

BEFORE

**THE BIHAR ELECTRICITY REGULATORY COMMISSION
VIDYUT BHAWAN –II, PATNA**

**Petition
For
True – up for FY 2017-18**

Annual Performance Review (APR) for FY 2018-19

Annual Revenue Requirement (ARR) for FY 2019-20

And

**Determination of Multi Year Transmission Tariff for Control Period
from FY 2019-20 to FY 2021-22**

For

**Bihar State Power Transmission Company Limited
(BSPTCL)**

Patna



Chief Engineer (Power Management Cell)

1stFloor, Vidyut Bhawan-1

Jawaharlal Nehru Marg

Patna – 800 021

30 November' 2018

BEFORE, THE BIHAR ELECTRICITY REGULATORY COMMISSION,

IN THE MATTER OF

Filing of the Petition for True-up of FY 2017-18, Annual Performance Review (APR) for FY: 2018-19, Annual Revenue Requirement (ARR) for FY 2019-20 and Determination of Multi-year Transmission Tariff and ARR for the Control Period from FY 2019-20 to FY 2021-22 under BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 & BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2018 along with the other guidelines and directions issued by the BERC from time to time and under Section 45, 46, 47, 61, 62, 64 and 86 of The Electricity Act 2003 read with the relevant guidelines.

AND

IN THE MATTER OF

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED (hereinafter referred to as “BSPTCL” or “STU” or “Petitioner” which shall mean for the purpose of this petition the Licensee), having its registered office at Vidyut Bhawan-I, Jawaharlal Nehru Marg, Patna.

The Petitioner respectfully submits as under:

1. Pursuant to the enactment of the Electricity Act, 2003, Bihar State Power Transmission Company Limited (hereinafter referred to as BSPTCL) is filing this petition for approval of the “Annual Revenue Requirement (ARR)” for the period 2019-20 & determination of Multi Year tariff for FY 2019-20, 2020-21 & 2021-22, True-up exercise for FY 2017-18 and “Annual Performance Review (APR)” of FY 2018-19 as per procedures outlined in section 61, 62 and 64, of Electricity Act 2003, and the governing regulations thereof.
2. The Multi-year Tariff (MYT) petition on behalf of all the companies for control period FY 2013-14 to FY 2015-16 was filed on 14.11.2012 by BSPHCL on behalf of all companies and accordingly the Hon’ble Commission had issued common order for all entities (tariff order dated March 15’ 2013).
3. The Petitioner had then filed petition for Annual Performance Review for FY 2013-14 and Revised ARR for FY 2014-15 on November 14’ 2013 and accordingly the Commission had issued tariff order dated February 28’ 2014.
4. The Petitioner had then filed petition for True-up for FY 2013-14, Annual Performance Review (APR), Revised Annual Revenue Requirement (ARR) for FY 2015-16 and accordingly the Commission had issued tariff order dated March 12’ 2015.

5. The petitioner had then filed petition for true-up for FY 2014-15, Annual Performance Review (APR) for FY 2015-16 and approval of the Annual Revue Requirement (ARR) for the period FY 2016-17 & Determination of Multi-Year Transmission Tariff for FY 2016-17, 2017-18 & 2018-19 on December 28, 2015 and the Hon'ble Commission issued the Order on the Petition on March 21, 2016.
6. The petitioner filed the review petition before Hon'ble Commission against Hon'ble BERC Tariff Order dated March 21, 2016 and the Hon'ble Commission issued the order on Review Petition on July 12, 2016.
7. The petitioner had then filed the petition for True-up for FY 2015-16, Annual Performance Review (APR) for FY 2016-17 and Determination of Annual Revenue Requirement (ARR) and Tariff for FY 2017-18 and accordingly the Hon'ble Commission had issued the order dated March 9, 2017.
8. The petitioner had then filed the petition for True-up for FY 2016-17, Annual Performance Review (APR) for FY 2017-18 and Determination of Annual Revenue Requirement (ARR) and Tariff for FY 2018-19 and accordingly the Hon'ble Commission had issued the order dated March 7, 2018 against which BSPTCL had filed the review petition before Hon'ble BERC on 24.04.2018 for which order has been reserved but not passed.
9. This instant petition is being filed before the Hon'ble Commission for True-up for FY 2017-18, Annual Performance Review (APR) for FY 2018-19, Annual Revenue Requirement (ARR) for the period FY 2019-20 to FY 2021-2022 & determination of Multi Year tariff for FY 2019-20, 2020-21 & 2021-22, as per procedures outlined in section 61, 62 and 64, of Electricity Act 2003, and the governing regulations thereof considering the approved values of MYT order dated 21st March 2016 & Tariff order dated 9th March, 2017 and 7th March 2018.
10. The present petition is filed on independent basis by BSPTCL.
11. This petition has been prepared in accordance with the provisions of Sections 61, 62 of the Electricity Act, 2003 and has taken into consideration the Chapter 6, Multi-Year Tariff of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 and BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2018 as amended time to time by the Commission.
12. BSPTCL along with this petition is submitting the regulatory formats with data & information to the extent applicable and would make available any further information / additional data required by the Hon'ble Commission during the course of proceedings.

Prayers to the Commission:

The Petitioner respectfully prays that the Hon'ble Commission may:

- a) Admit this petition;
- b) Examine the proposal submitted by the Petitioner in the enclosed petition for a favorable dispensation;
- c) Pass suitable orders with respect to the True-up for FY 2017-18 for Rs. 740.69 Crores, APR for FY 2018-19 for Rs. 1062.65 Crores and ARR from FY 2019-20 to FY 2021-22 for Rs. 1568.76 Crores, Rs. 1950.54 Crores and Rs. 2246.95 Crores respectively.
- d) Approve the transmission charges as per the proposal and allow relaxation in tariff norms wherever sought for;
- e) Pass separate order for the Petitioner against the present petition;
- f) BSPTCL may also be permitted to propose suitable changes to the respective ARRs, prior to the final approval by the Hon'ble Commission.
- g) Condone delay in filing petition for determination of ARR for FY 2019-20 & Multi Year tariff and any inadvertent omissions / errors / short comings and permit BSPTCL to add / change / modify / alter this filing and make further submissions as may be required at a future date.
- h) Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

Dated: Novermer' 2018

(Rakesh)
Chief Engineer (Power Management Cell)

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1. Introduction

1.1 Background

- 1.1.1 Bihar State Electricity Board (“Board” or “BSEB”) 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.
- 1.1.2 Under the new ‘Bihar State Electricity Reforms Transfer Scheme 2012’, the BSEB has been unbundled into five companies: 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 (NBPDCCL) with effect from 1st November’ 2012 vide notification no. dated 30.10.2012.
- a) **“Bihar State Power (Holding) Company Limited” or “BSP(H)CL”** means the Company that will own shares of newly incorporated reorganized four companies i.e. Bihar State Power Generation Company Limited, Bihar State Power Transmission Company Limited, South Bihar Power Distribution Company Limited, and North Bihar Power Distribution Company Limited.
 - b) **“Bihar State Power Generation Company Limited” or “BSPGCL”** means the Generating Company to which the Generating Undertakings of the Board are to be transferred in accordance with this Scheme
 - c) **“Bihar State Power Transmission Company Limited” or “BSPTCL”** means the Transmission Company to which the Transmission Undertakings of the Board are to be transferred in accordance with this Scheme
 - d) **“South Bihar Power Distribution Company Limited” or “SBPDCL” and “North Bihar Power Distribution Company Limited” or “NBPDCCL”** collectively mean the Distribution Companies, to which the Distribution Undertakings of the Board are to be transferred in accordance with this Scheme.

1.2 Profile of BSPTCL

- 1.2.1 Primarily, the transmission of power takes place at 400 kV, 220 kV and 132 kV voltage levels. The capacity additions in the transmission system in FY 2018-19 (till 27.11.2018) are provided in the table below:

Table 1: GSS and Power Transformer Capacity (in MVA)

Sub-stations	No. of GSS	FY 2018-19 (up to 27.11.2018)
220/132 kV	2	6750
132/33 kV	119	12150
220/132/33 kV	16	--

Table 2: Transmission Line Length (in Ckm)

Transmission Lines (in Ckm.)	FY 2018-19 (up to 27.11.2018)
220kV	4074.144
132 kV Double Ckt. Line	10063.62

- 1.2.2 The details of the sub-stations covering name of sub-station and capacity are provided at Details of Grid Sub-Station.
- 1.2.3 The power supply position in the State of Bihar is improving and Bihar Utilities are taking all required steps to strengthen and develop the electricity infrastructure in transmission and distribution. Further the approvals have also been received for many projects under the 12th & 13th Plan, Backwards Region Grant Fund (BRGF)/Special Plan and State Plan Funds. Hence there is need to invest in the transmission and distribution sector in the State of Bihar.

1.3 Current Petition

- 1.3.1 This Petition considers proposal for the Transmission Company for the True-up of FY 2017-18, revised APR for FY 2018-19 and ARR for FY 2019-20 and thereby determination of the MYT tariff /charges for FY 2019-20 to 2021-22 of BSPTCL.
- 1.3.2 Section 62 of the Electricity Act 2003 requires the licensee to furnish details as may be specified by the Commission for determination of tariff. In addition, as per the regulations issued by the Hon'ble Commission, BSEB or its unbundled companies is required to file petition for all reasonable expenses which it believes 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.

1.3.3 The current petition is prepared in accordance with the provisions of the following Acts / Policies / Regulations:

- » Electricity Act 2003;
- » National Electricity Policy;
- » National Tariff Policy;
- » BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 as amended time to time.
- » BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2018.
- » BERC (Terms and Conditions for Open Access) Regulations, 2018 as amended time to time

1.3.4 BSPTCL has made genuine efforts for compiling all relevant information relating to the APR / ARR petition as required by 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.

1.3.5 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 condone. 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

1.4.1 The present petition comprises of main sections namely:

- True-up for FY 2017-18
- Annual Performance Review (APR) for FY 2018-19
- Annual Revenue Requirement (ARR) for FY 2019-20 & MYT for FY 2019-20 to FY 2021-22.

2. Approach for Present filing

2.1 Approach for the current petition

2.1.1 The Commission in the order dated 7th March 2018 approved the true-up of FY 2016-17, Annual Performance Review of FY 2017-18 and Annual Revenue Requirement of FY 2018-19 for BSPTCL.

2.1.2 Therefore, The Hon'ble Commission in the order dated 07.03.2018 approved the true-up of FY 2016-17, APR for FY 2017-18 and ARR for FY 2018-19 and determination of tariff for FY 2018-19 for BSPTCL.

2.1.3 (A) As per **Clause 90** of the Tariff Regulations 2007, the MYT Framework for implementation is provided as below:

“90 (1) *The Multi-Year frame-work shall feature a five year control period. However, the Commission shall fix the initial control period for transmission and distribution as three years, **due to data uncertainties and other practical considerations. In case of lack of reliable data, the Commission shall lay down assumptions in MYT for the first control period.** As and when more reliable data is available, the Commission shall start a fresh control period.*

“90 (2) *Where operations have been much below the norms for the previous years, **the initial starting point in determining the revenue requirement and the improvement should be recognized at 'relaxed' levels and not the 'desired' levels.** The Commission shall however conduct suitable bench – marking studies to establish the desired performance standards and also to assess, for each utility, the capital expenditure required to meet the minimum service standards.*

(B) As per clause 4 of Multi Year Tariff Framework, 2018 of BERC (Multi – year Transmission Tariff & SLDC charges) Regulations, 2018 for implementation is provided as below:

4.1 The commission shall determine the tariff for transmission business or charges of SLDC operation Under a Multi-Year Tariff framework with effect from April 1st of each financial year subject to provisions under these Regulations.

4.2 The Multi Year Tariff frameworks shall be based on the following elements, for calculation of Aggregate Revenue Requirement and expected revenue from tariff and charges for transmission Business and Fees and charges of SLDC.

- i. Control Period, before commencement of which a forecast of the Aggregate Revenue Requirement and expected revenue from existing tariff in case of transmission licensee or Fees and Charges in case of SLDC, as the case may be, shall be submitted by the applicant and approved by the commission;

Provided that the performance parameters whose trajectories have been specified in these Regulations shall form the basis of projection for the Aggregate Revenue Requirement for the entire Control period.

- ii. A detailed Business Plan based on the Operational Norms and trajectories of performance parameters specified in the MYT Regulations, for each year of the Control Period, shall be submitted by the applicant for the commission's approval subject to provision under these Regulation;
 - iii. Based on the Business Plan, the applicant shall submit a petition with the forecast of Aggregate Revenue Requirement and expected revenue from existing tariff and charges for each year of the control period, and the commission shall approve the transmission tariff and Fees and charges in case of SLDC for each year of the Control Period;
 - iv. The mechanism for pass- through of approved gains or losses on account of uncontrollable factors as specified under Regulation 09 of these Regulation;
 - v. The mechanism for sharing of approved gains or losses arising out of controllable factors as specified under Regulation 10 of these Regulation.
- 2.1.4 This petition contains the actual data for *FY 2017-18* based on the audited account for FY 2017-18. Further, estimates for FY 2018-19 have also been revised based on the actual performance of the licensee *during the last 6 months*.
- 2.1.5 In line with the above, BSPTCL is filing the present petition for the True-up for FY 2017-18, Annual Performance Review (APR) for FY 2018-19 and Annual Revenue Requirement (ARR) for FY 2019-20 & Determination of MYT tariff for the Control Period of 3 years taking into account the previous year(s) gap / surplus for Commission's approval.

