

BEFORE
THE BIHAR ELECTRICITY REGULATORY COMMISSION
VIDYUT BHAWAN - II, PATNA

Petition for
True-Up for FY 2020-21,
Annual Performance Review (APR) for FY 2021-22,

And

Business Plan and Aggregate Revenue Requirement (ARR) for the Control
Period from FY 2022-23 to FY 2024-25 and Transmission Charges for FY 2022-23

For

Bihar State Power Transmission Company Limited
(BSPTCL)

Patna



Chief Engineer (STU),
4th Floor, Vidyut Bhawan - II,
Jawaharlal Nehru Marg,
Patna - 800 021

14th December 2021

**Before the Bihar Electricity Regulatory Commission,
Patna**

Filing No.:

Case No.:

IN THE MATTER OF

Filing of the Petition for approval of True-up of FY 2020-21, Annual Performance Review (APR) for FY 2021-22, Business Plan and Aggregate Revenue Requirement (ARR) for the Control Period from FY 2022-23 to FY 2024-25, and Tariff for FY 2022-23 under BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2021 along with the other guidelines and directions issued by the Hon'ble BERC from time to time and under Sections 45, 46, 47, 61, 62, 64 and 86 of the Electricity Act, 2003 read with the relevant guidelines.

AND

IN THE MATTER OF
THE APPLICANT

Bihar State Power Transmission Company Limited (herein after referred to as 'BSPTCL' or 'Petitioner'), which shall mean for the purpose of this Petition the Licensee, having its registered office at Vidyut Bhawan -II, Jawaharlal Nehru Marg, Patna - 800 021

The Petitioner respectfully submits as under:

1. Pursuant to the enactment of Electricity Act, 2003, Bihar State Power Transmission Company Limited (herein after referred to as 'BSPTCL' or 'Petitioner') is filing this Petition, under Sections 61, 62 and 64 of the Electricity Act, 2003 and the governing Regulations thereof, for approval of True-up of FY 2020-21, Annual Performance Review (APR) for FY 2021-22, Business Plan & Aggregate Revenue Requirement (ARR) for the Control Period from FY 2022-23 to FY 2024-25, and Tariff for FY 2022-23.
2. The Multi-Year Tariff (MYT) Petition for the Control Period from FY 2013-14 to

FY 2015-16 was filed by BSPHCL on behalf of all successor Companies on 14th November 2012 and accordingly, the Hon'ble Commission had issued common Order for all entities (Tariff Order dated 15th March 2013).

3. Thereafter, BSPTCL has been filing separate Tariff Petition for subsequent years. Following is the list of Tariff Petitions filed by BSPTCL and the corresponding Tariff Orders issued by the Hon'ble Commission till date.

Particulars	Petition filed on	Tariff Order issued on
Petition for APR for FY 2013-14 and Revised ARR for FY 2014-15	14 th November 2013	28 th February 2014
True-up for FY 2013-14, APR for FY 2014-15, Revised ARR for FY 2015-16	3 rd December 2014	12 th March 2015
True-up for FY 2014-15, APR for FY 2015-16 and approval of ARR for the period FY 2016-17 and Determination of Multi-Year Transmission Tariff for FY 2016-17, 2017-18 and 2018-19	28 th December 2015	21 st March 2016
True-up for FY 2015-16, APR for FY 2016-17 and Determination of ARR and Tariff for FY 2017-18	30 th November 2016	9 th March 2017
True-up for FY 2016-17, APR for FY 2017-18 and Determination of ARR and Tariff for FY 2018-19	24 th November 2017	24 th April 2018
True-up for FY 2017-18, APR for FY 2018-19 and approval of ARR for the Multi-Year Tariff period from FY 2019-20 to FY 2021-22 and Determination of Transmission Tariff for FY 2019-20	30 th November 2018	15 th February 2019
True-up for FY 2018-19, APR for FY 2019-20 and approval of ARR and Tariff for FY 2020-21	15 th November 2019	20 th March 2020
True-up for FY 2019-20, APR for FY 2020-21 and approval of ARR and Tariff for FY 2021-22	24 th December 2020	19 th March 2021

4. BSPTCL has filed appeals before the Hon'ble APTEL against certain Tariff Orders issued by the Hon'ble Commission. Following are the list of Appeals pending before Hon'ble APTEL:

Appeal No.	Appeal Against Tariff Order dated	Date of Filing	Current Status
APL 383/2019	The Appellant has filed the Appeal under Section 111 of EA 2003 praying for the modification of Tariff Order dated 07.03.2018 drawn on the grounds of the appeal and setting aside of impugned Order dated 20.11.2018 passed in Review Petition No. 15 of 2018.	12.02.2019	Matter is adjourned to 21.02.2022
DFR No. 2324/2019	The Appellant, in the Appeal, has challenged the legality, validity and propriety of the impugned Tariff Order dated 15.02.2019 in Case No. 51 of 2018 and impugned Order dated 25.07.2019 passed in Review Case No. 12 of 2019.	14.10.2019	Matter is adjourned to 24.02.2022

5. In case the Judgment of the Hon'ble APTEL in the above-mentioned Appeals is in favour of BSPTCL, the Hon'ble Commission is requested to provide the impact of the desired relief on all the issues raised by BSPTCL in these Appeals, entirely for previous Control Period (i.e., FY 2016-17, FY 2017-18, FY 2018-19) where the same Regulations were applicable, along with carrying cost in subsequent Tariff Order/s.
6. The present Petition is being filed before the Hon'ble Commission for approval of Truing-up of FY 2020-21, APR of FY 2021-22, Business Plan and ARR for the Control Period from FY 2022-23 to FY 2024-25, and Tariff for FY 2022-23, as per procedures outlined in Section 61, 62 and 64, of the Electricity Act 2003, and the governing Regulations thereof, considering the approved values of Tariff Order dated 20th March 2020 and Tariff Order dated 19th March 2021 for Truing-up of FY 2020-21 and APR of FY 2021-22, respectively.
7. This Petition has been prepared in accordance with the relevant provisions of BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2018 ("MYT Regulations, 2018) and BERC (Multi-Year Transmission Tariff and

SLDC Charges) Regulations, 2021 ("MYT Regulations, 2021) notified by the Hon'ble Commission.

8. The Petitioner along with this Petition is submitting the regulatory formats with data and information to the extent applicable and would make available any further information/additional data required by the Hon'ble Commission during the course of the proceedings.

9. The clause 11.3 of the MYT Regulations, 2021 specifies that an application for determination of tariff and charges shall be made by 15th November every year for Truing up of expenses of previous years, for APR of the ARR for the current year and determination of ARR and Transmission tariff for the ensuing years of the Control Period. BSPTCL would like to submit that the Ministry of Corporate Affairs as well as Income Tax Department have extended the time for finalization of Annual Accounts in view of country wide impact of COVID-19 pandemic. Annual Accounts for FY 2020-21 have been prepared on 30th October, 2021 and audited accounts will be available only in December 2021. Also, new MYT Regulations, 2021 have been notified by the Hon'ble Commission very recently. These have led to delay in meeting the timeline for filing of present Tariff Petition. BSPTCL has sought additional time for filing the Petition from the Hon'ble Commission, vide letter Ref: 59 dated 15th November 2021. The Hon'ble Commission has considered the request of BSPTCL vide letter Ref: 876 dated 17.11.2021.

Prayers to the Hon'ble Commission:

10. The Petitioner respectfully requests the Hon'ble Commission to:
 - a. Admit this Petition;
 - b. Examine the proposal submitted by the Petitioner in the enclosed Petition for a favourable dispensation;
 - c. Pass suitable Orders with respect to the True-up of ARR for FY 2020-21, APR for FY 2021-22, Business Plan and ARR for the Control Period from FY 2022-23 to FY 2024-25, and Tariff for FY 2022-23 as submitted in this Petition;
 - d. Permit to propose suitable changes to the respective True-up/ APR/Business Plan/ ARRs, prior to the final approval by the Hon'ble Commission;

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- e. Permit to revise any inadvertent omissions/errors/shortcomings, etc., and accordingly add/change/modify/alter this filing and make further submissions as may be required at a future date;
 - f. Approve open access charges in Tariff Order of BSPTCL, which is to be recovered from open access consumers;
 - g. Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case;
 - h. Pass desired impact of issues raised by BSPTCL in appeals along with carrying cost in ensuing Tariff Order in case the appeals are ruled in favour of BSPTCL;
 - i. To condone the delay in filing of present Tariff Petition for FY 2022-23 due to finalisation of annual accounts for FY 2020-21.

Dated: __ December 2021

Kumar Prasant
Chief Engineer (STU)

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
A&G	Administrative & General
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATC	Annual Transmission Charges
BERC	Bihar Electricity Regulatory Commission
BRGF	Backword Regions Grant Fund
BSEB	Bihar State Electricity Board
BSPHCL	Bihar State Power (Holding) Company Limited
BSPTCL	Bihar State Power Transmission Company Limited
CAGR	Compounded Aggregate Growth Rate
CEA	Central Electricity Authority
CPI	Consumer Price Index
CWIP	Capital Work in Progress
EA	Electricity Act
FY	Financial Year
GFA	Gross Fixed Asset
GoB	Government of Bihar
GSS	Grid Sub-station
IDC	Interest During Construction
IRF	Internal Resource Fund
IoWC	Interest on Working Capital
kV	kilo Volt
MAT	Minimum Alternate Tax
MCLR	Marginal Cost of Funds based Lending Rate
MU	Million Units
MVA	Mega Volt Ampere
MW	Mega Watt
MYT	Multi Year Tariff
NBPDCL	North Bihar Power Distribution Company Limited
O&M	Operation & Maintenance
PSDF	Power System Development Fund
R&M	Repair & Maintenance
RoE	Return on Equity
SBPDCL	South Bihar Power Distribution Company Limited
SLDC	State Load Despatch Centre
SBI	State Bank of India
STOA	Short Term Open Access
STU	State Transmission Utility
TAF	Transmission Availability Factor

TSU	Transmission System User
WPI	Wholesale Price Index

1 Introduction

1.1 Background

The erstwhile Bihar State Electricity Board (hereinafter referred to as 'Board' or 'BSEB') was originally constituted on 1st April 1958 under Section 5 of the Electricity (Supply) Act, 1948 and was engaged in the management of electricity generation, transmission, distribution and related activities in the State of Bihar.

Under the 'Bihar State Electricity Reforms Transfer Scheme, 2012', the BSEB was unbundled into five Companies, viz., Bihar State Power (Holding) Company Limited (BSPHCL), Bihar State Power Transmission Company Limited (BSPTCL), Bihar State Power Generation Company Limited (BSPGCL), South Bihar Power Distribution Company Limited (SBPDCL), and North Bihar Power Distribution Company Limited (NBPDC), with effect from 1st November 2012 vide Notification No. 17 dated 30th October 2012.

'Bihar State Power Transmission Company Limited' or 'BSPTCL' means the Transmission Company to which the Transmission Undertakings of the Board have been transferred in accordance with this Transfer Scheme.

1.2 Profile of BSPTCL

Primarily, the transmission of power takes place at 220 kV and 132 kV voltage levels. The number of Grid Sub-stations (GSS) and transformation capacity in MVA as on 31st March 2021 and 30th September 2021 are provided in the table below:

Table 1-1: GSS and Power Transformer Capacity in MVA

Sub-stations	FY 2020-21		FY 2021-22 (Up to Sep 2021)	
	No. of GSS	Capacity (MVA)	No. of GSS	Capacity (MVA)
220/132kV	20	7900	20	8500
132/33kV	126	15210	126	15380
TOTAL	146	23110	146	23880

The following table shows the line length in Ckt km operational and charged as on 31st March 2021 and 30th September 2021:

Table 1-2: Transmission Line Length in Ckt Km

Transmission Line	FY 2020-21	FY 2021-22 (Up to Sep 2020)
220 kV	3760.08	3928.18
132 kV Double Circuit	11323.89	11405.84

The power supply position in the State of Bihar is improving and BSPTCL is taking all the required steps to strengthen and develop the electricity infrastructure for end-to-end transmission of power within the State. BSPTCL has almost completed all the projects undertaken in the 12th Plan. Further, all the requisite approvals of projects under 13th Plan have already been accorded by the Hon'ble Commission vide Tariff Order dated 15th February 2019, Tariff Order dated 20th March 2020 and Tariff Order dated 19th March 2021. Majority of the works under 13th Plan have already been initiated during FY 2020-21. The schemes under 13th Plan are funded through 80% loan and 20% equity.

1.3 Filing of Present Petition

The present Petition considers the proposal of BSPTCL for approval of True-up of FY 2020-21, APR for FY 2021-22, Business Plan and ARR for the Control Period from FY 2022-23 to FY 2024-25, and Tariff for FY 2022-23.

Section 62 of the Electricity Act, 2003 requires the Licensee to furnish details as may be specified by the Hon'ble Commission for determination of tariff. Further, as per the Regulations notified by the Hon'ble Commission, BSEB or its unbundled Companies are required to file Petition for all reasonable expenses, which they believe that they would incur over the next financial year and seek the approval of the Hon'ble Commission for the same. The filing is to be done based on the projections of the expected revenue and costs.

The present Petition is prepared in accordance with the provisions of the following Acts/Regulations, namely:

- Electricity Act, 2003;
- BERC (Terms and Conditions for Open Access) Regulations, 2018, as amended time to time;
- BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018;

-
- BERC Multi-Year (Transmission Tariff and SLDC Charges) Regulations, 2018; and
 - BERC Multi-Year (Transmission Tariff and SLDC Charges) Regulations, 2021.

BSPTCL has made genuine efforts for compiling all relevant information relating to the True-up/APR/ARR and Business Plan as required in the Regulations issued by the Hon'ble Commission and has also made every effort to ensure that information provided to the Hon'ble Commission are accurate and free from material errors.

However, there may be certain deficiencies/infirmities in the Petitions owing to the different aspects related with the operations of Transmission Company on independent basis. Hence, BSPTCL prays to the Hon'ble Commission that the information provided be accepted for the current filing and deficiencies, if any, may please be condoned. BSPTCL assures the Hon'ble Commission that appropriate measures have been taken to improve the management information system for improved data collection.

1.4 Contents of the Petition

The present Petition consist of the following main sections namely:

- Truing-up of FY 2020-21;
- Annual Performance Review (APR) of FY 2021-22;
- Business Plan for the Control Period from FY 2022-23 to FY 2024-25;
- Aggregate Revenue Requirement for the Control Period from FY 2022-23 to FY 2024-25 and Tariff for FY 2022-23;
- Compliance to Directives.

1.5 Approach to the Present Filing

The Licensee is required to file an application before the Hon'ble Commission for determination of tariff as per Regulation 11.3 of MYT Regulations, 2021.

The relevant extract of MYT Regulations, 2021 is as under:

"11.3 An application (along with soft copy) for determination of tariff and charges shall be made by 15th November every year, for Truing up of expenses of previous years, for Annual Performance Review (APR) of the Aggregate Revenue Requirement (ARR) for the current year and determination of ARR and transmission tariff or SLDC charges for the ensuing years of the control period. The application should contain the data

relating to each item of the ARR supported with the information/data in the formats Form no- SI to Form no-P12 appended to these Regulations and accompanied by such fees as may be specified under the BERC (Fees, Fines and Charges) Regulations, 2019 as amended from time to time. All the information as required in the formats appended to these Regulations along with justification shall be provided in the main petition.

Provided that the Commission may require submission of additional information/data required for determination of ARR and tariff."

The Hon'ble Commission vide Tariff Order dated 19th March 2021 approved the Truing-up of FY 2019-20, Annual Performance Review (APR) of FY 2020-21 and ARR and Tariff for FY 2021-22 as per the provisions of MYT Regulations, 2018.

Therefore, BSPTCL is filing the present Petition for approval of Truing-up of FY 2020-21 based on annual accounts of FY 2020-21, APR for FY 2021-22 based on estimates for current year in accordance with the provisions of BERC MYT Regulations, 2018, and Business Plan and ARR for the Control Period from FY 2022-23 to FY 2024-25 and tariff for FY 2022-23 based on projections as per the provisions of BERC MYT Regulations, 2021.

2 Truing up for FY 2020-21

2.1 Introduction

BSPTCL has filed Truing-up Petition for FY 2020-21 based on the annual accounts of FY 2020-21. BSPTCL has considered the values approved in ARR of FY 2020-21 vide Tariff Order dated 20th March 2020, vis-à-vis values as per annual accounts of FY 2020-21. Though the Hon'ble Commission had approved the revised estimates of ARR and Revenue Gap/(Surplus) for FY 2020-21 in the APR of FY 2020-21 undertaken in the latest Tariff Order dated 19th March, 2021, the Hon'ble Commission had not passed through the computed Revenue Gap/(Surplus) for FY 2020-21 in the ARR of FY 2021-22. Hence, the true-up for FY 2020-21 has been claimed with respect to the values approved in the Tariff Order for FY 2020-21 dated 20th March 2020.

The Truing-up of FY 2020-21 is to be carried out in accordance with relevant provisions of BERC (Multi Year Transmission Tariff and SLDC Charges) Regulations, 2018. Regulation 7 and Regulation 13 (a) to (c) of the MYT Regulations, 2018 specifies as follows:

“7. Annual Review of Performance and True-up

7.1 Where the Aggregate Revenue Requirement and expected revenue from tariff and charges of a Transmission Licensee or SLDC, as the case may be, are covered under a Multi-Year Tariff framework, such Transmission Licensee or SLDC shall be subject to an annual review of performance and True-up during the Control Period in accordance with these Regulations.”

“13. True-Up and Annual Performance Review

The Commission shall True-Up expenses of the previous year either as part of the Tariff order or issue Order/s for True-Up of expenses preceding the Tariff order of ensuing year.

(a) An order for True-Up of expenses shall be issued on annual basis.

(b) An order for True-Up of expenses shall be on the basis of expense estimates made in the beginning of the year under consideration, actual expenses booked in the audited books of accounts of the Transmission Licensee or SLDC, as the case may be, for the year, and after prudence check of data by the Commission.

(c) *Where audited books of account are not available at the time of true-up, provisional books of annual (regulatory) accounts duly approved by the Board of Directors of the applicant company shall be used for the provisional True-up process.*
.....”

Accordingly, BSPTCL has submitted the Truing-up for FY 2020-21 based on the annual accounts of FY 2020-21. A copy of annual accounts of FY 2020-21 with Board of Directors’ approval is attached as **Annexure I**.

2.2 Transmission Losses

BSPTCL submits that the Hon'ble Commission vide MYT Order dated 15th February 2019 had specified normative Transmission Loss of 3.92% for all three years of Control Period (i.e., FY 2019-20 to FY 2021-22) as per Regulation 6.1 of MYT Regulations, 2018. However, in Tariff Order dated 19th March, 2021, the Hon’ble Commission reduced the normative transmission loss to 3.00% for FY 2020-21 and FY 2021-22 based on actual data submitted by BSPTCL for April 2020 to Sept 2020. Therefore, BSPTCL had filed a Review Petition on the rulings given by Hon’ble Commission in Tariff Order. In the Review Petition, BSPTCL had submitted that there is no provision in MYT Regulations, 2018 for revision of approved trajectory for transmission loss in the middle of Control Period. BSPTCL also submitted that the revision of transmission loss for FY 2020-21 and FY 2021-22 is contrary to the provisions of MYT Regulations, 2018 as well as to the very rationale and framework of the MYT regime. In view of these, BSPTCL had prayed to the Hon’ble Commission to retain the transmission loss of 3.92% for FY 2020-21 and FY 2021-22 as approved in MYT Order dated 15th February 2019.

The Hon’ble Commission issued the Order on Review Petition vide Order in Case No. 05 of 2021 dated 9th November 2021. The Hon’ble Commission retained the transmission line trajectory of 3.92% for FY 2020-21 and FY 2021-22. In view of this, BSPTCL has compared the actual transmission loss for FY 2020-21 with approved transmission loss of 3.92%.

BSPTCL submits that the actual transmission loss of BSPTCL system for FY 2020-21 is 2.92%. The following table shows the comparison of approved and actual transmission loss for FY 2020-21:

Table 2-1: Actual Transmission Loss of BSPTCL for FY 2020-21

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)
Energy Input (in MU)		34005.48
Energy Output (in MU)		33011.03
Transmission Loss (in MU)		994.46
Transmission Loss (%)	3.92%	2.92%

As seen from the above Table, BSPTCL has been able to achieve transmission loss of 2.92%, which is lower than the approved transmission loss of 3.92%. The month-wise Transmission Loss for FY 2020-21, i.e., from April 2020 to March 2021 with details of energy input and energy output, as certified by SLDC, is attached as **Annexure II**.

2.3 Capitalization

BSPTCL submits that the capitalization as per annual accounts of FY 2020-21 is Rs. 723.32 Crore, which includes Interest During Construction (IDC) of Rs. 8.58 Crore. The following table shows the approved and actual capital expenditure and capitalization claimed in the truing-up of FY 2020-21:

Table 2-2: Capital Expenditure and Capitalization for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Opening CWIP (A)	2,043.16	2,284.20
2	Capital Investment during the Year (B)	427.05	1,327.71
3	Less: Capitalization (C)	1,629.99	714.74
4	Less: IDC Capitalized (D)	-	8.58
5	Closing CWIP (A+B-C-D)	840.22	2,888.59

BSPTCL has considered closing balance of CWIP of Rs. 2,284.20 Crore approved by the Hon'ble Commission for FY 2019-20 vide Tariff Order dated 19th March 2021 as opening CWIP for FY 2020-21. The capital expenditure and capitalization incurred during the year is as per annual accounts for FY 2020-21. Accordingly, the closing CWIP for FY 2020-21 works out to Rs. 2,888.59 Crore.

BSPTCL has provided work-wise break-up of capitalization of Rs. 723.32 Crore (including IDC of Rs. 8.58 Crore) for FY 2020-21 as **Annexure III**.

In the Tariff Order dated 19th March 2021, the Hon'ble Commission asked for reasoning and justification for variation in cost and time overrun for the projects to be capitalized under 13th Plan (Upcoming projects). The relevant extract of the Order is as follows:

“

However, at the time of True-up of capitalization of these schemes during Tariff proceedings of subsequent years, BSPTCL shall be required to submit detailed documents and reasoning establishing the prudence of capital cost incurred and any variation in cost and time overrun as per Regulations of the Commission.

.....”

The total approved cost for projects under 13th Plan (Upcoming projects) is Rs. 3735.21 Crore and amended cost is Rs. 3289.51 Crore. BSPTCL has capitalized Rs. 125.89 Crore against these projects till FY 2020-21. Therefore, there is no cost and time overrun for these projects. Further, BSPTCL submits that there is no concept of time and cost overrun in the tendering of BSPTCL because of the following:

- BSPTCL awards multiple projects at a time because tendering individual projects will take more time.
- For Transmission line, BSPTCL invites tender on 'fixed rate' basis and for Substation on 'contract with variation' basis.
- There is no cost variation in any contract awarded by BSPTCL, and there is only quantity variation. Due to quantity variation, cost of project varies.
- Price also varies because in some cases, area of project is decided but exact location is not fixed. In such cases, price varies due to re-routing and site conditions.

