

| | | | |
|---|------------------|------------------|------------------|
| Aggregate Revenue Requirement (Transmission Charges) | 22,085.17 | 21,847.94 | 21,200.65 |
| Less: revenue contributing to reduction in transmission charges | | | |
| Unitary charges received | | | 9.18 |
| Connectivity fee for Transmission system | | | 1.74 |
| Income from SLDC & STS charges for open access | | | 8.11 |
| Aggregate Revenue Requirement (Transmission Charges) | | | 21,181.62 |

True Up of Transmission Business for FY 2022-23 (Rs. Million)

| | |
|---|-----------|
| Transmission ARR approved by the Commission for True up | 21,181.62 |
| Total Revenue Recovered as per Audited Accounts | 21,104.21 |
| ARR Surplus/(Gap) | -77.41 |

Note: As the terminal benefits on which carrying cost has not been allowed by the Commission exceeds the ARR gap, on true-up for the FY 2022-23, no carrying cost has been considered by the Commission.

The Commission observes that the revenue recovered by the licensee during the FY 2022-23 is lower by Rs -77.41 millions. However, the said amount is less than the terminal benefits amounting to Rs 3571.66 millions; 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 2022-23 i.e. Rs. 22085.17 Million and now approved on 'truing up' of the un-controllable expenses i.e. Rs. 21181.62 million shall be carried over to the ARR of the FY 2023-24 without any holding / carrying cost.

3.6 TRUE-UP OF SLDC BUSINESS

The licensee has prayed to the Commission that the ARR for SLDC Business for the FY 2022-23, based on actual audited figures, may be approved for the true up as Rs. 132.13 Million.

True Up Requirement of SLDC Business for FY 2022-23 (Rs. Millions)

| S. No | SLDC Business | Approved by HERC Dated. 02.03.2022 | True up | Gap/Surplus |
|-------|----------------------------------|------------------------------------|---------|-------------|
| 1 | Employee Expense | 54.55 | 62.705 | -8.155 |
| 2 | Terminal Benefits | 0 | 0 | 0 |
| 3 | A&G Expense | 9.14 | 9.925 | -0.785 |
| 4 | R&M Expense | 7.05 | 12.218 | -5.168 |
| 5 | Depreciation | 67.98 | 48.767 | 19.213 |
| 6 | Interest on Loan | 24.81 | 0 | 24.81 |
| 7 | Interest on Working Capital | 2.57 | 2.619 | -0.049 |
| 8 | Return on Equity | 0 | 0 | 0 |
| 9 | Less: Non-Tariff Income | -1.45 | -4.099 | 2.649 |
| 10 | Add: Revenue Gap/ Surplus Refund | 0 | 0 | 0 |
| 11 | Carrying Cost | 0 | 0 | 0 |

| | | | | |
|-----------|--------------|---------------|---------------|--------------|
| 12 | TOTAL | 164.65 | 132.13 | 32.52 |
|-----------|--------------|---------------|---------------|--------------|

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 2022-23) and the principles adopted while determining the ARR for SLDC business vide its order dated 02.03.2022. The revised ARR for SLDC business for the FY 2022-23 is approved at Rs. 132.13 million as against Rs. 164.65 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 2024-25.

The ARR approved by the Commission, true up proposed by the licensee and the amount approved by the Commission for true-up, is presented below: -

True Up of SLDC Business for FY 2022-23 (Rs. Million)

| Particulars | Approved by HERC | Actual (Audited) | Revised ARR approved by the Commission |
|---------------------------------|------------------|------------------|--|
| Employees Expenses | 54.55 | 62.70 | 62.70 |
| Terminal Benefits | 0.00 | 0 | 0 |
| A&G expenses | 9.14 | 9.925 | 9.925 |
| R&M Expenses | 7.05 | 12.21 | 4.64 |
| Depreciation | 67.98 | 48.76 | 48.76 |
| Interest on loan | 24.81 | 0 | 0 |
| Interest on working Capital | 2.57 | 2.62 | 2.63 |
| Return on Equity | 0 | 0 | 0 |
| Less: Non-Tariff Income | -1.45 | -4.099 | -4.099 |
| Add: Revenue Gap/Surplus Refund | 0 | 0 | 0 |
| Carrying Cost | 0 | 0 | 0 |
| TOTAL ARR | 164.65 | 132.12 | 124.55 |

Note: FY 2022-23 average GFA as per Audited Accounts = Rs. 927.71 million 0.5% average GFA = Rs. 4.64 million for working out eligible R&M expenses.

3.7 ANNUAL (MID YEAR) REVIEW PERFORMANCE OF ARR FY 2023-24

HVPL has submitted that the Hon'ble Commission, vide notification dated 21.05.2020 had issued the MYT order for HVPL for the control period FY 2020-21 to FY 2024-25. The STU/HVPL 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 2023-24 including revised capital expenditure for the FY 2023-24 and proposed Capital Expenditure Plan for the control period FY 2024-25.

3.8 REVISED CAPITAL EXPENDITURE AND CAPITALIZATION FOR FY 2023-24 AND PROPOSED CAPITAL EXPENDITURE PLAN FOR CONTROL PERIOD FY 2024-25

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 2023-24.

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 2023-24 and proposed Capital Expenditure Plan for period of FY 2024-24 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 2023-24 and FY 2024-25. The details of the works are provided as part of the Annexure to this Petition.

Work-wise expenditure for period FY 2023-24 and FY 2024-24 (Rs. Million)

| Works | FY 2023-24 | FY 2024-25 |
|-----------------------------------|-----------------|----------------|
| Substations | 6090.19 | 5677.48 |
| Lines | 2348.98 | 2525.89 |
| Information Technology | 117.86 | 113.09 |
| Land | 37.258 | 7.204 |
| Miscellaneous | 242.98 | 296.36 |
| SAMAST & OPGW Projects | 969.45 | 880.00 |
| Total Transmission | 9807.930 | 9500.00 |
| SLDC | 0.00 | 0.00 |
| Total (Transmission +SLDC) | 9807.93 | 9500.00 |

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 | FY 2023-24 | FY 2024-25 |
|--------------------------|------------|------------|
| Total-Substations | 6090.19 | 5677.48 |

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)

| Particulars | FY 2023-24 | FY 2024-25 |
|---------------------------------|------------|------------|
| Total-Transmission Lines | 2348.98 | 2525.89 |

The main purposes for the expenditures on transmission line is to port bulk quantum of power near to the load center 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)

| Particulars | FY 2023-24 | FY 2024-25 |
|------------------------------|------------|------------|
| Total-Information Technology | 117.86 | 113.09 |

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:-

In Rs. Millions

| Particulars | FY 2023-24 | FY 2024-25 |
|-------------|------------|------------|
| Total-Land | 37.258 | 7.204 |

F. SMAST & OPGW Projects

The Capital Expenditure planned to be incurred for SMAST and OPGW Projects is provided below as:

In Rs. Millions

| Particulars | FY 2023-24 | FY 2024-25 |
|--------------------------------|------------|------------|
| Total-SAMAST and OPGW Projects | 969.45 | 880.00 |

G. SLDC

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

Expenditure planned for SLDC (in Rs. million)

| Particulars | FY 2023-24 | FY 2024-25 |
|-------------|------------|------------|
| Total-SLDC | 0.00 | 0.00 |

H. 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)

| Particulars | FY 2023-24 | FY 2024-25 |
|---------------------|------------|------------|
| Total-Miscellaneous | 242.98 | 296.36 |

I. 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 2023-24 | FY 2024-25 |
|--|----------------|----------------|
| Deposit work (Self Execution, DHBVNL, DLF, HSIIDC, Railway, IOCL and other etc.) | 448.80 | 292.00 |
| NABARD | 708.79 | 570.50 |
| Power finance corporation (PFC) | 803.10 | 517.99 |
| Posed to PNB | 3411.11 | 245.37 |
| REC | 2474.54 | 2573.48 |
| Yet to pose | - | 3400.66 |
| Total | 7846.34 | 7600.00 |
| Internal Accruals | 1961.59 | 1900.00 |
| Total | 9807.93 | 9500.00 |