CHAPTER-I**3. True-up for FY 2017-18****3.1 Introduction**

3.1.1 The Petitioner is filing the present petition for the true-up of FY 2017-18 based on the audited annual accounts for the year, Annual Performance Review (APR) for FY 2018-19 based on the actual data of previous eight (8) months and determination of Annual Revenue Requirement for FY 2019-20 & Multi Year Transmission tariff for the control period of three (3) years commencing from FY 2019-20.

3.2 Transmission System Availability Factor (TAFM)

3.2.1 BSPTCL has submitted the month-wise transmission system availability factor (TAFM) from April'2017 to March'2018 and is tabulated as follows:

S.No.	Month	Transmission System Availability Factor (%)
1.	April'17	99.13
2.	May'17	99.34
3.	June'17	99.32
4.	July'17	98.40
5.	August'17	98.35
6.	September'17	99.24
7.	October'17	99.35
8.	November'17	99.38
9.	December'17	99.06
10.	January'18	99.38
11.	February'18	99.35
12.	March'18	99.31
13.	Total for FY 2017-18	99.134

3.2.2 Incentive Calculation (In Rs. Crores)

S.No.	Month	Percentage TAFM (%)	Target Availability (%)	Difference (%)	Average Equity for FY 2017-18 (Rs. Crore)	Incentive
1	Apr-17	99.13	98	1.13		
2	May-17	99.34	98	1.34		
3	Jun-17	99.32	98	1.32		
4	Jul-17	98.4	98	0.4		
5	Aug-17	98.35	98	0.35		
6	Sep-17	99.24	98	1.24		
7	Oct-17	99.35	98	1.35		

8	Nov-17	99.38	98	1.38		
9	Dec-17	99.06	98	1.06		
10	Jan-18	99.38	98	1.38		
11	Feb-18	99.35	98	1.35		
12	Mar-18	99.31	98	1.31		
	FY 2017-18	99.135	98	1.135	1018.33	11.55

3.3 Transmission Loss

3.3.1 The transmission loss trajectory considered by the Commission in the Tariff order (dated 7th March ' 2018) is provided in the table below:

Table 3: Transmission Loss approved in the MYT order

Particulars	FY 2017-18	FY 2018-19
Transmission Loss	3.92%	3.92%

(A) PO & WO dated-08.05.2018 has been issued for procurement of ABT meters and work under ABT metering scheme has already been processed. Meters at Karbigahia GSS, Katra GSS and Gaurichak GSS has already been installed.

(B) Status of Supply of materials

- 400 Nos. Meters have been supplied to Transmission circle Patna & erection has been started on 25.10.2018.
- 400 Nos. Meters have been supplied to Transmission circle Muzaffarpur & erection of meters started from 20.11.2018.
- IT hardware have been supplied at Patna.

(C) However as the matters related to tender for ABT meter is subjudice under CWJC no.- 5533 of 2018 in Hon'ble High Court of Patna and under case no.- 08 & 09 09/2018.

Therefore the SDOC may differ as per the final order of Hon'ble High Court and Ho'ble BERC.

(D) All the meters will be installed by the end of March' 2019.

(E) All meters to be installed under SAMAST.

(F) SBPDCL have prepared the energy accounting for the FY 2017-18 is as follows :-

Table 4: Actual Transmission Loss for FY 2017-18

Particulars	FY 2017-18
Energy Input (in MU)	26760.45835
Energy Output (in MU)	25559.38382
Transmission Loss (in MU)	1201.074537
Transmission Loss (%)	4.488%

3.3.2 Further, the Petitioner would like to submit that the above figure is indicative as the energy accounting report by the Discoms based on the energy meter reading at input level of distribution periphery, once the metering system under SAMAST will be completed then proper energy accounting of BSPTCL will be done.

3.3.3 Therefore, the transmission Loss of BSPTCL for FY 2017-18 is 4.488 % and Petitioner requests the Hon'ble Commission to approve the same.

3.3.4

3.4 Capital Investment and Capitalization

3.4.1 The capitalization for FY 2017-18 as per the audited accounts of the petitioner is Rs 1391.30 crores. New Investment for the year as per the accounts is Rs 1114.22 crores. The comparison of the actual and approved figures of CWIP and capitalization is provided in the table below:

Table 5: CWIP and Capitalisation for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.3.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Opening CWIP (A)	2955.93	2947.15	3128.38	3114.83
2	New Investment (B)	883.56	1250	2025.1	1114.22
3	Less: Capitalization through CWIP (C)	2238.54	1632.26	3044.3	1255.90
4	Closing CWIP (A+B-C)	1600.94	2564.89	2109.18	2973.15

3.4.2 *The Petitioner requests the Commission to approve the above CWIP and capitalization figures as shown in the table above.*

3.5 Gross Fixed Assets

3.5.1 The Petitioner hereby submits the computation of Gross Fixed Assets considering the opening GFA and closing GFA for FY 2017-18 as reflected in the audited annual accounts for FY 2017-18. The Gross addition in GFA for the year is Rs 1385.73 Crores, however after adjustment of assets disposed off during the period, Net addition in GFA comes to Rs 1391.30 Crores and the Petitioner requests the Commission to approve the same.

3.5.2 The computation of Gross Fixed Assets for FY 2017-18 is tabulated below:

Table 6: Gross Fixed Assets for FY 2017-18 (Rs. Crores)

Sl No.	Particulars	FY 2017-18			
		MYT Order dated 21.03.2016	Tariff Order dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Opening GFA	6560.66	5291.53	5026.70	4994.31
2	Add: Additions during year (NET)	2238.54	1632.26	3044.30	1385.73
3	Less: Deductions				
4	Add: Interest during Construction (IDC)	45.16	1.56	32.94	5.57
5	Closing GFA	8844.36	6925.35	8103.94	6385.61

3.5.3 The Petitioner requests the Hon'ble Commission to approve the GFA as per the above table.

3.6 Depreciation on GFA

The depreciation for FY 2017-18 as per the audited accounts is Rs 236.80 Crore. Further, land and land rights have not been subject to any depreciation. The Petitioner has excluded land and land rights from the average GFA during FY 2017-18 and then applied the weighted average rate of depreciation of 5.28% for arriving at the depreciation. Closing depreciable GFA and Grants approved by the Hon'ble Commission for FY 2017-18 in Tariff Order dated March 7, 2018 have been considered as opening depreciable GFA and Grants for FY 2017-18, respectively.

The depreciation for the true-up of FY 2017-18 is as below.

Table 7: Depreciation on GFA for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.03.2016	Tariff Order dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Opening depreciable GFA	5194.54	3908.48	3634.54	4994.31
2	Additions during year	2238.54	1632.26	3044.3	1385.73
3	Less: Value of Land				13.41
4	Less: Deductions				0.00
5	Interest during Construction	45.16	1.56	32.94	5.57
6	Closing GFA(1+2-3-4+5)	7478.25	5542.30	6711.77	6372.2
7	Average GFA (1+6) / 2	6336.39	4725.39	5173.16	5683.26
8	Weighted Avg. Rate of Depreciation	3.36%	5.13%	5.11%	5.28%
9	Depreciation (7*8)	212.90	242.41	264.35	300.08
10	Opening Grants	2883.80	1636.04	1636.04	1401.47
11	Grants during year	696.32		17.16	37.36
12	Less: Amortisation during the year	-	-	-	0.00
13	Total Grants (10+11-12)	2883.80	1636.04	1653.2	1438.83
14	Average Grants (10+13) / 2	2883.80	1636.04	1644.62	1420.15
15	Weighted Avg. Rate of Depreciation	3.35%	5.13%	5.11%	5.28%
16	Depreciation for GFA on Grants (14*15)	96.90	83.93	84.04	74.98
17	Net Depreciation for GFA on Loans (9-16)	116.01	158.48	180.31	225.09

The Petitioner requests the Hon'ble Commission to approve the depreciation as per above table for FY 2017-18.

3.7 Interest & Finance Charges

- 3.7.1 The Petitioner for computation of weighted average interest rate for FY 2017-18 has considered the opening and closing loan balances for FY 2017-18 as per the audited annual accounts of the Petitioner.
- 3.7.2 The petitioner, for purpose of computation of interest, has considered the opening loan for FY 2016-17 based on closing loan approved in true up for FY 2016-17 in Tariff Order Dated- 07.03.2018 and loan additions during FY 2017-18 is considered @70% of the capitalization (@70% of Rs.1391.29 Crore i.e. Rs. 973.907 Crore) in terms of Regulation 71(1)(ii) of the BERC Regulations, 2007. The petitioner has

considered the repayment of loans equivalent to Depreciation allowed during FY 2017-18 in this true-up.

Table 8: Details of Interest on Loans for FY 2017-18 (Rs. Crores)

S. No.	Source of Loan	Opening Balance as on 1.04.17	Addition during the year	Repayment/ Adjustment	Closing Balance as on 31.03.18	Average Loan during FY 2017-18	Rate of Interest (%)	Average Rate of Interest (%)
1	State Govt. Loan	340.55	0.00	0.00	340.55	340.55	10.50%	11.45%
2	ADB Loan	193.37	241.85	209.49	225.73	209.55	13.00%	
3	Total	533.92	241.85	209.49	566.28	550.10		

3.7.3 The comparison of the values from the earlier approved figures is as below;

Table 9: Interest on Loans for FY 2017-18 (Rs. Crores)

Sl No.	Particulars	FY 2017-18		
		MYT Order dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Opening Loan	930.15	1072.58	1072.58
2	Additions during year	878.56	2142.05	973.91
3	Repayment	167.9	180.31	225.09
4	Closing Loan(1+2-3)	1640.81	3034.32	1821.40
5	Average Loan(1+4)/2	1285.48	2,053.44	1446.99
6	Rate of Interest	10.56%	8.68%	11.45%
7	Interest on Loan	135.75	178.24	165.68
8	Financing Charges	0.01	0	0.010
9	Total Interest and Financing Charges	135.76	178.24	165.69

Further, Petitioner claims amount of Rs 0.01 Crores which have been incurred as finance charges in the form of bank charges, interest to group saving schemes etc. The same are as per the audited accounts of the Petitioner for FY 2017-18.

3.7.4 The Petitioner, therefore, claims an amount of Rs 165.69 (165.68 + 0.01) Crores as the interest and finance charges for FY 2017-18.

3.7.5 The Petitioner requests the Hon'ble Commission to approve the interest and finance charges for FY 2017-18 as submitted above.

3.8 Operation and Maintenance Expenses

3.8.1 Employee Expenses

3.8.1.1 The 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.

3.8.1.2 The Petitioner submits employee expenses of Rs 140.74 Crores for FY 2017-18 as per the audited accounts of the Petitioner. The comparison of the employee expenses as per actual and as approved earlier by the Commission is as below.

Table 10: Employee Expenses for FY 2017-18 (In Rs.)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.03.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Employee Cost (Including SLDC)	102.23	101.55	101.90	140.74
2	Indexation	4.65%	2.59%	3.51%	-
3	Add: Inflationary Increase	4.75	2.63	3.58	-
4	Employee Cost (sub-total)	106.99	104.18	105.48	140.74
5	Less: Support by State Govt. against terminal benefits				
6	Employee Cost	106.99	104.18	105.48	140.74
7	Less: Employee cost relating to SLDC business	-	3.77	3.12	-
8	Net Employee Cost (Rs. Crores)	106.99	100.41	102.36	140.74

The details of the employee expenses for FY 2017-18 as per the audited accounts of the Petitioner are as below.

Table 11: Details of Employee Expenses for FY 2017-18 (In Rs.)

Sl. No	Particulars	Employee Expenses
1	Salaries	8817,40,263
2	Over Time	-
3	Dearness Allowance	1149,83,361
4	Other Allowance	953,94,850
5	Medical Expenses Re-imbursement	44,24,484
6	Staff Welfare Expenses	15,10,430
7	Terminal Benefits	3093,31,345
8	TOTAL	1407384733.00

3.8.1.3 The Petitioner requests the Commission to approve the employee expenses of Rs 140.74 Crores for FY 2017-18 and the same are as per the audited annual accounts of the Petitioner for FY 2017-18.