2.4 Gross Fixed Asset

BSPTCL has considered the closing GFA of FY 2019-20 approved by the Hon'ble Commission vide Tariff Order dated 19th March 2021 as opening Gross Fixed Asset (GFA) for FY 2020-21.

The addition to GFA and IDC are considered based on the annual accounts for FY 2020-21. The total asset capitalised during FY 2020-21 is Rs. 723.32 Crore, which includes IDC of Rs. 8.58 Crore. BSPTCL has adjusted the amount of Rs. 3.66 Crore

from GFA addition on account of disposal/sale/transfer of assets during the year. Accordingly, BSPTCL has arrived at closing GFA of FY 2020-21. The following table shows the schedule of GFA claimed in Truing-up of FY 2020-21:

Table 2-3: GFA claimed in True-up of FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Opening GFA (A)	9,005.53	9,486.39
2	Add: Additions to GFA (excluding Land & IDC) (B)	1,629.99	681.43
3	Add: Direct Additions to GFA (C)	-	-
4	Add: Net Value of Land (D)	13.30	33.31
5	Less: Disposal/Sale/ Transfer of Asset (E)		3.66
6	Add: Interest During Construction (F)		8.58
7	Closing GFA (A+B+C+D-E+F)	10,648.82	10,206.06

BSPTCL has considered the closing GFA for FY 2020-21, as computed in the table above. The Hon'ble Commission is requested to approve asset addition, IDC during the year, and closing GFA as claimed in the table above.

2.5 Scheme-wise Capitalisation during FY 2020-21

BSPTCL has capitalised net amount of Rs. 719.66 Crore after deducting disposal/sale/transfer of asset of Rs. 3.66 Crore during the year as per annual accounts of FY 2020-21. The following Table shows the scheme-wise capitalisation incurred during the year.

Table 2-4: Scheme wise Capitalisation for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Claimed in Truing-up of FY 2020-21
1	Schemes under State Plan	531.86
2	Schemes under BRGF	85.91
3	Schemes under IRF	58.41
4	Schemes under ADB	9.61
5	Schemes under Deposit works	25.29
6	Schemes under PSDF	0.00

Sl. No.	Particulars	Claimed in Truing-up of FY 2020-21
	Total Scheme-wise Capitalisation	711.09
7	IDC	8.58
	Total Capitalisation transferred from CWIP	719.67

2.6 Depreciation

BSPTCL has computed depreciation for FY 2020-21 in accordance with Regulation 23 of the MYT Regulations, 2018. The relevant provisions are as follows:

“23 Depreciation

(i) Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year. No advance shall be granted against depreciation.

(ii) Depreciation shall not be allowed on assets funded by capital subsidies, beneficiary contributions or grants.

(iii) Depreciation shall be calculated annually on the basis of assets capitalised and put to use based on the straight-line method over the useful life of the asset and at the rate not exceeding the rate specified by the Central Electricity Regulatory Commission from time to time as provided in Appendix-III of these Regulations.

The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. The Transmission Licensee or SLDC, as the case may be, shall submit separate detail of fully depreciated asset along with year of commissioning and year of attaining ninety percent depreciation with the tariff petition.

Provided that freehold land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

Provided further that the cost of lease hold land shall be amortised evenly within the leased period.

(iv) The original capital cost of the asset shall include Additional Capitalisation on account of Foreign Exchange Rate Variation as allowed by the Government / Bihar Electricity Regulatory Commission.

(v) Depreciation shall be chargeable from the first year of operation of the asset. For part of the year, depreciation shall be charged on pro rata basis.

(vi) A provision of replacement of assets shall be made in the capital investment plan.”

As stated earlier, BSPTCL has considered the closing GFA approved by the Hon'ble Commission in Truing-up of FY 2019-20 as the opening GFA for FY 2020-21. BSPTCL has reduced the net amount of land from the opening balance approved by the Hon'ble Commission to arrive at GFA net of land.

BSPTCL has computed the depreciation to be considered in the true-up of FY 2020-21 based on weighted average depreciation rate on average depreciable GFA. BSPTCL has considered weighted average rate of 5.21% on opening GFA and 5.24% on addition during the year worked out on the basis of annual accounts of FY 2020-21. BSPTCL has separately computed depreciation on assets created out of Grants/Consumer Contribution/deposit works and adjusted the same in the gross depreciation to arrive at net depreciation to be charged in ARR of FY 2020-21. The following Table shows the net depreciation considered by BSPTCL for FY 2020-21:

Table 2-5: Depreciation considered in Truing-up of FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Opening GFA*		9,486.39
2	Less: Value of Land		1,469.76
3	Value of GFA net of Land (1-2)	7,579.23	8,016.63
4	Addition during the year (excluding land and IDC)	1,629.99	681.44
5	Add: IDC		8.58
6	Less: Adjustment for assets sold/ disposed		3.66
7	Closing GFA (3+4+5-6)	9,209.22	8,702.98
8	Average GFA (Average of 3 and 7)	8,394.23	8,359.80
9	Weighted average rate of depreciation on opening GFA	4.84%	5.21%
10	Weighted average rate of depreciation on addition during the year	3.42%	5.24%
11	Depreciation ((3*9) + ((4+5-6) *10))	422.58	455.40
12	Opening Grants**	1856.40	1,915.45
13	Assets capitalised funded through grants	65.67	0.00
14	Asset capitalised through deposit works		25.29
15	Total Grants**	1,922.07	1,940.74
16	Average Grants**	1,889.24	1,928.10
17	Weighted average rate of depreciation on opening grants	4.84%	5.21%
18	Weighted average rate of depreciation on addition during the year	3.42%	5.24%
19	Deprecation on Grants ((12*17) + (13+14) *18))	92.10	101.13
20	Net Depreciation considered in ARR (11-19)	330.48	354.27

*Closing balance of FY 2019-20 as approved in True-up

**Grants include consumer contribution and deposit works

The Hon'ble Commission is requested to approve Depreciation in Truing-up of FY 2020-21 as shown in the above Table.

2.7 Interest and Finance Charges

Regulation 24 of MYT Regulations, 2018 specifies provisions for computing the interest on loan. The relevant extracts are as follows:

"24. Interest and finance charges on loan capital

(a) The Transmission Licensee or SLDC, as the case may be, shall provide detailed loan-wise, project wise and utilization-wise details of all the loans.

(b) If the equity actually deployed is more than 30 % of the capital cost, equity in excess of 30 % shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loan:

....

(e) The repayment for the control period shall be deemed to be equal to the depreciation allowed for the year.

...

(g) The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the control period, in accordance with terms and conditions of relevant loan agreements, or bonds or nonconvertible debentures:

.....”

BSPTCL has considered normative opening balance of loan for FY 2020-21 as Rs. 3,524.26 Crore, which is equal to the closing balance of normative loan approved by the Hon’ble Commission in Truing-up of FY 2019-20. As stated earlier, asset capitalized during FY 2020-21 is Rs. 719.67 Crore as per annual accounts for FY 2020-21 after deducting disposal/sale/transfer of asset. Further, BSPTCL has reduced the amount capitalised on account of grant received from PSDF and Deposit works for the purpose of funding.

BSPTCL has considered Debt Equity ratio as 70:30 for the project capitalised under 12th Plan (12th Plan ongoing projects and 12th Plan old projects) and Debt Equity ratio of 80:20 of the projects capitalised under State Plan in 13th Plan. Further, BSPTCL has considered entire amount of capitalisation from ADB loan under Debt in line with the approach adopted by the Hon’ble Commission in the previous year Order. The scheme wise Debt Equity ratio for the projects capitalized in FY 2020-21 is shown in the Table below:

Table 2-6: Scheme wise Loan and Equity additions during FY 2020-21 (Rs. Crore)

Particulars	Capitalization	IDC	Debt: Equity Ratio	Debt	Equity
12th Plan (Old Projects)					
ADB	3.95		100:0	3.95	0.00
BRGF	66.16		70:30	46.31	19.85

Particulars	Capitalization	IDC	Debt: Equity Ratio	Debt	Equity
Deposit	25.29		NA		
IRF	58.41		70:30	40.89	17.52
State Plan	177.75		70:30	124.43	53.33
12th Plan (Ongoing)					
ADB	5.66	3.95	100:0	9.61	0.00
BRGF	19.75		70:30	13.83	5.93
State Plan	221.41		70:30	154.99	66.42
12th Plan Total	578.38	3.95		394.00	163.04
13th Plan (Other projects)					
State Plan	89.96	0.87	80:20	72.66	18.17
13th Plan (Upcoming projects)					
State Plan	42.74	3.76	80:20	37.20	9.30
13th Plan Total	132.70	4.63		109.86	27.47
Grand Total	711.09	8.58		503.86	190.51

Table 2-7: Loan and Equity additions during FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Amount (Rs. Crore)
1	Capitalization during FY 2020-21	719.67
2	Less: Grant and Deposit Works	25.29
3	Net Capitalization (A)	694.38
4	12th Plan Projects	
5	Equity Considered (30%)	163.04
6	Debt Considered (70%)	394.00
7	13th Plan Projects	
8	Equity Considered (20%)	27.47
9	Debt Considered (80%)	109.86
10	Total Equity	190.51
11	Total Debt	503.86

BSPTCL has considered repayment of loans equivalent to Depreciation worked out in Truing-up of FY 2020-21 in this Chapter, in accordance with Regulation 24 (e) of BERC MYT Regulations, 2018.

As per MYT Regulations, 2018, rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of

The Control Period. BSPTCL has outstanding loan from ADB and Canara Bank in FY 2020-21. Therefore, BSPTCL has considered weighted average interest rate of interest rate applicable on loan from ADB and Canara Bank. Interest on loan from Canara Bank is MCLR+0.10%. Since, MCLR applicable on opening loan from Canara Bank is 7.70% for FY 2020-21, BSPTCL has considered the effective rate of interest of 7.80% for loan from Canara Bank.

As per annual accounts, the interest rate of ADB loan is 13.00% in which 10.5% is principal interest and 2.5% is penal interest. BSPTCL had claimed interest rate of 13% during Truing-up of FY 2019-20; however, the Hon'ble Commission has disallowed the penal interest of 2.50% in line with its previous Tariff Order and has considered the rate of interest on ADB loan at 10.50% for computation of interest on normative loan for FY 2019-20 in Truing-up. Therefore, BSPTCL has also considered the rate of interest on ADB loan at 10.50% for computation of interest on normative loan for FY 2020-21 in line with the approach adopted by the Hon'ble Commission.

Actual loans outstanding at the beginning of FY 2020-21 and applicable interest rates are shown in the Table below:

Table 2-8: Weighted Average Interest rate for FY 2020-21

Sl. No.	Particulars	Amount Outstanding (Rs. Crore)	Applicable Interest rate
1	Loans from Financial Institutions	500.00	7.80%
2	Loans from ADB	464.03	10.50%
Weighted Average Interest Rate			9.10%

Accordingly, BSPTCL has considered weighted average interest rate of 9.10% as shown in the Table above. BSPTCL has claimed other finance charges in line with the amounts reflecting in annual accounts of FY 2020-21. The following Table shows the computation of Interest on Loan for FY 2020-21 in accordance with Regulation 24 (g) of the MYT Regulations, 2018 and approach adopted by the Hon'ble Commission in the Tariff Order of previous year.

Table 2-9: Interest on Loan computed for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Opening Loan	3,263.81	3,524.26
2	Addition during the year	1,235.13	503.86
3	Normative Repayment (Equal to Depreciation)	330.48	354.27
4	Closing Loan (1+2-3)	4,168.45	3,673.85
5	Average Loan	3,716.13	3,599.06
6	Interest Rate (%)	10.50%	9.10%
7	Interest on Loan	390.19	327.50
8	Other Finance Charges	0.01	1.23
9	Interest and Finance Charges (7+8)	390.20	328.73

The Hon'ble Commission is requested to approve Interest on Loan and Finance Charges in Truing-up of FY 2020-21 as shown in the above Table.

2.8 Operation and Maintenance Expenses

2.8.1 Normative Operation and Maintenance (O&M) Expenses

Regulation 21 of BERC MYT Regulations, 2018, specifies that the Hon'ble Commission shall stipulate a separate trajectory of norms for each of the components, viz., Employee expenses, R&M expenses and A&G expenses, which shall be defined in terms of number of personnel per Ckt. km, number of personnel per bay along with annual expenses per personnel, combination of A&G expenses per personnel, and A&G expenses per substation, and R&M expenses as percentage of Gross Fixed Assets.

Normative Employee Expenses

The Hon'ble Commission in Tariff Order dated 15th February 2019 stipulated a separate trajectory of norms for Employee Expenses namely: Norms for No. of personnel per Ckt/km and No. of personnel per substation and therefore, annual expenses per personnel. The Hon'ble Commission adopted a ratio of 45% of the total no. of the employees as a part of norms for substation and 55% personnel as a part of norms for Ckt/km for the purpose of calculation of norms.

The following Table shows the base value of norms computed by the Hon'ble Commission in Tariff Order dated 15th February 2019 for FY 2018-19:

Table 2-10: Base value norms for Employee Expenses

Sl. No.	Particulars	FY 2018-19
1	Number of personnel per Ckt/km (55%)	0.0822
2	Number of personnel per substation (45%)	6.6427
3	Annual expenses per personnel (Rs. Lakh)	7.461

Regulation 21.1 of BERC MYT Regulations, 2018 provides for escalation of base value norms for consideration of employee expenses. The relevant extracts are as follows:

“21.1 Employee Cost

Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Transmission Licensee and one-time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief, governed by the following formula:

$$EMP_n = (EMP_b * CPI \text{ inflation}) + Provision$$

Where:

EMP_n : Employee expense for the year n

EMP_b : Employee expense as per the norm

CPI inflation: is the average increase in the Consumer Price Index (CPI) for immediately preceding three years.....”

The Hon'ble Commission vide Tariff Order dated 15th February 2019 determined the norms for computation of employee expenses and accordingly approved the employee expenses for FY 2019-20 to FY 2021-22 by escalating all three base norms by average annual CPI Index for computation of employee expenses. However, in the Tariff Orders dated 20th March 2020 and 19th March 2021, the Hon'ble Commission adopted a different approach for escalating the norms for employee expenses. The Hon'ble Commission applied the same base norms as worked out in the Tariff Order dated 15th February 2019 for computation of Employee expenses for FY 2019-20 to FY 2021-22, without applying CPI Index on norms for number of personnel per Ckt/km and number of personnel per Substation. The Hon'ble Commission had stated in the Tariff Order dated 20th March 2020 that there has been an error in computation of

norms in Tariff Order dated 15th February 2019 and therefore, it has considered the base norms for computation of employee expenses in APR for FY 2019-20. The Hon'ble Commission has re-iterated the same approach while approving the True-up of FY 2019-20 in Tariff Order dated 19th March 2021. The Hon'ble Commission has considered the same norms again without any escalation on number of personnel per Ckt/km and number of personnel per Substation for computation of employee expenses in APR for FY 2020-21 and in ARR for FY 2021-22 vide Tariff Order dated 19th March 2021.

BSPTCL had raised the above issue of computation of Employee expenses in Review Petition vide Case No. 21 of 2020 filed on 6th July 2020 against the Tariff Order dated 20th March 2020. BSPTCL also filed a Review Petition vide Case No. 05 of 2021 on similar issue. The Hon'ble Commission through its Order in Case No. 21 of 2020 dated 3rd August 2021 and Order in Case No. 05 of 2021 dated 9th November 2021 dealt with the issue on computation of employee expenses and addressed the BSPTCL's concern by giving a detailed justification for not linking the inflationary indexation to number of personnel per Ckt/km and number of personnel per Substation.

The Hon'ble Commission in its Order dated 3rd August 2021 has explained the reason for not linking the two parameters as under:

" ...

3.2 If inflationary indexation is considered on these increased number of transmission line length and substations, it results in double claim of norms and accordingly the increase in the employee expenses.

..."

Thus, the Hon'ble Commission has rejected the review sought by BSPTCL. Therefore, BSPTCL has considered CPI inflation only for norms of Annual Expenses per personnel for computation of employee expenses for FY 2020-21. BSPTCL has considered base norm for Annual expenses per personnel of Rs. 7.7756 Lakh approved in True up for FY 2019-20 for computation of employee expenses for FY 2020-21.

In accordance with the MYT Regulations, 2018, BSPTCL has considered CPI inflation of average of preceding three years (i.e., FY 2017-18, FY 2018-19 and FY 2019-20) for escalating base norms of employee expenses for FY 2020-21. The following Table

shows the escalation considered on base norms for computation of employee expenses:

Table 2-11: CPI Inflation for FY 2020-21

Particulars	Actual			
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Annual Average CPI	284	300	323	339
CPI Inflation		5.45%	7.53%	5.02%
Average CPI Inflation for last three years				5.35%

BSPTCL has hence, considered inflation rate of 5.35% on base norms for Annual Expenses per personnel for computation of employee expenses for FY 2020-21.

The following table shows the employee expenses considered in Truing-up of FY 2020-21 on normative basis.

Table 2-12: Normative Employee expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Base Norm	FY 2020-21	
			Approved in TO dated 20.03.2020	Claimed in Truing Up for FY 2020-21
1	Average annual CPI index		4.22%	5.35%
2	Norms-Number of personnel per Ckt/km	0.0822	0.0822	0.0822
3	Norms-Number of personnel per substation	6.6427	6.6427	6.6427
4	Transmission line in Ckt km		16696	15,084
5	No. of substations		152	146
6	Norms-Annual expenses per personnel (Rs. lakh)	7.7756	8.1040	8.1919
7	Employee cost (Number of personnel per Ckt/km basis) $(2*4*6)/100$ (Rs. Crore)		111.22	101.57
8	Employee cost (Number of personnel per substation basis) $(3*5*6)/100$ (Rs. Crore)		81.83	79.45
9	Total Employee cost for the year (7+8) (Rs. Crore)		193.05	181.01

The Hon'ble Commission is requested to consider Normative Employee Cost in Truing-up of FY 2020-21 as shown in the above Table.

Normative Repairs and Maintenance (R&M) Expenses

Regulation 21.2 of the MYT Regulations, 2018 specifies R&M expenses as percentage of opening gross fixed assets (excluding land cost) for estimation of R&M expenses. Regulation 21 (i) specifies that the norms shall be determined based on audited accounts of last three years. The Hon'ble Commission in Tariff Order dated 15th February 2019 computed the 'K' factor (i.e., R&M norm) based on available three (3) years audited accounts from FY 2015-16 to FY 2017-18. The Hon'ble Commission considered 'K factor' of 1.36% for the Control Period from FY 2019-20 to FY 2021-22 in MYT Order.

BSPTCL has considered 'K factor' of 1.36% as approved in MYT Order dated 15th February 2019 and applied the same on the Opening GFA (net of Land) for computation of R&M expenses for FY 2020-21. The following table shows the R&M expenses considered in Truing-up of FY 2020-21 in line with the methodology specified in Regulation 21.2 of MYT Regulations, 2018:

Table 2-13: Normative R&M expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Opening GFA (net of land)	7,579.23	8016.63
2	% on GFA	1.36%	1.36%
3	R&M expenses for the year	103.08	109.03

The Hon'ble Commission is requested to consider the above-computed Normative R&M Expenses in Truing-up of FY 2020-21.

Normative Administration and General (A&G) Expenses

The Hon'ble Commission in its previous Tariff Order has computed norms for A&G expenses in terms of A&G expense per personnel and A&G expense per substation. The following Table shows the norms stipulated by the Hon'ble Commission for FY 2019-20 in Truing-up of FY 2019-20:

Table 2-14: Base value norms for A&G Expenses

Sl. No.	Particulars	FY 2019-20
1	A&G Expenses per personnel	1.0343

Sl. No.	Particulars	FY 2019-20
2	A&G Expenses per sub-station (Rs. Lakh)	12.4443

BSPTCL has considered the above norms as base values for computation of A&G expenses for FY 2020-21. Regulation 21.3 of MYT Regulations, 2018 provides for escalation of base value norms for consideration of A&G expenses. The relevant extracts are as follows:

“21.3 Administrative and General (A&G) Expense

A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and Consumer Price Index (CPI) in the ratio 60:40 and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Transmission Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

$$A\&G_n = (A\&G_b * WPI \text{ inflation}) + Provision$$

Where:

A&G_n: A&G expense for the year n

A&G_b: A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years.....”

BSPTCL has considered average escalation of CPI and WPI indices with weightage of 40:60 respectively for immediately preceding three years (i.e., FY 2017-18, FY 2018-19 and FY 2019-20) on base norm of A&G expenses, as shown in the Table below:

Table 2-15: CPI: WPI Inflation considered for FY 2020-21

Particulars	Actual			
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Annual Average CPI Index	276	284	300	323
CPI Inflation		3.08%	5.45%	7.53%
Annual Average WPI Index	112	115	120	122
WPI Inflation		2.92%	4.28%	1.68%
Average WPI: CPI (60:40) Inflation for preceding three years				3.92%

The following table shows the A&G Expenses considered in Truing-up of FY 2020-21 in line with the methodology specified in Regulation 21.3 of MYT Regulations, 2018:

Table 2-16: Normative A&G Expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Base Norms	FY 2020-21	
			Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Average annual CPI&WPI index		3.47%	3.92%
2	Norms-A&G Expenses per personnel	1.0343	1.0702	1.0748
3	Norms-A&G Expenses per substation (Rs. Lakh)	12.4443	12.8757	12.9317
4	No. of employees		2342	2334
5	No. of substations		152	146
6	A&G Expenses (No. of employees basis) (2*4) (Rs. Crore)		25.06	25.09
7	A&G Expenses (No of substations basis) (3*5) (Rs. Crore)		19.57	18.88
8	Total A&G Expenses for the year (Rs. Crore) (6+7)		44.64	43.97

The Hon'ble Commission is requested to consider the above-computed Normative A&G Expenses in Truing-up of FY 2020-21.

Normative O&M Expenses

The following Table shows the normative O&M expenses as computed by BSPTCL in the above Tables:

Table 2-17: Normative O&M Expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Employee expenses	181.01
2	R&M expenses	109.03
3	A&G expenses	43.97
	Total O&M Expenses	334.00

2.8.2 Actual Operation and Maintenance (O&M) Expenses

Actual Employee Expenses

It is submitted that that employee expenses primarily include costs towards salaries, dearness allowances, bonus, staff welfare and medical benefits, leave travel and

earned leave encashment, and the terminal benefits in the form of pension, gratuity, etc.

The following Table shows the actual employee expenses as reflecting in annual accounts of FY 2020-21. BSPTCL has adjusted the employee cost of SLDC from the total employee cost as reflecting in annual accounts of FY 2020-21. The employee cost of SLDC has been claimed separately in Tariff Petition of SLDC.