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 | Actual Investment | Proposed | Proposed | Proposed | Proposed | Proposed | Proposed |
|-------------|-------------------|--------------------------|---------------------------|------------|------------|------------|------------|------------|
| Year | FY 2022-23 | First half of FY 2023-24 | Second half of FY 2023-24 | FY 2023-24 | FY 2024-25 | FY 2025-26 | FY 2026-27 | FY 2027-28 |
| HVPNL | 5934.72 | 2877.99 | 6928.74 | 9807.93 | 9500.03 | 13927.37 | 9745.95 | 2708.01 |
| SLDC | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 5934.72 | 2877.99 | 6928.74 | 9807.93 | 9500.03 | 13927.37 | 9745.95 | 2708.01 |

The Commission has taken into consideration the Capital Investment projections for the control period for FY 2024-25 only, from the CIP submitted by the HVPNL for the approval of the ARR of the transmission business and SLDC and the transmission and SLDC charges for FY 2024-25. The projection of CIP for FY 2025-26 and onwards shall be considered while considering ARR for FY 2025-26 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) |
|---------------------------------|--|--|----------------------------------|---|
| 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 | 5934.72 | 62.31% |
| 2023-24 (up to September, 2023) | 11944.49 9807.93 (Revised) | 9500 | 2877.99 | |

The Commission observes that every year HVPNL has been incurring Capital expenditure, which is far less than the Capex approved by Commission. In FY 2022-23,

HVPNL projected Capex of Rs. 11757.50million and Rs. 9524 million were approved by the Commission whereas actual expenditure is reported to be Rs. 5934 million, which is 62.31% of approved Capex. Average percentage of actual expenditure to approved expenditure for last four years is about 64% of the approved Capex. Licensee has proposed revised Capex of Rs. 9807.93 million for FY 2023-24 and proposed Rs. 9500.03 million during 2024-25.

In view of foregoing discussion, the Commission approves the capex of Rs.7500 million for FY 2024-25 and decides to consider the revised capax for FY2023-24 as per actuals at the time of its true-up.

J. Intra-State Transmission Losses

HVPN has submitted that the transmission losses achieved by HVPNL from FY 2014-15 to FY 2023-24 (up to September, 2023) along with the benchmark fixed by Hon'ble Commission as hereunder:

| Sr. 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 | 2.10 | 1.857 |
| 9. | 2022-23 | 2.05 | 1.930 |
| 10. | 2023-24 (up to September, 2023) | 2.02 | 1.936 |

K. 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 plans for reducing losses, together with relevant load flow studies and details of the investment required to achieve the planned reduction should be presented & shall substantiated by relevant analysis as to achievability and cost. With the system strengthening, average transmission losses are on decrease as indicated in 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 | 2.05 | 1.930 | 607196 |
| 2023-24 (up to Sept, 2023) | 2.02 | 1.936 | 363303 |

** based on provisional energy account of September, 2023)*

The month wise Intra-State transmission losses of HVPN during FY 2022-23 and FY 2023-24 are as under:

Intra-State transmission losses FY 2022-23 and FY 2023-24

| Month | FY 2022-23 | | | FY 2023-24 | | |
|--------------|--|---------------------------------------|--------------------------------------|--|---------------------------------------|--------------------------------------|
| | Total Energy at State Bus from all sources | Intra state Transmission losses in LU | Intra state Transmission losses in % | Total Energy at State Bus from all sources | Intra state Transmission losses in LU | Intra state Transmission losses in % |
| Apr-22 | 45597.54543 | 779.69386 | 1.710 | 41550.80900 | 810.46044 | 1.95053 |
| May-22 | 56536.04626 | 999.73151 | 1.768 | 50479.05033 | 935.65419 | 1.85355 |
| Jun-22 | 63716.75589 | 1155.36232 | 1.813 | 61137.02009 | 1229.63740 | 2.01128 |
| Jul-22 | 65250.96678 | 1187.205 | 1.819 | 66967.98032 | 1327.03498 | 1.98160 |
| Aug-22 | 67500.23276 | 1251.90718 | 1.855 | 75553.45957 | 1459.86032 | 1.93222 |
| Sep-22 | 61933.93417 | 1145.04854 | 1.849 | 67615.60965 | 1272.10512 | 1.88138 |
| Oct-22 | 43394.61952 | 836.85437 | 1.928 | | | |
| Nov-22 | 38905.71219 | 805.34217 | 2.070 | | | |
| Dec-22 | 43159.23080 | 886.30223 | 2.054 | | | |
| Apr-23 | 43226.49847 | 1035.64978 | 2.396 | | | |
| May-23 | 39039.07524 | 831.62171 | 2.130 | | | |
| Jun-23 | 38935.74516 | 805.68707 | 2.069 | | | |
| Total losses | 607196.3627 | 11720.40592 | 1.930 | 363303.92896 | 7034.75245 | 1.936 |

The Commission observes that HVPNL has been able to handle energy to the tune of 60,719.6 MU during the year 2022-23 and 36,330.3 MU in year 2023-24 up to September, 2023. Further, HVPN has achieved the target for intra state transmission losses fixed for FY 2022-23 i.e., 1.930% against target of 2.05%.

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

L. 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 | 2 nd MYT Control period | | | | |
|-----------|------------------------------------|-------------------|-------------------|-------------------|-------------------|
| | 2020-21 (%age) | 2021-22 (%age) | 2022-23 (%age) | 2023-24 (%age) | 2024-25 (%age) |
| AC System | 99.20 | 99.20 | 99.20 | 99.20 | 99.20 |

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

| Availability in % | |
|--|----------|
| Cumulative for the year 2006-07 | 99.62 |
| Cumulative for the year 2007-08 | 99.57 |
| Cumulative for the year 2008-09 | 99.57 |
| Cumulative for the year 2009-10 (April to September) | 99.56 |
| Cumulative for the year 2009-10 (October 2009 to March 2010) | 99.3935 |
| Cumulative for the year 2010-11 | 99.5948 |
| Cumulative for the year 2011-12 | 99.5569 |
| Cumulative for the year 2012-13 | 99.6724 |
| Cumulative for the year 2013-14 | 99.690 |
| Cumulative for the year 2014-15 | 99.1309 |
| Cumulative for the year 2015-16 | 98.2985 |
| Cumulative for the year 2016-17 | 99.0425 |
| Cumulative for the year 2017-18 | 98.9518 |
| Cumulative for the year 2018-19 | 99.5401 |
| Cumulative for the year 2019-20 | 99.8531 |
| Cumulative for the year 2020-21 | 99.3614 |
| Cumulative for the year 2021-22 | 99.5770 |
| Cumulative for the year 2022-23 | 99.56065 |
| Cumulative for the year 2023-24 (up to September, 2023) | 99.4942 |

The Commission observes that the licensee has been able to achieve transmission system availability of 99.56% in the FY 2022-23 and 99.4942% for the year 2023-24 (up to September, 2023). However, it would like to emphasize the need to keep focused attention on 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%.

The Commission vide T.O. dated 30.01.2023 had imparted following directions to 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 try to maintain frequency profile in the frequency band prescribed by IEGC.
- d. To maintain the target availability as per norms specified in MYT Regulations, 2019.

In response to the above directions the licensee has submitted as follows:

Adequate capacitor banks are installed on all 3 nos. Transformers as per their rated capacity at 132 KV Substation Ratia, which are tabulated as under:

| Sr. No. | Transformer | Voltage Level & Transformation Capacity | Installed Capacitor Bank (in MVAR) |
|---------|-------------|---|------------------------------------|
| 1 | T-1 | 10/16 MVA, 132/11kV Power Transformer | 4.98 |
| 2 | T-2 | 20/25 MVA, 132/33kV Power Transformer | 5.44 |
| 3 | T-3 | 40/50 MVA, 132/33kV Power Transformer | 10.872 |

132kV lines feeding 132kV sub-station Ratia are as under: -

1. 132kV Aherwan- Ratia line (0.2 sq" ACSR)
2. 132kV Hukmawali - Ratia line (0.2 sq" ACSR) (commissioned on 12.06.2023)
3. 132kV Ratia- Teliwara line (0.2sq" ACSR).
 - The existing line i.e. 132kV S/C Aherwan - Ratia line is sufficient for feeding the Installed capacity of 91 MVA of the substation.
 - 132 kV Bhuna- Teliwara S/C line with 0.2 Sq" ACSR Panther is the main feeding source of 132kV S/Stn. Teliwara, load on which gone upto 70 MW. 132 kV Teliwara - Ratia line cannot be used as a feeding line due to the loading constraint of the main feeding line i.e. 132kV Bhuna- Telewara line having 0.2 sq" ACSR conductor.
 - In order to control High Voltages, the Nigam instructions regarding switching off the capacitor banks are being meticulously followed. Also, the changing of tap position and switching off of the idle lines is being carried out in consultation with SLDC.
 - Tower to tower patrolling, cleaning of disc, replacement of disc insulator to polymer insulator, tightening of jumper and tree has been done to prevent outage of 400 kV line. Simultaneous maintenance of all the equipment are being carried out as and when a shutdown is taken on line/ power transformers to minimize the outage time.
 - Further, HVPNL has already been achieving the targets set by Hon'ble Commission. TSA for the FY 2022-23 is 99.5665% which well above the target (99.2%) set by Hon'ble Commission.