3.8.2 Repairs and Maintenance Expenses

3.8.2.1 The Petitioner has initiated major drive for maintenance and up-keep of its existing transmission assets and also incurred substantial capital expenditure in the improvement of the existing intra state transmission infrastructure to improve the transmission system reliability matching with the short term & long term demand of the State. Repairs and Maintenance expenses claimed in the true up is based on the audited accounts of FY 2017-18.

3.8.2.2 The Petitioner submits that R&M expenses as per the audited accounts of the petitioner company are Rs. 32.69 Crores incurred during FY 2017-18. The comparison of the R&M expenses as per actual and as approved earlier by the Commission is as below.

Table 12: R&M Expenses for FY 2017-18 (Rs. Crores)

Sr. No.	Particulars	FY 2017-18			
		MYT Order Dated 21.03.2016	Tariff Order dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Base R&M Cost	39.98	37.11	47.24	32.69
2	Inflationary Index	4.65%	2.59%	3.51%	
3	Add: Inflationary Increase	1.86	0.96	1.66	-
4	Total R&M expenses (4=1+3)	41.84	38.07	48.90	32.69
5	Less: R&M cost relating to SLDC business	--	1.05	0.44	-
6	R&M cost considered for Transmission business (4-5)	41.84	37.02	48.46	32.69

3.8.2.3 The Petitioner requests the Commission to approve the R&M expenses of Rs 32.69 Crores keeping in view the substantial amount incurred by the petitioner to upkeep & strengthen the existing intra state transmission infrastructure to evacuate large quantum of power matching with demand, which is still in progress. Owing to the above, the R&M expenses have increased as compared to the figures approved earlier by the Commission.

3.8.2.4 The details of the R&M expenses for FY 2017-18 as per the audited accounts of the Petitioner are as below;

Table 13: Details of R&M Expenses for FY 2017-18 (In Rs.)

Sl No	Particulars	R&M Expenses
1	2	3
1	Plant and Machinery	1858,64,939
2	Building	361,42,963
3	Civil Works	286,75,320
4	Hydraulic Works	-
5	Line Cable Net Works	745,52,668
6	Vehicles	11,903
7	Furniture and Fixture	45,289
8	Office Equipment	16,26,317
	TOTAL	326919399

3.8.2.5 The Petitioner requests the Hon'ble Commission to approve the R&M expenses as submitted above for FY 2017-18.

3.8.3 Administration & General Expenses (A&G)

3.8.3.1 Administration and General expenses mainly comprise costs towards rent charges, telephone and other communication expenses, professional charges, conveyance and travelling allowances & Holding Company Expenses and other debits.

3.8.3.2 The Petitioner submits that A&G expenses of Rs 26.09 Crores have been incurred for FY 2017-18 and the same are as per the audited accounts of the Petitioner. The comparison of A&G expenses as per actual and as approved earlier by the Commission is as below;

3.8.3.3 The details of A&G expenses for FY 2017-18 as per the audited accounts towards of the Petitioner are as below;

Table 14: A&G Expenses of Transmission Company for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.03.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Base A&G Expense	9.28	16.56	18.25	26.09
2	Inflationary Increase	4.65%	2.59%	3.51%	
3	Add: Inflationary Increase	0.43	0.43	0.64	0.00
4	Gross A&G Expense	9.71	16.99	18.89	26.09
5	Less: A&G expenses relating to SLDC business	-	0.43	0.44	-
6	Net A&G Expenses	9.71	16.56	18.45	26.09

The Petitioner requests the Hon'ble Commission to approve the A&G Expenses of BSPTCL of Rs. 26.09 crores as submitted above for FY 2017-18.

Table 15: Details of A&G Expenses for FY 2017-18 (In Rs.)

Sl. No	Particulars	A&G Expenses
1	2	3
1	Rent, Rates & Taxes	156,94,672
2	Insurance	240,42,647
3	Telephone charges, Postage, Telegram and Telex Charges.	43,14,380
4	Legal Charges.	45,11,453
5	Audit Fees	2,51,200
6	Consultancy Charges	114,21,806
7	Director's Sitting Fees	74,400
8	Interest on Statutory Dues	15,628
9	Technical Fees	-
11	Other Professional Charges	64,664
12	Conveyance & Travel	378,87,798
14	Other Expenses.	
	Fees & Subscription	70,30,550
	Books & Periodicals	3,21,785
	Printing & Stationary	29,45,148
	Advertisement	60,05,375
	Exp. On CSR	102,48,723
	Loss on Fire/Theft of stock	-
	Electricity Charges	707,52,347
	Entertainment Charges	18,81,734
	Commission for sale of scrap	29,00,002
	Home Guard/ Security Guard	463,32,325
	Miscellaneous Expenses	103,76,549
15	Freight	1,11,402
16	Other Purchase related Expenses	-
17	Crop compensation	84,175
18	Preliminary Expenses	36,21,704
22	Total	260890467

3.8.4 Allocation of Holding Company Expenses

The Petitioner submits that holding company expenses of Rs 10.29 Crores have been reported for FY 2017-18 as per the audited accounts of the Petitioner. The comparison of the holding company expenses as per actual and as approved earlier by the Commission is as below.

Table 16: Holding Company Expenses for FY 2017-18 (Rs. Crores)

Sl. No	Particulars	FY 2017-18			
		MYT Order Dated 21.03.2016	Tariff Order dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Holding Company Expenses	5.00	7.29	5.15	10.29

The Petitioner requests the Hon'ble Commission to approve the Holding Company Expenses of BSPTCL of Rs. 10.29 crores as submitted above for FY 2017-18.

3.8.5 Summary of O&M Expenses

3.8.5.1 The summary of the O&M expenses is tabulated below for reference:

Table 17: O&M Expenses for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.03.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Employee Expenses	106.99	104.18	105.48	140.74
2	Repair and Maintenance Expenses	41.84	38.07	48.90	32.69
3	Administrative and General Expenses	9.71	16.99	18.89	26.09
4	Holding Company Expenses	5.00	7.29	5.15	10.29
5	Total O&M Expenses	163.53	166.53	178.42	209.81
6	Less: SLDC expenses	0.00	5.25	4.00	0.00
7	Net O&M Expenses	163.53	161.28	174.42	209.81

3.8.5.2 *The Hon'ble Commission is requested to approve the above O&M expenses for Rs. 209.81 Crores for FY 2017-18.*

3.9 Interest on Working Capital

3.9.1 The Petitioner has arrived at the working capital requirement according to applicable norms for transmission function provided in the BERC (Terms and Conditions of Tariff) Regulations, 2007 as amended from time to time, which are reproduced in the following table for reference:

Table 18: Norms for Working Capital Requirement

Sr. No.	Particulars	Norm
1.	Operation & Maintenance	One month
2.	Maintenance spares	1% of the historical cost escalated at 6% per annum
3.	Receivables	Two months of transmission charges
4.	Rate of Interest on Working Capital	Rate of interest on working capital will be computed at 350 basis point over and above the base rate. The interest on working capital shall be payable on normative basis notwithstanding that the transmission licensee may not have taken working capital loan from any outside agency or taken at different rates and amounts."

3.9.2 The rate of interest applied on the working capital is as per the SBI base rate plus 350 basis points i.e. 12.80%. The normative interest on working capital for FY 2017-18 computed as per the above norms is as below

Table 19: Interest on Working Capital for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.03.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	O&M Expenses for 1 Month	13.04	13.44	14.53	17.48
2	Maintenance Spares @1% of Opening GFA with 6% escalation	38.46	42.79	39.98	52.94
3	Receivables 2 Months	58.73	98.25	109.52	109.52
4	Total Working Capital	110.23	154.48	164.03	179.24
5	Rate of Interest	13.50%	12.80%	12.60%	12.80%
6	Interest on Working Capital	14.88	19.77	20.67	23.03

3.9.3 The Petitioner requests the Hon'ble Commission to approve the computation of working capital and the interest charges thereon for FY 2017-18 based on the actual components of the normative working capital.

3.9.4 The Petitioner requests the Commission to approve interest on working capital of Rs 23.03 Crores for true-up of FY 2017-18.

3.10 Return on Equity

3.10.1 The Petitioner hereby submits that based on the Opening and Closing equity balances as per the audited accounts for FY 2017-18, the revised RoE claimed in true up is Rs. 276.99 crores for 2017-18. The Petitioner submits that the above equity is excluding Reserves and Surplus as the same comprises of grants for capital assets and consumer contributions.

3.10.2 The computation of return on equity for FY 2017-18 is tabulated below:

Table 20: Return on Equity for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2016-17			
		MYT Order dated 21.3.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Opening Equity	375.41	375.41	375.41	375.41
2	Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%
3	Return on Equity (1*2)	52.56	52.56	52.56	52.56
4	Equity on projects commissioned w.e.f 1.4.2015	-	-	-	-
5	Opening Equity	407.08	400.67	321.22	1239.24
6	Addition in FY 2017-18	685.11	490.15	918.02	417.39
7	Closing Equity Balance (5+6)	1092.19	890.81	1239.24	1656.63
8	Average Equity (5+7)/2	546.10	645.74	780.23	1447.94
9	Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%
10	Return on Equity	84.64	100.09	120.94	224.43
11	Total Return on Equity (3+10)	137.20	152.65	173.50	276.99

3.10.3 The Petitioner requests the Hon'ble Commission to approve the computation of return on equity (RoE) Rs. 276.99 crores & payment against MAT Rs. 51.39 crores (as per audited account) for FY 2017-18 totaling to Rs. 328.38 crores as submitted above.

3.11 Non-Tariff Income

3.11.1 The Petitioner submits non-tariff income of Rs 95.23 Crores for the true-up for FY 2017-18 as per the audited accounts for the year. The comparison of the non-tariff income as per actual and as approved earlier by the Commission is as below.

Table 21: Non-Tariff Income for FY 2017-18 (Rs. Crores)

Sl. No.	Particulars	FY 2017-18			
		MYT Order dated 21.3.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 9.03.2018	True-up
1	Non-Tariff Income	37.26	26.63	41.09	95.23

3.11.2 The details of non-tariff income for FY 2017-18 as per the audited accounts of the Petitioner are as below.

Table 22: Details of Non-Tariff Income for FY 2017-18 (In Rs.)

Sl. No	Particulars	Non-Tariff Income
1	2	3
A	<u>Interest Income</u>	
1	Interest on Staff Loan & Advances	4960.000
2	Income from Investment (Fixed Deposit)	0.00
3	Interest from Banks (Other than Fixed Deposit)	132037029.00
4	Interest from income tax refund	6975610.00
	Sub-total (A)	139017599.00
B	<u>Other Income</u>	
1	Income from Scrap Sale	82414921.00
2	Miscellaneous Receipts	7908409.00
3	Application fee received	60000.00
4	Lease Rental Income	2379986.00
5	Terminal Benefits from GoB	35626639
6	Deferred Income	684914353.00
	Sub-total (B)	813304308.00
	Total (A + B)	952321907.00

3.11.3 The Petitioner requests the Hon'ble Commission to approve the Non-Tariff Income for FY 2017-18 as submitted in table above.

4. Transmission ARR for True-up of FY 2017-18:

4.1 The Annual Fixed Charges or Transmission charges have been arrived at by aggregating all the expenses detailed in the previous sections i.e. Depreciation, Interest on Loan, Interest on Working Capital, O&M expenses and ROE. The total expenses less Non- Tariff income are the net Annual Fixed Charges or Transmission charges.

4.2 Accordingly, following is the summary of revised projections of Aggregate Revenue Requirement of the Petitioner for the true-up of FY 2017-18 for approval by the Hon'ble Commission.

Table 23: Transmission ARR for True-up of FY 2017-18 (Rs. Crores)

Sr. No.	Particulars	FY 2017-18			
		MYT Order dated 21.3.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	O&M Expenses	163.54	166.53	174.42	209.81
a	Employee Expenses	106.98	104.18	102.36	140.74
b	R&M Expenses	41.84	38.07	48.46	32.69
c	A&G Expenses	9.71	16.99	18.45	26.09
d	Holding Company Expenses Allocated*	5.00	7.29	5.15	10.29
e	Less: O&M exp. capitalised	-	5.25	0.00	0.00
2	Less: IDC	-	1.56	0.00	0.00
3	Depreciation	116.01	158.48	180.31	225.09
4	Interest and Finance Charges	146.75	125.52	178.24	165.69
5	Interest on Working Capital	21.76	19.77	20.67	23.03
6	Return on Equity	137.20	152.65	173.50	276.99
7	MAT	-	--	-	51.39
8	Prior Period expenses	-	-	-	0.00
9	Incentive	-	-	-	11.55
10	Gross Annual Revenue Requirement	585.25	616.15	694.19	963.55
11	Less: Non Tariff Income	37.26	26.63	41.09	95.23
12	Less: Income from Other Sources (STOA, Railway)	-	-	-	4.55
12	Net Revenue Requirement	547.99	589.52	653.10	863.77

4.3 The Petitioner would like to submit that the Transmission Charges for true-up of FY 2017-18 have been determined based on the applicable rules and regulations of the Commission and based on the audited account of BSPTCL for FY 2017-18. In view of the submitted facts and explanations, the Petitioner humbly prays to the Hon'ble Commission for approval of the true-up of ARR for FY 2017-18 for Rs. 863.77 crores and the resultant revenue gap to be adjusted in the Transmission Charges of the Petitioner for FY 2019-20 to be recovered from the two distribution companies.