Table 2-18: Actual Employee expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Salaries	137.07
2	Overtime	6.80
3	Dearness Allowance	23.06
4	Other Allowance	21.37
5	Medical Expense Re-imburement	0.55
6	Staff Welfare Expenses	0.38
	Total Other Employee Cost	189.24
7	Add: Terminal Benefits	40.79
8	Less: Employee cost of SLDC	6.21
	Total Actual Employee Cost of BSPTCL	223.82

Actual R&M Expenses

BSPTCL has initiated a major drive for maintenance and up-keep of its existing transmission assets and also incurred substantial capital expenditure in improvement of existing intra-State transmission infrastructure to improve transmission system reliability matching with short/long-term demand of the State.

The following Table shows the actual R&M expenses for FY 2020-21 as reflecting in annual accounts of FY 2020-21.

Table 2-19: Actual R&M expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Plant and Machinery	32.60
2	Building	2.83
3	Civil Works	5.04
4	Hydraulic Works	-
5	Line Cable Net Works	8.69
6	Vehicles	0.00
7	Furniture and Fixture	0.01
8	Office Equipment	0.37
9	Total R&M Expenses	49.53
10	Less: R&M Cost of SLDC	0.01
11	Total R&M Expenses of BSPTCL	49.51

Actual A&G Expenses

A&G Expenses mainly comprise rent charges, telephone and other communication expenses, professional charges, conveyance and travelling allowances and Holding Company expenses and other debits.

The following Table shows the actual A&G expenses for FY 2020-21. BSPTCL has adjusted the A&G expenses of SLDC from the total A&G expenses as reflecting in annual accounts of FY 2020-21. A&G expenses of SLDC has been claimed separately in Tariff Petition of SLDC.

Table 2-20: Actual A&G expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Rent, rates & taxes	1.01
2	Insurance	6.97
3	Telephone, postage & Telegrams	0.57
4	Legal Charges	0.11
5	Audit Charges	0.05
6	Consultancy fees	1.00
7	Director's Sitting Fee	0.01
8	Interest on Statutory Dues	0.01
9	Other professional charges	0.001
10	Conveyance & travel expenses	11.45

Sl. No.	Particulars	FY 2020-21
11	Fees & Subscription	1.60
12	Books & Periodicals	0.01
13	Printing & Stationary	0.36
14	Advertisement	0.91
15	Expenditure on CSR	8.05
16	Electricity & Water charges	15.47
17	Entertainment Charges	0.15
18	Commission for sale of scrap	0.26
19	Home Guard/ Security Guard	12.54
20	Miscellaneous Expenses	0.69
21	Contribution to CM Relief Fund-Company	5.00
22	Compensation/Injuries/Death/Damages	-
23	Loss Due to Cyclon/Flood/Theft	1.06
24	Less SLDC Expenses	0.26
	Total actual A&G expenses	67.02

Actual O&M Expenses

The following Table shows the actual O&M expenses of BSPTCL as reflecting in audited accounts of FY 2020-21 after adjustment of SLDC expenses.

Table 2-21: Actual O&M expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Employee expenses	223.82
2	R&M expenses	49.51
3	A&G expenses	67.02
	Total O&M Expenses	340.35

The Hon'ble Commission is requested to consider Actual O&M Expenses in Truing-up of FY 2020-21 as shown in the above Table.

Holding Company Expenses

BSPTCL submits that expenses of BSP(H)CL, which is the Holding Company of all the State Utilities and Generating Company, is recovered from its subsidiary Companies. The cost sharing between the subsidiary Companies including BSPTCL is as per the amount of equity shares issued by the Holding Company to the Subsidiary Company.

In light of the above, all the Utilities have to bear the cost of the Holding Company. BSPTCL is claiming Holding Company expenses separately in line with the methodology adopted in previous Tariff Orders. BSPTCL has claimed the Holding Company Expenses in line with the amount reflecting in annual accounts of FY 2020-21, as shown in the Table below:

Table 2-22: Holding Company Expenses for FY 2020-21 (Rs Crore)

Sl. No.	Particulars	Approved in TO dated 20.03.2020	FY 2020-21 (Claimed in True-Up)
1	Holding Company Expenses for FY 2020-21	12.96	11.44

The Hon'ble Commission is requested to approve Holding Company Expenses in Truing-up of FY 2020-21 as shown in the above Table.

2.9 Return on Equity

BSPTCL has considered closing equity of Rs. 375.41 Crore as on 31st March 2015 (approved in the True up for FY 2014-15) as opening equity for FY 2015-16 in respect of assets capitalised before 31st March 2015.

Further, in respect of projects commissioned with effect from 1st April 2015, the opening equity is considered as Rs. 1,409.53 Crore same as closing equity approved in true up for FY 2019-20 vide Tariff Order dated 19th March 2021. The addition to equity during FY 2020-21 is considered at Rs. 190.51 Crore as worked out in Table 2-7 of this Petition.

Regulation 22 read with Regulation 27 has considered rate of return on equity on pre-tax basis. The relevant extracts are as follows:

"22 (b) The return on the equity invested shall be allowed from the date of start of commercial operation and after put to use:

(c) Return on equity shall be computed at the rate of 15.5% for the project which is commissioned w.e.f. 01.04.2015 and further incentive equivalent to 0.5% will be allowed in the form of RoE, if the project is completed within schedule as per the Annexure A or original schedule period as the case may be. However, Return on Equity for the project commissioned prior to 01.04.2015 shall be allowed at the rate of 14%....

....27 (2) Rate of return on equity shall be rounded off to two decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of licensee/SLDC paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess..."

In the Petition for approval of Truing-up of FY 2019-20, APR for FY 2020-21 and revised ARR for FY 2021-22, BSPTCL had claimed lower Rate of Return as 10% for FY 2019-20 to FY 2021-22 against the approved rate of 15.5% to pass on some benefit to the consumers of the State during the outbreak of COVID-19 Pandemic. BSPTCL had also stated that claiming lower RoE at 10% for the financial year under consideration shall not imply that BSPTCL will continue to claim RoE at 10% in perpetuity. Accordingly, the Hon'ble Commission had provisionally considered the rate of RoE as 10% for FY 2020-21 vide Order dated 19th March 2021.

The Hon'ble Commission had shown its concerns regarding lower claim of RoE by BSPTCL and also viewed that BSPTCL shall be at liberty to claim RoE for the ensuing years (i.e., from FY 2020-21 onwards) either at the reduced rate of 10% or 15.5% as per the BERC (Multi Year Transmission Tariff and SLDC charges) Regulations, 2018. The relevant extracts of the Order dated 19th March 2021 have been reproduced as below:

"5.7.10 The Commission notes that BSPTCL has claimed lower Rate of Return as 10% for FY 2020-21 on account of outbreak of COVID-19 Pandemic wherein BSPTCL being the State Transmission Utility, has kept a considerate view regarding the consumers of the State of Bihar. BSPTCL wishes to pass on some benefit to the consumers of the State during this difficult period. BSPTCL has hence, claimed lower RoE, at the rate of 10% in the Truing-up of FY 2019-20, APR for FY 2020-21 and revised ARR for FY 2021-22 against the approved. The Commission also noted that BSPTCL has stated that claiming lower RoE at 10% for the financial year under consideration shall not imply that BSPTCL will continue to claim RoE at 10% in perpetuity.

5.7.11 The Commission in Truing-up section has already shown its concerns regarding lower claim of RoE by BSPTCL. Since, the APR of FY 2020-21 needs to be undertaken in the current proceeding, the Commission is provisionally approving a lower RoE of 10% for FY 2020-21. However, the Commission suggests, that in the subsequent Tariff proceeding BSPTCL may indicate the required rate of RoE for FY 2020-21 and FY 2021-22 and also indicate how any shortfall in RoE will be compensated, either by inhouse economy, State Government intervention, or other Non-Tariff Income, so as to ensure that its financial health is maintained. However, at the time of filing the next Tariff Petition, BSPTCL shall be at liberty to claim RoE for the ensuring years (i.e., from FY 2020-21 onwards) either at the reduced rate of 10% or 15.5% as per the BERC (Multi Year Transmission Tariff and SLDC charges) Regulations, 2018."

Since BSPTCL had already proposed lower Rate of Return of 10% in its earlier Petition for FY 2019-20 to FY 2021-22 against the approved rate of 15.5%, BSPTCL has considered rate of RoE at 10% for APR of FY 2020-21 for computation of Return on Equity. BSPTCL has considered the MAT rate of 17.47% as approved by the Hon'ble Commission for FY 2020-21 in Tariff Order dated 19th March 2021 and in line with the actual MAT rate applicable for FY 2020-21 as per annual accounts.

The following table shows the RoE computed by BSPTCL for FY 2020-21:

Table 2-23: Return on Equity for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Equity as on 31.03.2015	375.41	375.41
2	Rate of Return on Equity	14.00%	10.00%
3	Tax/MAT rate %	17.47%	17.47%
4	Pre-tax Rate of return on equity (2/ (1-3))	16.96%	12.12%
5	Return on Equity (1*4)	63.68	45.49
6	Opening equity	1291.41	1,409.53
7	Addition during the year	342.48	190.51
8	Closing Equity (6+7)	1633.89	1,600.04
9	Average equity (6+8)/2	1462.65	1,504.79
10	Rate of Return on Equity	15.50%	10.00%
11	Tax/MAT rate %	17.47%	17.47%

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
12	Pre-tax Rate of return on equity (10/ (1-11))	18.78%	12.12%
13	Return on Equity (9*12)	274.70	182.34
14	Total Return on Equity (5+13)	338.38	227.83

The Hon'ble Commission is requested to approve Return on Equity in Truing-up of FY 2020-21 as shown in the above Table.

2.10 Interest on Working Capital

Regulation 26 of the MYT Regulations, 2018 specifies the method for computation of Interest on Working Capital for the Control Period. The relevant extracts are as follows:

"26 Interest on working Capital

The Transmission Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:

(i) Receivables equivalent to two (2) month of transmission charges calculated on target availability level.

(ii) O&M Expenses of one (01) month.

(iii) Maintenance spares @ 15% of O&M expenses for one month.

Less:

(iv) Depreciation return on equity and contribution to contingency reserves equivalent to two months.

(v) Amount of security deposits from Transmission System users, if any, held during the year except the security deposits held in the form of Bank Guarantee from Transmission System Users.

b) Interest on working capital shall be on normative basis and rate of interest shall be equal to the State Bank one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as of the date on which petition for determination of tariff is filed plus 150 basis points. The rate of interest for the purpose of Truing-up shall be the weighted average MCLR of the concern Financial Year plus 150 basis points.

(c) Interest shall be allowed on the amount held as security deposit from Transmission System Users at the Bank Rate as at the date on which the application for determination

of tariff is filed. The interest allowed shall be subject to true up at weighted average Bank Rate of the concern Financial Year.

(d) If the State Government is providing resource gap grant and/or subsidy, the working capital shall be reduced by two months equivalent of that amount."

In accordance with the above provisions, BSPTCL has computed the interest on working capital for FY 2020-21. Regulation 26 (b) specifies that for the purpose of True-up, the rate of interest shall be State Bank of India (SBI) weighted average one-year MCLR for concerned financial year plus 150 basis points.

BSPTCL has computed the weighted average of SBI 1-year MCLR for FY 2020-21 as available on SBI website (<https://www.sbi.co.in/web/interest-rates/interest-rates/mclr-historical-data?inheritRedirect=true>). The following Table shows the weighted average interest rate for FY 2020-21:

Table 2-24: Average One-year MCLR rate of Interest

Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20
7.40%	7.25%	7.00%	7.00%	7.00%	7.00%
Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Weighted Average One-year MCLR Interest rate					7.05%

BSPTCL has added 150 basis points as provided in the Regulations to average interest rate computed above. BSPTCL has therefore considered interest rate of 8.55% (7.05%+1.5%) for computation of interest on working capital for FY 2020-21. The maintenance spares are considered at 15% of 1-month O&M expenses, in accordance with the Regulations.

BSPTCL has computed the working capital and interest on working capital for FY 2020-21, as given in the Table below:

Table 2-25: Interest on Working Capital for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in TO dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Receivables equivalent to two (2) months of Transmission Charges	215.36	201.52
2	O&M Expenses of one month	29.48	28.79
3	Maintenance spares @15% of O&M expenses	4.42	4.32
4	Less: Depreciation, RoE, and Contribution to Contingency Reserves for 2 months	111.48	97.02
5	Total Working Capital	137.78	137.61
6	Rate of Interest on working Capital (%)	9.50%	8.55%
7	Interest on Working Capital	13.09	11.77

The Hon'ble Commission is requested to approve Interest on Working Capital in Truing-up of FY 2020-21 as shown in the above Table.

2.11 Incentive for Transmission Availability

BSPTCL has claimed incentive on Transmission Availability Factor (TAF) for FY 2020-21 as per Regulation 16 of the MYT Regulations, 2018.

The incentive computation is as per the Formula prescribed in Regulation 33.2 of MYT Regulations, 2018 for FY 2020-21. The following table shows the month-wise Transmission availability achieved by BSPTCL during FY 2020-21:

Table 2-26: Month-wise Transmission Availability

April-20	May-20	June-20	July-20	Aug-20	Sep-20
99.68%	99.33%	99.44%	99.53%	99.77%	99.66%
Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
99.83%	99.78%	99.52%	99.52%	99.72%	99.60%

Thus, the actual TAF achieved by BSPTCL in FY 2020-21 works out to 99.62%. The SLDC Certificate for actual TAF achieved by BSPTCL in FY 2020-21 is annexed as **Annexure IV**.

For computation of Incentive on account of achieving higher than target TAF in FY 2020-21, BSPTCL has considered target availability of 99% as specified in Regulation 16.1 of MYT Regulations, 2018 as shown in Table below:

Table 2-27: Incentive Computation on Transmission Availability (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
		Claimed in True-up
1	Transmission Availability for FY 2020-21	99.62%
2	Target Availability	99.00%
3	Additional Achievement	0.62%
4	Annual Transmission Charges	1,209.13
5	Incentive for Target Availability	7.44

The Hon'ble Commission is requested to approve Incentive on Target availability in Truing-up of FY 2020-21 as shown in the above Table.

2.12 Incentive for Transmission Losses

As stated earlier, the Hon'ble Commission vide Order on Review Petition issued on 9th November 2021 accepted the submission of BSPTCL and retained the Transmission loss trajectory of 3.92% for FY 2020-21 and FY 2021-22, which was approved in the MYT Order dated 15th February 2019.

BSPTCL submits that the actual transmission loss for FY 2020-21 is coming out to 2.92%. Accordingly, BSPTCL has claimed incentive on Transmission Losses of FY 2020-21 as per Regulations 38 of BERC MYT Regulations, 2018. The relevant clause is as follows:

"38.1 The Transmission Licensee shall be entitled to incentive/disincentive on account of deviation from target availability as well as transmission Loss target set by commission.

However, the incentive/disincentive on account of deviation from transmission loss target shall be +/- 0.01% of ARR for deviation of 0.01% of transmission loss limited to +/- 2% of the ARR.

The transmission charges referred to in Regulation 33 of these Regulations are inclusive of such incentives and disincentives on account of availability of system...."

In line with the approach specified in the above Regulations, BSPTCL has computed the Incentive on Transmission Losses for FY 2020-21, as shown in the Table below:

Table 2-28: Incentive Computation on Transmission Losses

Sl. No.	Particulars	FY 2020-21
		Claimed in True-up
1	Approved Transmission Loss for FY 2020-21	3.92%
2	Actual Transmission Loss of FY 2020-21	2.92%
3	Incentive on Transmission Loss (%)	1.00%
4	Total ARR Claimed for FY 2020-21	1,209.13
5	Incentive for Transmission Loss (Rs. Crore)	12.09

2.13 Non-Tariff Income

Non-Tariff Income as per the annual accounts for FY 2020-21 is Rs. 131.94 Crore which includes Deferred Income of Rs. 72.26 Crore. The Hon'ble Commission during the True up for FY 2018-19 vide Order dated 20th March 2020 had excluded the Deferred Income from the total Non-Tariff Income of FY 2018-19. In line with the approach, BSPTCL has considered the Non-Tariff Income of Rs. 59.68 Crore for FY 2020-21 after excluding Deferred Income of Rs. 72.26 Crore. The following Table shows the break-up of Non-Tariff Income for FY 2020-21. BSPTCL submits that the Other Transmission/Open Access Charges coming under Non-Tariff Income includes Open Access Charges.

Table 2-29: Non-Tariff Income for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in Tariff Order dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Income from sale of Scrap		6.93
2	Lease Rental Income		0.29
3	Interest Income		35.44
4	Other Transmission/Open Access Charges		0.74
6	Income from Tax Refund		7.71
7	Supervision Charges		5.53
8	Interest on Loan and Advances to Staff		0.00

Sl. No.	Particulars	FY 2020-21	
		Approved in Tariff Order dated 20.03.2020	Claimed in Truing-up of FY 2020-21
9	STU Charges		2.08
10	Miscellaneous Receipts		0.79
11	Application fee Received		0.17
	Total Non-Tariff Income	133.70	59.68

Note: Excluding Deferred Income of Rs. 72.26 Crore

The Hon'ble Commission is requested to approve Non-Tariff Income in Truing-up of FY 2020-21 as shown in the above Table.

2.14 Sharing of Gains and Losses

Regulation 10 of BERC MYT Regulations, 2018 specifies the mechanism for sharing of gains and losses on account of controllable factors. The relevant Regulations are as follows:

"10.1 The approved aggregate gain or loss to the Licensee or SLDC, as the case may be, on account of controllable factors shall be dealt with separately for aggregate gain and aggregate loss in the following manner:

(a) Aggregate gain: (i) Two-third of the amount of such gain shall be a pass through as an adjustment in the tariff of the Licensee or SLDC, as the case may be, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations;

(ii) The balance one-third of the amount of such gain shall be on account of Licensee or SLDC, as the case may be, and such amount shall be utilized at the discretion of Licensee or SLDC, as the case may be.

(b) Aggregate Loss: (i) One-third of the amount of such loss shall normally be a pass through as an adjustment in the tariff of the Licensee or SLDC, as the case may be, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations, provided the Commission is satisfied that such loss is not on account of deliberate action of the Licensee or SLDC, as the case may be;

(ii) The balance two-third of the amount of such loss shall be on account of Licensee or SLDC and shall be absorbed by the Licensee or SLDC, as the case may be."

In accordance with the above Regulations, BSPTCL has claimed sharing of gains and losses on account of O&M expenses, Interest on Working Capital, Incentive on Transmission Loss and Transmission Availability Factor in True-up of FY 2020-21 as discussed below:

Sharing of gains/(losses) on account of variation in O&M expenses

BSPTCL has claimed the sharing of gains on O&M expenses with respect to the difference between the actual and normative O&M expenses as shown in the Table below:

Table 2-30: Sharing of Losses / (Gains) on O&M expenses for FY 2020-21 (Rs. Crore)

SI. No.	Particulars	Basis	Claimed in True up
1	Normative expenses	A	334.00
2	Actual expenses	B	340.35
3	Gains/(losses)	$C=A-B$	(6.35)
4	Losses to be passed on as adjustment in Tariff	$D=1/3*C$	(2.12)
5	Net sharing Gains/(losses) on O&M Expenses	$E=D$	(2.12)

Sharing of gains/(losses) on account of variation in Working Capital Requirement

BSPTCL submits that there is no actual working capital for FY 2020-21. Therefore, the actual working capital has been considered as Nil and the sharing of gains/ (loss) has been worked out accordingly. The normative Interest on working capital as claimed in Truing-up of FY 2020-21 in this Petition stands at Rs. 11.77 Crore. Considering the above, BSPTCL has claimed sharing of gains and losses on account of Interest on Working Capital for FY 2020-21 as shown in the Table below:

Table 2-31: Sharing of Losses / (Gains) on Interest on Working capital for FY 2020-21 (Rs. Crore)

SI. No.	Particulars	Basis	Claimed in True up
1	Normative Interest on Working Capital	A	11.77
2	Actual Interest on Working Capital	B	0.00
3	Interest on Working Capital gains/ (losses)	$C=A-B$	11.77
4	1/3rd of gains to be retained by the Licensee	$D=1/3*C$	3.92
5	2/3rd of gain to be passed through as an adjustment in Tariff	$E=2/3*C$	7.85

Sharing of gains/(losses) on account of Incentives on Transmission losses

BSPTCL has computed the incentives on Transmission loss of Rs. 13.28 Crore in this Petition for Truing-up of FY 2020-21. Accordingly, BSPTCL has computed the sharing of gains/(losses) towards incentives on Transmission losses as shown in the Table below:

Table 2-32: Sharing of Losses / (Gains) on Interest on Incentives on Transmission losses for FY 2020-21 (Rs. Crore)

SI. No.	Particulars	Basis	Claimed in True up
1	Incentives on reduction in Transmission losses	A	12.09
2	1/3rd of gains to be on account of Licensee	$B=1/3*A$	4.03
3	2/3rd of gains to be passed-on as adjustment through Tariff	$C=2/3*A$	8.06

Sharing of gains/(losses) on account of Incentives on Transmission Availability Factor

BSPTCL has computed the incentives on Transmission Availability as Rs. 8.18 Crore in this Petition for Truing-up of FY 2020-21. Accordingly, BSPTCL has computed the sharing of gains/(losses) towards incentives on Transmission Availability as shown in the Table below:

Table 2-33: Sharing of Losses / (Gains) on Interest on Incentives on Transmission Availability Factor for FY 2020-21 (Rs. Crore)

SI. No.	Particulars	Basis	Claimed in True up
1	Incentives on Transmission Availability Factor	A	7.44
2	1/3rd of gains to be on account of Licensee	$B=1/3*A$	2.48
3	2/3rd of gains to be passed-on as adjustment through Tariff	$C=2/3*A$	4.96

BSPTCL requests the Hon'ble Commission to consider the gain on account of O&M expenses, Interest on Working Capital, Incentive on Transmission Loss and Transmission Availability Factor in True-up of FY 2020-21 as shown in the above Tables.

2.15 Revenue from Transmission Charges

The following table shows the revenue earned by BSPTCL from Transmission Charges during FY 2020-21:

Table 2-34: Revenue from Transmission Charges for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in Tariff Order dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Revenue from NBPDCCL		390.44
2	Revenue from SBPDCL		458.34
3	Revenue from Railways		22.13
4	Total Revenue from Transmission Charges	1,292.18	870.90
5	Add: Surplus of FY 2018-19	(421.28)	-
6	Net Revenue to be recovered	870.90	870.90

As seen from the table above, BSPTCL has booked revenue of Rs. 870.90 Crore, which is in line with the revenue approved by the Hon'ble Commission in the Tariff Order dated 20th March 2020.

The Hon'ble Commission is requested to approve Revenue from Transmission charges in Truing-up of FY 2020-21 as shown in the above Table.