The Commission directs the licensee:

1. At 132kV S/Stn. Sirsa, time during which 132 KV voltage has been found outside the limit i.e. below 122kv during 12/05/2023 to 19/05/2023 (77 hrs.) & 12/09/2023 to

19/09/2023 (5hrs.). Commission directs the licensee to look into the reasons of low voltage and take appropriate action.

2. Voltage at 400 KV S/Stns. at Kirori was found to be high at different times of the year. Licensee to take appropriate action to control high voltages.
3. The frequency profile in the year 2022-23 remained 69.70% of the time in the IEGC band i.e. 49.90-50.05 Hz with comparison to 75.08 % of the time in the year 2021-22. The licensee to control under drawl/ over drawl during the period in which the frequency is out of IEGC band.
4. To continue maintaining the target availability as per norms specified in MYT Regulations, 2019.

FAILURES OF POWER TRANSFORMERS

HVPNL has submitted that there are 1277 Power Transformers installed in HVPNL as on 30.09.2023. During the period 1.04.2023 to 30.09.2023, 07 nos. of power transformers had failed as under:

| 01.04.2020 to 31.03.2021 | 01.04.2021 to 31.03.2022 | 01.04.2022 to 31.03.2023 | 01.04.2023 to 30.09.2023 |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 11 | 21 | 11 | 07 |

The rating wise detail of Transformer damage from 01.04.2023 to 30.09.2023 is as under:

| Sr. No. | Voltage rating | Total no. of transformer | Damaged transformer | % of damage |
|---------|----------------|--------------------------|---------------------|-------------|
| 1 | 400 kV | 15 | 0 | 0 |
| 2 | 220 kV | 236 | 0 | 0 |
| 3 | 132 kV | 618 | 5 | 0.81 |
| 4 | 66 kV | 409 | 2 | 0.48 |

The commission observes that the damaged rate of 132kV transformers is significantly higher than other voltage rating transformers. Licensee may look into this aspect.

Status of Circle-wise M&P observations pending as on 31.03.2023

In response to the direction of the Commission to attend the M&P observations relating to system protection, the Licensee vide Memo no. Ch- 104 /XEN/RAU/F-175 dated 09/01/2024 has submitted the circle-wise abstract of pending and attended M&P observations during FY 2022-23 (April, 2022 to March, 2023) & during FY 2023-24 (up to October, 2023) is tabulated as under: -

| Sr. No | Name of Circle | Old pending observations | No. of new observations | Attended | Pending as on 31 st March 2023 |
|--------|---------------------|--------------------------|-------------------------|----------|---|
| A | B | C | D | E | F |
| 1 | TS Circle Panchkula | 401 | 1169 | 1018 | 552 |
| 2 | TS Circle Kamal | 427 | 69 | 618 | 334 |
| 3 | TS Circle Hisar | 390 | 772 | 958 | 204 |
| 4 | TS Circle Rohtak | 154 | 901 | 871 | 184 |
| 5 | TS Circle Gurugram | 362 | 673 | 853 | 182 |

| | | | | | |
|-------|---------------------|------|------|------|------|
| 6 | TS Circle Faridabad | 195 | 633 | 613 | 215 |
| Total | | 1929 | 4217 | 4931 | 1671 |

M&P observations during FY 2023-24 (up to October, 2023): -

| Sr. No | Name of Circle | Old pending observations as on 1 st April 2023 | No. of new observations | Attended | Pending |
|--------|---------------------|---|-------------------------|----------|---------|
| A | B | C | D | E | F |
| 1 | TS Circle Panchkula | 552 | 1007 | 375 | 1184 |
| 2 | TS Circle Kamal | 334 | 404 | 273 | 465 |
| 3 | TS Circle Hisar | 204 | 490 | 275 | 419 |
| 4 | TS Circle Rohtak | 184 | 192 | 128 | 248 |
| 5 | TS Circle Gurugram | 182 | 307 | 160 | 329 |
| 6 | TS Circle Faridabad | 215 | 381 | 177 | 419 |
| Total | | 1671 | 2781 | 1388 | 3064 |

HVPN has further submitted that strict directions have been given to all the field officers to attend the pending observations raised by M&P wing by putting out personal efforts and by using all the available resources.

The Commission observes that M&P observations have been almost double from ending March,2023 to ending October, 2023.If the same are not attended in time. they may cause outage/ damage of costly equipment.

Therefore, Commission directs HVPNL that M&P observation mainly relating to protection be attended within three months of the order.

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

- To the observation of the commission regarding developing the monitoring system for replacement defective Las, GO switches and earthing and replacement of CTs viz-a-viz total CTs having tan delta more than 1 in the FY 2022-23 the licensee has submitted point wise reply as under:
- 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 Earthing, 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 Earthing 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 Earthing and DISCOMs authorities are insuring that the work is in progress and will be completed at the earliest. The meetings are regularly scheduled at Sub-division, Division, Circle and Zone level.

- The matter has also been deliberated in MDs Co-ordination Committee of HPU held on dated 12.05.2023 where following have been decided:
 - DISCOMs shall ensure proper earthing of first H-pole of feeder and replacement of defective Las and G.O. switch in time bound schedule. Concerned SDO/DISCOMs and SSE shall certify the same.
 - Suitable instructions to the field staff shall be issued by DISCOMs to ensure proper patrolling of lines in the event of tripping.
 - Shifting of 11 kV feeders shall be carried out by DISCOMs to nearest 33 kV substation of DISCOMs to provide relief to 132 kV/11 kV transformers of HVPNL.
 - The progress on the above issues shall be monitored and report shall be sent to the office of Deputy Secretary/Operation, HVPNL by 2nd week of every month through respective SE/TS and comments there upon by CE/TS.”
- The D.O letters from Directors HVPNL to Directors DISCOMS for timely replacement of Defective LAs, Go Switches and Earthing are also issued.

2. Status of replacement of defective LA, GO switch, Earthing (as on 31.10.2023):

| Sr. no. | Name of TS Division | Total no. of 11 KV feeders as on 31.10.2023 | Balance as on 31.10.2023 | | |
|-------------------------|---------------------|---|--------------------------|-------------|------------|
| | | | GO Switch | LA | Earthing |
| 1 | Faridabad | 955 | 359 | 1827 | 239 |
| 2 | Gurugram | 1194 | 272 | 1599 | 268 |
| 3 | Hisar | 690 | 156 | 912 | 170 |
| 4 | Panchkula | 1197 | 193 | 989 | 107 |
| 5 | Kamal | 495 | 42 | 376 | 82 |
| 6 | Rohtak | 507 | 139 | 838 | 69 |
| HVPNL as a Whole | | 5038 | 1161 | 6541 | 935 |

The Commission directs the licensee to monitor the progress of replacement of defective Las/GO switches/defective earthing continuously to minimize outage of system and give reliable supply and submit report after first quarter of FY 2024-25.

3. Replacement of CTs having high tan delta

In response to the direction of the Commission to furnish progress of replacement of CTs viz-a-viz total CTs having tan delta more than 1 in the FY 2022-23 HVPNL has submitted as follows:

The following has been deliberated in the technical committee of HVPNL meeting held on 18.05.2023 regarding replacement of CTs having high Tan Delta values: -

“The replacement of CTs being carried out by TS wing solely on the basis of higher Tan Delta be reviewed as the test results of capacitance in respect of all CTs (voltage wise) having higher Tan Delta values needs to be considered. A detailed note on abstract of CTs (make-wise) having high tan delta (more than 0.7% V/S Age) was discussed and during meeting it was observed that more comprehensive study in this regard is required. Therefore, M&P wing has been instructed to carry out the exercise to check the Capacitance of CTs having higher Tan Delta and submit a detailed report within 3 months, for further analysis of the issues.”

