th May, 2009, has expressed views regarding the necessity of functional autonomy to the SLDC i.e. not only in financial terms but also in decision making. It is reiterated that the Ministry of Power, Government of India, constituted a Committee on “Manpower Certification and Incentives for System Operation and Ring-Fencing Load Despatch Centres” to ensure functional autonomy for the Load Despatch Centres. The Committee in its report dated 11th August, 2008 observed that functional autonomy would mean taking decisions without being adversely influenced by extraneous issues originating from the Company Management or any of the market players, which can be ensured through: -

- a) Independent governance structure
- b) Separate accounting
- c) Adequate number of skilled manpower having high ethical standards and driven by altruistic values
- d) Adequate logistics / infrastructure.

For implementation of the recommendations of the Committee the Ministry of Power, Government of India created a Task Force vide notification No. 6 / 2 / 2008 – Trans dated 13th October, 2008. The action plan formulated by the Task Force was forwarded to the Government of Haryana and HVPNL vide the Commission’s letter No. 2256-58 / HERC / 2008 dated 19.12.2008 for implementation of the same in the prescribed manner.

Although the accounts of SLDC business stand separated by HVPNL and the Commission has been giving a separate order on the ARR and tariff applications of SLDC business of HVPNL since the FY 2006-07, yet other aspect such as independent governance structure, adequate skilled manpower and adequate logistics / infrastructure are still to be provided to SLDC.

Therefore, it becomes utmost important that the action plan recommended by the task force is implemented in letter and spirit. The Commission had directed HVPNL to submit detailed action taken report for implementation of the recommendations of the Committee within 30 days from the date of the Order dated 18th May, 2009. However, as per the record available in the Commission no progress has been made regarding this important matter.

The Commission has examined the proposed ARR for the SLDC Business as presented above and finds the same in order. The resultant figures of ARR for the FY 2023-24 for the SLDC business approved by the Commission are given in the following table: -

HERC Approved ARR of SLDC for the FY 2023-24 (Rs. Million)

Particular	Approved by HERC FY 23-24	Revised Estimates for FY 23-24	Approved ARR 2023-24
Employee Expense	48.29	60.94	60.94
Terminal Benefits	0.00	0.00	0.00
A&G Expense	7.40	9.62	9.62
R&M Expense	12.42	10.73	10.73
Depreciation	45.27	94.24	94.24
Interest on Loan	19.85	55.92	55.92
Interest on Working Capital	2.29	3.26	3.26
Return on Equity	0.00	0.00	0.00
Less: Non-Tariff Income	8.32	-1.45	-1.45
Add: Revenue Gap/ Surplus Refund	0.00	0.00	0.00
Carrying Cost	0.00	0.00	0.00
TOTAL	127.20	233.26	233.26

CHAPTER 5

5.1. ANNUAL TRANSMISSION CHARGES AND SLDC CHARGES

The annual transmission charges are determined as per the provisions of Regulation 50 of the MYT Regulations 2019 i.e. *“Transmission licensee shall recover the transmission charges at the normative annual transmission system availability factor specified for it by the Commission.”* The details of the annual transmission charges proposed by the licensee are summarized in table below:

Annual Transmission Charges Proposed for FY 2023-24 (In Rs. Millions)

Annual Revenue Requirement for FY 2023-24	Rs. Million	20001.37
Rev Gap of FY 2020-21	Rs. Million	3719.16
Carrying cost for FY 2020-21, FY 2022-23 and FY 2023-24	Rs. Million	681.14
Aggregate Revenue Requirement	Rs. Million	24401.67
Transmission Share of SLDC Charges	Rs. Million	18.66
Unitary Charges for JKTPL	Rs. Million	506.32
Less YTC for Lines Operating as ISTS Lines FY 2023-24	Rs. Million	3.47
Total Transmission Charges	Rs. Million	24923.18
Monthly Transmission Tariff	Rs. Million	2076.93
Monthly Transmission Charges UHBVNL	45.6005%	947.09
Monthly Transmission Charges DHBVNL	53.2600%	1106.17
Monthly Transmission Charges TPTCL	0.4172%	8.66
Monthly Transmission Charges NTPC	0.0168%	0.35
Monthly Transmission Charges CRPCPL	0.0025%	0.05
Monthly Transmission Charges Northern Railways	0.7030%	14.60

The petitioner has submitted that in case of any addition of new beneficiary, the transmission charges would be charged in proportion of the allotted capacity.