4.4 Revenue Gap / (Surplus) for FY 2017-18

4.4.1 The revenue gap/(surplus) for FY 2017-18 as per the true-up is as below:

Table 24: Revenue Gap/ (Surplus) for FY 2017-18 (Rs. Crores)

Sl.No.	Particulars	FY 2017-18			
		MYT Order dated 21.3.2016	Tariff Order Dated 09.03.2017	Tariff Order Dated 07.03.2018	True-up
1	Aggregate Revenue Requirement for FY 2017-18	459.54	589.52	653.10	863.77
2	Add: Earlier Approved Annual Transmission Charges for the year	74.71	34.06	34.06	34.06
3	Annual Transmission Charges	384.83	623.58	687.16	897.83
4	Less: Transmission charges Recovered	384.83	623.58	623.58	653.11
5	Revenue Gap (+)/Surplus (-) for FY 2017-18	0.00	0.00	63.59	244.72

Calculation of Gap with Interest

Particulars	Amount
Revenue Gap approved in True-up for FY 2017-18 to be carry forward	244.72
Interest for FY 2017-18 @12.8% for six months	15.66
Interest for FY 2018-19 @12.8%	31.32
Interest for FY 2019-20 @12.45% for six months	15.23
Total Gap with Interest	306.94

4.4.2 The Commission in order dated March 09' 2017 had approved revenue gap of Rs 63.58 Crores for the Review of FY 2017-18 and had noted that the deficit/surplus of FY 2017-18 based on actual would be considered in the future years once the audited accounts of the Petitioner are made available. In accordance to the direction of the Hon'ble Commission, the Petitioner prays that revenue gap for FY 2017-18 as per the audited accounts of the Petitioner amounts to Rs. 306.94 Crores may be approved and Hon'ble Commission allow recovery of the same in the Transmission ARR for FY 2019-20 from NBPDCCL & SBPDCL respectively.

CHAPTER-II

Annual Performance Review (APR) for FY 2018-19 & Annual Revenue Requirement (ARR) for FY 2019-20 and Determination of Multi-year tariff for FY 2019-20 to FY 2021-22

1.0 Introduction

- 1.1 The instant petition is related with Annual Performance Review (APR) for FY 2018-19 and approval of ARR for FY 2019-20 and determination of Multi-year tariff for the control period 2019-20 to FY 2021-22. The petition has been framed based on the actual available data for FY 2017-18 and available data of past Six (6) months for FY 2018-19.
- 1.2 Transmission Charges for FY 2018-19 to be recovered from the two distribution companies namely SBPDCL and NBPDCCL have also been laid out in the Chapter-II.

2.0 Transmission Loss and Trajectory:

- 2.1 The transmission loss trajectory considered by the Commission in the MYT order is provided in the table below:

Table 25: Transmission Loss Trajectory

Particulars	FY 2017-18	FY 2018-19 (Expected)	FY 2019-20 (Expected)	FY 2020-21 (Expected)	FY 2021-22 (Expected)
Approved Transmission Loss in %	3.97	3.92	***	***	***
Actual Transmission loss in %	4.49	-	***	***	***
Revised Trajectory of Transmission Loss in %	-	4.73	4.49	4.49	4.49

- 2.2 The Actual transmission loss for FY 2017-18 is 4.49 %.
- 2.3 Therefore, the petitioner request from Hon'ble Commission to approve the same for FY 2018-19 and for the control period from FY 2019-20 to FY 2021-22.

Table 26: Actual Transmission Loss for FY 2018-19 (up to September' 2018)

Particulars	220 kV Level
Energy Input (in MU)	16092.74
Energy Output (in MU)	15331.07
Transmission Loss (in MU)	761.67
Transmission Loss (%)	4.73

The petitioner submits that the above figure are taken from the energy accounting report prepared by the Discoms., therefore request from Hon'ble Commission to approve the same as stated in the above table.

- 2.4 Further, the Petitioner would like to submit that it has been making consistent efforts to bring down the losses by way of up-gradation of existing infrastructure and infusing substantial investments in the new intra state transmission infrastructure.

Further, the improvement in the transmission losses would be reflected only after the commissioning of the various transmission assets & metering scheme and SAMAST.

- 2.5 The Petitioner requests the Hon'ble Commission to approve the transmission losses for this control period on actual basis. Accordingly, BSPTCL provides herewith the transmission loss trajectory for consideration and approval by the Hon'ble Commission to be computed based on the above suggestions.

Table 27: Transmission Loss Trajectory

Particulars	FY 2018-19 (upto sep'2018)	FY 2019-20 (Expected)	FY 2020-21 (Expected)	FY 2021-22 (Expected)
Approved Transmission Loss in %	3.92	***	***	***
Revised Trajectory of Transmission Loss in %	4.73	4.49	4.49	4.49

- 2.9 The Petitioner requests the Hon'ble Commission to approve the revised transmission loss trajectory as submitted above for FY 2018-19 and for the control period from FY 2021-22.

3.0 Capital Investment Plan

The Petitioner submits that the 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.

3.1 Details of ongoing projects are as follows:

Sl. No .	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Commissioning Date/LDOC)	COST(Rs.)	Mode of Finance
1	Construction of 220KV D/C transmission line from BTPS to Hajipur	07.08.2018	105.78 Cr	BRGF, Phase III Part I
2	Construction of 132/33KV GSS Maharajganj	24.05.2017	79.24 Cr	State Plan
3	Construction of 132/33KV GSS Narkatiyaganj	01.06.2017		
4	Construction of 132/33KV GSS Hathua	20.05.2017		
5	Construction of 132/33KV GSS Areraj	18.05.2017		
6	Construction of 132/33KV GSS Chakiya	29.11.2017	41.30 Cr	State Plan
7	Construction of 132/33KV GSS Jhanjharpur	24.07.2018		
8	Construction of 132/33KV GSS Pakridayal	30.10.2018		
9	Construction of 132/33KV GSS Siwan-New	30.04.2018	23.51 Cr	State Plan
10	Construction of Loop In Loop Out arrangement of 132 KV Tx. line Madhepura- Sonebarsa 132 KV S/C Tx.line on D/C Tower at Saharsa Existing (CKM-40KM) under Special Plan of Phase-III against NIT 38/2014.	31.10.2018	17.52 Cr	BRGF
11	Construction of 132/33 KV, 2 x 20MVA Nirmali, 2 x 20 MVA, 2 x 20 MVA Banmankhi, 2 x 20 MVA Manihari and 2 x 10 MVA Triveniganj against NIT 63/2014(Package B)	GSS Nirmali :- 28.12.2016, GSS Bnamankhi:- 25th Jan 2017, GSS Mnaihari : 07.12.2017, GSS Triveniganj:- 14.04.2017	79.04	State Plan

12	Construction of 2 x20MVA , 132/33KV GSS Tarapur, Teghra and Simri Bakhtiyarpur against NIT 91/2014.	GSS Tarapur:- 27.01.2017, GSS Teghra:- 31.10.2018, Simri Bakhtiyarpur:- 02.03.2017.	67.03	State Plan
13	Construction of 2 x50MVA , 132/33KV GSS Araria, Barsoi, Baisi and Dhamdaha AGAINST NIT 92/2014.	GSS Araria:- 18.10.2017 , GSS Barsoi:- 16.01.2018, GSS Baisi:- 02.05.2018, GSS Dhamdaha:- 10.10.2018	105.07	State Plan
14	R&M of 132/33KV GSS at Kishanganj, Jamalpur and Purnea against NIT no. 07/PR/BSPTCL/2016	LDOC- December 2018	34.28 Cr	State Plan
15	Construction of 3X50 MVA, 132/33kV Grid Sub-Station, Jagdishpur (Bhagalpur New) and Korha(Katihar)against NIT no. 10 /PR/BSPTCL/2016	LDOC of Grid Sub-Station, Jagdishpur (Bhagalpur New)- 10.02.2019 GSS Korha(Katihar)--land not finalized yet	57.04 Cr.	State Plan
16	Strengthening of 132 KV & 33 KV main bus and transfer bus by double moose & quad moose respectively of different GSS of BSPTCL	LDOC-31st December 2018	67.17 Cr	State Plan
17	Second circuit stringing of Existing 03 Nos. of 132 kV Double Circuit Single Strung Transmission Lines under Transmission Circle, Purnea on Turnkey Basis against NIT No. 76/PR/BSPTCL/2015	07-08-2017	16.69 Cr.	State Plan
18	Construction of 132 KV D/C T/L from Motihari (400 KV) to Motihari (BSPTCL) NIT 403/PR/BSPTCL/2013 Pkg A	25.05.2017	8.54 Cr	BRGF Phase III, part I
19	Construction of 132 KV D/C T/L from Motihari (400 KV) to Bettiah NIT 403/PR/BSPTCL/2013 Pkg B	30.06.2017	18.69 Cr	BRGF Phase III, part I
20	Construction of 132 KV D/C T/L from Motihari (400 KV) to Raxaul NIT 403/PR/BSPTCL/2013 Pkg C	31.10.2017	27.42 Cr	BRGF Phase III, part I
21	construction of two numbers of 132 KV Line bays each at Bettiah (132/33 KV) GSS and Raxaul (132/33 KV) GSS	20.10.2017	7.02 Cr	BRGF Phase III, part I

	NIT 403/PR/BSPTCL/2013 Pkg D			
22	(i) construction of 132 KV S/C transmission lines on D/C Tower from 132/33 KV Dhaka GSS to upcoming Pakridayal GSS (ii) Construction of New 132 KV S/C Transmission line on D/C Tower from 220/132 KV Motipur GSS to upcoming Chakiya GSS (iii) LILO of 132 KV S/C of Jainagar-Phulparas Transmission Line at upcoming Jhanjharpur GSS NIT No 82/PR/BSPTCL/2014	24.02.2018	48.16 Cr	State Plan
23	Construction of 132KV D/C Udakishanganj-Sonebarsa T/L and 132KV D/C Kusheshwarsthan- Sonebarsa T/L against NIT No. 16/PR/BSPTCL/2014	Udakishanganj-Sonebarsa: 13.06.2016 Kusheshwarsthan-Sonebarsa: 08.01.2018	114.7 Cr. (with E.T)	BRGF/ Special Plan, N-1 Compliance Scheme
24	Construction of 220KV D/C Transmission line Kishanganj (New) – Kishanganj (PGCIL) & 132 KV D/C T.L. Kishanganj (New) – Kishanganj (existing GSS) against NIT No. 58/PR/BSPTCL/2014	220KV D/C Transmission line Kishanganj (New) – Kishanganj (PGCIL) charged on 5.10.2016 & 28.12.2016 and 132 KV D/C T.L. Kishanganj (New) – Kishanganj (existing GSS) has been charged 04.01.2017.	25.92 Cr. (with E.T)	BRGF Phase III Part II
25	Construction of 6 nos of 132/33KV Transformer Bay at Madhubani, Muzaffarpur, Dalsingsarai, Ramnagar, Hajipur and Jandaha	Madhubani- 22.02.2016, Dalsingsarai-26.09.2016, Muzaffarpur-31.07.2015, Ramnagar- 13.01.2016, Hajipur-23.06.2016 Jandaha- 22.10.2017	12.67 Cr.(with E.T)	Special Plan (BRGF) Phase III, Part II (N-1) Compliance
26	Construction of 220 KV Kishanganj New- Madhepura D/C Tx. Line	Line Charged on 24.08.2018	129.79 Cr.	special Plan BRGF, Ph-III Part-II
27	Construction of 220 KV (D/C) Line between Madhepura to Laukhi with AL-59 Conductor(75Km)	Line Charged on 07.06.2018	103.95 Cr.	special Plan BRGF, Ph-III Part-II
28	Construction of 220 KV Purnea (PG) – Begusarai D/C Tx. Line	Charged on 06.09.2018	125.26 Cr.(with E.T)	RSVY & State Plan
29	132 KV LILO T/l on one of the CKT of 132 KV Betia--Dhanha to Ramanagar GSS against NIT No. 22/PR/BSPTCL/2015	LDOC-31.12.2018	35.24 (with E.T)	BRGF/ Special Plan, N-1 Compliance Scheme