2.16 Revenue Gap/(Surplus) for FY 2020-21

BSPTCL has considered the components of ARR as discussed in this Chapter and has adjusted the revenue as reflecting in annual accounts of FY 2020-21 to arrive at Revenue Gap/(Surplus) for FY 2020-21. The following Table shows the Revenue Gap/(Surplus) for FY 2020-21:

Table 2-35: Revenue Gap/(Surplus) for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in Tariff Order dated 20.03.2020	Claimed in Truing-up of FY 2020-21
1	Employee Expenses	193.05	181.01
2	R&M Expenses	103.08	109.03
3	A&G Expenses	44.64	43.97
4	Share of Holding Company Expenses	12.96	11.44
5	Total O&M Expenses	353.73	345.44
6	Return on Equity	338.38	227.83
7	Depreciation	330.48	354.27
8	Interest on Loan Capital and Finance Charges	390.20	328.73
10	Interest on Working Capital	13.09	11.77
12	Incentive for Transmission Availability		7.44
13	Incentive for Transmission Losses		12.09
14	Add: Sharing of Losses/(Gains) on O&M expenses		2.12
15	Add: Sharing of Losses/(Gains) on Interest on Working Capital		(7.85)
16	Add: Sharing of Losses/(Gains) on Incentives on reduction in Transmission losses		(8.06)
17	Add: Sharing of Losses/(Gains) on Incentives on Transmission Availability Factor		(4.96)
18	Total Expenditure	1,425.88	1,268.81
19	Less: Non-Tariff Income	133.70	59.68
20	Net ARR for Transmission	1,292.20	1,209.13
21	Add: Revenue Gap/(Surplus) of Previous year	(421.28)	(421.28)
22	Revenue earned from Transmission Charges	870.90	870.90
23	Revenue Gap/(Surplus)	-	(83.05)

The Hon'ble Commission is requested to approve ARR and Revenue Surplus as shown above in Truing-up of FY 2020-21. The Revenue Surplus is to be passed on in the ARR and Tariff of FY 2022-23 along with holding cost.

3 Annual Performance Review (APR) for FY 2021-22

3.1 Background

BSPTCL has filed Annual Performance Review (APR) for FY 2021-22 as compared to the ARR approved for FY 2021-22 vide Tariff Order dated 19th March 2021. The APR is filed in accordance with relevant provisions of MYT Regulations, 2018.

Regulation 7 and Regulation 13 of BERC MYT Regulations, 2018 provides for APR of the current year. The relevant extracts are as follows:

“7 Annual Review of Performance and True-up

7.1 Where the Aggregate Revenue Requirement and expected revenue from tariff and charges of a Transmission Licensee or SLDC, as the case may be, are covered under a Multi-Year Tariff framework, such Transmission Licensee or SLDC shall be subject to an annual review of performance and True-up during the Control Period in accordance with these Regulations....

13 True-Up and Annual Performance Review

..... (d) The Commission shall undertake review of estimates of expenses for the current year as a part of the tariff order on the basis of the actual expenses incurred during the period April – September of the current year and corresponding figures in the order for Annual Revenue Requirement (ARR) of the current year approved by the Commission.

(e) Estimates of expenses for the ensuing year shall be on the basis of corresponding figures in the order for True-up of expenses of the previous year and Annual Performance Review or Tariff Order of the current year, as the Commission may consider reasonable and deem fit.....”

In line with the above provisions of MYT Regulations, 2018, BSPTCL has estimated the APR for FY 2021-22, as discussed in the following sections.

3.2 Transmission Losses

BSPTCL submits that it has considered the transmission loss of 3.92% in the APR of FY 2021-22, which is in line with the transmission loss approved vide Tariff Order dated 15th February 2019. The actual month-wise transmission loss for FY 2021-22 till

September 2021 is 2.70% which is well within the approved loss of 3.92%. The following table shows the month-wise Transmission Loss for first half of FY 2021-22:

Table 3-1: Actual Transmission Loss for H1 of FY 2021-22

Particulars	FY 2021-22 (Actual)
April 2021	2.91%
May 2021	2.79%
June 2021	2.59%
July 2021	2.67%
August 2021	2.56%
September 2021	2.68%

As seen from the above Table, the Transmission loss for the months of April to September 2021 ranges from 2.56% to 2.91%. The transmission loss varies every month and therefore, BSPTCL requests the Hon'ble Commission to kindly approve transmission loss of 3.92% in line with the transmission loss approved in MYT Order dated 15th February 2019. BSPTCL shall claim the actual Transmission Losses for FY 2021-22 at the time of Truing-up.

The month-wise Transmission Losses from April 2021 to September 2021 is attached as **Annexure V**.

3.3 Capital Expenditure and Capitalization

BSPTCL has projected capital expenditure and capitalization for FY 2021-22 based on the current status of all ongoing and upcoming projects. As stated earlier, most of the works on ongoing projects were affected due to lockdown imposed in the Country and subsequent restrictions imposed in the State, which affected project completion. Keeping the above factors into consideration, BSPTCL has estimated capital expenditure conservatively for FY 2021-22.

BSPTCL submits that majority of the projects that are falling under 12th Plan are completed and capitalized in FY 2020-21. Some projects from 12th Plan are spilled over to FY 2021-22. In addition to spill over projects, BSPTCL has also estimated capitalisation from works, which are ongoing under 13th Plan and expected to get

completed in this year. Accordingly, capitalization is projected against these works in FY 2021-22.

BSPTCL has considered opening CWIP of Rs. 2,888.59 Crore for FY 2021-22 in line with the closing CWIP of FY 2020-21 as considered in True-up of FY 2020-21.

BSPTCL has estimated capital expenditure of Rs. 919.14 Crore and capitalization of Rs. 1,363.50 Crore for FY 2021-22. The estimated capitalization includes IDC of Rs. 52.04 Crore based on the assets that are expected to get capitalized in FY 2021-22, which are either funded through ADB loan or under State Plan. BSPTCL has considered conservative estimates of project completion depending on present status of projects and likelihood of projects getting completed and put to use before 31st March, 2022. Accordingly, the closing balance of CWIP for FY 2021-22 is worked out as Rs. 2,444.23 Crore.

The following Table shows the approved and estimated capital expenditure and capitalization considered in APR of FY 2021-22:

Table 3-2: Capital Expenditure and Capitalization for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Opening CWIP (A)	2,224.16	2,888.59
2	Investment during the Year (B)	505.75	919.14
3	Less: Capitalization (excluding IDC) (C)	1,572.05	1,311.46
4	Less: IDC (C)	127.37	52.04
5	Closing CWIP (A+B-C-D)	1,030.49	2,444.23

The detailed list of projects, which are expected to get capitalized by March 2022 is attached as **Annexure III**.

The Hon'ble Commission is requested to approve Capitalization in the APR of FY 2021-22 as shown in the above Table.

3.4 Gross Fixed Asset

BSPTCL has considered the opening GFA of Rs. 10,206.06 Crore for FY 2021-22, which is equal to the closing GFA as considered in True-up of FY 2020-21.

The total capitalisation as discussed in previous section of this Chapter is considered as net addition to GFA for FY 2021-22. The addition to GFA of Rs. 1,363.50 Crore is considered, which also includes estimated IDC. Accordingly, BSPTCL has arrived at closing GFA of FY 2021-22. The following Table shows the schedule of Gross Fixed Asset claimed in APR of FY 2021-22:

Table 3-3: Gross Fixed Asset claimed in APR of FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Opening GFA	10,921.18	10,206.06
2	Add: Additions to GFA (excluding IDC)	1,572.05	1,311.46
3	Add: IDC	127.37	52.04
4	Add: Land Cost	-	-
5	Closing GFA	12,620.60	11,569.55

The Hon'ble Commission is requested to approve asset addition, Interest during Construction, and closing GFA as shown in the above Table.

3.5 Depreciation

BSPTCL has computed depreciation for FY 2020-21 in accordance with Regulation 23 of the MYT Regulations, 2018. The relevant provisions are as follows:

"23 Depreciation

(i) Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year. No advance shall be granted against depreciation.

(ii) Depreciation shall not be allowed on assets funded by capital subsidies, beneficiary contributions or grants.

(iii) Depreciation shall be calculated annually on the basis of assets capitalised and put to use based on the straight-line method over the useful life of the asset and at the rate

not exceeding the rate specified by the Central Electricity Regulatory Commission from time to time as provided in Appendix-III of these Regulations.

The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. The Transmission Licensee or SLDC, as the case may be, shall submit separate detail of fully depreciated asset along with year of commissioning and year of attaining ninety percent depreciation with the tariff petition.

Provided that freehold land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

Provided further that the cost of lease hold land shall be amortised evenly within the leased period.

(iv) The original capital cost of the asset shall include Additional Capitalisation on account of Foreign Exchange Rate Variation as allowed by the Government / Bihar Electricity Regulatory Commission.

(v) Depreciation shall be chargeable from the first year of operation of the asset. For part of the year, depreciation shall be charged on pro rata basis.

(vi) A provision of replacement of assets shall be made in the capital investment plan."

BSPTCL has considered opening depreciable GFA of Rs. 8,702.98 Crore in line with the closing depreciable GFA considered in True-up of FY 2020-21, which is net of land. BSPTCL has considered additions to GFA as discussed in the above section.

BSPTCL has computed the depreciation to be considered in APR of FY 2021-22 based on weighted average depreciation rate on average depreciable GFA. BSPTCL has considered weighted average rate of 5.21% on opening GFA and 5.24% on addition to GFA in line with the rates considered in Truing-up of FY 2020-21. BSPTCL has separately computed depreciation on asset created out of grants and adjusted the same in the gross computed depreciation, to arrive at net depreciation to be charged in APR of FY 2021-22. The following Table shows the net depreciation considered by BSPTCL for FY 2021-22:

Table 3-4: Depreciation considered in APR of FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	Approved in Tariff Order dated 19.03.2021	FY 2021-22 (APR)
1	Depreciable GFA net of Land	9,506.17	8,702.98

Sl. No.	Particulars	Approved in Tariff Order dated 19.03.2021	FY 2021-22 (APR)
2	Addition during the year (excluding IDC)	1,572.05	1,311.46
3	Add: IDC	127.37	52.04
4	Closing GFA	11,205.59	10,066.48
5	Average GFA (Average of 1 and 4)	10,355.88	9,384.73
6	Weighted average rate of depreciation on opening depreciable GFA	5.19%	5.21%
7	Weighted average rate of depreciation on addition to depreciable GFA	4.15%	5.24%
8	Depreciation	563.90	524.87
9	Opening Grants*	2,063.09	1,940.74
10	Grants during the year including deposit works*	-	195.31
11	Total Grants*	2,063.09	2,136.05
12	Average Grants	2,063.09	2,038.40
13	Weighted average rate of depreciation on opening Grants	5.19%	5.21%
14	Weighted average rate of depreciation on additional Grants	4.15%	5.24%
15	Depreciation on Asset created out of Grants	107.07	111.35
16	Net Depreciation considered in ARR (8-15)	456.82	413.52

*Grants includes Deposit Works

The Hon'ble Commission is requested to approve Depreciation in APR of FY 2021-22 as shown in the above Table.

3.6 Interest and Finance Charges

BSPTCL has considered normative opening balance of loan for FY 2021-22 equal to the closing balance of normative loan considered in Truing-up of FY 2020-21. Net Asset capitalized during FY 2021-22 is Rs. 1,168.19 Crore after excluding amount of Rs. 195.31 Crore for Grant (Rs. 68.87 Crore) and Deposit work (Rs. 126.44 Crore).

Regulation 24 (j) specifies that *“addition to loan during the year for interest purpose will be restricted to the quantum of assets capitalised and put to use”*.

Regulation 24 (b) specifies that

“(b) If the equity actually deployed is more than 30 % of the capital cost, equity in excess of 30 % shall be treated as normative loan: Provided that where equity actually

deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loan....”

BSPTCL would like to submit that all of the projects of 12th Plan are expected to be commissioned in FY 2021-22. The debt equity ratio for projects capitalised under 12th Plan other than projects funded by ADB is considered as 70:30. Further, BSPTCL has considered entire amount of capitalisation from ADB loan under Debt. BSPTCL would like to submit that the projects under the 13th Plan are funded through 80% Debt and 20% Equity. As specified in the Regulations, since equity deployed is less than 30% for such projects, actual debt equity ratio is to be considered.

The scheme wise Debt Equity ratio for the projects expected to be capitalized in FY 2021-22 is shown in the Table below:

Table 3-5: Scheme wise Loan and Equity additions during FY 2021-22 (Rs. Crore)

Particulars	Capitalization	IDC	Debt: Equity Ratio	Debt	Equity
12th Plan (Old Projects)					
ADB	16.77		100:0	16.77	0.00
BRGF	41.70		70:30	29.19	12.51
Deposit	125.18		NA		
IRF	31.18		70:30	21.82	9.35
PSDF Capacitor	0.16		NA	0.00	0.00
State Plan	21.34	0.00	70:30	14.94	6.40
12th Plan (Ongoing)					
ADB	127.24		100:0	127.24	0.00
BRGF	34.25		70:30	23.98	10.28
IRF	0.26		70:30	0.18	0.08
PSDF	68.71		NA	0.00	0.00
State Plan	114.81		70:30	80.37	34.44
12th Plan Total	581.60	0.00		314.49	73.06
13th Plan (Other projects)					
Deposit Plan	1.26		NA	0.00	0.00
IRF	16.73		70:30	11.71	5.02
State Plan	62.65	7.32	80:20	55.98	13.99
13th Plan (Upcoming projects)					
IRF	6.60		70:30	4.62	1.98
State Plan	642.62	44.72	80:20	549.87	137.47
13th Plan Total	729.86	52.04		622.18	158.46

Particulars	Capitalization	IDC	Debt: Equity Ratio	Debt	Equity
Grand Total	1311.46	52.04		936.66	231.52

Table 3-6: Loan and Equity additions during FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22
1	Capitalization during FY 2021-22	1,363.50
2	Less: Grant and Deposit Works	195.31
3	Net Capitalization (A)	1,168.19
4	Projects with Debt Equity of 70:30	
5	Equity Considered (30%)	80.06
6	Debt Considered (70%)	330.82
7	Projects with Debt Equity of 80:20	
8	Equity Considered (20%)	151.46
9	Debt Considered (80%)	605.85
10	Total Equity	231.52
11	Total Debt	936.66

BSPTCL has considered repayment of loans equivalent to Depreciation for FY 2021-22 in accordance with Regulation 24(e) of MYT Regulations, 2018.

As per MYT Regulations, 2018, rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the Control Period. Actual loans outstanding at the beginning of FY 2021-22 and applicable interest rates are shown in the Table below:

Table 3-7: Weighted Average Interest rate for FY 2021-22

Sl. No.	Particulars	Amount Outstanding (Rs. Crore)	Applicable Interest rate
1	Loans from Financial Institutions	1750	7.80%
2	Loans from ADB	464.13	10.50%
Weighted Average Interest Rate			8.37%

Accordingly, BSPTCL has considered weighted average interest rate of 8.37% as shown in the Table above. BSPTCL has considered other finance charges in line with the actual claimed in FY 2020-21. BSPTCL has computed Interest and Finance Charges

in accordance with Regulation 24 of MYT Regulations, 2018, as shown in the following Table:

Table 3-8: Interest on Loan computed for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Opening Loan (A)	4,142.03	3,673.85
2	Addition of loan during the year	1,383.35	936.66
3	Normative Repayment (Equal to Depreciation)	456.82	413.52
4	Closing Loan	5,068.56	4,197.00
5	Average Loan	4,605.29	3,935.42
6	Interest Rate (%)	9.08%	8.37%
7	Interest on Loan	418.11	329.24
8	Other Finance Charges	-	1.23
9	Interest and Finance Charges (7+8)	418.11	330.47

The Hon'ble Commission is requested to approve Interest on Loan and Finance Charges in APR of FY 2021-22 as shown in the above Table.

3.7 Operation and Maintenance Expenses

Regulation 21 of the MYT Regulations, 2018, specifies that the Hon'ble Commission shall stipulate a separate trajectory of norms for each of the components, viz., Employee expenses, R&M expenses and A&G expenses, which shall be defined in terms of number of personnel per Ckt. km, number of personnel per bay along with annual expenses per personnel, combination of A&G expenses per personnel, and A&G expenses per substation, and R&M expenses as percentage of Gross Fixed Assets.

Employee Expenses

In the Truing-up of FY 2020-21, BSPTCL has considered normative escalation on the base norms computed by the Hon'ble Commission in previous Tariff Order. The following Table shows the base norms considered for projecting employee expenses for FY 2021-22:

Table 3-9: Base value norms for Employee Expenses

Sl. No.	Particulars	FY 2021-22
1	Number of personnel per ckt/km (55%)	0.0822
2	Number of personnel per substation (45%)	6.6427
3	Annual expenses per personnel (Rs. Lakh)	8.1919

BSPTCL has considered the above norms as base norms for computation of employee expenses for FY 2021-22. BSPTCL has estimated Transmission Line in ckt. km, number of sub-stations for FY 2021-22 based on actuals of FY 2021-22 till date and estimates for balance period of FY 2021-22. The following Table shows the estimates for transmission lines and number of sub-stations for FY 2021-22.

Table 3-10: Transmission Line, No. of sub-stations and Number of Employees for FY 2021-22

Sl. No.	Particulars	FY 2021-22 (Estimated)
1	Transmission Line in Ckt. km	16,070
2	No. of sub-stations	148
3	Number of employees	2,333

Based on the above parameters and the base values worked out for FY 2021-22, BSPTCL has estimated employee expenses for FY 2021-22.

Regulation 21.1 of MYT Regulations, 2018 provides for escalation of base value norms for consideration of employee expenses. The relevant extracts are as follows:

“21.1 Employee Cost

Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Transmission Licensee and one-time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief, governed by the following formula:

$$EMP_n = (EMP_b * CPI \text{ inflation}) + Provision$$

Where:

EMP_n : Employee expense for the year n

EMP_b : Employee expense as per the norm

CPI inflation: is the average increase in the Consumer Price Index (CPI)

for immediately preceding three years.....”

In accordance with the above Regulations, BSPTCL has considered the CPI up to March 2021 and taken average of preceding three years of escalation in CPI for consideration of escalation of base norm for employee expenses. The following Table shows the escalation considered on base norms for computation of employee expenses:

Table 3-11: CPI Inflation considered for FY 2021-22

Particulars	Actual				Estimate
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Annual Average CPI Index	284	300	323	339	351
CPI Inflation		5.45%	7.53%	5.02%	6.00%

BSPTCL has hence, considered inflation rate of 6% on base norms for computation of employee expenses for FY 2021-22. The following Table shows the computation of employee expenses in accordance with Regulation 21.1 of BERC MYT Regulations, 2018:

Table 3-12: Employee Expenses for FY 2021-22

Sl. No.	Particulars	Base Norms	FY 2021-22	
			Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	CPI Inflation		5.35%	6.00%
2	Norms-Number of personnel per ckt. km	0.0822	0.0822	0.0822
3	Norms-Number of personnel per substation	6.6427	6.6427	6.6427
4	Transmission line length in ckt. km		16,856.66	16,070
5	No. of Sub-stations		146	148
6	Norms-Annual expenses per personnel (Rs. lakh)	8.1922	8.630	8.6834
7	Employee cost (Number of personnel per ckt. km) (2*4*6)/100 (Rs. Crore)		119.58	114.70
8	Employee cost (Number of personnel per substation) (3*5*6)/100 (Rs. Crore)		83.70	85.37
9	Total Employee cost for the year (7+8) (Rs. Crore)		203.29	200.07

The Hon’ble Commission is requested to approve Employee Cost in APR of FY 2021-22 as shown in the above Table.

Repairs and Maintenance Expenses (R&M)

Regulation 21.2 of the MYT Regulations, 2018 specifies R&M expenses as percentage of opening gross fixed assets (excluding land cost) for estimation of R&M expenses. The Hon'ble Commission computed 'K factor' at 1.36% for the Control Period from FY 2019-20 to FY 2021-22.

BSPTCL has considered 'K factor' of 1.36% as approved in the MYT Order and applied the same on the Opening GFA (net of Land) for computation of R&M expenses for FY 2021-22, as shown in the following Table:

Table 3-13: R&M expenses for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Opening GFA (net of Land)	9,506.17	8702.98
2	% On GFA	1.36%	1.36%
3	R&M Expenses on Opening GFA (1*2)	129.28	118.36

The Hon'ble Commission is requested to approve R&M Expenses in APR of FY 2021-22 as shown in the above Table.

Administration and General Expenses (A&G)

A&G Expenses mainly comprise rent charges, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits.

As discussed in the previous Section, the Hon'ble Commission in previous Tariff Order has computed norms for A&G expenses in terms of A&G expense per personnel and A&G expense per substation. In the Truing-up of FY 2020-21, BSPTCL has considered normative escalation on the base norms computed by the Hon'ble Commission in previous Tariff Order. BSPTCL considered escalation on base value norms considered for FY 2020-21 for computing A&G expenses of FY 2021-22. The following Table shows the base value norms considered for FY 2021-22:

Table 3-14: Base value norms for A&G Expenses

Sl. No.	Particulars	FY 2021-22
1	A&G Expenses per personnel	1.0748
2	A&G Expenses per sub-station (Rs. Lakh)	12.9317

BSPTCL has considered the above norms for computation of A&G expenses for FY 2021-22. BSPTCL has estimated number of sub-stations and number of employees for projecting A&G expenses for FY 2021-22.

Regulation 21.3 of BERG MYT Regulations, 2018 provides for escalation of base value norms for consideration of employee expenses. The relevant extracts are as follows:

“21.3 Administrative and General (A&G) Expense

A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and Consumer Price Index (CPI) in the ratio 60:40 and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Transmission Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

$$A\&G_n = (A\&G_b * WPI \text{ inflation}) + Provision$$

Where:

A&G_n: A&G expense for the year n

A&G_b: A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years.....”

BSPTCL has considered average of preceding three years of escalation in CPI and WPI indices for consideration of escalation of base norm for A&G expenses. The following Table shows the escalation considered on base norms for computation of A&G expenses:

Table 3-15: CPI: WPI Inflation considered for FY 2021-22

Particulars	Actual				Estimate
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Annual Average CPI Index	284	300	323	339	351
CPI Inflation		5.45%	7.53%	5.02%	6.00%

Particulars	Actual				Estimate
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Annual Average WPI Index	115	120	122	123	134
WPI Inflation		4.28%	1.68%	1.29%	2.42%
WPI: CPI (60:40)					3.85%

BSPTCL has hence, considered inflation rate of 3.85% on base norms of FY 2020-21 for computation of A&G expenses for FY 2021-22.

The following Table shows the computation of A&G expenses in accordance with Regulation 21.3 of BERG MYT Tariff Regulations, 2018:

Table 3-16: A&G Expenses for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	Base Value	FY 2021-22	
			Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Average annual WPI & CPI Index		3.92%	3.85%
2	Norms-A&G Expenses per personnel	1.0748	1.1169	1.1162
3	Norms-A&G Expenses per substation (Rs. Lakh)	12.9317	13.4381	13.4296
4	No. of Employees		2,342	2,333
5	No. of Sub-stations		146	148
6	A&G Expenses (No. of employees) (2*4) (Rs. Crore)		26.16	26.04
7	A&G Expenses (No of substations) (3*5) (Rs. Crore)		19.62	19.88
8	Total A&G Expenses for the year (Rs. Crore) (6+7)		45.78	45.92

The Hon'ble Commission is requested to approve A&G Expenses in APR of FY 2021-22 as shown in the above Table.