Based on the Commission's approved true up for the FY 2021-22 and the approved ARR for the FY 2023-24, the approved transmission tariff, for the FY 2023-24, to be recovered in the ratio of transformation capacity provided by the licensee is given in table below. The Commission observes that the transmission charges so apportioned are only indicative and are based on historical data provided by the licensee. The actual transmission tariff to be charged from existing and prospective beneficiaries shall, strictly, be in accordance with the relevant provisions of the MYT Regulations, 2019.

Approved Transmission Charges for the FY 2023-24 (Rs. Million)

		HVPNL Proposed Transmission Tariff for the FY 2023-24	HERC Approved Transmission Tariff for the FY 2023-24
Annual Revenue Requirement for FY 2023-24	Rs. Million	20001.37	19674.10
Rev Gap of FY 2020-21	Rs. Million	3719.16	2457.59
Carrying cost for FY 2020-21, FY 2022-23 and FY 2023-24	Rs. Million	681.14	0.00
Aggregate Revenue Requirement	Rs. Million	24401.67	22131.70
Transmission Share of SLDC Charges	Rs. Million	18.66	18.66

Unitary Charges for JKTP	Rs. Million	506.32	506.32
Less YTC for Lines Operating as ISTS Lines FY 2023-24	Rs. Million	3.47	3.47
Total Transmission Charges	Rs. Million	24923.18	22653.21
Monthly Transmission Tariff	Rs. Million	2076.93	1887.77
Monthly Transmission Charges UHBVNL	45.6005%	947.09	860.83
Monthly Transmission Charges DHBVNL	53.2600%	1106.17	1005.42
Monthly Transmission Charges TPTCL	0.4172%	8.66	7.88
Monthly Transmission Charges NTPC	0.0168%	0.35	0.32
Monthly Transmission Charges CRPCPL	0.0025%	0.05	0.05
Monthly Transmission Charges Northern Railways	0.7030%	14.60	13.27

5.2. SHARE OF SLDC CHARGES AS PER HERC MYT REGULATIONS 2019

As per the HERC MYT Regulations 2019. "The annual charges of SLDC is determined as a single composite charge from the beneficiaries as under: -

Intra – State Transmission Licensee	8% of the Annual SLDC Charges
Generating Stations and Sellers	46% of the Annual SLDC Charges
Distribution Licensees and Buyers	46% of the Annual SLDC Charges

In line with the above and HERC MYT Regulation 2019, the petitioner has apportioned the SLDC Charges for the FY 2023-24 among the different beneficiaries as per the table below:

Proposed SLDC Charges for FY 2023-24 (in Rs. Million)

Beneficiaries		Amount	Total (Rs. Millions) FY 2023-24
HVPN @ 8%	-	Amount	18.6616
Generating Companies & Sellers @ 46%	Installed Capacity / Capacity (in MW)	Amount	107.3044
HPGCL	2,582.40	Sub-Amount	60.6399
Faridabad Gas Power Plant	432.00		10.1442
Mahatma Gandhi Super Thermal Power Station	1,320.00		30.9962
Gemco Biomass	8.00		0.1879
Star Wire India Ltd	9.90		0.2325
Sri Jyoti	9.50		0.2231
Shahbad Co-operative Sugar Mills	24.00		0.5636
Naraingarh Sugar Mill	22.40		0.5260
Amplus Sun Solutions Pvt Ltd.	50.00		1.1741
JBM Environment Pvt Ltd	8.00		0.1879
Deepan Godara S/o Sh Dalip Singh	0.25		0.0059
Raj Waste Treat Pvt Ltd	2.00		0.0470
Hind Samachar Ltd	15.00		0.3522
SAEL Ltd	15.00		0.3522
LR Energy Ltd	20.00		0.4696
Avaada Green HN Project	50.00		1.1741
Mor Bio Energy Pvt LTD	1.20		0.0282
Distribution Licensees and Buyers @ 46%	Transformation Ratio (in %)	Amount	107.3044
UHBVNL	45.5450%	Sub-Amount	48.8718
DHBVNL	53.1951%		57.0807
Tata Power Trading Company Limited	0.4167%		0.4471
NTPC	0.0168%		0.0180
CRPCPL	0.0025%		0.0027
Northern Railways	0.7021%		0.7534
Merino Panel Products	0.0168%		0.0180