30	Construction of 3x50MVA , 132/33KV GSS Raghapur against NIT 30/PR/BSPTCL/2017.	04.01.2019	32.3	State Plan
31	Construction of LILO of one circuit of 132KV Laukahi-Supaul Transmission Line at 132/33 KV GSS Raghapur against NIT No. 31/PR/BSPTCL/2017	LDOC-17.12.2018	15.28 (with GST)	State Plan
32	Construction of 132KV S/C Transmission line on D/C Tower between 132/33KV GSS Rosera and Hasanpur Sugar Mill along-with 01 no. 132KV line bay at 132/33KV GSS Rosera against NIT No.-15/PR/BSPTCL/2017	31.12.2018	Rs.12,42,84,340.3 5	IRF
33	Construction of 8 Nos. 132KV line bays at Pandaul-01Nos., Madhubani-02Nos, Jainagar-02, Phulparas-01Nos, Ekma-01Nos and Kusheshwarsthan-01Nos under state plan against NIT No. 04/PR/BSPTCL/2016	Jainagar -02 no.charged on 14.10.17, Pandaul-01 no.,charged on 15.10.17 , Madhubani -02 no. charged on .01.11.17 and Ekma-01 no. charged on 02.05.2018.Kuseshwarsthan bay Likely to be charged by 30.11.2018	12.58 Cr.	State plan
34	Construction of 02 nos. 132KV line bays each at 132/33KV GSS SKMCH & Sitamarhi under Special Plan/BRGF, Phase-III,Part-I against NIT No. 07/PR/BSPTCL/2016	Sitamarhi- 01 no. bay commissioned on 11.04.2017.02 no. bay LDOC 31.11.2017.	7.44 Cr.	BRGF, Phase-III
35	Construction of New 132 KV S/C Transmission Line on D/C Tower from existing Kuseshwarsthan GSS to Benipur GSS (Line length-37 Km), construction of New 132 KV S/C Transmission Line on D/C Tower from 220/132 KV Samastipur GSS to Upcoming Shahpurpatori GSS (Line Length-31 CKM), LILO of 132 KV S/C of Muzaffarpur –Sitamarhi at Belsand GSS under State Plan on turnkey basis against NIT No.-81/PR/BSPTCL/2014	1. Muzaffarpur – Sitamarhi: Completed &Charged on 09/08/2018 2. Samastipur – Shahpurpatori: Completed &Charged on 02/05/2018 3. Kuseshwarsthan - Benipur :LDOC 31.11.2017.	39.18 Cr	State Plan
36	Construction of 132/33 KV Grid Sub-station, Belsand (2X10MVA), Shahpur Patori (2X20MVA) and Benipur (2X10MVA), NIT-62/BSPTCL/2014 Pkg-B under state plan on turnkey basis against NIT No.-62/PR/BSPTCL/2014	LDOC 31.11.2017.	55.51 Cr	state plan

	Pkg-B			
37	Construction of 2 x160+3x50 MVA GSS Musahari(New)	Commissioned on 17.01.2017	Rs. 85.07 Cr./-	BRGF, Phase-III
38	Construction of 220 KV & 132 KV D/C Transmission line for evacuation of power from upcoming Motipur GSS	Charged on-21.11.2017	193.14Cr/-	BRGF, Phase-III
39	Construction of (i) 220KV D/C Line from Darbhanga 400/200 KV GSS to (i) 220KV D/C Line from Darbhanga 400/200 KV GSS to to Laukahi (new)GSS (ii) 220KV D/C Line from Laukahi(new) GSS to Supaul (existing) Pkg-'D' GSS	DEC'18 (LDOC)	126.24	BRGF, Phase-III
40	Construction of 220 KV & 132 KV D/C Transmission line for evacuation of power from upcoming Musahari GSS	15.04.17	123.09Cr/-	BRGF, Phase-III
41	Construction of 220 /132 /33 kV Motipur GSS	commissioned on 29.03.2017	75.42 Cr/-	BRGF, Phase-III
42	Construction of 2 x160+2x50 MVA ,220/132/33KV GSS Laukahi	commissioned on 21.06.2018	67.23Cr/-	BRGF, Phase-III
43	Construction of 132/33kV GSS at Manjhaul , Ballia and Bakhari against NIT-63/PR/BSPTCL/2014, Package-(A)	GSS Bakhari LDOC- November,2018 GSS BalliaOne 10 MVA Transformer charged on 13.06.2017 and another 50 MVA Transformer charged on 30.01.18 GSS Manjhaul: 50 MVA Transformer charged on load on 12/06/2017.one Nos. 10 MVA Transformer charged on 31.08.2017	64.24 Cr	State Plan

44	Construction of 132KV Transmission lines connecting the revenue GSS Bakhri, Ballia, Manjhaul, Nirmali, Triveniganj, Banmankhi, Manihari and Piro against NIT No. 35/PR/BSPTCL/2015	<p>All Lines Charged- 19.11.17 132 KV S/C Purnea – Saharsa Lilo at Banmankhi 25.01.2017 132 KV D/C Bikramganj – Piro TL 29.05.2017 132 KV D/C Begusarai – Bakhari Lilo at Manjhaul TL 18.05.2017 132 KV D/C Begusarai – Bakhari Lilo at Ballia 04.05.2017 LILO of 132 KV Purnea - Forbesganj line at Rajwara(Chahatapur) for 132/33 KV Triveniganj GSS 02/02/17 132 KV S/C Purnea – Katihar Lilo at Manihari 19.11.17 132 KV D/C Phulparas – sapoul Lilo at Nirmali TL. 25.12.2016 132KV D/C Begusarai - Bakhari Line 15.11.2017(Manjhaul- Bakhari Line) 16.11.17(Ballia-Bakhari Line)</p>	103.74 Cr.	State Plan
45	Construction of 220/132/33KV GSS Kishanganj (new) with bay extensions against NIT No. 03/PR/BSPTCL/2014	<p>1. 220/132/33KV Kishanganj GSS - 10.10.2016 2. 2x132KV line bay extension at Kishanganj Remote site- 04.01.2017 3. 2x132KV line bay extension at Forbesganj Remote site- 20.10.2016 and 10.01.2017 4. 4x220KV line bay extension at Madhepura Remote site- 27.04.2017 5. Laukhi Bay extension was charged upto line isolator on 05.06.2018 & 06.06.2018.</p>	89.51 Cr.(with E.T)	BRGF Phase III part II
46	Capacity augmentation of 220/132/33 kV & 132/33 kV Grid Substation Madhepura, Naugachia, Vaishali, Gangwara, Jamui, Ara and Bihta	31.10.2018	48.13 Cr.	ADB

47	Procurement and construction of 33 KV line bays in form of Indoor VCB panels at 10 nos. of AIS sub-station under transmission circle, Purnea	30.11.2018	28.28 Cr.	ADB
48	Procurement and construction of 33 KV line bays in form of Indoor VCB panels at 21 nos. of AIS sub-station under transmission circle, Muzaffarpur	30.11.2018	59.09 Cr.	ADB
49	Procurement and construction of 33 KV line bays in form of Indoor VCB panels at 08 nos. of AIS sub-station under transmission circle, Biharsharif	30.11.2018	25.20 Cr.	ADB
50	Construction of 220 KV Bihta(new) -Sipara(Patna) D/C transmission line ,220 KV Bihta(new)-Bihta(existing) D/c Transmission line (charged at 132 KV) and 33 Kv down linking lines from Bihta(new) 220/132/33 KV GSS on turnkey basis.	30.11.2018	72.03 Cr.	State Plan
51	Renovation & Up gradation of Protection and Control Systems of 220/132KV Grid Substation at Biharsharif, Fatuha, Bodhgaya, Dehri On Sone, Khagaul and 132/33KV Grid Substation Kataiya on turnkey basis	31.12.2018	69.66 Cr.	PSDF
52	Second circuit stringing of existing 04 nos of 132KV Double circuit Single strung transmission line:- 1) 132KV Biharsharif-Ekangarsarai- Hulasganj(Except LILO point to Ekangarsasari)(48.14CKM) 2)132KV BIharsharif-Nawada(48.89CKM) 3)132KV BIharsharif-Sheikhpura(38.78CKM) 4)132KV Jamui-sheikhpura(51.9CKM)	31.12.2018	20.34 cr	State Plan
53	Construction of 08 nos. 132 KV Line bays each at -Belaganj 01no. , Hulasganj-01 no., Jehanabad -01 no., Tekari-02 no., Ataula-01 no. ,Chandauti-01 no., Nawada-01 no. under Trans. Circle, Gaya for 2nd ckt. stringing of existing 132 KV DCSS	TOC Issued for Chandauti-15.12.17 Tekari-05.01.18 Hulasganj-20.12.17 Ataullah-01.01.18 Jehanabad-18.12.17 For Belaganj & Nawada LDOC 15.11.18	12,58,84,382.60	State Plan

	transmission line against NIT No.-01/PR/BSPTCL/16			
54	Construction of 132KV S/C Transmission Line for Solar PV Project of M/s Alfa Infraprop Pvt. Ltd. at Bhagaura from 132KV GSS Rafiganj and Construction of 01 no. 132KV line bay at GSS Rafiganj against NIT No.-02/PR/BSPTCL/17	TOC issued dated 04.07.17	9,74,27,690.84	State Plan
55	Construction of 11 Nos. of line bays at Sherghati -01, Imamganj -01, Sonenagar-02, Aurangaba-02, Ara-02, Jagdishpur-03 & 1 No. of T/F bay at Sherghati against NIT No.-68/PR/BSPTCL/14	TOC issued for Imamganj-29.08.16 For rest GSS LDOC 15.11.18	11,42,02,222.50	BRGF
56	Second Circuit Stringing of Existing 03 Nos. of 132 KV Double Circuit Single Strung Transmission Line: i) GSS Belagunj to tapping point of L-32 & L-33 Trans. Line 2.5 CKM ii) 132 KV Gaya-Tekari and 132 KV Tekari-Goh 51.8 CKM iii) 132 KV Jehanabad-Ataula (Karpi) 22.57 CKM Under Transmission Circle Gaya on Turnkey Basis under State Plan on FIRM prices against NIT No.-72/PR/BSPTCL/15	TOC issued dated 08.08.18 for line (i) & (iii) LDOC for line(ii) - 30.11.18	7,40,60,775.00	State Plan
57	Construction of 3x50MVA, 132/33KV GSS Ramgarh (Kaimur dist.) and Warislaiganj (Nawada Dist.) on turnkey basis against NIT No.-84/PR/BSPTCL/15	LDOC-31.12.2018	64,96,98,737.19	State Plan
58	Procurement and Construction of 33KV line bays in form of Indoor VCB panels at 06 nos. of AIS Sub-station under Transmission Circle Bhagalpur against 24/Package D-1/BSPTCL/ADB/16	30.11.18	18,91,28,358.20	ADB

59	Procurement and Construction for Re-conductoring of 06 nos.132KV Transmission lines against 31/Package K-1/ BSPTCL/ADB/16	30.11.18	43,99,91,760.93	ADB
60	Procurement and Construction for Re-conductoring of 06 nos.132KV Transmission lines against 33/Package M-1/ BSPTCL/ADB/16	30.11.18	40,86,19,492.60	ADB
61	i) LILO of one ckt. At north of muthani railway station from 132KV D/C Pusouli (New) – Mohania Trans. Line to proposed 3x50 MV Ramgarh GSS (BSPTCL of route length 20Km. ii) LILO of 132KV Line Biharsharif – Nawada D/C Trans. Line – Warsaliganj (New) GSS of Route length 40Kms.iii) LILO of one Ckt. Of 132KV Chhapra – Siwan Transmission Line – Siwan (New) GSS near Darauli of route length 45Kms. Turnkey basis under Under State Plan.	Completed on 11.08.2018	56.17 Crore	State Plan
62	3X50 MVA,132/33 KV GSS Kerpa	11.02.2019	Rs.31.69 Cr.	State Plan
63	Construction of 132KV Lines and 33KV Lines	30.03.2018	58.23 Crore	ADB
64	Construction of 220KV Lines	30.12.2018	41.52 Crore	ADB
65	Procurement and Construction of 33KV line bays in form of Indoor VCB panels at 14 nos. of AIS Sub-station under Transmission Circle DOS	30.11.2018	33.02 Crore	ADB
66	Procurement and Construction of 33KV line bays in form of Indoor VCB panels at 14 nos. of AIS Sub-station under Transmission Circle DOS	30.11.2018	40.25 Crore	ADB
67	Construction of 33 kV Line Bays in form of Indoor GIS Panel at 11 nos. of AIS Substation under Patna District of BSPTCL on Turnkey Basis.	30.11.2018	66.79 Crore	ADB
68	Re-conductoring of 05 nos. 220KV & 132KV Transmission lines -- 254.99 Ckm	30.11.2018	35.45 Crore	ADB
69	Supply, Installation, Implementation, Configuration and Integration of ERP system in	17.05.2019	21.5 Crore	ADB

	the BSPTCL			
70	Construction of LILO line on both circuits of 220 KV Begusarai-Purnea (PG) Transmission line at Khagariya new 220/132/33 KV GSS against NIT 12/PR/BSPTCL/2016 Pkg-A under state plan.	31.12.2018(revised)	9.63	state plan
71	construction of LILO line on both circuits of 132 KV BTPS-Purnea D/C Transmission line at Khagariya new 220/132/33 KV GSS (CKM-10 KM) against NIT 12/PR/BSPTCL/2016 Pkg-B under state plan.	31.12.2018(revised)	11.62	state plan
72	Construction of (2x160 + 2x50) MVA, 220/132/33KV Grid Sub-Station in KHAGARIA (New) under State Plan in between 220KV D/C Purnea (PG) – Begusarai Transmission Line.	30.06.2019(revised)	70	state plan
73	construction of 132/33 KV 3x50 MVA Jamui and Banka GSS against NIT 86/PR/BSPTCL/2015	30.11.2018	52.29	state plan
74	Construction of 132 KV Transmission Lines required for the connectivity of power to upcoming new 132/33 KV Grid Sub Stations at Korha (Distt-Katihar), Nathnagar (Distt.-Bhagalpur) and Jamui(new) on turnkey basis under State Plan (R.L.=190 CKM) against NIT No.-87/PR/BSPTCL/2015	31.12.2018	63.1	state plan
75	Construction of 132KV D/C Sonenagar (New)-Aurangabad Transmission Line.	31.12.2018	15,89,46,455.00	Special Plan(BRGF), Ph-III, N-I Compliance
76	Construction of 132KV D/C Ara-Jagdishpur Transmission Line.	05.11.2018	21,16,14,696.21	
77	Work of construction of 06 nos. of 132 KV D/C towers from Ara (PG) to tower loc. No. 1 with ACSR Panther Conductor for connectivity of 2nd circuit of 132 KV D/C Ara (PG)- Jagdishpur Transmission line on turnkey basis.	15.12.2018	14550394.42	