Further, to curtail the damage of CTs in Nigam and to reduce the trends of increasing High Tan Delta Value of CTs, HVPNL has revised the technical specification of instruments Transformers. The management has approved the revised technical specification of instruments transformers in Oct, 2023 and procurement of 66/ 132/ 220kV CTs is being processed with the revised Technical Specification of the instrument’s transformers by HVPNL.

The Commission observes that no concrete action has been taken in the matter till now and directs the licensee to submit the action plan for replacement of CTs viz-a-viz total CTs having tan delta more than one in the FY 2023-24 within 3 months of issue of this order.

M. Fatal and Non-Fatal Accidents

HVPNL has supplied data of fatal and Non-Fatal accidents to human beings for the year 2021-22, 2022-23 & 2023-24 (up to 30.09.2023) as tabulated below:

Fatal and Non-Fatal Accidents

| Category | 2021-22 | 2022-23 | 2023-24 (till 30.09.2023) |
|----------------------|---------|---------|---------------------------|
| (A) Fatal | | | |
| Human beings | 1 | 2 | 2 |
| Non-human beings | 0 | 1 | 0 |
| (B) Non-Fatal | | | |
| Human beings | 1 | 0 | 2 |
| Non-human beings | 0 | 0 | 0 |

The Commission had directed in its previous tariff order to adhere safety rules, so that the accident(s) could be avoided in future. HVPN has submitted that HVPN has a set of well-framed safety rules, which are intended to avoid accidents in the system, which are as under:

All possible safety measures are presently being taken to avoid occurrence of accidents. The supervisory staffs, subordinate staff and the workers are regularly advised to take safety measures while performing their duties. The following measures have been taken to avoid accident.

- 1) Workshops on safety are being organized in the field to increase awareness about safety regulation & safety measures to be adhered to while working on electrical equipment & electric lines.
- 2) Proper Tools and Plants (T&P) have been provided to the field technical staff;
- 3) Fencing/ guarding is being provided wherever necessary;
- 4) All electrical equipment and structures are properly earthed;
- 5) All safety instructions of Grid Code are being implemented.
- 6) Literature on safety regulations, safety measures has been prepared and circulated amongst the officers / staff posted in the field to increase the level of awareness.

The commission observes that the Fatal and non-fatal accidents of human beings have increased even up to September 2023 along with FY 2023-2024 which is quite alarming and directs the licensee to implement the above plan in true letter and spirit.

N. Plans for Improving the System Power Factor

The Commission had imparted the following directions to the licensee:

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

To the above directions the licensee has replied as under:

HVPNL has already installed 6795.91 MVAR capacitors (as on 31.03.2023) on 220kV, 132kV and 66kV network to improve the power factor in the HVPN System. During FY 2022-23 HT Capacitors of 70.017 MVAR Capacity have been added in the Transmission system up to September-2023. However, the system power factor is mainly driven by type of the load and is affected primarily by the consumers of the Distribution and Retail Supply Licensees.

The status of total capacitors installed in HVPNL System is as under: -

| Total capacitors in MVAR installed as on 31.03.2023 (as per the data submitted for directives) | Total capacitors in MVAR installed as on 30.09.2023 |
|--|---|
| 6795.91 | 6931.20 |

HVPNL has submitted list of 212 power T/Fs where capacitor Bank is yet to be provided, where Capacitor Bank is provided less than 20% of rated capacity and where Capacitor Bank provided but defective. No capacitor bank is provided on 91 power T/Fs.

The Commission again directs the licensee to repair/replace defective capacitor banks and provide new capacitor banks, where Capacitor Banks are not provided.

O. Energy Accounting

HVPNL has submitted that the information on energy received at interface points of HVPNL with CTU and energy supplied to distribution licensees and Railways at LV side of the transformers in the HVPNL Sub Stations is being accounted. Regarding metering of interface points with DISCOMs/Railways, HVPNL respectfully submits that there are 1502 interface metering points between HVPNL and licences distribution i.e. UHBVNL, DHBVNL & railways and at all the locations 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 these interface points of the DISCOMs at 11kV or 33 kV side of each Power Transformer feeding the distribution area. In addition, the energy fed directly from the Sub Stations of HVPNL at 66kV and above voltage to the consumers of DISCOMs & Railway is accounted for in the monthly energy accounts.

It is further added that HVPNL has decided to install SEMs, in accordance with CEA Metering Regulations, 2006 with its enactments issued from time to time, at new interface points as under:

a) Interface between HVPNL and Discoms:-

Only one SEM be installed to serve as main meter on 11 KV & 33 KV feeders emanating from sub-station under the control of HVPNL. The check/standby SEM be installed by DISCOM. As of now, SEMs are being installed at 11kV incomer panels with provisions of 0.2S accuracy class metering CT/PT instead of separate 11kV combined CT/PT unit.

b) Interface points with HPGCL: -

The standby meter will be installed on HV side of generator transformer and station auxiliary transformer by HPGCL. Main and check SEMs on all outgoing feeders are installed by HVPNL.

Further HVPNL has submitted that:

- i) There are 75 interface locations of HVPNL feeding consumers through independent feeder as on 31.08.2023.
- ii) There are 1502 interface metering points between HVPNL & DISCOMs/Railway. Status of Special Energy Meters (SEMs) and Conventional meters installed at various interface points with DISCOMs/Railway, as on 30.09.2023 is as under: -

| Description | DHBVNL | UHBVNL | Railways | Total |
|-------------|--------|--------|----------|-------|
|-------------|--------|--------|----------|-------|

| | | | | |
|--|-----|-----|----|------|
| Total no. of interface points between licensees i.e. DHBVNL, UHBVNL & Railways | 765 | 716 | 21 | 1502 |
|--|-----|-----|----|------|

iii) The interface points w.r.t. State Generators and HVPNL are as under: -

| Name of Generating Plant | PT PS | WYC | DCRTP P | RGTPP | FGPS | MGSTPP |
|---|-------|-----|---------|-------|------|--------|
| Total No. of Interface Points | 11 | 3 | 8 | 4 | 4 | 4 |
| No. of interface points where SEMs are commissioned | 11 | 3 | 8 | 4 | 4 | 4 |

iv) The interface points w.r.t. HVPNL and Renewable Energy Generating Plants connected at voltage 66 kV & above are as under: -

| Name of Renewable Energy Generating Plants connected at voltage 66 kV & above | Shahabad Sugar Mill | Star wire | Gemco | Sri Jyoti | Naraingarh Sugar Mill | Amplus Sun Solution | Avaada | Panipat Sugar Mill | Karnal Sugar Mill |
|---|---------------------|-----------|-------|-----------|-----------------------|---------------------|--------|--------------------|-------------------|
| Total No. of Interface Points | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No of interface points where SEMs are commissioned | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

v) As far as the inter-State metering is concerned, these meters are installed and maintained by the Central Transmission Utility. Adequate back-up systems also exist to avoid metering inadequacies in the system.

Further, with reference to the direction of the commission to supply the list of defective interface Special Energy Meters, HVPNL has replied that there are 15 no. of defective SEMs as on 31.03.2023. Further, it is intimated that all the existing SEMs are going to be replaced shortly by new SEMs under Scheduling, Accounting, Metering and Settlement of Transaction (SAMAST) project.

The project work for implementation of Scheduling, Accounting, Metering and Settlement of Transaction (SAMAST) framework in the state of Haryana has been awarded to M/s RE Connect Energy Solutions Ltd on 08.09.2022.

As on date, the brief status of project is as under: -

Site survey of all 438 nos. sites have been completed.

- i. Software Requirement Specification (SRS) of all 13 nos. modules have been finalized/ approved and this software is likely to be ready by July 2023.
- ii. Design & Engineering of the project is under progress as per submission of the firm. It is likely to be completed by July 2023. Dispatch Instructions for First lot of 100 nos. Energy meter out of 2727 Energy meters have been issued. Supply is yet awaited. The firm has assured to expedite the supply of material.

-
- iii. The project is likely to be completed by 06.04.2024.

The Commission directs the licensee to complete the work without any further slippages.

Status of Reliable Communication and Data Acquisition System for 132 kV & above Network in Haryana.

To enhance the visualization and ensure efficient & effective power system operation in the State, HVPNL has awarded the Project Work of Reliable Communication and Data Acquisition System for 132 kV & above Network in Haryana during May-2022 for laying OPGW over 132 kV & above transmission lines (3954 kms), provision of RTUs (61 nos.), wideband communication equipment (232 nos.) & auxiliary power supply system (253 nos.) at 132 kV & above level remaining substations. The Scheduled Completion period of the Project is 16.10.2024.