Beneficiaries		Amount	Total (Rs. Millions) FY 2023-24
Orbit Resorts Limited	0.0252%		0.0270
M/S Sky City Hotels Pvt. Ltd.	0.0017%		0.0018
M/s Asian Paints Limited	0.0168%		0.0180
M/s Goodrich Carbohydrates Ltd.	0.0081%		0.0087
M/s Dorset Industries Pvt. Ltd.	0.0030%		0.0032
M/s KRBL Ltd.	0.0045%		0.0049
M/s G. S. Spinning Mills	0.0034%		0.0036
M/s Garg Spinning Mills	0.0034%		0.0036
M/s Bhartiya Spinners Ltd.	0.0034%		0.0036
M/s Blow Packaging	0.0020%		0.0022
M/s Rico Auto Industries Ltd	0.0336%		0.0361
TOTAL (HVPN + GENERATING COMAPANIES+DISTRIBUTION LICENSEES			233.2705

The petitioner has submitted that in case of any addition of new beneficiary, the transmission charges would be charged in proportion of the allotted capacity.

Based on the details of transformation capacity and the generation capacity, the Commission has approved SLDC charges on page no 57 of this order. The petitioner may note that the SLDC charges, so apportioned, are only indicative and the actual recovery of the charges from existing and prospective beneficiaries shall be strictly in accordance with the relevant provisions of the MYT Regulations, 2019 and the SLDC charges approved by the Commission for the FY 2023 in the present order i.e. Rs. 233.26 million.

5.3. PROSPECTIVE SHORT-TERM OPEN ACCESS CHARGES (STOA)

Transmission charges from short term open access consumers shall be recovered as per Regulation 53 of the HERC MYT Regulations, 2019 as may be amended from time to time i.e. "the transmission charges shall be payable by the short-term open access consumers for the scheduled energy drawl at per kwh rate as worked out by dividing the annual transmission charges by the total volume of energy transmitted by the transmission licensee during the previous year."

As such, the petitioner has submitted the following calculation of the transmission charges to be recovered from Prospective Short-Term Open Access consumers.

Transmission Charges to be recovered by Short-Term Open Access Consumers

STOA Charges (Rs. Mn)	Amount
Transmission Cost for FY 2023-24	24,420.33
Unitary Charges	506.32
The total energy transmitted by HVPNL for FY 2021-22 (MU)	54,949.50
Proposed Charges	0.45

Based on the approved transmission charges for the FY 2023-24, the Commission approves the transmission charges payable by the short-term open access consumers as per the details provided in the table that follows: -

Approved STOA Charges (Rs. Mn)	Amount
Transmission Cost for FY 2023-24	22146.89
Unitary Charges	506.32
Total	22653.21
The total energy transmitted by HVPNL for FY 2021-22 (MU)	54949.50
Proposed Charges	0.41

5.4. RECOVERY OF SLDC CHARGES FROM SHORT TERM OPEN ACCESS CONSUMERS

The short-term open access consumers shall pay composite SLDC charges as provided in the HERC (Terms and conditions for grant of connectivity and open access for intra-State transmission and distribution system), Regulations, 2019 as may be amended from time to time.