78	Replacement of 23 nos. 50 MVA and 01 no 20 MVA transformer by 24 nos. 132/33 KV, 80 MVA transformer along with associated bay work in existing GSS of Patna	30.06.2019	107.62	State Plan
79	Construction of (2X160 MVA+2X50 MVA),220/132/33 KV GSS at Bihta(Patna) & associated 220,132 & 33 kv bays extension at remote end on turnkey basis	31.03.2019	59.15	State Plan
80	Construction of 132 KV D/C Transmission Line between 220/132/33 KV Bihta (New) GSS and 132/33KV Upcoming Paliganj GSS NIT No.-24/PR/BSPTCL/2016	31.12.2018	19.4	State Plan

3.2 Details of upcoming projects & Schedule of capitalization are as follows:

Details of upcoming projects & Schedule of capitalisation

Sl. No	Name of Element (Transmission line, Substation, Bay Extension, etc.)	Commissi- oning Date/LDOC)	COST (Rs. In Cr)	Cost of the Land	Total project cost including cost of the land	Tentative Expenditures (Rs. In Cr)				Mode of Finan ce
						FY 2018- 19	FY 2019- 20	FY 2020- 21	FY 2021- 22	
1	Construction of (2x160MVA+3x50MVA) 220/132/33 KV GSS, Tajpur(with SAS)(District-Samastipur) and Residential Quarters (Additional scope) under State Plan on turnkey basis against NIT No.-34/PR/BSPTCL/2018.	FY - 2020-21	92.55	37.5	130.05	42.00	55.53	23.1375	9.3825	State Plan 80% from loan + 20% equity from GoB.
2	Augmentation of existing 132/33 KV GSS Ekma (1x20MVA + 1x50MVA) by 3x50MVA capacity against NIT No.-36/PR/BSPTCL/2018	FY - 2020-21	38.19	11	49.19	13.00	22.914	9.5475	3.7285	State Plan 80% from loan + 20% equity from GoB.
3	Construction of 132/33KV (2X50 MVA) GSS at Palasi (Dist. Araria) on turnkey basis. NIT No.-37/PR/BSPTCL/18	FY - 2020-21	39.8	12	51.8	14.00	23.88	9.95	3.97	State Plan 80% from loan + 20% equity from GoB.
4	Construction of 220/132/33 KV (2X160+3x50MVA) GSS at Garaul (Dist. Vaishali) on turnkey basis NIT No 39/PR/BSPTCL/2018.	FY - 2020-21	98.27	37.5	135.77	42.50	58.962	24.5675	9.7405	State Plan 80% from loan + 20% equity from GoB.

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5	Construction of (2x200 MVA+ 3x50 MVA) 220/132/33 KV GSS, Raxaul (District-East Champaran) complete with SAS and Residential Quarters under State Plan on turnkey basis against NIT No. 40/PR/BSPTCL/2018	FY - 2020-21	93.49	30	123.49	35.00	56.094	23.3725	9.0235	State Plan 80% from loan + 20% equity from GoB.
6	Capacity augmentation of GSS Hajipur, Gopalganj & Darbhanga by replacement of power transformer against NIT No.- 46/PR/BSPTCL/2018	FY - 2020-21	67.08		67.08	6.708	46.956	13.416		State Plan 80% from loan + 20% equity from GoB.
7	Re-conductoring of following transmission lines with HTLS (equivalent to Panther) except GAP conductor on Turnkey Basis as detailed below : 1. 132 KV S/C Kahalgaon (BSPTCL)- Kahalgaon (NTPC) trans. Line of route length 7 Km. 2. 132 KV S/C Kahalgaon (BSPTCL)- Sabour trans. Line of route length 27 Km. NIT No.- 113/PR/BSPTCL/2018	FY - 2020-21	19.43		19.43	1.943	13.601	3.886		State Plan 80% from loan + 20% equity from GoB.
8	Re-conductoring of Barauni TPS-Begusarai 132 KV D/c Transmission lines with HTLS Conductor (Capacity -240 MVA, 1050A) (12 RKM). NIT No.- 112/PR/BSPTCL/2018	FY - 2020-21	13.68		13.68	1.368	9.576	2.736		State Plan 80% from loan + 20% equity from GoB.
9	Construction of 132 KV transmission line with HTLS (equivalent to Panther) conductor on turnkey basis from 132 KV GSS Phulparas to 220/132 KV GSS Laukahi (CKM-25 KM). NIT No. 111/PR/BSPTCL/2018	FY-2020-21	42.69		42.69	4.269	25.614	14.942		State Plan 80% from loan + 20% equity from GoB.
10	Construction of following associated 220KV & 132KV D/C Transmission Lines of 220/132/33KV GSS Asthawan (Dist. Nalanda) on Turnkey Basis:- 1. Construction of 220 KV D/C Transmission line from Sheikhopursarai(BGCL) to 220/132/33 KV GSS Asthawan (Line Length- 20)RKM 2. Construction of 220 KV D/C Transmission line from 220/132/33 KV GSS Biharsharif to 220/132/33 KV GSS Asthawan (Line Length - 20 RKM). 3. Construction of 132 KV D/C Transmission line from 220/132/33 KV GSS Asthawan to 132/33 KV GSS Barh (Line Length - 40 RKM). 4. Construction of 132 KV D/C Transmission line from 220/132/33 KV GSS Asthawan to 132/33 KV GSS Rajgir (Line Length - 40 RKM). 5. Construction of 132 KV D/C Transmission line from 220/132/33 KV GSS Asthawan to 132/33 KV GSS Nalanda (Line Length - 30 RKM). NIT No.-58/PR/BSPTCL/2018	FY - 2020-21	128.33		128.33	12.833	89.831	25.666		State Plan 80% from loan + 20% equity from GoB.

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11	Construction of line bays at various Grid substations on Turnkey Basis under state plan :- i. 02 Nos. 132KV line bays at GSS Harnaut, ii. 02 Nos. 132KV line bays at GSS Baripahari NIT No.-83/PR/BSPTCL/2018	FY - 2020-21	29		29	2.9	20.3	5.8	State Plan 80% from loan + 20% equity from GoB.
12	Construction of 132 KV D/C Bakhtiyarpur (New) to Harnaut (BSPTCL) Transmission Line with ACSR Panther Conductor (Line Length - 15 RKM) and Construction of 132 KV D/C Bakhtiyarpur (New) to Baripahari (BSPTCL) Transmission Line with ACSR Panther Conductor (Line Length - 38 RKM) under state plan [80:20] NIT No.-78/PR/BSPTCL/2018	FY - 2020-21	39.62		39.62	3.962	27.734	7.924	State Plan 80% from loan + 20% equity from GoB.
13	1. Construction of 220kV D/c Pusauli (PG)-Sahpuri LILO Karmnasha (new) Transmission line with single moose (Line length-12 Ckm) on turnkey basis. 2. Construction of 220kV D/c Pusauli (BSPTCL)- Karmnasha (New) Transmission Line with twin moose (Line length - 80 Ckm) on turnkey basis NIT No.-56/PR/BSPTCL/2018	FY - 2020-21	87.86		87.86	8.786	61.502	17.572	State Plan 80% from loan + 20% equity from GoB.
14	Construction of 220 KV D/C Saharsa(New)-Khagaria(New) Transmission line with ACSR Zebra Conductor (Approx Route Length-80KM) under State Plan against NIT No. 57/PR/BSPTCL/2018	FY - 2020-21	114		114	11.4	79.8	22.8	State Plan 80% from loan + 20% equity from GoB.
15	Re-conductoring of 132 KV Chandauti-Sonenagar S/C Trans. Line (L-30) and 132 KV Chandauti-Rafiganj-Sonenagar Trans. Line (L-31) with HTLS conductor (equivalent to Panther) on turnkey basis. (Route length- 78.21 KM) against NIT No.-109/PR/BSPTCL/18	FY - 2020-21	79.94		79.94	7.994	55.958	15.988	State Plan 80% from loan + 20% equity from GoB.
16	Construction of 132 KV D/C Transmission Line for LILO of Chandauti-Sonenagar (L-30) 132 KV S/C Transmission Line and Chandauti-Rafiganj-Sonenagar (L-31) 132 KV S/C Transmission Line at GSS Chandauti (New) with HTLS Conductor (equivalent to Panther) conductor on turnkey basis. (Route length -46 KM).against NIT No.-110/PR/BSPTCL/18	FY - 2020-21	67.8		67.8	6.78	47.46	13.56	State Plan 80% from loan + 20% equity from GoB.
17	1.Construction of 132KV LILO line on 132KV S/C Dehri-Banjari Tr line to new GSS Kerpa(CKM-02KM approx.) 2.Re-conductoring of existing 132KV S/c Tr Line from Dehri to Banjari with HTLS (Equivalent to Panther conductor) 40KM approx 3. Re-conductoring of existing 132KV D/C Tr line from dehri to Sonenagar with HTLS (Equivalent to Panther conductor)29KM approx. NIT No.-108/PR/BSPTCL/2018	FY - 2020-21	39.36		39.36	3.936	27.552	7.872	State Plan 80% from loan + 20% equity from GoB.
18	Construction of LILO of one Ckt of 132 KV D/C Kishanganj (Old)-Forbisganj Transmission line at Palasi GSS with ACSR Panther Conductor (Line Length – 20 RKM) against NIT No.-69/PR/BSPTCL/2018.	FY - 2020-21	17.93		17.93	1.793	12.551	3.586	State Plan 80% from loan + 20% equity from GoB.