As of now, the supply of 1839 km of OPGW, 61 nos. RTUs and 42 nos. Communication Equipment has been received. The Erection of 493 km of OPGW has been done.

Status of SAMAST Project

The 'SAMAST' (Scheduling, Accounting, Metering and Settlement of Transactions) in power is a very significant project and meant to implement an integrated IT solution to streamline and automate various processes related to Scheduling, Accounting, Metering and settlement of transaction in electricity. The project work has been awarded to M/s RE Connect Energy Solutions Ltd. on 08.09.2022. The contractual completion date of the project is 06.04.2024.

As of now, 100 nos. of Energy Meters out of 3045 nos. of Energy Meters, 216 nos. of Data Concentrator Unit (DCU) out of 436 nos. DCU & other associated substation equipment and the mostly all Centralized Data Centre (CDC) & Disaster Recovery (DR) centre equipment have been supplied. The erection of these equipment is under process.

As discussed during State Advisory Committee (SAC) meeting, the pace of implementation of the project is very slow and direct HVPNL to ensure its completion in a time bound manner without any further slippage.

3.9 EMPLOYEE RECRUITMENT AND RETIREMENT

The total number of retiring employees and recruitment envisaged for the FY 2023-24 and FY 2024-24 has been provided by the licensee as under: -

Retirements and Recruitments (Nos)

| Financial Years | Retirement | Proposed addition of Employees | Effective | Cumulative |
|-----------------|------------|--------------------------------|-----------|------------|
| FY 2023-24 | 127 | 499 | 372 | 372 |
| FY 2024-25 | 117 | 0 | (117) | 255 |

3.10 AGGREGATE REVENUE REQUIREMENT

In accordance with the revised estimates of individual items, the licensee has proposed the revised APR for the FY 2023-24 vis-à-vis those approved by the Commission for the FY 2023-24. The same is reproduced below:

Transmission ARR for FY 2023-24 (Rs. Million)

| Particulars | FY 2023-24 | | |
|---|--------------------------------|--------------------------------|---------------------------|
| | Approved by HERC 30.01.2023 | Proposed for APR FY-2023-24 | Gap Surplus/ (Deficit) |
| Expenditure | | | |
| O&M expenses | 8838.07 | 9371.91 | -533.84 |
| <i>Employee Expenses</i> | 5003.32 | 5523.00 | -519.68 |
| <i>Terminal Benefits</i> | 2814.80 | 2814.80 | 0.00 |
| <i>A&G Expenses</i> | 428.21 | 409.95 | 18.26 |
| <i>R&M Expenses</i> | 591.74 | 624.17 | -32.43 |
| Depreciation | 4761.80 | 5026.12 | -264.32 |
| Interest on term Loans | 2983.42 | 3294.19 | -310.77 |
| Impact of Foreign Exchange Risk Variation | 0.00 | 0.00 | 0.00 |
| Interest on working Capital | 314.65 | 392.58 | -77.93 |
| Total Expenditure | 16897.94 | 18084.81 | -1186.87 |
| Return on Equity | 2998.97 | 2783.16 | 215.81 |
| Less: Non Tariff Income | -222.80 | -222.80 | 0.00 |
| Annual Transmission Charges | 19674.11 | 20645.17 | -971.06 |
| Add: Revenue Gap 2021-22 | 2457.59 | 2457.59 | 0.00 |
| Add: Carrying cost on above | 0.00 | 0.00 | 0.00 |
| Aggregate Revenue Requirement | 22131.70 | 23102.76 | -971.06 |
| ULDC Charges for FY 2023-24 | 0.00 | 84.58 | -84.58 |
| Transmission Share of SLDC Charges | 18.66 | 10.48 | 8.18 |
| Unitary Charges for JKTPPL | 506.32 | 498.75 | 7.57 |
| Less YTC for Lines Operating As ISTS Lines FY 2023-24 | 3.47 | 3.47 | 0.00 |
| Total Transmission Charges | 22653.21 | 23693.10 | -1039.89 |

3.11 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 2023-24. The petitioner has prayed that the Hon'ble Commission may approve the Annual Performance Review for the FY 2023-24 based on the true-up of the FY 2022-23 and revised ARR (APR) of the FY 2023-24. It has been further submitted that the petitioner has computed carrying cost on the revenue gap for the FY 2022-23, FY 2023-24 and FY 2024-25, considering the applicable SBI base rate and appropriate margin rate as provided in the table below: -

Proposed Revenue Gap with Carrying Cost for FY 2023-24 (Rs. Million)

| Particulars | FY 2022-23 | FY 2023-24 | FY 2024-25 |
|--|------------|------------|------------|
| Approved ARR | 22,085.17 | 22,653.21 | 22,449.19 |
| Proposed Revised ARR | 21,847.94 | 23,693.10 | 22,449.19 |
| Opening Revenue Gap | - | (247.32) | (272.05) |
| Addition in Revenue Gap | (237.23) | - | - |
| Closing Revenue Gap | (237.23) | (247.32) | (272.05) |
| Interest Rate | 8.50% | 10.00% | 10.000% |
| Carrying Cost | (10.08) | (24.73) | (13.60) |
| Closing Revenue Gap with Carrying Cost | (247.32) | (272.05) | (285.65) |

The Commission has examined the half yearly accounts made available by the petitioner up to September 2023, 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 will not be appropriate to replace one set of estimated figures for the FY 2023-24 with another set of estimates 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.

3.12 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 2023-24 (Rs. Million)

| SLDC Business | | FY 2023-24 |
|---------------|----------------------------------|---------------|
| S. No | Particulars | APR |
| 1 | Employee Expense | 64.54 |
| 2 | Terminal Benefits | 0.00 |
| 3 | A&G Expense | 10.22 |
| 4 | R&M Expense | 5.05 |
| 5 | Depreciation | 49.69 |
| 6 | Interest on Loan | 0.00 |
| 7 | Interest on Working Capital | 2.97 |
| 8 | Return on Equity | 0.00 |
| 9 | Less: Non-Tariff Income | -1.45 |
| 10 | Add: Revenue Gap/ Surplus Refund | 0.00 |
| 11 | Carrying Cost | 0.00 |
| | TOTAL | 131.01 |

In conclusion, on the issue of performance review for the FY 2023-24, the Commission does not consider it appropriate to revise the ARR for the SLDC for the FY 2023-24 on the basis of another 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.

CHAPTER 4

ANNUAL REVENUE REQUIREMENT, ANNUAL TRANSMISSION TARIFF & SLDC CHARGES FOR THE FY 2024-25

4.1. BRIEF BACKGROUND

In line with the HERC MYT Regulations 2019, the petitioner has submitted the Annual Revenue Requirement for the FY 2024-25 and proposed Annual Transmission & SLDC charges for the FY 2024-25 as under: -.

4.2. OPERATION & MAINTENANCE EXPENSES (O&M)

A. EMPLOYEE COST

The petitioner has submitted that the employee cost for the FY 2022-23 has been considered as per the audited accounts. Further, the inflation factor has been considered as per methodology, approved by the Hon'ble 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. As the proposal of the transmission licensee is in line with the Regulations and previous orders of the Commission the same is being allowed except for the cost attributed towards employees cost for additional employees in the absence of sufficient details, which were not provided by HVPNL even during the hearing or thereafter.

Employee Cost for the FY 2024-25 (in Rs. Million)

| Particulars | HVPNL | | | HERC |
|--|---------------------------------|-------------------------------|------------------------------|----------------|
| | True up approved for FY 2022-23 | HVPNL Proposal for FY 2024-25 | HERC approved for FY 2024-25 | |
| Salaries and Wages | 3863.84 | 4,093.57 | | 4093.58 |
| Other Staff Cost | 1285.85 | 1,362.31 | | 1362.30 |
| Staff Welfare Expenses | 143.98 | 152.54 | | 152.54 |
| Benefit from Staff Loans | 0 | 0 | | 0.00 |
| Add: Employee Cost for Additional Employees (Net of Retires and New Joinees) | 0 | 95.12 | | 0.00 |
| Less: Employee Benefit for SLDC | 62.70 | 66.43 | | 66.43 |
| Total Employee Cost | 5230.97 | 5,637.11 | | 5542.00 |
| Terminal Benefits | 3,571.66 | 1,957.80 | | 1957.80 |
| Total Employee Cost Incl Terminal Benefits | 8802.63 | 7594.91 | | 7499.80 |

HVPNL has submitted that the terminal liability amounting to Rs. 1957.80 million for the FY 2024-25 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. Accordingly, the petitioner has prayed that this Hon'ble Commission may approve the terminal liability for the FY 2024-25 as per the actuarial valuation 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. 95.12 Million proposed by the petitioner towards employees cost for additional Employees (Net of Retires and New Joinees). 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). However, the R&M expenses for FY 2024-25 have been proposed considering the revised opening GFA for FY 2022-23 and projected addition in GFA during FY 2023-24 and FY 2024-25 and considering 1 % of the GFA as during the year 2024-25, as lot of Repair and maintenance works have been proposed to be carried out by the field offices.