Holding Company Expenses

BSPTCL submits that expenses of BSP(H)CL, which is the Holding Company of all the State Utilities and Generating Company, is recovered from its subsidiary Companies. BSPTCL is claiming holding expenses separately in line with the methodology

adopted in previous Tariff Order. BSPTCL has claimed Holding Company expenses for FY 2021-22 on the basis of actual expenses of FY 2020-21. Any variation with respect to these expenses shall be claimed at the time of True-up of FY 2021-22.

Table 3-17: Holding Company Expenses for FY 2020-21 (Rs Crore)

Sl. No.	Particulars	Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Holding Company Expenses for FY 2021-22	11.96	11.44

The Hon'ble Commission is requested to approve Holding Company Expenses as in APR of FY 2021-22 as shown in the above Table.

The following Table shows the total O&M expenses claimed by BSPTCL for FY 2021-22 as per Regulations 21.1, 21.2 and 21.3 of BERC MYT Tariff Regulations, 2018.

Table 3-18: Operation and Maintenance Expenses for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Employee expenses	203.29	200.07
2	Repairs and Maintenance Expenses	129.28	118.36
3	Administration and General Expenses	45.78	45.92
4	Holding Company Expenses	11.96	11.44
5	Total Operation and Maintenance Expenses	390.31	375.79

The Hon'ble Commission is requested to approve O&M Expenses in APR of FY 2021-22 as shown in the above Table.

3.8 Return on Equity

BSPTCL has considered closing equity of Rs. 375.41 Crore as on 31st March 2015 (approved in the True up for FY 2014-15) as opening equity for FY 2015-16 in respect of assets capitalised before 31st March 2015.

Further, in respect of projects commissioned with effect from 1st April 2015, the opening equity is considered at Rs. 1,600.04 Crore based on the closing equity

considered in true up for FY 2020-21. The addition to equity during FY 2021-22 is considered at Rs. 231.52 Crore as worked out in Table 3-6 of this Petition.

Regulation 22 read with Regulation 27 has considered rate of return on equity on pre-tax basis. The relevant extracts are as follows:

“22 (b) The return on the equity invested shall be allowed from the date of start of commercial operation and after put to use:

(c) Return on equity shall be computed at the rate of 15.5% for the project which is commissioned w.e.f. 01.04.2015 and further incentive equivalent to 0.5% will be allowed in the form of RoE, if the project is completed within schedule as per the Annexure A or original schedule period as the case may be. However, Return on Equity for the project commissioned prior to 01.04.2015 shall be allowed at the rate of 14%....

....27 (2) Rate of return on equity shall be rounded off to two decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Clause

(1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of licensee/SLDC paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess...”

BSPTCL had proposed the lower Rate of Return of 10% as compared to rate of 15.5% during the approval of ARR for FY 2021-22 in order to pass some benefits to consumers of State due to difficulty faced under COVID-19 pandemic. Accordingly, the Hon’ble Commission had provisionally considered the rate of RoE as 10% as for FY 2021-22 vide Order dated 19th March 2021. Accordingly, BSPTCL has considered the RoE of 10% in APR for FY 2021-22. BSPTCL further submits that claiming lower RoE at 10% for the financial year under consideration shall not imply that BSPTCL will continue to claim RoE at 10% in perpetuity.

BSPTCL has considered the MAT rate of 17.47%, in line with the actual MAT rate of FY 2020-21. BSPTCL has computed pre-tax RoE of 12.12% (10.00% / (1-17.47%)).

The following table shows the Return of Equity computed by BSPTCL for FY 2021-22:

Table 3-19: Return on Equity for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in TO dated 19.03.2021	Claimed in APR
1	Opening Equity as on 1.4.2015	375.41	375.41
2	Rate of Return on Equity	10.00%	10.00%
3	Tax/MAT rate %	17.47%	17.47%
4	Rate of Return on Equity (Pre-tax)	12.12%	12.12%
5	Return on Equity (1*4)	45.49	45.49
	Equity on projects commissioned w.e.f. 1.4.2015		
6	Opening Equity	1,706.01	1,600.04
7	Addition during the year	316.06	231.52
8	Closing Equity (6+7)	2,022.07	1,831.56
9	Average Equity	1,864.04	1,715.80
10	Rate of Return on Equity	10.00%	10.00%
11	Tax/MAT rate %	17.47%	17.47%
12	Rate of Return on Equity (Pre-tax)	12.12%	12.12%
13	Return on Equity (9*12)	225.86	207.91
14	Total Return on Equity (5+13)	271.35	253.39

The Hon'ble Commission is requested to approve pre-tax Return on Equity in APR of FY 2021-22 as shown in the above Table.

3.9 Interest on Working Capital

Regulation 26 of the MYT Regulations, 2018 provides for computation of Interest on Working Capital for the Control Period. The relevant extracts are as follows:

"26 Interest on working Capital

The Transmission Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:

(i) Receivables equivalent to two (2) month of transmission charges calculated on target availability level.

(ii) O&M Expenses of one (01) month.

(iii) Maintenance spares @ 15% of O&M expenses for one month.

Less:

(iv) Depreciation return on equity and contribution to contingency reserves equivalent to two months.

(v) Amount of security deposits from Transmission System users, if any, held during the year except the security deposits held in the form of Bank Guarantee from Transmission System Users.

b) Interest on working capital shall be on normative basis and rate of interest shall be equal to the State Bank one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as of the date on which petition for determination of tariff is filed plus 150 basis points. The rate of interest for the purpose of Truing-up shall be the weighted average MCLR of the concern Financial Year plus 150 basis points.

(c) Interest shall be allowed on the amount held as security deposit from Transmission System Users at the Bank Rate as at the date on which the application for determination of tariff is filed. The interest allowed shall be subject to true up at weighted average Bank Rate of the concern Financial Year.

(d) If the State Government is providing resource gap grant and/or subsidy, the working capital shall be reduced by two months equivalent of that amount."

In accordance with the above provisions, BSPTCL has computed the interest on working capital for FY 2021-22. Regulation 26 (b) specifies that the rate of interest shall be equal to State Bank of India (SBI) one-year MCLR as of the date on which Tariff Petition is filed, plus 150 basis points.

BSPTCL has considered SBI MCLR rate of 7.00% for one-year tenure revised with effect from 15th September 2021, as latest available on SBI website (<https://www.sbi.co.in/portal/web/interest-rates/mclr>), and accordingly added 150 basis points as provided in the Regulation. BSPTCL has therefore considered interest rate of 8.50% (7.00%+1.50%) for computation of interest on working capital for FY 2021-22. The maintenance spares are considered at 15% of 1-month O&M expenses, in accordance with the Regulations.

BSPTCL has computed the working capital and interest on working capital considering the expenses estimated in the APR of FY 2021-22 at an interest rate of 8.50% for FY 2021-22 as given in the Table below:

Table 3-20: Interest on Working Capital for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Receivables equivalent to two (2) months of Transmission Charges	240.25	220.48
2	O&M Expenses of one month	32.53	31.32
3	Maintenance spares @15% of 1-month O&M expenses	4.88	4.70
4	Less: Depreciation, RoE and Contribution to Contingency Reserve for 2 months	121.36	111.15
	Total Working Capital	156.29	145.34
5	Interest on Working Capital (%)	8.50%	8.50%
6	Interest on Working Capital	13.28	12.35

The Hon'ble Commission is requested to approve Interest on Working Capital in APR of FY 2021-22 as shown in the above Table.

3.10 Non-Tariff Income

BSPTCL submits that it has considered Non-Tariff Income for FY 2021-22 after escalating 5% on actual income of FY 2020-21 as per methodology adopted by Hon'ble Commission in previous Tariff Order. Any variation in Non-Tariff Income shall be submitted at the time of true-up for FY 2021-22.

Table 3-21: Non-Tariff Income for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	FY 2021-22	
		Approved in Tariff Order dated 19.03.2021	Claimed in APR
1	Non-Tariff Income of FY 2020-21	103.23	59.68
2	Escalation (%)	5%	5%
3	Increase	5.16	2.98
4	Non-Tariff Income for the Year	108.39	62.66

Note: Excluding Deferred Income.

The Hon'ble Commission is requested to approve Non-Tariff Income in APR of FY 2021-22 as shown in the above Table.

3.11 Revenue from Transmission Charges

The Hon'ble Commission had approved Annual Transmission Charges of Rs. 1,130.68 Crore for FY 2021-22 in the previous Tariff Order, after adjusting the surplus of FY 2019-20 along with holding cost. BSPTCL is liable to recover the same from Distribution Companies and Railways during FY 2021-22. Therefore, BSPTCL has considered the same as revenue in APR of FY 2021-22.

The Hon'ble Commission is requested to approve Revenue of Rs. 1130.68 Crore from Transmission charges in APR of FY 2021-22.

3.12 Aggregate Revenue Requirement for FY 2021-22

Based on the discussions in previous sections of this Chapter, BSPTCL has computed the ARR for Transmission Business in the APR for FY 2021-22, as shown in the Table below:

Table 3-22: Annual Transmission Charges/ARR of Transmission Business for FY 2021-22 (Rs. Crore)

Sl. No	Particulars	FY 2021-22	
		Approved in Tariff Order. dated 19.03.21	Claimed in APR
1	O&M expenses (a+ b+ c+ d)	390.31	375.79
	<i>a. Employee cost</i>	203.29	200.07
	<i>b. R&M expenses</i>	129.28	118.36
	<i>c. A&G Expenses</i>	45.78	45.92
	<i>d. Holding Company expenses</i>	11.96	11.44
2	Depreciation	456.82	413.52
3	Interest on Loan Capital	418.11	330.47
4	Interest on Working Capital	13.28	12.35
5	Return on Equity	271.35	253.39
6	Less: Non-Tariff Income	108.39	62.66
7	ARR for Transmission	1,441.49	1,322.85
8	Add: Revenue Gap/(Surplus) of Previous Year	(310.81)	(310.81)
9	Net ARR	1,130.68	1,012.04

The Hon'ble Commission is requested to approve Net ARR in APR of FY 2021-22 as shown in the above Table.

3.13 Revenue Gap/(Surplus) for FY 2021-22

BSPTCL has considered the components of ARR as discussed in this Chapter and has adjusted the Revenue approved by the Hon'ble Commission in previous Tariff Order for FY 2021-22, to arrive at the Revenue Gap/(Surplus) for FY 2021-22, as shown in the following Table:

Table 3-23: Revenue Gap/(Surplus) for FY 2021-22 (Rs. Crore)

Sl. No.	Particulars	Approved in T.O. dt. 19.03.2021	Claimed in APR
1	Net ARR	1,130.68	1,012.04
2	Revenue approved in Tariff Order FY 2020-21	1,130.68	1,130.68
3	Revenue Gap/(Surplus) (1-2)	-	(118.64)

The Hon'ble Commission is requested to approve the Revenue Surplus in APR of FY 2021-22 as shown in the above Table.

Regulation 14 (f) stipulates that

"14. True-Up and Annual Performance Review...

.... (f) Notwithstanding anything contained in regulation 4 of these Regulations, the Revenue gap/surplus arising out of Truing up shall be considered by the Commission while determining the ARR of ensuing year(s). While approving adjustments towards revenue/ expenses in future years, arising out of Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. However the revised estimated gap/surplus as a result of APR shall not be passed in the ARR of ensuing year..... (Emphasis Added)

In accordance with the above Regulations, the Revenue Surplus worked out in the APR for FY 2021-22 is not passed to be passed through in the Tariff for FY 2022-23.



4 Business Plan for the Control Period from FY 2022-23 to FY 2024-25

4.1 Introduction

BSPTCL has filed Business Plan for the Control Period from FY 2022-23 to FY 2024-25 in accordance with relevant provisions of MYT Regulations, 2021.

In accordance with the provision of Regulation 5.1 of MYT Regulations, 2021, Transmission Licensee or SLDC is required to incorporate the components of the Business Plan in the MYT Petition for the Control Period. The relevant extracts are as follows:

“5.1 The Transmission Licensee or SLDC, as the case may be, shall file a Business Plan, for the Control Period by a Petition in accordance with BERC (Conduct of Business) Regulations, 2005 and its amendments from time to time, by 15th September of the year prior to the commencement of the Control Period and accompanied by such fee payable, as specified in the BERC (Fees, Fines and Charges) Regulations, 2019 as amended from time to time.

Provided that, application for approval of the Business Plan shall not be required to be filled for the Control Period 2022-23 to 2024-25 and all requirement of business plan shall be incorporated in the MYT petition of this control period.”

Accordingly, the broad framework of the Business Plan has been incorporated in this MYT Petition, as detailed in the following paragraphs, while the numbers have been elaborated in the MYT Chapter.

4.2 Business Scope

Considering the duties and functions of STU illustrated in the Electricity Act, 2003, the business scope for BSPTCL essentially covers the following:

- (i) Planning and development of a properly co-ordinated intra-State transmission system in its Capital Investment Plan;
- (ii) Provide access to Transmission facilities to the State distribution utilities and any other user of the Transmission system, on payment of transmission charges;
- (iii) Provide long-term and short-term open access to consumers on payment of requisite transmission and other charges approved by the State Commission;



-
- (iv) Explore and develop the new dimensions of business from growth perspective and enhance value.

4.3 Approach to Development of Business Plan

The Business Plan comprises the infrastructure requirement commensurate with load growth forecast and demand projections, capital investment plan, financing plan and physical targets. The capital investment is determined based on the analysis of projected demand growth in electricity distribution sector commensurate with the economic growth in the State, and generation capacity additions/ increased evacuation requirement vis-à-vis the available transmission capacity. Also, transmission infrastructure has been planned considering the DISCOM's infrastructure requirement. Transmission infrastructure requirement planning is done in conjunction with DISCOMs and considering the following:

- Increasing integration of renewable energy in the system,
- In order to avoid source outage, BSPTCL has to keep ready infrastructure to accommodate power from multiple sources,
- To meet increasing demand due to various initiatives of Central as well as State Government, i.e., 24&7 power for all, Smart Grid, SAUBHAGYA, etc.

Further, based on these growth projections, requirement of additional transmission lines and substations or augmentation of existing transmission capacity are planned. A rational approach has been followed for ascertaining various data points using practical assumptions wherever required.

The components of Business Plan depend upon various factors such as historical data, current and future financial estimates, growth estimates, economic, financial and business-related assumptions, current operational requirements, other foreseeable changes/requirements in future, etc. Any deviations due to a number of uncontrollable externalities shall be brought to the notice of the Hon'ble Commission in accordance with the provisions of MYT Regulations. The Business Plan may need to be updated periodically in accordance with various schemes/ policy initiatives of the Government and in order to comply the directions of the Government/ Hon'ble Commission, as the case may be. Thus, BSPTCL would like to submit that the Business Plan is a dynamic document, which may need to be updated at various intervals in order to align it with the goals and objectives of the company and various schemes/



directions of the Central and State Government. Further, due to changing electricity market trends and various internal and external factors, the Business Plan may need to be updated.

4.4 Key Objectives of the Business Plan

The primary objectives for developing the Business Plan are as follows:

- Providing a tool for Strategic Planning: The Business Plan is intended to chart the Company's way forward. The key objective for developing the Business Plan is to analyse and anticipate the major requirements of transmission infrastructure commensurate with the expected demand growth of electricity. The Business Plan may prove to be a tool to strategically plan for capital investments and its financing. Further, it may help in timely execution and monitoring of the work.
- For the regulatory compliance of incorporation of requirements of Business Plan in the MYT Petition as mandated by MYT Regulations, 2021.
- Aid in Decision Making and better operational efficiency: The Business Plan may aid in decision making while planning and execution of the project. Further, proactive actions may be taken during the execution of the project in order to achieve the Company's goal of supplying quality power to all. This may help in improving the operational efficiency by running the transmission network in accordance with the set performance target.

4.5 Business Plan

The Business Plan of BSPTCL covers the following for the Control Period.

- Performance targets
- Norms for O&M Expenses
- Capital expenditure and Capitalisation
- Source of Funding of capital investment

The above items are discussed in detailed in the following sections.

4.6 Performance Targets

Transmission Availability



As far as the transmission system availability is concerned, BSPTCL is consistently trying to ensure a transmission system availability of above 98% as specified in the MYT Regulations, 2021. During the Control Period from FY 2022-23 to FY 2024-25, BSPTCL shall continue to ensure a transmission system availability of at-least 98% despite the increasing network loading. Transmission system availability for the Control Period proposed by BSPTCL is as follows:

Table 4-1: Transmission System Availability proposed for the Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Transmission System Availability	98%	98%	98%

Transmission Losses

The Hon'ble Commission had approved transmission losses of 3.92% for the last Control Period of FY 2019-20 to FY 2021-22. Over the period BSPTCL have taken various initiatives to reduce transmission losses like installation of ABT meter, routine maintenance, etc. BSPTCL has been able to reduce the transmission losses in comparison of loss level approved by the Hon'ble Commission in the last Control Period. BSPTCL has achieved the actual transmission losses of 3.66% and 2.92% for FY 2019-20 and FY 2020-21, respectively. However, BSPTCL expects the transmission losses of 3.5% for the period from FY 2022-23 to FY 2024-25 due to ongoing network expansion as well as system loading. The transmission loss trajectory proposed for the ensuing Control Period is shown in the table below:

Table 4-2: Transmission Losses proposed for the Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Transmission Losses	3.5%	3.5%	3.5%

4.7 Norms for O&M Expenses

Regulations 21 of BERC MYT Regulations 2021 specify that the Hon'ble Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses. The relevant extract of the Regulations is reproduced as below:

"21. Operation and Maintenance Expenses

(a) The Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, Repair and Maintenance (R&M) expense and Administrative and General (A&G) expense.



Provided that such norms may be specified for a specific Transmission Licensee or a class of Transmission Licensees.

(b) Norms shall be defined in terms of number of personnel per ckt/km (for different categories of transmission lines for e.g. 400 KV, 220 KV, 132 KV etc. Lines) and number of personal per bay (for different categories of bay for e.g. 400 KV, 220 KV, 132 KV etc. Bays) along with annual expenses per personnel for Employee expenses; combination of A&G expense per personnel and A&G expense per substation for A&G expenses and R&M expense as percentage of gross fixed assets for estimation of R&M expenses.

...”

In view of the above Regulations, BSPTCL has proposed the norms applicable for the Control Period from FY 2022-23 to FY 2024-25 for each of the components of O&M expenses as discussed below:

Norms for Employee and A&G Expenses

The Hon'ble Commission in Tariff Order dated 15th February 2019 had stipulated a separate trajectory of norms for Employee Expenses and A&G Expenses applicable for the Control Period from FY 2019-20 to FY 2021-22 namely. BSPTCL has worked out norms based on the approach adopted by the Hon'ble Commission for computation of norms for Employee and A&G Expenses for the new Control Period.

BSPTCL has considered the number of employees, transmission line in Ckt km, no. of substations and actual employee and A&G cost for the past years, i.e., for FY 2013-14 to FY 2020-21. BSPTCL has adopted a ratio of 45% of the total no. of employees as a part of norms for substation and 55% personnel as a part of norms for Ckt km for the purpose of calculation of norms. Since, the Employee expenses and A&G expenses of BSPTCL includes the SLDC cost also, SLDC cost has been deducted from the total Employee expenses and A&G expenses of BSPTCL.

Based on the past data of Employee expenses for FY 2013-14 to FY 2020-21, BSPTCL has calculated the Compounded Aggregate Growth Rate (CAGR) for all the three norms employee expenses i.e., number of personnel per ckt/km, number of personal per substation and annual expenses per personnel. Similarly, CAGR has been computed for the two norms of A&G expenses, i.e., A&G expenses per personnel and A&G expenses per substation. BSPTCL has applied CAGR on the values of FY 2020-21 to derive base norms for Employee expenses and A&G expenses. It is to be noted



that the CAGR for number of personnel per ckt/km is coming out to be negative, hence, BSPTCL has not used negative CAGR and value of number of personnel per ckt km of FY 2020-21 has been considered as it is without any escalation for the base norm.

BSPTCL has computed the norms for Employee expenses and A&G expenses as detailed below:

Table 4-3: Computation of base value of Employee cost norm (Rs. Crore)

Particulars	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	CAGR	Base Value
No. of employees	1424	1331	1546	1571	1919	2264	2335	2334		
Transmission line in Ckt KM	8,125.72	8,488.66	8,940.67	10,405.46	12,843.77	14694	16,644.00	15,084		
No. of substations	95	97	99	115	130	142	144	146		
Number of personnel per ckt/km (55%)	0.10	0.09	0.10	0.08	0.0822	0.08	0.08	0.09	-1.76%	0.0851
Number of personnel per substation (45%)	6.75	6.17	7.03	6.15	6.6427	7.17	7.30	7.19	0.92%	7.2603
Employee cost (Including SLDC)	77.57	93.35	98.99	101.9	137.18	162.84	168.34	189.24		
Less: SLDC Cost	1.87	2.25	2.39	2.46	3.39	4.06	5.1	6.21		
Employee cost	75.70	91.10	96.60	99.44	133.79	158.78	163.24	183.03		
Annual expenses per personnel (Rs. Crore)	0.05	0.07	0.06	0.06	0.070	0.07013	0.07	0.08	5.71%	0.0829
Annual expenses per personnel (Rs. Lakh)	5.3160	6.8445	6.2484	6.3297	6.9719	7.0133	6.9910	7.8418		8.2896

Table 4-4: Computation of base value of A&G cost norm (Rs. Crore)

Particulars	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	CAGR	Base Value
No. of employees	1424	1331	1546	1571	1919	2264	2335	2334		
No. of substations	95	97	99	115	130	142	144	146		
A&G Expenses	6.19	8.47	16.14	18.25	26.6	32.49	45.84	59.23		



Particulars	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	CAGR	Base Value
(Including SLDC)										
Less: SLDC	0.13	0.17	0.33	0.38	0.51	0.58	0.33	0.26		
A&G Expenses	6.06	8.3	15.81	17.87	26.09	31.91	45.51	58.97		
A&G Expenses per personnel (55%) (Rs. Crore)	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	28.98%	0.0179
A&G Expenses per substation (45%) (Rs. Crore)	0.03	0.04	0.07	0.07	0.09	0.10	0.14	0.18	30.17%	0.2366
A&G Expenses per personnel (Rs. Lakh)	0.23	0.34	0.56	0.63	0.75	0.78	1.07	1.39		1.7923
A&G Expenses per substation (Rs. Lakh)	2.87	3.85	7.19	6.99	9.03	10.11	14.22	18.18		23.6594

BSPTCL has proposed the norm for employee expenses and A&G expenses as shown in the Tables above. Considering the above norms, BSPTCL has computed the total employee cost and A&G cost for the Control Period as discussed in the subsequent chapter of this Petition.