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19	1. Construction of 132Kv D/C Karmnasa (new)- Ramgarh Tr Line on single mooze. 2. Construction of 132KV D/c Karmnasa (new)- Karmnasa Tr line on single mooze. NIT No.- 55/PR/BSPTCL/2018	FY - 2020-21	40.18		40.18	4.018	28.126	8.036		State Plan 80% from loan + 20% equity from GoB.
20	Construction of 220 KV D/C Sitamarhi (New)- Raxaul(New) Transmission Line with twin moose Conductor (Line Length - 120 RKM) on turnkey basis against NIT No.- 60/PR/BSPTCL/2018.	FY – 2020-21	214.05		214.05	21.405	149.835	42.81		State Plan 80% from loan + 20% equity from GoB.
21	(i) Construction of 220 KV D/C Transmission Line from 220/132/33 KV Samastipur (New) to proposed 220/132/33 KV GSS Tajpur (Line Length -30 KM). (ii) Construction of 132KV D/C Shahpurpatori - Tajpur Transmission line with ACSR Panther Conductor (Line Length-40 KM). & (iii) Construction of 220 KV D/C Transmisin Line from proposed 220/132/33KV GSS Tajpur to proposed GSS Goraul (Line Length- 45 KM) against NIT No.-66/PR/BSPTCL/2018.	FY – 2020-21	103.6		103.6	10.36	72.52	20.72		State Plan 80% from loan + 20% equity from GoB.
22	Re-conductoring of following transmission lines with HTLS (equivalent to Panther) except GAP conductor on Turnkey Basis as detailed below : - 1. 132 KV S/C Kahalgaon (BSPTCL)- Kahalgaon (NTPC) trans. Line of route length 7 Km. 2. 132 KV S/C Kahalgaon (BSPTCL)- Sabour trans. Line of route length 27 Km. NIT No.- 113/PR/BSPTCL/2018	FY - 2020-21	19.43		19.43	1.943	13.601	3.886		State Plan 80% from loan + 20% equity from GoB.
23	Construction of following Transmission lines on Turnkey basis: i) 220 KV D/C Muzaffarpur(PG)-Garaul Transmission Line with ACSR Zebra Conductor (Line Length-20 RKM) ii) 132 KV D/C Garaul-MahnarTransmission Line with ACSR Panther Conductor (Line Length- 45 RKM) iii) LILO of both circuit of 132 KV D/C Muzaffarpur-vaishali Transmission Line at Garaul GSS with ACSR Panther Conductor (Line Length- 2x15 RKM) iv) 132 KV D/C Transmission line from GSS Chhapra(New)-Ekma with ACSR Panther Conductor (Line Length - 45 RKM) NIT No- 50/PR/BSPTCL/2018.	FY – 2020-21	103.14		103.14	10.314	72.198	20.628		State Plan 80% from loan + 20% equity from GoB.
24	Supply, installation, testing & commissioning of DLMS compliant 0.2s class ABT type energy meter with implementation of 100% metering, data acquisition and online ABT monitoring for the transmission & sub transmission substations up to 33 KV level, monthly energy accounting and service maintenance for a period of 5 years against NIT No. 37/PR/BSPTCL/2017.	FY 2020-21	68.11		68.11	20.00	25.00	23.11		State Plan

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25	Construction of 220 KV D/c transmission line from 220/132/33 KV GSS Chapra (New), Amnour to 400/220 KV GSS Muzaffarpur (PG) with Zebra conductor (line length –Approx. 65 KM) & 132 KV D/c transmission line from 220/132/33 KV GSS Chapra (New), Amnour to 132/33 KV GSS Vaishali with Panther conductor (line length- Approx 40 KM on turnkey basis against NIT No.- 51/PR/BSPTCL/2018.	FY - 2019-20	84.93		84.93	8.493	59.451	16.986		State Plan 80% from loan + 20% equity from GoB.
26	Construction of (i)132 KV D/C by making LILO arrangement of 132 KV DCSS Saharsa(OLD)-Banmankhi Transmission Line at Saharsa (New) GSS (line length approx. 20 RKM) (ii) 132 KV D/C by making LILO arrangement of 132 KV DCSS Saharsa(OLD)-Udakishanganj Transmission Line at Saharsa (New) GSS (line length approx. 15 RKM) and (iii) 132KV D/C by making LILO arrangement of one circuit of Madhepura- Sonebarsa 132KV D/C transmission line at Saharsa (New) GSS (line length approx. 35 RKM) against NIT No. 53/PR/BSPTCL/2018.	FY - 2019-20	54.07		54.07	5.407	37.849	10.814		State Plan 80% from loan + 20% equity from GoB.
27	Construction of 220 KV D/C Saharsa(New)- Begusarai Transmission line with ACSR Zebra Conductor (Approx Route Length-100KM) under State Plan against NIT No. 54/PR/BSPTCL/2018.	FY - 2019-20	165.64		165.64	16.564	115.948	33.128		State Plan 80% from loan + 20% equity from GoB.
28	Construction of 220 KV D/C Transmission Line from GSS Sitamarhi (New) to 220/132/33 KV GSS Motipur with Twin ACSR Moose Conductor (Approx Line Length – 54RKM) and construction of 132 KV D/C Transmission Line from GSS Sitamarhi (New) to 132/33 KV GSS Runnisaidpur with single ACSR Moose Conductor (Approx Line Length – 17RKM) on turnkey basis against NIT No.- 61/PR/BSPTCL/2018.	FY - 2019-20	119.65		119.65	11.965	83.755	23.93		State Plan 80% from loan + 20% equity from GoB.
29	Construction of 220 KV D/C Transmission Line from 220/132/33 KV GSS Raxaul (New) to 220/132/33 KV GSS Gopalganj with Twin ACSR Moose Conductor (Approx Line Length – 80RKM) on Turnkey Basis against NIT No.- 62/PR/BSPTCL/2018.	FY - 2019-20	150.09		150.09	15.009	105.063	30.018		State Plan 80% from loan + 20% equity from GoB.
30	Construction of 132 KV Line bays at various grid substation on turn key basis i)Construction of 132 KV line bays 02 nos. at GSS Laukahi. ii)Construction of 132 KV line bays 02 nos. at GSS Phulparas. NIT No.- 63/PR/BSPTCL/2018	FY - 2019-20	9.1		9.1	0.91	6.37	1.82		State Plan 80% from loan + 20% equity from GoB.
31	Construction of 02 Nos. 132 KV line bays each at GSS Muzaffarpur & Vaishali against NIT No.-65/PR/BSPTCL/2018.	FY - 2019-20	9.32		9.32	0.932	6.524	1.864		State Plan 80% from loan + 20% equity from GoB.

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32	Construction of (i) 02 Nos. of 220 KV Line bay at 220/132/33 KV GSS Kishanganj (New) with SAS (ii) 02 Nos. of 132 KV Line bay at 132/33 KV GSS Araria on turnkey basis against NIT No. 67/PR/BSPTCL/2018.	FY - 2019-20	10.77		10.77	1.077	7.539	2.154		State Plan 80% from loan + 20% equity from GoB.
33	Construction of 220 KV D/C by making LILO arrangement of both circuits of 220 KV D/C Purnea(PG)-Begusarai Transmission line to 220/132/33 KV Korha GSS ON Turnkey basis against NIT No. 70/PR/BSPTCL/2018.	FY - 2019-20	14.14		14.14	1.414	9.898	2.828		State Plan 80% from loan + 20% equity from GoB.
34	Construction of LILO of 132 KV DCSS Benipatti - Pupari Transmission line at Sitamarhi (new) and LILO of both ckt. of 132 KV Raxaul - Bettiah D/C Transmission line at Raxaul (new) with ACSR Panther Conductor. NIT No.-71/PR/BSPTCL/2018	FY - 2019-20	52.8		52.8	5.28	36.96	10.56		State Plan 80% from loan + 20% equity from GoB.
35	Second circuit stringing of 220 KV DCSS Darbhanga (400/220 KV) – Samastipur (New) Transmission Line (Line Length- 47 KM) with ACSR Zebra Conductor on turnkey basis against NIT No.72/PR/BSPTCL/2018	FY - 2019-20	8.09		8.09	0.809	5.663	1.618		State Plan 80% from loan + 20% equity from GoB.
36	Construction of 02 Nos. 132 KV line bay at GSS Runnisaipur & 02 Nos. 220KV line bays at GSS Motipur against NIT No.-76/PR/BSPTCL/2018.	FY - 2019-20	12.31		12.31	1.231	8.617	2.462		State Plan 80% from loan + 20% equity from GoB.
37	Supply, erection, testing and commissioning of Reliable communication and Data Acquisition for implementation of Integrated Communication system upto 132 KV in Bihar with AMC for 6 years under State Plan (20% Equity: 80% : Loan) against NIT No. 79/PR/BSPTCL/2018.	FY - 2019-20	160.4		160.4	16.04	112.28	32.08		State Plan 80% from loan + 20% equity from GoB.
38	Construction of 4 Nos of 220 KV GIS bays and 4 Nos of 132 KV GIS Bays at 220/132/33 KV GSS Chhapra(new), Amnaur on turnkey basis. NIT No. 80/PR/BSPTCL/2018.	FY - 2019-20	47.87		47.87	4.787	33.509	9.574		State Plan 80% from loan + 20% equity from GoB.
39	Construction of 2 Nos of 220 KV GIS Bays at 220/132/33 KV GSS Gopalganj on turnkey basis NIT No 82/PR/BSPTCL/2018.	FY - 2019-20	28.73		28.73	2.873	20.111	5.746		State Plan 80% from loan + 20% equity from GoB.

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40	Construction of 02 nos. 132KV Line bays each at 132/33KV Grid-Substation Mahnar & Shahpurpatori and Construction of 02nos. 220KV Line bays at 220/132/33KV GSS Samastipur(New) on Turnkey basis under State Plan against NIT No. 85/PR/BSPTCL/2018.	FY - 2019-20	14.83		14.83	1.483	10.381	2.966		State Plan 80% from loan + 20% equity from GoB.
41	i) Construction of 220/132KV (2x100 MVA) GSS at Korha with SAS and Residential Quarters (ii) Addition/augmentation of 160MVA 220/132 Transformer at 220/132/33KV GSS Kishanganj (New) on turnkey basis under State Plan against NIT No. 86/PR/BSPTCL/2018.	FY - 2019-20	63.09	30	93.09	33.00	37.854	15.7725	6.4635	State Plan 80% from loan + 20% equity from GoB.
42	Supply, erection, testing and commissioning of 28 Nos. of 132/33 KV 50 MVA Transformer including Transformer Foundations under State Plan against NIT No. 105/PR/BSPTCL/2018.	FY - 2019-20	81.94		81.94	8.194	57.358	16.388		State Plan
43	Capacity augmentation by addition of 3rd 160 MVA, 220/132KV ICT along with associated transformer bays at Sonenagar (New) GSS on turnkey basis NIT No.-95/PR/BSPTCL/2018	FY - 2019-20	13.21		13.21	1.321	9.247	2.642		State Plan 80% from loan + 20% equity from GoB.
44	Construction of 02 Nos. of 220KV Line bays at Begusarai GSS & 2 Nos. 220KV Line bays at Khagaria(New) GSS with SAS against NIT No. 68/PR/BSPTCL/2018	FY - 2019-20	16.25		16.25	1.625	11.375	3.25		State Plan 80% from loan + 20% equity from GoB.
45	Re-conductoring of following transmission lines with HTLS (equivalent to Panther) conductor on turnkey basis:- (1) Circuit 1 & Circuit 2 of 132 KV Biharsharif – Baripahari D/C Transmission line. (CKM – 14 KM approx) (2) 132 KV S/C Sipara – Mithapur – Karbigahiya Transmission line (CKM – 7 KM approx) NIT No.-107/PR/BSPTCL/2018	FY – 2019-20	14.97		14.97	1.497	10.479	2.994		State Plan 80% from loan + 20% equity from GoB.
46	Reconductoring of (i) 132 KV Muzaffarpur - SKMCH S/C Transmission line with HTLS conductor (line length 20.5 RKM) along with involvement 01 no. of Pile foundation. (ii) 132 KV Kanti (MTPS)- SKMCH D/C transmission line with HTLS conductor (line length 14,28 RKM). NIT No.114/PR/BSPTCL/2018	FY - 2019-20	31.04		31.04	2.0	23.0	6.04		State Plan 80% from loan + 20% equity from GoB.
47	Installation of capacitor bank at 35 location for Bihar under PSDF Scheme against NIT No.-06/PR/BSPTCL/2017.	FY 2019-20	21.13		21.13	12.30	9.00			PSDF
48	Capacity augmentation of different GSS by Addition /Replacement by 200 MVA Power Transformer alongwith associated bays on Turnkey Basis at GSS Khagaul & Sipara NIT No.-49/PR/BSPTCL2018	FY – 2019-20	65.46		65.46	6.546	45.822	13.092		State Plan 80% from loan + 20% equity from GoB.
49	Procurement of 04 nos. 20 MVA, 132/33 KV Power Transformers against NIT No. 22/PR/BSPTCL/2018.	FY 2019-20	6.6		6.6	4.5	2.1			O&M

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50	Construction of 12 Nos of 132/33 KV Transformer Bays on turnkey basis under State Plan against NIT No. 106/PR/BSPTCL/2018.	FY - 2019-20	35.19		35.19	3.519	24.633	7.038		State Plan
51	Construction of (2x50) MVA, 132/33 KV GSS Paliganj (Dist.- Patna) and 02 Nos. 132 KV Line Bay Extension at remote end on turnkey basis NIT No.-03/PR/BSPTCL/2018	FY - 2021-22	24.74	2	26.74	3.237	14.844	6.185	2.474	State Plan
52	Construction of 220/132/33 KV, (2x160 + 3x50) MVA, GSS Asthawan (Dist.- Nalanda) including Residential Quarters with Construction of 02 Nos. 220 KV Line Bays & 06 Nos. 132 KV Line Bays at remote end on Turnkey Basis. NIT No.-41/PR/BSPTCL/2018	FY - 2021-22	109.46	37.5	146.96	42.973	65.676	27.365	10.946	State Plan 80% from loan + 20% equity from GoB.
53	Construction of 220/132/33 KV (2x200 MVA + 3x50MVA) GSS Karmnasha (new) NIT No.-38/PR/BSPTCL/2018	FY - 2021-22	95.86	9.6	105.46	14.393	57.516	23.965	9.586	State Plan 80% from loan + 20% equity from GoB.
54	Construction of (2x200 + 2x80) MVA, 220/132/33 KV Gas Insulated Sub-station at Digha (New) and 02 nos. 220 KV GIS line bays extension at GSS Sheikhopursarai (BGCL) on turnkey basis NIT No.-75/PR/BSPTCL/2018	FY - 2021-22	141.03		141.03	7.0515	84.618	35.2575	14.103	State Plan 80% from loan + 20% equity from GoB.
55	Construction of (2x160 MVA+3x50MVA) 220/132/33 KV GSS, Thakurganj (with SAS) (District-Kishanganj) and Residential Quarters under State Plan on turnkey basis against NIT No. 35/PR/BSPTCL/2018.	FY - 2021-22	92.55	37.5	130.05	42.00	55.53	23.1375	9.3825	State Plan 80% from loan + 20% equity from GoB.
56	Construction of 02 nos 220KV GIS line bays each at 220/132/33KV GIS Sheikhpura(BGCL), Hatidah (GIS, BGCL) and 220KV Fatuha GSS(BSPTCL). NIT No.-84/PR/BSPTCL/2018	FY - 2021-22	72.73		72.73	7.273	50.911	14.546		State Plan 80% from loan + 20% equity from GoB.
57	Construction of (i) LILO of Barh-Patna 400 KV D/C (QUAD) Transmission line at Bakhtiyarpur (New) (10RKM) (ii) Bakhtiyarpur (New) - Sheikhpura (New) 220 KV D/C Transmission Line (51 RKM) (iii) Bakhtiyarpur (New) – Hathidah(New) 220 KV D/C Transmission Line (52 RKM) and (iv) Bakhtiyarpur (New) – Fathua (BSPTCL) 220 KV D/C Transmission Line (28 RKM) under state plan[80:20] against NIT No.-77/PR/BSPTCL/18	FY - 2021-22	153.68		153.68	15.368	107.576	30.736		State Plan 80% from loan + 20% equity from GoB.