The R&M expenses for the FY 2024-25 have been proposed, considering the revised opening GFA for FY 2022-23 and projected addition in GFA during FY 2023-24 and FY 2024-25.

R&M expenses for FY 2024-25 (In Millions)

| Particulars | FY 23-24 | FY 24-25 |
|---------------------------|--------------------|--------------------|
| Opening GFA | 1,12,337.28 | 1,21,277.67 |
| Closing GFA | 1,21,277.67 | 1,30,900.84 |
| Average GFA | 1,16,807.47 | 1,26,089.70 |
| % of GFA for R&M Expenses | 0.50% | 1.00% |
| R&M Expenses | 624.167 | 1260.8935 |

R&M expenses for FY 2024-25 (In Millions)

| Particulars | FY 22-23 | FY 23-24 | FY 24-25 |
|---------------------------|-----------|------------|------------|
| Opening GFA | 105309.37 | 112,337.21 | 120,932.29 |
| Closing GFA | 112337.21 | 120,932.29 | 129,059.10 |
| Average GFA | 108823.29 | 116634.75 | 124995.70 |
| % of GFA for R&M Expenses | 0.50% | 0.50% | 0.50% |
| R&M Expense | 544.12 | 583.17 | 624.98 |

The Commission has examined the R&M calculations proposed by the licensee and finds that the same is not as per regulations i.e. 0.50% of average GFA. The Commission has considered R&M expense as per regulations as 0.50% of average GFA, as against the proposal of 1% of average GFA. **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 2024-25 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 2024-25 (In Millions)

| S. No. | Particulars | ARR Projection |
|-----------|---|----------------|
| A) | Administration Expenses | |
| 1 | Rent (Including Lease Rent) | 1.85 |
| 2 | Insurance | 3.02 |
| 3 | Rates and taxes | 65.15 |
| 4 | Telephone charges, Postage, Telegram and Telex Charges | 4.96 |
| 5 | Mobile sets Charges | 13.69 |
| 6 | Legal and professional | 39.96 |
| 7 | Payments to auditors (Including out of pocket expenses) | 0.85 |
| 8 | Consultancy charges | 14.55 |
| 9 | Professional charges | 16.06 |
| 10 | Service charges for computerisation | 2.74 |
| 11 | Conference Expenses | 0.01 |
| 12 | Training Expenses | 29.31 |
| 13 | Travelling and conveyance | 155.91 |
| 14 | Other Expenses | 73.31 |
| | Sub-Total of Administrative Expenses | 421.39 |
| B) | Other Charges | |
| 1 | Material Related Expenses | 9.46 |
| 2 | Expenses on Photostat on Contract Basis | 1.62 |
| | Sub-Total of other charges | 11.08 |
| C) | Less: A&G Expenses against SLDC | (10.52) |
| D) | Total Charges | 421.96 |

The Commission has examined the projected A&G expenses filed by the licensee, for the period under consideration and considering the expenses amounting to Rs. 398.20 million approved for the FY 2022-23 as part of true up and adjusting for the inflation factor of 2.93% p.a. the A&G expenses for the FY 2024-25 is approved at **Rs 421.96 Millions**.

4.3. DEPRECIATION

HVPL has proposed depreciation for the FY 2024-25 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 4.47% and the same has been considered for computation of depreciation for the FY 2024-25.

Depreciation for FY 2024-25 (In Rs. Million)

| Gross Fixed Assets (Rs. in Million) | | | | | | Provision For Depreciation (Rs. in Million) | | | | |
|-------------------------------------|-------------|----------------------|----------------------|-------------------------|----------------|---|----------------------|----------------------|-------------------------|----------------|
| S. No | Particulars | At Beginning of Year | Addition During Year | Adjustments & Deduction | At End of Year | Rate of Depreciation | At Beginning of Year | Addition During Year | Adjustments & Deduction | At End of Year |
| | | | | | | | | | | |

| | | | | | | | | | | |
|---|----------------------------------|-------------|---------|---|-------------|--------|-----------|----------|---|-----------|
| 1 | Land & Land rights | 4,118.68 | - | - | 4,118.68 | | - | - | - | - |
| 2 | Building and Civil Works | 7,158.93 | | - | 7,158.93 | 4.47% | 2,969.33 | 319.78 | - | 3,289.11 |
| 3 | Plant & Machinery | 1,10,493.50 | 9623.17 | - | 1,20,116.68 | 4.47% | 49,970.89 | 5,150.50 | - | 55,121.35 |
| 4 | Furniture & Fixtures | 311.91 | | - | 311.91 | 4.47% | 201.18 | 13.93 | - | 215.12 |
| 5 | Vehicles | 139.83 | | - | 139.83 | 4.47% | 101.46 | 6.25 | - | 107.70 |
| 6 | Total HVPNL as per Balance sheet | 1,22,222.85 | 9623.17 | - | 1,31,846.02 | | 53,242.86 | 5,490.41 | - | 58,733.27 |
| 7 | Less: SLDC assets | 945.18 | - | | 945.18 | 5.26% | 364.20 | 49.69 | | 413.89 |
| 8 | Total Transmission | 1,21,277.67 | 9623.17 | - | 1,30,900.84 | (0.05) | 52,878.66 | 5440.72 | - | 58,319.38 |

Note: BBMB assets have not been considered while calculating the GFA and depreciation for the FY 2024-25

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. 5062.86 million towards depreciation, net of consumers contribution for the FY 2024-25.

4.4. INTEREST & FINANCE CHARGES

The interest and finance charges 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 2024-25 (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. | 3,226.81 |
| 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 | 3,226.81 |
| B | Interest on Loan on New Capex (Net of Repayments) | 1100.16 |
| | Total of B | 1100.16 |
| C | Grand Total of Interest & Finance Charges: A + B | 4326.97 |
| D | Less: Interest & Finance Charges Chargeable to Capital Account | - |
| E | Net Total of Interest & Finance Charges: For Revenue Account: C-D | 4326.97 |
| | Net Interest on Loan | 4326.97 |

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 2024-25, as per the following details:-

Interest and Finance Charges approved for FY 2024-25 (In Rs. Million)

| Calculation of interest on term loan allowed for the FY 2024-25 | Rs. Millions |
|---|--------------|
| Interest & finance charges claimed by HVPNL | 4,326.97 |
| Less: Interest on loan (Rs. 689.62 million) disallowed as per true up for the FY 22-23 @ 10.27% | 70.82 |
| Less: Interest on capex disallowed (Rs. 2000 Million) @ 10.27% | 205.40 |
| Approved Interest & finance charges for the FY 2024-25 | 4,050.75 |

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 10.00%. 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 2024-25 (in Rs. Millions)

| Sr. No. | Particulars | HVPNL Proposed for FY 2024-25 | HERC Approved for FY 2024-25 |
|---------|------------------------------------|-------------------------------|------------------------------|
| 1 | O&M for 1 month | 773.15 | 712.22 |
| 2 | Maintenance spares | 1391.66 | 1,282.00 |
| 3 | Receivables | 1868.13 | 1,717.63 |
| 4 | Total | 4032.94 | 3,711.85 |
| 5 | Interest Rate | 10.00% | 10.00% |
| 6 | Interest on Working Capital | 403.29 | 371.19 |

Accordingly, the Commission approves Rs 371.19 Million towards interest on working capital requirement for the FY 2024-25.