K factor for R&M Expenses

The Regulation 21.2 of the MYT Regulations, 2021 specify R&M expenses as percentage of opening gross fixed assets (excluding land cost) for estimation of R&M expenses. Regulation 21 (i) specifies that the norms shall be determined based on audited accounts of operations of last three years. BSPTCL has accordingly computed the 'K' factor (i.e., R&M norm) based on audited accounts for FY 2018-19 to FY 2019-20 and annual accounts for FY 2020-21-21 as given below:

Table 4-5: Computation of K factor for R&M cost norm (Rs. Crore)

S. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Opening GFA	6418.00	7617.40	9486.39
2	Less: Opening value of Land	1405.30	1415.01	1469.76
3	Net opening GFA (1-2)	5012.70	6202.39	8016.63



S. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
4	R&M Expenses	36.35	32.60	49.51
5	% of R&M expenses to GFA $((4/3)*100)$	0.73%	0.53%	0.62%
6	Average % of R&M expenses to GFA - 'K' factor			0.62%

BSPTCL has proposed the 'K' factor at 0.62% for the Control Period from FY 2022-23 to FY 2024-25 and accordingly considered the 'K' Factor for computing R&M expenses for the Control Period as discussed in the subsequent chapter of this Petition.

The Hon'ble Commission is requested to approve the norms for each of the components of O&M Expenses as proposed above.

4.8 Capital Investment Plan

BSPTCL submits that due to changing business environment and the Regulations governing the Transmission Business, the Capital Investment Plan may need to be updated at various intervals in accordance with the policy initiatives of the Government and to align the growth path of the Company with the external business environment and internal factors affecting the business / operations of the Company.

BSPTCL had submitted a separate Petition for Capital Investment before the Hon'ble Commission on 5th August 2021. Meanwhile, finalisation of MYT Regulations 2021 got delayed and filing of MYT Petition was in process. BSPTCL during the hearing dated 2nd November 2021 for admittance of Petition on Capital Investment requested the Hon'ble Commission to consider Capital Investment Petition along with MYT Petition. Also, MYT Regulations, 2021 specify submission of Business Plan containing Capital Investment along with MYT Petition.

BSPTCL has submitted Capital Investment Plan in accordance with the provisions specified in the MYT Regulations, 2021 and BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018. While preparing the Capital Investment Plan, BSPTCL follows policy initiatives of the Government of Bihar (GoB). The Capital Investment Plan mainly comprises two categories of projects, viz., ongoing projects, which are spilled over from previous Control Period, and 26 nos. of new projects.

Capex & Capitalisation for Ongoing Projects

BSPTCL submit that capex plan for ongoing projects under 13th Plan would be spilled over in the Control Period till FY 2024-25. BSPTCL submits that earlier it has submitted the awarded cost as project cost, which was excluding IDC. Since, the total project cost shall comprise Hard Cost and IDC, BSPTCL has considered IDC for the projects under 13th Plan to be funded under State Plan. The summary of capex and capitalisation proposed for ongoing projects as shown in the Table below:

Table 4-6: Capex and Capitalisation Proposed for Ongoing Projects (Rs. Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Capex	626.33	386.52	254.01
Capitalisation	1,281.81	1,035.14	774.91

The list of ongoing projects has been annexed as **Annexure-III** in this Petition.

Capex & Capitalisation for New Projects

BSPTCL proposes to undertake 26 nos. of new projects during the Control Period, which are expected to be completed till FY 2024-25. There is no capex plan for FY 2024-25. Name of projects, tentative project cost and reason for investment for 26 nos. of new projects proposed by BSPTCL are as given below:

Table 4-7: Details for the New Projects proposed for the Control Period

Sl. No.	Project	Project cost (Rs. Crore)	Reason for Investment
1	Construction of Following GIS bays on turnkey basis. - 1) 02 nos. of 220 kV GIS bays at GSS Dumraon (BGCL). 2) 01 no of 220 kV GIS bay at Darbhanga (DMTCL). 3) 2Nos 400 kV GIS bay at Naubatpur (BGCL) 44/PR/BSPTCL/2021	54.10	<ul style="list-style-type: none"> Construction of 02 Nos. of 220 KV GIS line bays at GSS Dumraon (BGCL) for connectivity of Buxar Thermal power plant. Construction of 01 no of 220 kV GIS bay at Darbhanga (DMTCL) for connectivity of Samsatipur (Ujiyarpur) GSS
2	Reconductoring of Kishanganj (new) - Kishanganj 132KV D/C transmission line by HTLS NIT No. 17/PR/BSPTCL/2021	13.31	Increasing capacity of Transmission line on same voltage.
3	Reconductoring of Motihari (ISTS)- Motihari (BSPTCL) 132 kV D/C transmission line by HTLS 16/PR/BSPTCL/2021	45.29	Increasing capacity of Transmission line on same voltage.



Sl. No.	Project	Project cost (Rs. Crore)	Reason for Investment
4	Construction of 04 nos. 132 kV Line bays & SPR Building at 400/220/132 kV Saharsa (New) NIT No 01/PR/BSPTCL/2021	8.88	For termination of 132 kV lines at 400/220/132 kV Saharsa (New)
5	Work for Revival of 220 kV D/C BTPC- Hajipur Transmission Line with involvement of 07 nos. Pile Foundation and associated work. 37/PR/BSPTCL/2021	38.10	For evacuation power from BTPS.
6	Work for restoration of 132 kV Kishanganj (New) - Barsoi Transmission line with involvement of 06 nos. pile foundation & its associated works. 38/PR/BSPTCL/2021	10.89	To provide uninterrupted power to Barsoi GSS.
7	Construction of 01 no. 132 KV Line Bay at 132/33 GSS Kataiya& stringing of 2nd circuit on DCSS of 132 kV Kataiya-Kusaha Transmission Line under deposit head of Nepal Electricity Authority on turnkey basis NIT No 04/PR/BSPTCL/2021	2.71	For Power Evacuation to Nepal
8	Construction of 220 KV double circuit transmission line from GSS Begusarai to IOCL Barauni Refinery (15 RKM) partly on monopole tower and shifting of 4 nos. of 220 KV Towers of existing transmission line required for M/s IOCL on M/C monopole Towers against NIT NO: -40/PR/BSPTCL/2020	43.54	For power evacuation to IOCL
9	Construction of 2 nos. of 220 KV line Bay, demolish of old quarters & construction of new quarters along with extension of control room and associated civil works at 220 KV GSS Begusarai under deposit scheme of IOCL against nit No: - 24/PR/BSPTCL/2020.	12.92	For power evacuation to IOCL



Sl. No.	Project	Project cost (Rs. Crore)	Reason for Investment
10	Construction of 132KV D/C Raxaul (New) to Raxaul (old) Transmission line (Line length- 20 RKM), 2nd Ckt Stringing of 132 kV Raxaul (Old) - Parwanipur line (07 RKM) & construction of 2 nos. 132 kV Line Bays at 220/132/33 GSS Raxaul (Under Principal Funding of MEA against NIT No: -05/PR/BSPTCL/2021	20.37	For Power Evacuation to Nepal
11	Construction of 02 nos. of 220 kV GIS line bays (related with Garaul GSS)	53.12	To provide power to GSS Garaul
12	Construction of 02 nos. 220 kV AIS Line Bays at GSS Fatuha, BSPTCL & 02 nos. 132 kV AIS Line Bays at GSS Harnaut, BSPTCL on turnkey basis under State Plan against NIT No. 03/PR/BSPTCL/2021	8.03	<ul style="list-style-type: none"> Required for termination of already approved Line i.e., construction of Bakhtiyarpur (New) to Fathua (BSPTCL) 220 kV D/C Trans/ Line. Required for termination of already approved Line i.e., construction of Bakhtiyarpur (New) to Harnaut (BSPTCL) 132 kV D/C Trans/ Line.
13	Construction of 220 kV& 132 kV transmission line by monopole/ narrow base tower for interconnectivity/ redundancy of GSS in and around Patna	90.30	To provide interconnectivity/ redundancy of GSS in and around Patna
14	Re-conducting of following transmission lines with HTLS (equivalent to Panther) conductor on turnkey basis under state plan: 1. 132 kV D/C Barauni TPS - Begusarai Trans Line (CKM-24 KM) 2. 132 kV D/C Lakhisarai (PGCIL) - Lakhisarai Trans Line (CKM-32 KM) against NIT No. 28/PR/BSPTCL/2020	36.03	As per 19th energy survey of CEA, max energy demand of Bihar was expected to reach to 6576 MW (max). To meet the increased power demand, reconductoring of existing transmission lines need to be done.
15	Reconductoring of Chandauti-Tekari 132 KVD/C Transmission line by HTLS	53.65	As per 19th energy survey of CEA, max energy demand of Bihar was expected to reach to 6576 MW (max). To meet the increased power demand, reconductoring of existing



Sl. No.	Project	Project cost (Rs. Crore)	Reason for Investment
			transmission lines need to be done.
16	Construction of 04 Nos. 220 kV line Bays at GSS Bodhgaya NIT No-19/PR/BSPTCL/2021	7.25	Required for already approved Line i.e., Construction of LILO of Gaya (PG)-Sonenagar 220 kV D/C Trans. Line at both Bodhgaya (BSPTCL) & Chandauti (New).
17	I. Construction of 132/33 kV 2x50 MVA GSS Bhore (Dist.: - Gaya) GSS NIT No-11/PR/BSPTCL/2021 II. Construction of 132/33 kV 2x50 MVA GSS Barachatti (Dist.: - Gaya) NIT No-11/PR/BSPTCL/2021	95.89	<ul style="list-style-type: none"> • 132/33 kV GSS Bodhgaya will be off loaded by 30 MW. • It will improve the Power reliability & availability of quality power. • 132/33 kV GSS Bodhgaya and Sherghati will be off loaded by 30 MW (approx.). • It will improve the Power reliability & availability of quality power.
18	I. LILO of 132 kV Barhi- Rajgir (L-29) and Barhi-Nalanda (L-28) Transmission line each at GSS Bhore (Each line length -1 KM) NIT No-12/PR/BSPTCL/2021 II. LILO of 132 KV Sonenagar - Chandauti (LL-38 RKM) NIT No-12/PR/BSPTCL/2021 III. 132 kV D/C Chandauti (New) to GSS Barachatti Transmission Line (RL-35 RKM) NIT No-12/PR/BSPTCL/2021	100.76	<ul style="list-style-type: none"> • Required for power supply to already approved GSS Bhore. • Required for power supply to already approved GSS Barrachatti.
19	I. Construction of 132/33 kV 3x MVA GSS Nabinagar (Dist.: - Aurangabad) II. Construction of 132/33 kV 2x50 GSS Daudnagar (Dist.: - Aurangabad) NIT No-13/PR/BSPTCL/2021 NIT No-13/PR/BSPTCL/2021	94.77	<ul style="list-style-type: none"> • The area is at remote end of the State. Feeder lengths of the PSSs will be reduced after connecting them to the proposed GSS. • 132/33 kV GSS Aurangabad, GSS Goh and GSS Rafiganj will be off loaded by 24 MW. • It will improve the Power reliability & availability of quality power • It will improve the Power reliability & availability of quality power.



Sl. No.	Project	Project cost (Rs. Crore)	Reason for Investment
			<ul style="list-style-type: none"> Six numbers of PSSs are to be connected to newly proposed GSS.
20	LILO of 132 kV Sonenagar - Rihand (Ckt-I) Transmission line at GSS Nabinagar (RL-15 RKM) NIT No-14/PR/BSPTCL/2021	16.40	Required for power supply to already approved GSS Nabinagar.
21	<p>I. Construction of 132/33 KV 2X50 MVA GSS Barari (Dist.- Bhagalpur) on turnkey basis under state plan (80:20) against NIT No- 10/PR/BSPTCL/2021</p> <p>II. Construction of 132/33 KV 2X50 MVA GSS Bagha (Dist.- West Champaran) on turnkey basis under state plan (80:20) against NIT No- 10/PR/BSPTCL/2021</p> <p>III. Construction of 132/33 KV 2X50 MVA GSS Murliganj (Dist.- Madhepura) with construction of 02 nos. of line bay at GSS Udakishanganj on turnkey basis under state plan (80:20) against NIT No- 10/PR/BSPTCL/2021</p>	150.72	<ul style="list-style-type: none"> 132/33 KV Sabour GSS will be off loaded. Feeder lengths of the PSSs will be reduced after connecting them to the proposed GSS. It will improve the Power reliability & availability of quality power. 132/33 KV Ramnagar GSS will be off loaded by 24 MW. It will improve the Power reliability & availability of quality power Improve voltage regulation in the existing PSS and meet the growing load demand in areas near Madhepura and Murliganj. It will improve the Power reliability & availability of quality power
22	<p>1. LILO of both circuit of 132 kV GIS Goradih- GSS Sabour D/C Transmission Line at GSS Barari with ACSR Panther</p> <p>2. D/C GSS Udakishanganj - GSS Murliganj Transmission Line (RL-50 KM) with ACSR Panther Conductor.</p> <p>3. LILO of 132 KV Ramnagar- Dhanaha transmission Line (RKM- 40 Km)</p>	163.89	Power evacuation from proposed GSS Murliganj, Goradih and Bagaha
23	<p>I. Construction of 400 kV BTPP- Naubatpur (BGCL) DCDS Twin Moose NIT No- 23/PR/BSPTCL/2021</p> <p>II. Construction of 220 kV BTPP- Karamnasa (New) DCDS Twin Moose NIT No-</p>	565.43	<ul style="list-style-type: none"> The voltage regulation will be better in the source grids owing to the fact these are connected to a Generating Plant. A strong and additional source to Patna (Naubatpur) at 400 kV voltage level.



Sl. No.	Project	Project cost (Rs. Crore)	Reason for Investment
	23/PR/BSPTCL/2021 III. Construction of 220 kV BTPP- Dehri DCDS Zebra NIT No- 23/PR/BSPTCL/2021 IV. Construction of 220 kV BTPP- Dumraon (BGCL) DCDS Twin Moose NIT No- 23/PR/BSPTCL/2021		<ul style="list-style-type: none"> • Karamnasa (New), Dehri and Dumraon (New) will get an additional source. • The system will be more stable as N-2 criteria will be available at all the connecting GSSs. As such, the Power reliability & Quality power will improve. • Power evacuation from Buxar Thermal Power plant
24	Construction of 220 kV BTPP- Dumraon (BGCL) DCDS Twin Moose NIT No- 24/PR/BSPTCL/2021	157.27	Power evacuation from Buxar Thermal Power plant
25	Construction of 02 nos. 220KV AIS line bays at Dehri NIT No- 25/PR/BSPTCL/2021	10.78	For connectivity of upcoming DCDS 220 kV from Buxar Thermal Power Plant to GSS Dehri- on -Sone
26	I. Construction of new 3X80 MVA; 132/33KV GSS Mithapur at Agriculture Research Institute Mithapur. II. Construction of 132 KV transmission line from new GSS Mithapur to GSS Karbigahiya through 1200 XLPE underground cable with associated work. NIT No- 38/PR/BSPTCL/2021	172.96	To meet the present demand of nearby locations
Total		2027.36	

The Hard Cost and IDC for the new Projects are shown in the Table below:

Table 4-8: Hard Cost and IDC proposed for the New Projects (Rs. Crore)

Particulars	Tentative Hard Cost (Rs. Crore)	IDC (Rs. Crore)	Total Tentative Project Cost (Rs. Crore)
Deposit Scheme	79.54		79.54
IRF	48.99		48.99
State Plan (80:20)	1787.25	111.58	1834.83
Grand Total	1915.78	111.58	2027.36



Further, BSPTCL submits that out of 26 new projects as shown above, 20 projects would be funded under State Plan, 2 projects would be funded through IRF and 4 projects would be executed under deposit scheme. The debt equity ratio for the projects funded under State Plan will be 80:20, and for IRF projects, debt equity ratio will be 70:30. The scheme-wise and year-wise capex, capitalisation and debt equity ratio have been shown in the Tables below:

Table 4-9: Scheme wise debt equity mix for the New Projects (Rs. Crore)

Particular	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
IRF 70:30				
<i>Debt</i>	0.00	34.29	0.00	0.00
<i>Equity</i>	0.00	14.70	0.00	0.00
State Plan 80:20				
<i>Debt</i>	0.00	82.16	534.40	903.17
<i>Equity</i>	0.00	20.54	133.60	225.79

Table 4-10: Capex and Capitalisation Proposed for New Projects (Rs. Crore)

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capex	284.01	616.93	731.37	395.87
Capitalisation	0.00	231.23	667.99	1128.96

The complete details of new projects have been annexed as **Annexure-VI** to this Petition.

Summary of Capex and Capitalisation for the Control Period

In view of the above, the summary of Capex and Capitalisation proposed for the Control Period is shown in the Table below:

Table 4-11: Capex and Capitalisation Proposed for the Control Period (Rs. Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Ongoing Project			
Capex	626.33	386.52	254.01
Capitalisation	1,281.81	1,035.14	774.91
New Project			
Capex	616.93	731.37	395.87
Capitalisation	231.23	667.99	1128.96
Total			
Capex	1,243.27	1,117.89	649.88
Capitalisation	1,513.04	1,703.14	1,903.87



BSPTCL submits that due to unprecedented situation of second wave of COVID-19 pandemic, which hit the State in March/April 2021 and subsequent lockdown/restrictions imposed by the State Government, functioning of BSPTCL was severely affected during FY 2021-22. BSPTCL during this period was not able to work with full work force, which led to delay in execution of projects in timely manner. It was observed that significant number of personnel of BSPTCL were also infected due to COVID-19 and internal processes had also come to a standstill. In view of the emergence of the highly mutated Covid-19 variant Omicron in November 2021, various Governments and GoB may also impose restrictions, which may impact functioning of BSPTCL. Due to this, there may be spill over of projects in the subsequent years compared to the proposed schedule as discussed above. The delay in execution of projects compared to the schedule plan may also result into increase in IDC. BSPTCL requests the Hon'ble Commission to consider the situation of Covid-19 as uncontrollable factor and allow actual IDC during the True up of respective financial years.

As regards Number of employees, O&M expenses, depreciation, and summary of ARR, BSPTCL has submitted details for the Control Period from FY 2022-23 to FY 2024-25 in the subsequent Chapter.



5 Aggregate Revenue Requirement for the Control Period from FY 2022-23 to FY 2024-25 and Tariff for FY 2022-23

5.1 Background

The Hon'ble Commission notified the MYT Regulations, 2021 for the Control Period from FY 2022-23 to FY 2024-25. Regulation 11.3 provides for the projection of ARR for each year of the Control Period and Tariff for ensuing year. The relevant extracts are as follows:

"11.3 An application (along with soft copy) for determination of tariff and charges shall be made by 15th November every year, for Truing up of expenses of previous years, for Annual Performance Review (APR) of the Aggregate Revenue Requirement (ARR) for the current year and determination of ARR and transmission tariff or SLDC charges for the ensuing years of the control period. The application should contain the data relating to each item of the ARR supported with the information/data in the formats Form no-SI to Form no-P12 appended to these Regulations and accompanied by such fees as may be specified under the BERC (Fees, Fines and Charges) Regulations, 2005 as amended from time to time. All the information as required in the formats appended to these Regulations along with justification shall be provided in the main petition... (Emphasis Added)."

Regulation 4 of the MYT Regulations, 2021 also provides for the Hon'ble Commission to determine the Transmission Charges for each year of the Control Period. The relevant extracts are as follows:

"4.1 The Commission shall determine the tariff for Transmission business or charges of SLDC operations under a Multi-Year Tariff framework with effect from April 1st of each financial year subject to provisions under these Regulations..... (Emphasis Added)."

Accordingly, BSPTCL submits its proposal for determination of ARR for the Control Period from FY 2022-23 to FY 2024-25 and Transmission Charges for FY 2022-23, as discussed in the following paragraphs.



5.2 Transmission Losses

As discussed in the Chapter on Business Plan, BSPTCL has projected transmission loss trajectory at 3.5% for each year of the Control Period, i.e., for FY 2022-23 to FY 2024-25.

The Hon'ble Commission is requested to approve Transmission Loss of 3.5% for the Control Period.

5.3 Capital Expenditure and Capitalization

BSPTCL has projected capital expenditure and capitalisation for each year of the Control Period as discussed in Business Plan Chapter. BSPTCL has considered the closing CWIP of FY 2021-22 estimated in APR of FY 2021-22 as the opening CWIP for FY 2022-23 and onwards. BSPTCL has computed IDC based on the assets that are expected to get capitalized during the Control Period. Thus, the total capitalization for the year includes asset capitalized and IDC. Accordingly, the closing balance of CWIP has been computed.

The following Table shows the projected capital expenditure and capitalization for the Control Period:

Table 5-1: Capital Expenditure and Capitalization for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening CWIP (A)	2,444.23	2,174.46	1,589.21
2	Investment during the Year (B)	1,243.27	1,117.89	649.88
3	Capitalization (Excluding IDC) (C)	1,429.67	1,608.81	1,795.64
4	IDC (D)	83.37	94.33	108.23
5	Capitalization (Including IDC) (E)	1,513.04	1,703.14	1,903.87
6	Closing CWIP (A+B-E)	2,174.46	1,589.21	335.22

The detailed list of projects expected to be capitalized during the Control Period is attached as **Annexure III**.



The Hon'ble Commission is requested to approve Capital Expenditure and Capitalization for the Control Period as per above table.

5.4 Gross Fixed Asset

BSPTCL has considered the closing GFA of FY 2021-22 estimated in APR of FY 2021-22 as the opening GFA for FY 2022-23 and onwards. The addition to GFA is considered based on the estimated capitalisation for the Control Period as discussed in the previous Section. The total capitalization considered also includes projected IDC. The following Table shows the schedule of GFA projected for the Control Period:

Table 5-2: Gross Fixed Asset projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening GFA (A)	11,569.55	13,082.59	14,785.73
2	Additions to GFA (Excluding IDC) (B)	1,429.67	1,608.81	1,795.64
3	IDC (C)	83.37	94.33	108.23
4	Total Additions to GFA (Including IDC) (D)	1,513.04	1,703.14	1,903.87
5	Closing GFA (A+D)	13,082.59	14,785.73	16,689.60

The Hon'ble Commission is requested to approve the addition to GFA for the Control Period from FY 2022-23 to FY 2024-25 as shown in the Table above.

5.5 Depreciation

BSPTCL has computed depreciation for each year of the Control Period in accordance with Regulation 23 of the MYT Regulations, 2021, as reproduced below:

"23. Depreciation

- (i) Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year. No advance shall be granted against depreciation.*
- (ii) Depreciation shall not be allowed on assets funded by capital subsidies, beneficiary contributions or grants.*
- (iii) Depreciation shall be calculated annually on the basis of assets capitalised and put to use based on the straight line method over the useful life of the asset and at*



the rate not exceeding the rate specified by the Central Electricity Regulatory Commission from time to time.

The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. The Transmission Licensee or SLDC, as the case may be, shall submit separate detail of fully depreciated asset along with year of commissioning and year of attaining ninety percent depreciation with the tariff petition.

Provided that freehold land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

.....”