5.5. REACTIVE ENERGY CHARGES:

The reactive energy charges are payable by the Discoms as per Regulation 48 of the HERC MYT Regulations which provides that '*the reactive energy charges shall be as provided in the Haryana Grid Code as amended from time to time*'. Clause 5.5 of the HERC Haryana Grid Code (HGC) Regulations, 2009 govern the charges for the reactive energy drawl/injection from/to state transmission system i.e. for VAR exchanges with the State Transmission System.

The Commission, vide order dated 03.09.2020, in Suo Motu proceedings, had directed HVPNL as below:

"In view of the above discussions, the Commission adopts the following procedure for management of Reactive Energy Charges receivable from/ payable to the NRPC as also on account of recovery/ payment of Reactive energy charges for VAR exchanges with Intra State Transmission System from the regional entities within the state of Haryana, depending upon the Reactive Energy consumption by them, as worked out by SLDC in accordance with the Haryana Grid Code, 2009 as amended from time to time, on monthly basis: (a) SLDC shall maintain a fund in its books of accounts in the name and style of Reactive Energy Pool Fund Account.

(b) The amounts received from NRPC shall be credited to above fund and the amounts paid to NRPC shall be debited to above fund. The recovery of Reactive energy charges for VAR exchanges within the Intra State Transmission System of Haryana (primarily UHBVNL, DHBVNL and Northern Railways, OA consumers, etc.) shall be credited to above fund and the amounts to be paid to such entities shall be debited to the above fund.

(c) The amounts shall be deposited in the bank account specially opened for this purpose. Considering the volume of funds in the bank account and the position of

receivable/payables, SLDC may invest the funds in fixed deposit of banks till such time they are utilised.

(d) SLDC shall raise invoices of recovery/ payment of Reactive energy charges for VAR exchanges with STS, in accordance with the State Grid Code, within a period of 15 days of the close of each month. However, for the Distribution licensees, where the variation is very high, the accounts shall be balanced every six months and only the net amount shall be recovered or paid. In case the payables are higher than the receivables, the funds received from NRPC, if available, shall be utilised to bridge the gap.

(e) The SLDC shall always maintain sufficient balance in the Reactive energy pool account equal to last three years annual average deficit/ penalty amount levied by NRPC/ NRLDS on this account.

(f) SLDC shall file a periodic (quarterly) status of the fund including utilisation with the Commission and also put it on its website.

(g) After the close of each financial year, considering the position of receivables and payables on account of Inter-State Reactive Energy Pool Account, in case the position permits, the surplus amount, including interest earned, shall be utilized by SLDC in accordance with the directions issued by the Commission from time to time. SLDC shall submit a complete proposal in this regard along with relevant detail/ data in support of the proposed investment along with the true up petition.

The Petitioner has submitted that the beneficiaries are expected to provide local VAR compensation such that they do not draw VAR from EHV grid, particularly under low voltage conditions. Accordingly, the Grid Code provides VAR exchanges as under:

- a) The beneficiary pays for VAR drawl when voltage at metering point is below 97%.
- b) The beneficiary gets paid for VAR return when voltage is below 97%.
- c) The beneficiary gets paid for VAR drawn when voltage is above 103%.
- d) The beneficiary pays for VAR return when voltage is above 103%.

According to Clause-6.6(2) of Indian Electricity Grid Code the VARh shall be @ 10 paise per KVARh w.e.f. 01.04.2010. The above charges are to be escalated at the rate of 0.5 paise per KVARh per year thereafter. Accordingly, HVPNL is raising reactive energy bills on Discoms at rates fixed by CERC for the FY 2019-20. HVPNL has proposed to charge UHBVN & DHBVN at a rate of 15.5 paise /KVARh from 01.04.2020 on the basis of recording made by existing SEMs interface. The Commission has considered the submissions of HVPNL on reactive energy charges. After due deliberations including the comfortable position of the reactive

energy pool account, the Commission directs that limited to the FY 2023-24, no reactive energy charges shall be recovered from the Discoms. However, HVPNL may approach this Commission for 'true-up' based on actual audited data.