4.6. RETURN ON EQUITY (TRANSMISSION BUSINESS)

The return on equity has been estimated by the licensee based on the expected equity infusion on the new capex proposed to be incurred by the petitioner. The rate of return considered for the return on equity is 10%. The 'Base Rate' in the regulation shall be constructed as last 2 years average rate (as on 1st April of the relevant financial year) of 10 years Government of India bonds. The Opening balance of Equity during FY 2024-25 has been considered on the closing balance of Rs. 28725.66 million as provided in table given below. New Equity addition during FY 2024-25 amounting to Rs. 1924.63 million is computed as 20% of the assets projected to be capitalized during FY 2023-24 (i.e., 20% of Rs. 9623.17 million). The details provided are as under: -

Return on Equity Proposed for FY 2024-25 (in Rs. Millions)

| S. No. | Particulars | FY 23-24 | FY 24-25 |
|--------|--|-----------|-----------|
| | | APR | ARR |
| 1 | Equity to be considered for Transmission business (Opening) | 26,937.58 | 28,725.66 |

| | | | |
|---|----------------------------------|-----------------|-----------------|
| 2 | Add: Equity portion of GFA added | 1,788.08 | 1,924.63 |
| 3 | Closing Equity for RoE | 28,725.66 | 30,650.29 |
| 4 | Rate of Return | 10.00% | 10.00% |
| 5 | Average Internal Accruals | 27,831.62 | 29,687.98 |
| 6 | RoE - Proposed | 2,783.16 | 2,968.80 |

The Commission has considered the submissions made by the licensee and approves the same as proposed by them.

Accordingly, ROE approved by the Commission for the FY 2024-25 is Rs. 2802.97 Million.

4.7. NON-TARIFF INCOME

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. 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 2024-25, as submitted by HVPNL, is presented below: -

Unitary Charges (FY 2024-25)

| S. No. | Description | Amount |
|--------|--|----------|
| 1 | Base Unitary Charge as per Clause 26.2.1 of TA (Rs) | 45000000 |
| 4 | WPI for Jan 2010 (Base Accounting Year) as per Clause 26.3 ((Published by the Ministry of Industry Office of Economic Advisor), GOI) | 135.20 |
| 5 | WPI for Jan-2024 preceding the accounting year (WPI base year 2011-12 | 153.00 |
| 5 | Linking factor of all commodities WPI (based 2004-05) for 2011-12 | 1.598 |
| 5 | WPI for Jan'24 preceding the Accounting Year | 244.494 |
| 6 | Increase in WPI (%) | 80.8380% |
| 7 | WPI Index (40 % of WPI increase) (%) as per Cl 26.3 | 32.3352% |
| 8 | Increase in Base Unitary Charge linked with WPI (Rs.) | 9793109 |
| 9 | Indexed Unitary Charge (Rs) (Sl.No.3+9) | 40079328 |
| 10 | System Availability (%) (Cumulative System availability for FY 23-24 (Upto Aug-2023 taken for reference)) | 99.8600 |

| | | |
|-----------|---|-------------------|
| 11 | Normative Availability (%) | 98 |
| 12 | Incentive due to System Availability* | 760689 |
| 13 | Incentive due to less Transmission Losses (cumulative incentive due to less Transmission Losses for FY 23-24 (Upto Aug-2023 taken for reference)) * | 236535 |
| 14 | Monthly Unitary Charges | 40079328 |
| 15 | Monthly Unitary Charges (Rs. Million) | 40.08 |
| 16 | Projected Unitary Charges for FY 2024-25(Rs. Million) | 480.951939 |
| *Note- | Incentive due to System Availability and less Transmission Losses shall recovered from respective Stake holders separately | |

As estimated by the licensee, the expected 'Unitary Charges' for the FY 2024-25 is likely to be about Rs 40.08 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 2024-25.

Accordingly, unitary charges Rs. 40.08 million per month is approved for the FY 2024-25. 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.

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

The petitioner has submitted that the Hon'ble 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, HVPNL is directed to rigorously follow up with CERC for getting its due share of charges on account of ISTS lines, which shall be considered at the time of true-up of the FY 2024-25.

4.10. AGGREGATE REVENUE REQUIREMENT

As per the foregoing discussions, the proposed ARR of HVPN for the FY 2024-25, as filed by the petitioner and that approved by the Commission, in the preceding paragraphs, is tabulated below:

Rs. Millions

| Particulars | FY 2024-25 | FY 2024-25 |
|---|-------------------|--------------------------------|
| | Proposed by HVPNL | ARR Approved by the Commission |
| O&M Cost | 9277.76 | 8546.65 |
| <i>Employee Expense</i> | 5637.11 | 5542.00 |
| <i>Terminal Benefits</i> | 1957.80 | 1957.80 |
| <i>A&G Expense</i> | 421.96 | 421.88 |
| <i>R&M Expense</i> | 1260.89 | 624.98 |
| Interest on Loan | 4326.97 | 4050.75 |
| Impact of Foreign Exchange Risk Variation | 0.00 | 0.00 |
| Depreciation | 5440.72 | 5062.86 |
| Interest on Working Capital | 403.29 | 371.19 |
| Total Expenditure | 19448.74 | 18031.44 |
| Return on Equity | 2968.80 | 2802.97 |
| Less: Non-Tariff Income | -222.80 | -222.80 |
| Annual Transmission Charges | 22194.74 | 20611.61 |
| Add: Incentive for TSA | 0.00 | 0.00 |
| Add: Sharing of Benefits @ 60% - Saving in loWC | 0.00 | 0.00 |
| Net ARR | 22194.74 | 20611.61 |
| Add: - Revenue Gap FY 2022-23 | -237.17 | -903.55 |
| Aggregate Revenue Requirement | 21957.57 | 19708.06 |
| ULDC Charges | | |
| Transmission Share of SLDC Charges | 10.66 | 7.39 |
| Unitary Charges for JKTPL | 480.95 | 480.95 |
| Less: - YTC for lines Operating as ISTS Lines | 0.00 | 0.00 |
| Annual Revenue Requirement | 22449.18 | 20196.40 |

4.11. SLDC ARR (FY 2024-25)

The licensee has submitted that the computation of expenses for SLDC business has been done in accordance with the MYT Regulations 2019. The Aggregate Revenue Requirement of SLDC for the FY 2024-25 has been projected by HVPNL as under: -

Aggregate Revenue Requirement for SLDC for FY 2024-25 (in Rs. Million)

| S. No | SLDC Business | FY 2024-25 |
|-------|-----------------------------|------------|
| 1 | Employee Expense | 66.43 |
| 2 | Terminal Benefits | 0.00 |
| 3 | A&G Expense | 10.52 |
| 4 | R&M Expense | 5.05 |
| 5 | Depreciation | 49.69 |
| 6 | Interest on Loan | 0.00 |
| 7 | Interest on Working Capital | 3.04 |
| 8 | Return on Equity | 0.00 |

| | | |
|-----------|-------------------------|---------------|
| 9 | Less: Non-Tariff Income | -1.45 |
| 10 | TOTAL | 133.27 |

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.

The Commission has examined the proposed ARR for the FY 2024-25 for the SLDC business and approved the same is as under: -

HERC Approved ARR of SLDC for the FY 2024-25 (Rs. Million)

| Particulars | HVPNL Proposal for the FY 24-25 | HERC Approval for the FY 24-25 |
|----------------------------------|----------------------------------|----------------------------------|
| | Annual revenue Requirement (ARR) | Annual revenue Requirement (ARR) |
| Employee Expense | 66.43 | 66.43 |
| Terminal Benefits | 0.00 | 0.00 |
| A&G Expense | 10.52 | 10.52 |
| R&M Expense | 5.05 | 5.05 |
| Depreciation | 49.69 | 49.69 |
| Interest on Loan | 0.00 | 0.00 |
| Interest on Working Capital | 3.04 | 2.28 |
| Return on Equity | 0.00 | 0.00 |
| Less: Non-Tariff Income | -1.45 | -1.45 |
| Add: Revenue Gap/ Surplus Refund | 0.00 | -40.10 |
| Carrying Cost | 0.00 | 0.00 |
| TOTAL | 133.28 | 92.42 |

True-up of SLDC charges for the FY 2022-23 is admitted at Rs. 124.55 million as against the earlier approval of Rs. 164.65 million i.e. true-up Rs. -40.10 million. The reduction in SLDC charges, under true-up has occurred due to less claim of the petitioner under the heads interest on loan and depreciation. The true-up of Rs. -40.10 million has been carried forward to the FY 2024-25.