BSPTCL has considered opening depreciable GFA for FY 2022-23, equal to the closing depreciable GFA considered in APR of FY 2021-22. Opening GFA for FY 2023-24 and FY 2024-25 have been worked out in similar manner, by considering the addition to GFA in the previous year. BSPTCL has considered additions to GFA for each year of the Control Period equal to capitalisation as discussed in previous Section.

BSPTCL has computed depreciation for the Control Period based on the weighted average depreciation rate of 5.21% on opening GFA and 5.24% on GFA addition during the year, as considered in Truing-up of FY 2020-21.

The opening value of Grants for FY 2022-23 is considered same as the closing value of grants considered in APR of FY 2021-22. BSPTCL has considered the assets funded by beneficiary contributions and grants for computation of depreciation as per the Regulations. The following Table shows the computation of depreciation for the Control Period:

Table 5-3: Depreciation projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Value of GFA net of Land	10,066.48	11,579.52	13,282.66
2	Addition during the year (Excluding IDC)	1,429.67	1,608.81	1,795.64
3	Add: IDC	83.37	94.33	108.23
4	Closing GFA	11,579.52	13,282.66	15,186.53
5	Average GFA	10,823.00	12,431.09	14,234.59
6	Weighted average rate of depreciation on opening depreciable GFA	5.21%	5.21%	5.21%



Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
7	Weighted average rate of depreciation on addition to depreciable GFA	5.24%	5.24%	5.24%
8	Depreciation	603.75	692.54	791.80
9	Opening Grants	2,136.05	2,215.59	2,215.59
10	Grants during the year	79.54	-	-
11	Total Grants	2,215.59	2,215.59	2,215.59
12	Average Grants	2,175.82	2,215.59	2,215.59
13	Weighted average rate of depreciation on opening Grants	5.21%	5.21%	5.21%
14	Weighted average rate of depreciation on additional Grants	5.24%	5.24%	5.24%
15	Depreciation on Asset created out of Grants	115.47	115.45	115.45
16	Net Depreciation considered in ARR (8-15)	488.28	577.09	676.35

The Hon'ble Commission is requested to approve Depreciation for the Control Period as shown in the above table.

5.6 Interest and Finance Charges

BSPTCL has considered the closing balance of loan for FY 2021-22 as the opening balance of loan for FY 2022-23 and onwards. The interest charges have been calculated in accordance with Regulation 24 of MYT Regulations, 2021.

Regulation 24 (b) specifies as under:

“(b) If the equity actually deployed is more than 30 % of the capital cost, equity in excess of 30 % shall be treated as normative loan: Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loan....”

BSPTCL would like to submit that the projects that are expected to get capitalised during the Control Period are from 13th Plan and from new projects as discussed in detail in the Chapter of Business Plan. BSPTCL has considered Debt: Equity ratio of 80:20 for projects under State Plan and Debt: Equity ratio of 70:30 for projects under IRF. As specified in the Regulations, since equity deployed for State Plan projects is less than 30% for such projects, actual debt equity ratio is to be considered.



Table 5-4: Loan and Equity additions projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Capitalization during the year	1,513.04	1,703.14	1,903.87
2	Less: Grant & Deposit works	79.54	0.00	0.00
3	Net Capitalization (A)	1,433.50	1,703.14	1,903.87
4	13th Plan Projects- IRF			
5	Equity Considered (30%)	7.56	0.00	0.00
6	Debt Considered (70%)	17.65	0.00	0.00
7	13th Plan Projects- State Plan			
8	Equity Considered (20%)	251.32	207.03	154.98
9	Debt Considered (80%)	1,005.28	828.11	619.93
10	New Projects- IRF			
11	Equity Considered (30%)	14.70	0.00	0.00
12	Debt Considered (70%)	34.29	0.00	0.00
13	New Projects- State Plan			
14	Equity Considered (20%)	20.54	133.60	225.79
15	Debt Considered (80%)	82.16	534.40	903.17
16	Total			
17	Equity Considered	294.12	340.63	380.77
18	Debt Considered	1,139.38	1,362.51	1,523.10

BSPTCL has considered repayment of loans equivalent to Depreciation in accordance with Regulation 24(e) of MYT Regulations, 2021.

As per Regulations, weighted average interest rate of actual loan portfolio is to be considered for computation of Interest Charges. BSPTCL has considered the weighted average interest rate of 8.37% computed in APR of FY 2021-22 as weighted average interest rate for computation of Interest Charges for the Control Period. Further, BSPTCL has considered other finance charges in line with the actual other finance charges claimed in FY 2020-21.

BSPTCL has computed Interest and Finance Charges as shown in the following Table:

Table 5-5: Interest on Loan projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Loan (A)	4,197.00	4,848.09	5,633.51
2	Addition during the year	1,139.38	1,362.51	1,523.10
3	Normative Repayment (Equal to Depreciation)	488.28	577.09	676.35



Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
4	Closing Loan	4,848.09	5,633.51	6,480.26
5	Average Loan	4,522.54	5,240.80	6,056.88
6	Interest Rate (%)	8.37%	8.37%	8.37%
7	Interest on Loan	378.36	438.44	506.72
8	Other Finance Charges	1.23	1.23	1.23
9	Interest and Finance Charges (7+8)	379.58	439.67	507.95

The Hon'ble Commission is requested to approve Interest on Loan and Finance Charges for the Control Period as shown in the above table.

5.7 Operation and Maintenance Expenses

Employee Expenses

As discussed earlier in Chapter for Business Plan, BSPTCL has projected a separate trajectory of norms for Employee Expenses namely: Norms for No. of personnel per ckt. km, no. of personnel per substation and annual expenses per personnel.

The following Table shows the base value of norms proposed by BSPTCL for Base Year of FY 2021-22.

Table 5-6: Base value norms for Employee Expenses

Sl. No.	Particulars	FY 2021-22 (Base Year)
1	Number of personnel per ckt. km (55%)	0.0851
2	Number of personnel per substation (45%)	7.2603
3	Annual expenses per personnel (Rs. Lakh)	8.2896

Further, BSPTCL has projected Transmission Line in ckt. km, number of sub-stations and number of employees for FY 2022-23 to FY 2024-25, as shown in the following Table:

Table 5-7: Transmission Line, No. of sub-stations and No. of employees projected for the Control Period

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Transmission Line in ckt. km	17,285	18,478	19,850
2	No. of sub-stations	152	157	165



Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
3	No. of employees	2,298	2,284	2,263

BSPTCL has considered additions in number of sub-stations based on the schemes, which are expected to get capitalized during FY 2022-23 to FY 2024-25. Number of employees are projected to be reduced in the Control Period on account of retirement of employees. Transmission Line in ckt. km is estimated based on the lines expected to get commissioned during FY 2022-23 to FY 2024-25.

Regulation 21.1 of MYT Regulations, 2021 specifies that the employee cost shall be computed as per the approved norm escalated by CPI for immediately preceding three years, as follows:

“21.1 Employee Cost

Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Transmission Licensee and one-time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief, governed by the following formula:

$$EMP_n = (EMP_b * CPI \text{ inflation}) + Provision$$

Where:

EMP_n : Employee expense for the year n

EMP_b : Employee expense as per the norm

CPI inflation: is the average increase in the Consumer Price Index (CPI) for immediately preceding three years.....”

In accordance with the above Regulation, the Petitioner has calculated the average increase in CPI Index in Table 3-11 of this Petition. BSPTCL has considered the average increase of 6.00% for projecting employee expenses for the Control Period from FY 2022-23 to FY 2024-25, in line with the increase considered in APR for FY 2021-22. BSPTCL has considered the same base value norms (without any escalation) for no. of personnel per ckt. Km and no. of personnel per substation for computing employee expenses for FY 2022-23 to FY 2024-25. BSPTCL has considered the escalation in each year only on the base value norms for Annual expenses per personnel.



The following Table shows the computation of employee expenses in accordance with Regulation 21.1 of BERC MYT Tariff Regulations, 2021:

Table 5-8: Employee Expenses projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	Base Value	FY 2022-23	FY 2023-24	FY 2024-25
1	Average annual CPI Inflation		6.00%	6.00%	6.00%
2	Norms-Number of personnel per ckt. km	0.0851	0.0851	0.0851	0.0851
3	Norms-Number of personnel per substation	7.2603	7.2603	7.2603	7.2603
4	Transmission line length in ckt. km		17,285	18,478	19,850
5	No. of Sub-stations		152	157	165
6	Norms-Annual expenses per personnel (Rs. Lakh)	8.2896	8.7870	9.3142	9.8731
7	Employee cost (Number of personnel per ckt. km) (2*4*6)/100 (Rs. Crore)		129.26	146.47	166.78
8	Employee cost (Number of personnel per substation) (3*5*6)/100 (Rs. Crore)		96.97	106.17	118.28
9	Total Employee cost for the year (7+8) (Rs. Crore)		226.23	252.64	285.06

The Hon'ble Commission is requested to approve Employee expenses for the Control Period as shown in the above table.

Repairs and Maintenance Expenses (R&M)

Regulation 21.2 of MYT Regulations, 2021 specifies provisions for computation of R&M expenses, the relevant extract of the Regulation is as follows:

21.2 Repairs and Maintenance (R&M) Expense

Repairs and Maintenance expense shall be calculated as percentage (as per the norm determined) of Opening Gross Fixed Assets excluding land cost for the year governed by following formula:

$$R\&M_n = K_b * GFAn$$

Where:

$R\&M_n$: Repairs & Maintenance expense for nth year

$GFAn$: Opening Gross Fixed Assets for nth year

K_b : Percentage point as per the norm.



In view of the above Regulations, BSPTCL has proposed 'K factor' at 0.62% for the Control Period from FY 2022-23 to FY 2024-25 as discussed earlier in Chapter for Business Plan. BSPTCL has applied the 'K factor' of 0.62% on the Opening GFA (net of Land) for computation of R&M expenses for FY 2022-23 to FY 2024-25, as shown in the following Table:

Table 5-9: R&M Expenses projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1.	Opening GFA (net of Land)	10,066.48	11,579.52	13,282.66
2.	% on GFA (K factor)	0.62%	0.62%	0.62%
3	R&M Expenses on Opening GFA (1*2)	62.69	72.12	82.72

The Hon'ble Commission is requested to approve R&M Expenses for the Control Period as shown in the above table.

Administration and General Expenses (A&G)

As discussed earlier in Chapter for Business Plan, BSPTCL has proposed norms for A&G expenses in terms of A&G expense per personnel and A&G expense per substation for Base Year of FY 2021-22 for computation of A&G expenses for the Control Period. The following Table shows the norms proposed by BSPTCL for Base Year of FY 2021-22.

Table 5-10: Base value norms for A&G Expenses

Sl. No.	Particulars	FY 2021-22 (Base Year)
1	A&G Expenses per personnel (Rs. Lakh)	1.7923
2	A&G Expenses per sub-station (Rs. Lakh)	23.6594

Regulation 21.3 of the BERC MYT Regulations, 2021 provides for escalation of base value norms for consideration of A&G Expenses. The relevant extracts are as follows:

"21.3 Administrative and General (A&G) Expense

A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and Consumer Price Index (CPI) in the ratio 60:40 and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Transmission Licensee

and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

$$A\&G_n = (A\&G_b * WPI \text{ inflation}) + Provision$$

Where:

A&G_n: A&G expense for the year n

A&G_b: A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years.....”

In accordance with the above Regulation, BSPTCL has calculated the weighted average increase in WPI: CPI Index in Table 3-15 of this Petition. BSPTCL has considered the weighted average increase of 3.85% for projecting A&G expenses for each year of the Control Period from FY 2022-23 to FY 2024-25, in line with the increase considered in APR for FY 2021-22.

BSPTCL has estimated number of sub-stations and number of employees for FY 2021-22 as discussed in above paragraphs. Norms proposed by BSPTCL for Base Year of FY 2021-22 is considered for projecting A&G expenses for FY 2022-23. In similar manner, A&G expenses for FY 2023-24 and FY 2024-25 have been computed considering A&G expenses for FY 2022-23 and FY 2023-24 as base year A&G expense.

The following Table shows the computation of A&G expenses for the Control Period.

Table 5-11: A&G Expenses projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	Base Norms	FY 2022-23	FY 2023-24	FY 2024-25
1	Average annual WPI & CPI Index		3.85%	3.85%	3.85%
2	Norms-A&G Expenses per personnel (Rs. Lakh)	1.7923	1.8613	1.9330	2.0074
3	Norms-A&G Expenses per substation (Rs. Lakh)	23.6594	24.5703	25.5163	26.4987
4	No. of Employees		2,298	2,284	2,263
5	No. of Sub-stations		152	157	165
6	A&G Expenses (No. of employees) (2*4) (Rs. Crore)		42.77	44.15	45.43
7	A&G Expenses (No. of substations) (3*5) (Rs. Crore)		37.35	40.06	43.72



Sl. No.	Particulars	Base Norms	FY 2022-23	FY 2023-24	FY 2024-25
8	Total A&G Expenses for the year (Rs. Crore) (6+7)		80.12	84.21	89.15

The Hon'ble Commission is requested to approve A&G Expenses for the Control Period as shown in the above table.

Holding Company Expenses

BSPTCL submits that BSP(H)CL, which is the Holding Company of all the State Utilities and Generating Company, recovers its expenses from its subsidiary Companies. BSPTCL is claiming holding expenses separately in line with the methodology adopted in previous Tariff Order.

BSPTCL has claimed Holding Company expenses for the Control Period on the basis of actual expenses for FY 2020-21. BSPTCL has not considered any increase in Holding Expenses for the Control Period. Any variation with respect to the submitted expenses shall be claimed in True-up of respective years of the Control Period.

Table 5-12: Holding Company Expenses projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Holding Company Expenses	11.44	11.44	11.44

The Hon'ble Commission is requested to approve Holding Company Expenses for the Control Period as shown in the above table.

The following Table shows the total O&M expenses projected by BSPTCL for each year of the Control Period:

Table 5-13: O&M Expenses projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Employee Expenses	226.23	252.64	285.06
2	R&M Expenses	62.69	72.12	82.72
3	A&G Expenses	80.12	84.21	89.15
4	Holding Company Expenses	11.44	11.44	11.44
5	Total O&M Expenses	380.48	420.40	468.37



The Hon'ble Commission is requested to approve O&M Expenses for the Control Period as shown in the above table.

5.8 Return on Equity

BSPTCL has calculated RoE in accordance with Regulation 22 of MYT Regulations, 2021, as reproduced below:

"22. Return on Equity

(a) *Return on equity shall be computed on 30% of the capital cost or actual equity, whichever is lower:*

.....

(c) *Return on equity shall be computed at the rate of 15.5% for the project which is commissioned w.e.f. 01.04.2015 and further incentive equivalent to 0.5% will be allowed in the form of RoE, if the project is completed within schedule as per the Annexure A or original schedule period as the case may be. However, Return on Equity for the project commissioned prior to 01.04.2015 shall be allowed at the rate of 14%."*

Further Clause 2 of Regulation 27 specifies for the formula for computation of RoE. The relevant extract of the Regulation is as:

"27. Tax on Return on Equity

.....

2) *Rate of return on equity shall be rounded off to two decimal places and shall be computed as per the formula given below:*

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of licensee/SLDC paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess."



BSPTCL has considered the opening balance of equity for FY 2022-23 same as the closing balance of equity for FY 2021-22 and onwards.

Further, in respect of projects commissioned with effect from 1st April 2015, the opening equity is considered at Rs. 375.41 Crore based on the closing equity considered in APR for FY 2021-22. The addition to equity during each year of the Control Period has been considered as projected in Table 5-4 of this Petition.

BSPTCL submits that the crisis of COVID-19 pandemic and subsequent lockdown imposed by the Central and State Government have had significant financial impact on all stakeholders, including the consumers of BSPTCL. BSPTCL feel that the impact of the pandemic was primarily witnessed in FY 2020-21 and FY 2021-22. The pandemic still seems to exist with new variants of COVID-19 and therefore, it may also have an impact in coming years. BSPTCL, being the State Transmission Utility (STU), has kept a considerate view regarding the consumers of the State of Bihar while filing this Petition.

In view of the above, BSPTCL proposes to claim lower Return on Equity (ROE) of 10% as compared ROE of 15.5% allowed in MYT Regulations, 2021 for the Control Period on assets capitalised after 01.04.2015 and instead of 14.00% on assets capitalised before 01.04.2015. This would result in passing on some benefit to the consumers of the State during this difficult period. BSPTCL would like to submit that claiming lower ROE at 10% for the financial years under consideration shall not imply that BSPTCL shall continue to claim ROE at 10% in perpetuity. At the time of filing the next Tariff Petition, BSPTCL shall be at liberty to claim ROE either at the reduced rate of 10% or 15.5% as per MYT Regulations, 2021.

BSPTCL has considered the MAT rate of 17.47% in line with the actual MAT rate applicable for FY 2020-21 as per annual accounts to arrive at effective Tax rate. The calculation of RoE is summarised in the table below:

Table 5-14: Return on Equity proposed for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Equity as on 1.4.2015	375.41	375.41	375.41
2	Rate of Return on Equity	10.00%	10.00%	10.00%



Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
3	Tax/MAT rate %	17.47%	17.47%	17.47%
4	Rate of Return on Equity (Pre-tax)	12.12%	12.12%	12.12%
5	Return on Equity (1*4)	45.49	45.49	45.49
	Equity on projects commissioned w.e.f.1.4.2015			
6	Opening Equity	1,831.56	2,125.68	2,466.31
7	Addition of equity during the year	294.12	340.63	380.77
8	Closing Equity (6+7)	2,125.68	2,466.31	2,847.08
9	Average Equity	1,978.62	2,296.00	2,656.70
10	Rate of Return on Equity	10.00%	10.00%	10.00%
11	Tax/MAT rate %	17.47%	17.47%	17.47%
12	Rate of Return on Equity (Pre-tax)	12.12%	12.12%	12.12%
13	Return on Equity (9*12)	239.75	278.21	321.91
14	Total Return on Equity (5+13)	285.24	323.70	367.40

The Hon'ble Commission is requested to approve pre-tax Return on Equity for the Control Period as shown in the above table.

5.9 Interest on Working Capital

The Petitioner has arrived at the working capital requirement in accordance with Regulation 26 of MYT Regulations, 2021, as follows:

"26 Interest on working Capital

(a) The Transmission Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:

(i) Receivables equivalent to two (2) month of transmission charges calculated on target availability level.

(ii) O&M Expenses of one (01) month.

(iii) Maintenance spares @ 40% of R&M expenses for one month.

.....

Less:

(iv) Return on equity and contribution to contingency reserves equivalent to two months.

(v) Amount of security deposits from Transmission System users, if any, held during the year except the security deposits held in the form of Bank Guarantee from Transmission System Users.



.....

b) Interest on working capital shall be on normative basis and rate of interest shall be equal to the State Bank (one-year tenure) Marginal Cost of Funds-based Lending Rate ('MCLR') as of the date on which petition for determination of tariff is filed plus 150 basis points. The rate of interest for the purpose of Truing-up shall be the weighted average MCLR of the concern Financial Year plus 150 basis points.

.....”

In accordance with the above provisions, BSPTCL has computed the interest on working capital for the Control Period. Regulation 26 (b) specifies that the rate of interest shall be equal to State Bank of India (SBI) one-year MCLR as of the date on which Tariff Petition is filed plus 150 basis points.

BSPTCL has hence, considered MCLR rate of 7.00% for one-year tenure revised with effect from 15th September 2021 as available on its website (<https://www.sbi.co.in/portal/web/interest-rates/mclr>) and accordingly added 150 basis points as provided in the Regulation. SLDC has therefore, considered interest rate of 8.50% (7.00%+1.50%) for computation of interest on working capital for the Control Period as shown in the Table below:

Table 5-15: Interest on Working Capital projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Receivables equivalent to two (2) months	247.95	285.78	328.97
2	O&M Expenses of one month	31.71	35.03	39.03
3	Maintenance spares @ 40% of R&M expenses for one month	2.09	2.40	2.76
4	Less: RoE and contribution to contingency reserve for 2 months	47.54	53.95	61.23
5	Total Working Capital	234.21	269.27	309.53
6	Rate of Interest on Working Capital	8.50%	8.50%	8.50%
7	Interest on Working Capital	19.91	22.89	26.31

The Hon'ble Commission is requested to approve Interest on Working Capital for the Control Period as shown in the above table.



5.10 Non-Tariff Income

BSPTCL submits that it has considered Non-Tariff Income for the Control Period based on APR of FY 2021-22 after considering escalation of 5% year on year.

Table 5-16: Non-Tariff Income projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Non-Tariff Income of previous year	62.66	65.80	69.09
2	Escalation	5%	5%	5%
3	Increase	3.13	3.29	3.45
4	Non-Tariff Income for the Year	65.80	69.09	72.54

Note: Excluding Deferred Income.

The Hon'ble Commission is requested to approve Non-Tariff Income for the Control Period as shown in the above table.

5.11 ARR for the Control Period from FY 2022-23 to FY 2024-25

Based on the discussions made in previous sections of this Chapter, BSPTCL has computed the ARR for the Control Period, as shown in the Table below:

Table 5-17: ARR projected for the Control Period (Rs. Crore)

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	O&M expenses (a+ b+ c+ d)	380.48	420.40	468.37
	<i>a. Employee cost</i>	226.23	252.64	285.06
	<i>b. R&M expenses</i>	62.69	72.12	82.72
	<i>c. A&G Expenses</i>	80.12	84.21	89.15
	<i>d. Holding Company expenses</i>	11.44	11.44	11.44
2	Depreciation	488.28	577.09	676.35
3	Interest on Loan Capital	379.58	439.67	507.95
4	Interest on Working Capital	19.91	22.89	26.31
5	Return on Equity	285.24	323.70	367.40
6	Less: Non-Tariff Income	65.80	69.09	72.54
7	Net ARR	1,487.69	1,714.67	1,973.84

The Hon'ble Commission is requested to approve Net ARR for the Control Period as shown in the above Table.

5.12 Trued-up Revenue Gap/ (Surplus) of FY 2020-21

BSPTCL had arrived at net Revenue Surplus of Rs. 83.05 Crore in the truing up for FY 2020-21. BSPTCL, in accordance with the BERC MYT Regulations, 2018 has carried forward the Trued-up Revenue Surplus of FY 2020-21 along with holding cost to the ARR of FY 2022-23.

BSPTCL has considered the holding cost as 8.55% for FY 2020-21 (SBI MCLR 7.05%+1.50%) as on April 1, 8.50% (SBI MCLR 7.00%+1.50%) as on September, 2021 for FY 2021-22 and half year of FY 2022-23 as per the methodology adopted by the Hon'ble Commission in previous Tariff Orders, as detailed in the below Table:

Table 5-18: Revenue Gap/(Surplus) of FY 2020-21 along with Holding Cost (Rs. Crore)

Sl. No.	Particulars	Amount (Rs. Crore)
1	Revenue Gap/(Surplus) in True Up of 2020-21	(83.05)
2	Interest for FY 2020-21 [(SBI MCLR 7.05%+1.5%) @8.55%] for 6 months	(3.55)
3	Interest for FY 2021-22 [(SBI MCLR 7.00%+1.5%) @8.50%] for 1 year	(7.06)
4	Interest for FY 2022-23 [(SBI MCLR 7.00%+1.5%) @8.50%] for 6 months	(3.53)
5	Total Revenue Gap/(Surplus) with holding cost	(97.19)

The Hon'ble Commission is requested to approve Revenue Surplus with Holding Cost as shown in the above table.