The Commission expects that going forward HVPNL would go an extra mile to improve upon the benchmarks set so as to ensure that the backbone of power system in the State is amongst the best performing power utility in the country. **The directives issued by the Commission in the present order has been collated in Annexure 'A' of the present order. The licensee shall implement the tariff and charges determined / approved by the Commission w.e.f.**

01.04.2023. Necessary steps may be taken for implementation of the order including the directives.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 30.01.2023. The petition is accordingly disposed of.

Date: 30.01.2023
Place: Panchkula

(Naresh Sardana)
Member

(R.K. Pachnanda)
Chairman

Annexure “A”

DIRECTIVES ISSUED IN THIS ORDER

1. The licensee is advised to take up preventive and predictive R&M works so as to ensure that the transmission assets are maintained in perfect condition for providing seamless transmission services to the beneficiaries.
2. The Commission, after due deliberations, approves the interest on working capital to the cost actually incurred by the licensee i.e. Rs 43.08 million, for the purpose of ‘True up’. The Commission observes that there is a large gap between normative computation and the actual working capital requirement of HVPNL. The licensee is directed to explain the large variation supported by lead and lag analysis for the year. The analysis should be submitted within three months from the date of the present order.
3. The calculation of FERV, as submitted by the licensee, has been examined by the Commission and found in order. Hence, the same is being allowed as the true up amount. However, the Commission observes that a lot of revenue is lost due to exchange rate variation each year. This year (FY 2021-22) the same amounts to over Rs. 19 crores. The licensee is directed to submit the details of foreign currency loans, the year it was contracted, the year in which drawl started and the drawl schedule, repayments made so far, loan tenure and net loss, so far, FY 2021-22 included on account of exchange rate variation. HVPNL may also suggest FX risk mitigation measures other than currency hedging, within three months from the date of the present order.
4. The licensee to:
 - get the matter investigated whether adequate capacitor banks have been provided or any of the lines feeding Ratia is overloaded.
 - take appropriate action to control high voltages.
 - take remedial action to prevent outage of 400 KV line as it affects large area.
 - maintain the target availability as per norms specified in MYT Regulations, 2019.

5. The licensee to:
- develop monitoring system for replacement defective LAs, GO switches and earthings with the involvement of Discoms and ensure that defects are removed within two months to minimize outage of system and give more reliable supply.
 - Progress of replacement of CTs viz-a-viz total CTs having tan delta more than 1 in the FY 2022-23 may be intimated to the Commission within 3 months of issue of order.
6. Regarding ringfencing of SLDC, the Commission, once again, directs HVPNL to take up the issue with the State Government and submit a report to the Commission within one month from the date of this Order.
7. The Commission directs the licensee:
- To expedite the repair of defective capacitor banks and ensure the healthiness of the capacitor banks installed in the system
 - To intimate to the Commission list of power T/Fs where capacitor Bank is yet to provided, where Capacitor Bank is provided less than 20% of rated capacity and where Capacitor Bank provided but defective.
8. The Commission directs that M&P observations relating to system protection be attended within two months of the order as attending the observations can go a long way in reducing the outages/damage.
9. Commission directs HVPNL to supply the list of defective interface Special Energy Meters.
10. The Commission directs the licensee:
- i) to mention the reason of high transformer damage rate from 01.04.2022 to 30.09.2022 and measures taken to arrest the damage rate within three months.
 - ii) to identify the no. of power transformers which have completed useful life. Draw action plan to replace transformers which have out lived and sick transformers.
 - iii) to submit status of circle-wise /substation-wise M&P observations pending, as on 31.03.2023.

- 11. The licensee needs to keep focused attention for the preventive maintenance of the transmission lines and the power transformers to avoid outages/ break downs in the transmission system and work towards improving upon the benchmark set for intra-State transmission losses.**
- 12. HVPNL is directed to prepare a five-year CAPEX plan with details such as heads / items on which the investments are proposed, funding arrangements, cost of funding, completing period of each capital works proposed, pay back period and the benefits that would accrue to the electricity consumers of Haryana. The Capex proposed for new sub-stations, lines, augmentation of transformers etc. may be backed by a load flow study. The report shall be filed in the Commission within 3 months from the date of this order.**