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 Revenue Requirement for FY 2024-25 | Rs. Million | 22194.75 |
| Rev Gap of FY 2022-23 | Rs. Million | -237.17 |
| Aggregate Revenue Requirement | Rs. Million | 21957.57 |
| Transmission Share of SLDC Charges | Rs. Million | 10.66 |
| Unitary Charges for JKTPPL | Rs. Million | 480.95 |
| Less YTC for Lines Operating As ISTS Lines FY 2023-24 | Rs. Million | 0.00 |
| Total Transmission Charges | Rs. Million | 22449.19 |
| Monthly Transmission Tariff | Rs. Million | 1870.77 |
| Monthly Transmission Charges UHBVNL | 45.5653% | 852.42 |
| Monthly Transmission Charges DHBVNL | 52.9380% | 990.35 |
| Monthly Transmission Charges TPTCL | 0.4177% | 7.81 |
| Monthly Transmission Charges NTPC | 0.0168% | 0.32 |
| Monthly Transmission Charges CRPCPL | 0.0025% | 0.05 |
| Monthly Transmission Charges Northern Railways | 1.0597% | 19.82 |

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 2022-23 and the approved ARR for the FY 2024-25, the approved transmission tariff, for the FY 2024-25, 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.

| | | |
|---|--------------------|-----------------|
| Annual Revenue Requirement for FY 2024-25 | Rs. Million | 20611.61 |
| Rev Gap of FY 2022-23 | Rs. Million | -903.55 |
| Carrying cost for FY 2022-23 and FY 2023-24 | Rs. Million | 0 |
| Aggregate Revenue Requirement | Rs. Million | 19708.06 |
| Transmission Share of SLDC Charges | Rs. Million | 7.39 |
| Unitary Charges for JKTPPL | Rs. Million | 480.95 |
| Less YTC for Lines Operating as ISTS Lines FY 2024-25 | Rs. Million | 0 |
| Total Transmission Charges | Rs. Million | 20196.40 |
| Monthly Transmission Tariff | Rs. Million | 1683.03 |
| Monthly Transmission Charges UHBVNL | 45.5653% | 766.88 |

| | | |
|--|----------|--------|
| Monthly Transmission Charges DHBVNL | 52.9380% | 890.96 |
| Monthly Transmission Charges TPTCL | 0.4177% | 7.03 |
| Monthly Transmission Charges NTPC | 0.0168% | 0.28 |
| Monthly Transmission Charges CRPCPL | 0.0025% | 0.04 |
| Monthly Transmission Charges Northern Railways | 1.0597% | 17.84 |

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 2024-25 among the different beneficiaries as per the table below:

Proposed SLDC Charges for FY 2024-25 (in Rs. Million)

| Beneficiaries | SLDC charges to be recovered Rs 133.27 million | Amount (in Rs Million) | Total (Rs. Millions) FY 2024-25 |
|---|--|------------------------|---------------------------------|
| HVPN @ 8% | - | Amount | 10.6616 |
| Generating Companies & Sellers @ 46% | Installed Capacity / Capacity (in MW) | Amount | 61.3044 |
| HPGCL | 2,582.40 | Sub-Amount | 34.6216 |
| Faridabad Gas Power Plant | 432.00 | | 5.7917 |
| Mahatma Gandhi Super Thermal Power Station | 1,320.00 | | 17.6969 |
| Gemco Biomass | 8.00 | | 0.1073 |
| Star Wire India Ltd | 9.90 | | 0.1327 |
| Sri Jyoti | 9.50 | | 0.1274 |
| Shahbad Co-operative Sugar Mills | 24.00 | | 0.3218 |
| Naraingarh Sugar Mill | 22.40 | | 0.3003 |
| Amplus Sun Solutions Pvt Ltd. | 50.00 | | 0.6703 |
| JBM Environment Pvt Ltd | 8.00 | | 0.1073 |
| Deepan Godara S/o Sh Dalip Singh | 0.25 | | 0.0034 |
| Raj Waste Treat Pvt ltd | 2.00 | | 0.0268 |
| Hind Samachar Ltd | 15.00 | | 0.2011 |
| SAEL Ltd | 15.00 | | 0.2011 |
| LR Energy Ltd | 20.00 | | 0.2681 |
| Avaada Green HN Project | 50.00 | | 0.6703 |
| Mor Bio Energy Pvt LTd | 1.20 | | 0.0161 |
| Giotech Power Pvt. Ltd. | 1.00 | | 0.0134 |
| K2 Power Renewal Pvt. Ltd. | 2.00 | | 0.0268 |
| Distribution Licensees and Buyers @ 46% | Transformation Ratio (in %) | Amount | 61.3044 |
| UHBVNL | 45.5098% | Sub-Amount | 27.8995 |
| DHBVNL | 52.8734% | | 32.4137 |
| Tata Power Trading Company Limited | 0.4172% | | 0.2557 |
| NTPC | 0.0168% | | 0.0103 |
| CRPCPL | 0.0025% | | 0.0015 |
| Northern Railways | 1.0584% | | 0.6488 |
| Merino Panel Products | 0.0168% | | 0.0103 |
| Orbit Resorts Limited | 0.0252% | | 0.0155 |

| | | | |
|---------------------------------|---------|--|--------|
| M/S Sky City Hotels Pvt. Ltd. | 0.0017% | | 0.0010 |
| M/s Asian Paints Limited | 0.0168% | | 0.0103 |
| M/s Goodrich Carbohydrates Ltd. | 0.0081% | | 0.0049 |
| M/s Dorset Industries Pvt. Ltd. | 0.0030% | | 0.0019 |
| M/s KRBL Ltd. | 0.0045% | | 0.0028 |
| M/s G. S. Spinning Mills | 0.0034% | | 0.0021 |
| M/s Garg Spinning Mills | 0.0034% | | 0.0021 |
| M/s Bhartiya Spinners Ltd. | 0.0034% | | 0.0021 |
| M/s Blow Packaging | 0.0020% | | 0.0012 |
| M/s Rico Auto Industries Ltd | 0.0336% | | 0.0206 |

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 in the preceding paras of this order. The petitioner may note that the SLDC charges, so apportioned by it, 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 2024-25 in the present order i.e. Rs. 92.42 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."

Based on the approved transmission charges for the FY 2024-25, the Commission approves the transmission charges payable by the short-term open access consumers as per the details provided in the table that follows: -

| STOA Charges | HVPNL Proposal | HERC approval |
|---|----------------|---------------|
| Transmission Cost for FY 2024-25 (Rs. million) | 21968.23 | 19715.45 |
| Unitary Charges | 480.95 | 480.95 |
| Total | 22449.18 | 20196.40 |
| Total Energy expected to be transmitted by HVPNL for the FY 2024-25 (at the actual level of FY 22-23) | 60719.636 | 60719.636 |
| STOA Charges (Rs. / Unit) | 0.37 | 0.33 |

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. However, the Commission in its order dated 30.01.2023, taking into consideration the comfortable position of the reactive energy pool account, had directed that limited to the FY 2023-24, no reactive energy charges shall be recovered from the Discoms. However, HVPNL was directed to approach the Commission for true-up based on actual audited data.

In view of the above, the SLDC is preparing the reactive account of the Discoms at the rates of 16.5 paisa/KVARh subject to the realization of the amount, at the time of true-up, as per the directions of the Hon'ble commission in the order dated 30.01.2023.

HVPNL has further submitted that new IEGC has come in force from 1st October 2023 which provides as under: -

“The charge for VARh shall be at the rate 5 paisa/KVARh w.e.f. date of effect of these regulations. This rate shall be escalated at the rate of 0.5 paisa/KVARh per year thereafter unless revised”

Keeping in view of the above, HVPNL has proposed to charge for VARh @ 5 paisa/KVARh w.e.f. the date of the order.

After due deliberations, the Commission approves VARh @ 5 paise/KVARh w.e.f. the date of this order. However, the Commission has taken note of the fact that balance in the “Reactive Energy charges pool fund account”, maintained by HVPNL, as on 30.09.2023 is Rs. 4672.07 lacs. Therefore, considering the comfortable position of the reactive energy pool account, the Commission directs that limited to the FY 2024-25, 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 directives issued by the Commission in the present order shall be complied with in a time bound manner. The licensee shall implement the tariff and charges determined / approved by the Commission w.e.f. 01.04.2024. 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 16.02.2024.

Date: 16.02.2024
Place: Panchkula

(Naresh Sardana)
Member