5.13 APR Revenue Gap/(Surplus) of FY 2021-22

BSPTCL has arrived at a Revenue Surplus of **Rs. 118.64 Crore** in APR of FY 2021-22. As discussed in the previous Chapter of APR for FY 2021-22, BSPTCL has not adjusted this Revenue Surplus in ARR of FY 2022-23 in accordance with the provisions of MYT Regulations, 2018.

5.14 Annual Transmission Charges for FY 2022-23

BSPTCL has considered the components of ARR as discussed in this Chapter and has considered Revenue Surplus along with holding cost for FY 2020-21 to arrive at Annual Transmission Charges for FY 2022-23, as shown in the following Table:



Table 5-19: Revenue Gap/(Surplus) for FY 2022-23 (Rs. Crore)

Sl. No.	Particulars	FY 2022-23
1	Net ARR considered for FY 2022-23	1,487.69
2	Add: Revenue Gap of FY 2020-21 along with Carrying cost	(97.19)
3	Annual Transmission Charges for FY 2022-23 (1+2)	1,390.51

The Hon'ble Commission is requested to approve Transmission Charges as shown in the above table for FY 2022-23.

5.15 Methodology of Recovery of ARR

Regulation 33 specifies the procedure for recovery of Annual Transmission Charges, as reproduced below:

“33. Annual Transmission Charges (ATC)

33.1 The annual Transmission charges of the transmission system shall be computed on annual basis, in accordance with norms contained in these regulations, aggregated as appropriate, and recovered on monthly basis as transmission charge from the users.

33.2 The Transmission charge (inclusive of incentive/disincentive) for AC system payable for a calendar month shall be:

$$ARR \times (NDM/NDY) \times (TAFM/NATAF)$$

Where;

$$NATAF = 98\%$$

NDM = Number of days in the month

NDY = Number of days in the year

TAFM = Transmission System availability factor for the month, in percent computed in accordance with Appendix-II.

34. Sharing of charges for Intra-State Transmission Network

34.1 The Aggregate Revenue Requirement of the Transmission Licensee, as approved by the Commission, shall be shared by all long-term users and medium-term users of the transmission system on monthly basis in the ratio of their respective contracted transmission capacities to the total contracted transmission capacity, in accordance with the following formula:

$$TC_n = (\text{Transmission ARR net of incentive/disincentive}) \times (NDM/NDY) \times CC_n/SCC$$

Where,



TCn = transmission charges for the month payable by the nth long-term user or medium-term user of the transmission system;

Transmission ARR = Aggregate Revenue Requirement of the Transmission Licensee, determined in accordance with Regulation 16 of these Regulations;

CCn = capacity contracted in MW by the nth long-term user or medium-term user of the transmission system during the month;

SCC = sum of capacities contracted in MW by all long-term users and medium-term users of the transmission system during the month;

NDM= Number of days in the month

NDY= Number of days in the year

Provided that the TCn shall be payable on monthly basis by each long-term user or medium-term user of the transmission system and shall be collected by the State Transmission Utility (STU)."

In accordance with the above Regulation, BSPTCL requests the Hon'ble Commission to permit BSPTCL to kindly recover the Annual Transmission Charges of Rs. 1,390.51Crore in 12 monthly instalments, subject to normative transmission availability of 98%.

For the purpose of determination of Transmission Charges, BSPTCL has segregated the Annual Transmission Charges of Rs. 1,390.51Crore between NBPDC/ SBPDCL and Railways based on the Maximum Projected Load during FY 2022-23.

Maximum Peak Load of BSPTCL projected for FY 2022-23 is 7,154 MW, which is considered for computation of Transmission Charges. Maximum Load of NBPDC/ SBPDCL is considered at 7,054 MW. Maximum Load of Railways is considered at 100 MW based on contracted capacity.

Transmission Charges for NBPDC/ SBPDCL

BSPTCL has bifurcated the total ARR based on the maximum projected load of individual long-term open access consumers. The combined maximum load of NBPDC/ SBPDCL is considered at 7,054 MW.

The Monthly Transmission Charges of BSPTCL to be recovered from both the Distribution Companies is as follows:



Table 5-20: Transmission Charges for NBPDC and SBPDCL (Rs. Crore)

Sl. No.	Particulars	FY 2022-23
1	Annual Transmission Charges for FY 2022-23 (Rs. Crore)	1,390.51
2	Total Maximum Projected Load (in MW)	7,154
3	Total Maximum Load of NBPDC and SBPDCL	7,054
4	Annual Transmission Charges to be levied to NBPDC and SBPDCL (Rs. Crore)	1,371.07
5	Monthly Transmission Charges to be levied to NBPDC and SBPDCL (Rs. Crore)	114.26

The Hon'ble Commission is requested to allow BSPTCL to recover monthly Transmission Charges of Rs. 114.26 Crore from NBPDC and SBPDCL in proportion to the power sharing ratio, subject to target availability.

Transmission Charges for Railways

BSPTCL has bifurcated the total ARR based on the maximum projected load of individual long-term open access consumers. The combined maximum load of Railway is considered at 100 MW based on contracted capacity.

The Monthly Transmission Charges of BSPTCL to be recovered from Railways is as follows:

Table 5-21: Transmission Charges for Railways (Rs. Crore)

Sl. No.	Particulars	FY 2022-23
1	Annual Transmission Charges for FY 2021-22 (Rs. Crore)	1,390.51
2	Total Maximum Projected Load (in MW)	7,154
3	Total Contracted Capacity of Railways	100
4	Annual Transmission Charges to be levied to Railways (Rs. Crore)	19.44
5	Monthly Transmission Charges to be levied to Railways (Rs. Crore)	1.62

The Hon'ble Commission is requested to allow BSPTCL to recover monthly Transmission Charges of Rs. 1.62 Crore from Railways, subject to target availability.



5.16 Transmission Charges for Short Term Open Access Consumers

BSPTCL has determined Short Term Open Access charges in accordance with the methodology adopted by the Hon'ble Commission in previous Tariff Order.

Transmission Charges payable by Short Term Open Access Consumer shall be determined by the following formula.

$$\text{Transmission Charges} = \text{ATC} / (\text{PLST} \times 8760)$$

Where,

ATC = Annual Transmission Charges arrived for FY 2022-23 for BSPTCL in Rs. Crore

PLST = Peak Load Projected to be served by the State Transmission System.

BSPTCL for the purpose of computation of Transmission Charges has considered peak load of 7,154 MW.

Transmission Charges for Short Term Open Access Consumer

$$= 1,390.51 / (7,154 \times 8760) \times 10^7 = \text{Rs. } 221.88/\text{MWh}$$

The Transmission Charges for Short Term Open Access shall be payable on the basis of energy actually scheduled for short-term transactions.

6 Compliance to Directives

The Hon'ble Commission in Tariff Order dated 19th March 2021, had issued certain directives to BSPTCL. This Chapter deals with the compliance status of directives for compliance and implementation by the Petitioner.

6.1 Directive 1: Energy Auditing and Transmission Loss

a) **Hon'ble Commission's direction:**

"The Commission notes the submission of BSPTCL. The Commission observed that BSPTCL have maintained month wise State Energy Account and have incorporated the same in their Annual Accounts. The Commission again directs BSPTCL to maintain its Energy Accounting on monthly basis and to submit the same to the Commission on quarterly basis. The Commission further directs to incorporate the monthly State Energy Accounting details in its Annual Accounts."

b) **Compliance Status and Actions**

BSPTCL is maintaining the month-wise State Energy Account and the same has been annexed as **Annexure II**. Also, BSPTCL has incorporated State Energy Accounting details in its Annual Accounts.

6.2 Directive 2: Maintenance of Asset / Property Register

a) **Hon'ble Commission's direction:**

"The Commission notes the submission of the Petitioner regarding COVID-19 scenario and hence the Commission is not taking any punitive action in this Tariff Order. However, the Commission directs to expedite the process of award of tender and apprise the same to the Commission on quarterly basis."

b) **Compliance Status and Actions**

BSPTCL submits that it had floated tender vide Tender Notice No.-30/PR/BSPTCL/2020 for 'Engagement of agency for Identification, Valuation, Preparation of Fixed Asset Register and Physical Verification of Fixed Assets of Bihar State Power Transmission Company Limited', but it is not awarded since, no responses were received from bidders. BSPTCL is preparing the list of the assets since the formation of the Company based on the queries from bidders. After finalisation of list, BSPTCL shall re-tender for the same.



6.3 Directive 3: Meters at interface points of BSPTCL & BGCL

a) **Hon'ble Commission's direction:**

"The Commission notes the submission of BSPTCL. The Commission directs BSPTCL to follow the procedure to avoid mismatch in energy accounting with other licensee(s)/ beneficiary(s)."

b) **Compliance Status and Actions**

BSPTCL had already submitted that representative of BSPTCL and BGCL have agreed on joint meter readings and any issues/ discrepancies arising from the same would be resolved by senior officers of BGCL and BSPTCL jointly. In this regard, regular meetings between representatives of BSPTCL and BGCL are being held.

6.4 Directive 5: Auxiliary Consumption and Electricity Charges

a) **Hon'ble Commission's direction:**

"The Commission notes the submission of BSPTCL and directs BSPTCL to expedite the process."

b) **Compliance Status and Actions**

BSPTCL submits that field officers of BSPTCL and DISCOM are coordinating for early installation of separate metering for auxiliary consumption and colony consumption. BSPTCL is continuously following up with the DISCOMs. Till now, there are four nos. of Grid Sub-stations where separate meters for auxiliary consumption and colony consumption are installed, namely, 132/33 kV GSS Banka, 132/33 kV GSS Kishanganj, 132/33 kV GSS Madhunani and 132/33 kV GSS Dalsinghsarai.

6.5 Directive 6: Timely Completion of Projects/ Schemes & Prepare Reporting of IEDC/IDC:

a) **Hon'ble Commission's direction:**

"The Commission notes the submission of the Petitioner, however the Commission observes that in spite of regulatory provisions of IDC and IEDC, BSPTCL have not provided the compliance of the same in their submission. BSPTCL is incurring huge capital expenditure



under their upcoming schemes whose funding is considered under debt: equity ratio of 80:20. Thus, the Commission is of the view that some employee expenses and A&G expenses must be capitalized under IEDC and interest under debt portion should also be capitalized under IDC related with at least upcoming projects/schemes. The Commission directs BSPTCL to furnish the compliance before next Tariff filing positively."

b) Compliance Status and Actions

BSPTCL submits that IEDC is not capitalized, only IDC is capitalized against the projects funded through ADB loan and State Plan (under 13th Plan). BSPTCL submits IDC on actual basis along with Tariff Petitions.

6.6 Directive 7 Discharge of Role of STU by BSPTCL and Preparation of Composite Power Map of Transco

a) Hon'ble Commission's direction:

"The Commission has noted the submission of BSPTCL and observes that still there is scope of more refinement need to be done for power map. Commission directs BSPTCL to prepare the power map of Bihar in way so it be more illustrative and presentable in nature and submit the same by May 2021."

b) Compliance Status and Actions

The Power Map as per the direction of the Hon'ble Commission is attached as Annexure C1.

6.7 Directive 8: Disclosure with respect to quantitative details no. of employees, total transmission lines in Ckt KM, no. of Substations and no. of bays

a) Hon'ble Commission's direction:

"The Commission has noted the submission of the BSPTCL. The Commission reiterates the same to be incorporated in ensuing year's Audited Account."

b) Compliance Status and Actions



BSPTCL is submits that it has included the details of no. of employees, total transmission lines in Ckt km, no. of Substations and no. of bays in the audited accounts as per the direction of the Hon'ble Commission.

6.8 Directive 9: Prior approval of Capex

a) Hon'ble Commission's direction:

"The Commission directs BSPTCL to file a separate Petition as per BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 vide letter dated 6 January, 2021."

b) Compliance Status and Actions:

BSPTCL submits that it files separate Petition for approval of Capital Investment in accordance with the provisions of BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018. BSPTCL has submitted a separate Petition for Capital Investment before the Hon'ble Commission on 5th August 2021. Meanwhile, finalisation of MYT Regulations 2021 got delayed and filing of MYT Petition was in process. BSPTCL during the hearing dated 2nd November 2021 for admittance of Petition on Capital Investment requested the Hon'ble Commission to consider Capital Investment Petition along with MYT Petition. Also, MYT Regulations, 2021 specify submission of Business Plan containing Capital Investment along with MYT Petition.

6.9 Directive 10: Standalone Accounting Statement

a) Hon'ble Commission's direction:

"As per proviso to Regulation 3.2(2)(ix) of BERC (Multi Year Transmission Tariff and SLDC Charges) Regulations, 2018, BSPTCL shall prepare separate accounting statement for each licensed business as given below:

".....

Provided further that, in case separate Accounting Statements are not submitted for each licensed Business in accordance with the Licence conditions and for each regulated Business for the Financial Year (FY) 2019-20 onwards, the Petitions filed by the Transmission Licensee or SLDC, as the case may be, may be rejected by the Commission after giving the Petitioner a reasonable opportunity of being heard.

.....

.....



Provided also that till the SLDC remains a part of Bihar State Power Transmission Company Limited (BSPTCL), separate books of accounts for SLDC shall be maintained by the Bihar State Power Transmission Company Limited and shall be audited and certified by the statutory auditor”

In view of the above mentioned provisos, BSPTCL is directed to submit standalone accounting statements of Transmission Business and SLDC business for Tariff proceedings of subsequent year onwards.”

b) Compliance Status and Actions:

BSPTCL submits that BSPTCL prepares joint annual accounts for BSPTCL and SLDC. Previously, the Hon’ble Commission has determined tariff/charges for SLDC considering the allocation statement of expenses and income. Further, BSPTCL and SLDC requested the Hon’ble Commission to consider allocation statement for trueing up of SLDC during hearing as well as through written submission while finalising MYT Regulations, 2021. The same has been considered by the Hon’ble Commission in MYT Regulations, 2021. Accordingly, BSPTCL is submitting allocation statement duly signed by an Auditor.

6.10 Directive 11: Schedule of capitalization of the projects shown under 12th Plan (Old Projects/schemes)

a) Hon’ble Commission’s direction:

“BSPTCL vide its submission subsequent to the Petitions and during the TVS mentioned that it has not prepared and maintained capex/capitalization data for the project shown under 12th Plan (Old Projects/schemes). With regards to the same projects, the Commission directs BSPTCL to submit the following information by 31 July, 2021 to the Commission:

- I. Complete list of NIT wise projects undergoing/planned under 12th Plan (Old Projects/schemes).*
- II. NIT wise Estimated project cost, Approved project cost and Amended project cost for each of such projects/Schemes.*
- III. Schedule of capitalization and capital expenditure for each of project under 12th Plan (Old Projects/schemes).*
- IV. Scheduled date of Commissioning for each project under 12th Plan (Old Projects/schemes).”*

b) Compliance Status and Actions:



BSPTCL submits NIT wise details of ongoing projects under 12th Plan (Old Scheme) in **Annexure C2** of this Petition.

6.11 Directive 12: Online platform for capital project monitoring

a) Hon'ble Commission's direction:

"BSPTCL should develop a web-based platform/portal such that it encompasses features tracking the various schemes being carried out by BSPTCL in terms of cost, time, scope, actual progress and deviations. BSPTCL shall update all relevant information on the web based portal on regular basis and provide access of the same to the office of the Commission. This shall enable the Commission to monitor real time data of capital projects and suggest corrective actions as and when needed."

b) Compliance Status and Actions:

BSPTCL filed a Review Petition on Order dated 19th March 2021 requesting the Hon'ble Commission to exempt it from developing web-based portal for capital project monitoring. In the Order dated 9th November 2021, the Hon'ble Commission clarified that decision is left to BSPTCL to develop web-based portal or not. The relevant extracts of the Order are as follows:

"

The Commission notes that BSPTCL has been conducting internal monitoring of its projects on a regular basis as well as apprising the CEA and Bihar Government about the project status. In such a case, if BSPTCL thinks that it can efficiently and effectively monitor the progress of their projects without any web-based project monitoring platform, taking this into account, the Commission leaves it to BSPTCL to decide whether they need to develop such a portal or not. Furthermore, the Commission has all the right to collect the data from the utilities regarding the progress of capital projects as and when required before passing orders and for the purpose of efficient discharge of the functions of the Commission under the Act.

....."



6.12 Directive 13: Submission of Peak and Average Loading of Transmission Elements

a) Hon'ble Commission's direction:

"BSPTCL is directed to submit on a quarterly basis about average as well as peak loading of various 220 kV, 132 kV and 33 kV sub-stations in BSPTCL network."

b) Compliance Status and Actions:

The required information on average as well as peak loading of various 220 kV, 132 kV and 33 kV sub-stations in BSPTCL network for the first quarter of FY 2021-22 has already been submitted to the Hon'ble Commission. The data for the second quarter of FY 2021-22 has been submitted as **Annexure C3** of this Petition.

6.13 Directive 14: Direct Capitalization

a) Hon'ble Commission's direction:

"BSPTCL is directed to strictly adhere to Regulation 6.6 of the BERC (procedure for filing Capital investment and capitalization plan), 2018 and obtain approval for assets capitalized directly. BSPTCL should submit a status report of Assets that it has capitalized directly without Commission's approval till date by 2nd quarter of FY 2021-22."

b) Compliance Status and Actions:

BSPTCL submits that it has not capitalized any asset directly. BSPTCL has taken regulatory approval from the Hon'ble Commission for all ongoing projects in the past. The list of projects approved by the Hon'ble Commission in past Tariff Order have been enlisted in Annexure III of this Petition.

6.14 Directive 15: Regulatory Accounting

a) Hon'ble Commission's direction:

"BSPTCL is directed to prepare and submit the Regulatory Accounts as per BERC (Power Regulatory Accounting) Regulations, 2018 in the next Tariff proceeding."

b) Compliance Status and Actions:

BSPTCL submits that the process of preparation of Regulatory Accounts for BSPTCL shall be taken up after implementation of SAP/ERP system.

Other Directives given in Order dated 19th March 2021

6.15 Detailed Justification for variation in capitalization for projects under 12th (Ongoing projects/scheme)

a) *The Commission directed BSPTCL to submit to submit detailed reasoning along with supporting documents against the amended project cost as compared to the original project cost for each of the projects under 12th (Ongoing) plan.*

b) **Compliance Status and Actions:**

The Hon'ble Commission in Tariff Order dated 19th March 2021 observed difference between original project cost and amended project cost and original project cost and cumulative capitalization. The relevant extracts are as follows:

“

However, when the cumulative capitalization of the aforesaid schemes claimed by BSPTCL till FY 2021-22 is compared with the total original and amended project cost of these schemes, a cumulative deviation of Rs 609.20 Crore (16%) and Rs. 113.81 Crore (approx. 2.90%) respectively, is observed.

.....”

BSPTCL submits that at the time of filing of Tariff Petition last year, BSPTCL had actual status till FY 2019-20 only, and submission for FY 2020-21 and FY 2021-22 was on estimation basis. In the present Petition, BSPTCL is submitting compliance based on the current status for all 79 projects under 12th Plan (Ongoing projects/scheme). Further, BSPTCL submits that several projects are still not capitalized. However, by the end of FY 2021-22, all projects under 12th (Ongoing) Plan shall be capitalized.

As per current status, the amended cost of projects is Rs. 3841.40 Crore and cumulative capitalization is Rs. 3869.34 Crore. In comparison with approved original project cost of Rs. 3761.75 Crore, difference between original project cost and amended project cost and original project cost and cumulative capitalisation is Rs. 79.65 Crore and Rs. 107.59 Crore, respectively. The cumulative capitalization exceeds the awarded cost due to the following reasons:

- Earlier BSPTCL submitted only awarded cost as project cost, which does not include entry tax component and IDC, wherever applicable.



- Cumulative Capitalization of ADB projects exceeds the approved cost, on account of entry tax and IDC.
- BSPTCL requests the Hon'ble Commission to allow IDC on account of COVID as all ongoing works are affected in the last two financial years. The Hon'ble Commission has already disallowed penal charges.

The detailed justifications for such variation are attached as **Annexure C4** of this Petition.

Further, in the APR of FY 2020-21, the Hon'ble Commission observed that proposed cumulative capitalization till FY 2020-21 is exceeding the approved capital expenditure by Rs. 173.77 Crore for ADB projects and Rs. 16.90 Crore for BRGF projects. In the absence of justification, the Hon'ble Commission provisionally disallowed the capitalization of Rs. 190.67 Crore in APR of 2020-21. Further, the Hon'ble Commission directed BSPTCL to submit the detailed justification and analysis for the excess capitalization in the next Tariff Petition (i.e., at the time of Truing-up of FY 2020-21).

In this regard, BSPTCL submits that due to COVID-19, all ongoing works of BSPTCL were affected during last two financial years. All projects under 12th Plan (Ongoing projects) have not been capitalized. These works will be capitalized by FY 2021-22. Till FY 2020-21, the Capitalization under ADB and BRGF are within the range of approved cost. However, after comparing with cumulative capitalization, cumulative Capitalization of projects funded through ADB loan exceeds by Rs. 107.53 Crore, as shown in the Table below:

Particulars	Approved Cost (Rs. Crore)	Capitalization up to FY 2020-21 (Rs. Crore)	Cumulative Capitalization (Rs. Crore)	Difference (Rs. Crore)
ADB	520.98	511.47	628.51	107.53
BRGF	1424.31	1389.69	1423.94	-0.37

Therefore, BSPTCL requests the Hon'ble Commission to consider this submission for information purposes only at this stage, and not come to any conclusions any based on these submissions, as all projects are not capitalized yet. BSPTCL shall furnish actual status once all projects under 12th Plan (ongoing projects) are capitalized.



6.16 Scheme wise details for 12th Plan (Old Project/ Schemes) in the Given format

a) *The Commission directs BSPTCL to provide relevant information as sought by the Commission in Annexure-4 with scheme wise detailed justification and supporting documents before the next Tariff filing.*

b) **Compliance Status and Actions:**

BSPTCL submits that it had undertaken projects under 12th Plan (Old projects) towards various transmission network capacity additions, augmentation and improvement projects for making reliable power uniformly available across the State. The capital expenditure has been incurred by BSPTCL against such schemes in lieu of the capital outlay approved by the Hon'ble Commission in previous Tariff Orders from time to time. However, BSPTCL has not obtained individual NIT wise approval of such projects/schemes from the Hon'ble Commission. Therefore, it is not possible to furnish project wise information in the specified format provided by the Hon'ble Commission. However, project/NIT wise information for all the projects has been submitted in **Annexure III** of this Petition.