58	Construction of 2x80 MVA, 132/33 KV Gas Insulated Sub-station at Board Colony Patna along with construction of 132 KV D/C transmission line with cable from 220/132/33 KV Gas Insulated Sub-station at Digha (new) to 132/33 KV Gas Insulated Sub-station at Board colony on cable (CKM – 14 KM) and construction of 132 KV S/C transmission line with cable from 220/132/33 KV Gas Insulated Sub-station at Digha (new) to Digha (Old) on cable (CKM – 1 KM) NIT No.- 74/PR/BSPTCL/2018	FY - 2021-22	135.29		135.29	13.529	94.703	27.058		State Plan 80% from loan + 20% equity from GoB.
59	Construction of 132 KV D/C Thakurganj-Araria Transmission Line with ACSR Panther Conductor (Line Length - 86 RKM) and Construction of 220 KV D/C Kishanganj (New)- Thakurganj Transmission Line with ACSR Zebra Conductor (Line Length - 52 RKM) under state plan[80:20]against NIT No. 52/PR/BSPTCL/2018.	FY – 2021-22	167.45		167.45	16.745	117.215	33.49		State Plan 80% from loan + 20% equity from GoB.
60	Construction o f (2x500+2x160) MVA 400/220/132 KV GIS Grid Sub-Station Bakhtiyarpur with SAS under turnkey basis. NIT No. 73/PR/BSPTCL/2018.	FY – 2021-22	250.51	30	280.51	42.00	150.306	62.6275	25.5765	State Plan 80% from loan + 20% equity from GoB.
61	Costruction of 220KV D/C Amnour (BGCL) – Digha (GIS) NIT No.-64/PR/BSPTCL/2018	FY - 2021-22	200.62		200.62	10.031	120.372	50.155	20.062	State Plan 80% from loan + 20% equity from GoB.

4.0 It is submitted that the total amount to be capitalized during the control period will be as follows:-

Table 28: Detailed amount of capitalization

(Rs. In cr.)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Amount to be capitalized (Rs. in cr.)	2607.45	1052.96	2007.58	1596.37

4.1 The supporting documents regarding sanction of these schemes by the energy department, Govt. of Bihar are attached as **Annexure.**

4.2 The Petitioner requests from Hon'ble Commission to approve the figures as above. The supporting documents regarding above scheme are attached as Annexure.

4.3 The total Capex summery of all the above projects are mentioned below all together:

Table 29: Total Capital Expenditure Summery of the Project

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Capitalisation During The Year	1391.3	2607.45	1052.96	2007.58	1596.37
Less: Grants	0	0	0	0	0
Net Capitalisation	1391.3	2607.45	1052.96	2007.58	1596.37
Equity Considered @ 30%	417.39	782.235	315.888	602.274	478.911
Loan Considered @ 70%	973.91	1825.215	737.072	1405.306	1117.459

5. Gross Fixed Assets (GFA)

The Projection of Gross Fixed Asset (GFA) of the Bihar State Power transmission Company Limited is Calculated as per the Estimated data as on 31.03.2018 is in the table as below:

Table 30: Gross Fixed Assets Proposed (Rs. Crores)

Sr. No	Particulars	FY 2018-19			PROJECTION		
		MYT Order Dated 21.03.2016	Approved by BERC Dated 07.03.2018	Projected for Review in APR (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Opening GFA	8844.36	8103.94	6385.61	9068.80	10121.76	12129.34
2	Add: Additions during year	1366.34	2706.96	2607.45	1052.96	2007.58	1596.37
3	Add: Interest during Construction (IDC)	8.33	18.15	75.74	0	0	0
4	Closing GFA	10219.03	10829.05	9068.80	10121.76	12129.34	13725.71

It is submitted from Hon'ble Commission to allow the same furnished as above.

5.1 Depreciation on GFA

The Proposed Depreciation of the Gross Fixed Assets is Calculated in the table as below:

Table 31: Depreciation Proposed (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			Projection		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Opening GFA	7478.24	6711.78	6385.61	9068.80	10121.76	12129.34
2	Additions during year	1366.34	2706.96	2607.45	1052.96	2007.58	1596.37
3	Interest during Construction	8.33	18.15	75.74	0	0	0
4	Closing GFA(1+2+3)	8852.90	9436.89	9068.80	10121.76	12129.34	13725.71
5	Average GFA (1+4)/2	8165.57	8074.33	7727.205	9595.28	11125.55	12927.53
6	Weighted Avg. Rate of Depreciation	3.36%	5.11%	5.28%	5.28%	5.28%	5.28%
7	Depreciation(5*6)	274.36	412.60	407.99	506.63	587.43	682.57
8	Opening Grants	2883.80	1653.20	1653.20	1653.20	1653.20	1653.20
9	Grants during year	0.00	158.39	0.00	0.00	0.00	0.00
10	Less: Grants amortized	0.00	0.00	0.00	0.00	0.00	0.00
11	Total Grants(8+9-10)	2883.80	1811.59	1653.20	1653.20	1653.20	1653.20
12	Average Grants (11+8)/2	2883.80	1732.40	1653.20	1653.20	1653.20	1653.20
13	Weighted Avg. Rate of Depreciation	3.36%	5.11%	5.28%	5.28%	5.28%	5.28%
14	Depreciation for GFA on Grants(13*12)	96.90	88.53	87.29	87.29	87.29	87.29
15	Net Depreciation for GFA on Loans (7-14)	177.47	324.07	320.7	419.34	500.14	595.28

6. Interest and Finance Charges

The Petitioner has projected interest on loans in accordance with the Regulation 73 of BERC Terms and Conditions for Determination of Tariff Regulations, 2007 amend from time to time. Normative funding pattern of 70: 30 Debt: Equity has been considered as per Regulation 71 of BERC Terms and Conditions for Determination of Tariff Regulations, 2007 amend from time to time.

“71 (1) in case of all projects, the debt - equity ratio as on the date of commercial operation shall be 70: 30 for determination of Tariff, provided that the Commission may in deserving case consider equity higher than 30% for purpose of determination of tariff, where the transmission licensee is able to establish to the satisfaction of the Commission that the deployment of equity more than 30% was in the interest of general public.

Provided that;

- i. in case a project, if the actual equity employed is less than 30%. The actual debt and equity employed shall be taken for determination of tariff.*
- ii. in case of existing projects the actual debt : equity ratio shall be used for tariff determination. However, any expansion shall be governed by clause (1) above.”*

The closing loan of FY 2017-18 has been considered as opening loan for FY 2018-19 and similarly for FY 2019-20 to FY 2021-22. Additions during the year has been considered at 70% of the capitalisation proposed in FY 2018-19 and FY 2019-20 to FY 2021-22 respectively.

The Petitioner has considered the weighted average effective rate of interest at 10.5% for FY 2018-19 and FY 2019-20 to FY 2021-22 as the Interest on Loan from State Govt has been considered @ 10.5% as earlier sanctioned loan to BSPTCL .

The Petitioner, in terms of Regulation 73(1)(f) of BERC Tariff Regulations 2007, has considered the repayment of loan equivalent to depreciation allowed during the year for computation of interest on loan for FY 2018-19 and FY 2019-20 to FY 2021-22.

Table 32: Projected Computation of Interest and Finance Charges (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			Projection		
		MYT Order Dated 21.03.2016	Approved by BERC Dated 07.03.2018	Projected for Review (RE) FY 2018-19	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Opening Loan	2193.58	3034.34	566.28	837.22	3056.59	3779.05
2	Additions during year	962.27	1796.7	270.94	2219.37	722.46	105.57
3	Repayment	177.47	324.07		-	-	-
4	Closing Loan(1+2-3)	3578.38	4506.95	837.22	3056.59	3779.05	3884.62
5	Average Loan(1+4)/2	3185.98	3770.63	701.75	1946.91	3417.82	3831.84
6	Rate of Interest	7.15%	8.68%	10.5%	10.5%	10.5%	10.5%
7	Interest on Loan	227.8	327.29	73.68	204.43	358.88	402.34
8	Finance Charges	0.01	--	0	0	0	0
9	Interest and Finance Charges	227.81	327.29	73.68	204.43	358.88	402.34

It is submitted from Hon'ble Commission to allow the same furnished as above.

7. Operation and Maintenance Expenses

As per Regulation 73 (3) of BERC (Terms and Conditions for Determination of Tariff Regulations), 2007:

“(3) Operation and Maintenance Expenses

Norms for operation and maintenance expenses per ckt.km and per bay shall be as under:

(a) The Commission shall, for the purpose of fixing normative rates for operation & maintenance expenses, study the O&M expenses incurred over the last 4 to 5 years and fix appropriate rates per CKt - km of transmission line and per bay. The norms so fixed for 2008-09 shall be escalated at 4% per annum.

(b) The total allowable O&M expenses for a transmission licensee shall be calculated by multiplying the numbers of bays and CKt – km of line length with the applicable norms for O&M expenses per bay and per CKt-km respectively.”

The Petitioner, accordingly, has followed the inflation index methodology considered by the Hon'ble Commission in Tariff Order dated March 7, 2018, based on the available CPI and WPI of the FY. The same has been for projection of employee expenses, Repairs & Maintenance expenses and Administration & General expenses for FY 2018-19 and from FY 2019-20 to FY 2021-22. The computation for indexation based on CPI and WPI is shown in the Table below:

Table 33: Computation for indexation based on CPI and WPI

Parameter	FY 2015-16	FY 2016-17	FY 2017-18
Average Annual CPI Index (Mar 31)	126.00	130.90	136.50
Average Annual WPI Index (Mar 31)	107.70	113.20	116.30
Indexed (60: 40)	115.02	120.28	124.38
Increase		4.6%	3.4%
Average Increase			3.99%

The Petitioner would like to submit that the adequate expenditure was not incurred on O&M in the previous years due to fund constraints and other reasons. However, the Petitioner has started focusing on Operation and Maintenance of its transmission system and this has started resulted in improvement in power supply position in the State of Bihar. The increase in actual O&M expenses in FY 2015-16 with respect to FY 2014-15 was around 12% and the increase in actual O&M Expenses in FY 2016-17 with respect to FY 2015-16 was around 15% and increase in actual O&M Expenses in FY 2017-18 with respect to FY 2016-17 was around 15% as shown in Table below:

Table 34: Actual/approved O&M expenses (Rs. Crores)

Particulars	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Actual O&M expenses	111.49	141.52	158.59	182.13	209.81
% inc. over previous year		27%	12%	15%	15%

The projection of O&M expenses is done by applying the escalation rate linked to WPI and CPI. Therefore, the Hon'ble Commission is requested to consider employee expenses, Repairs & Maintenance expenses and Administration & General expenses for FY 2018-19 and from FY 2019-20 to FY 2021-22 on actual basis at the time of Truing-up.

7.1 Employee Expenses

7.1.1 The 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.

7.1.2 The Petitioner has considered Revised Estimates for FY 2018-19 and Budget Estimates for FY 2019-20 to FY 2021-22 for the purpose of projecting revised employees expenses. Based on the above, the net employee costs for tariff determination are projected in the table below.

Table 35: Projected Employee Expenses for FY 2018-19 and ARR from FY:2019-20 to FY: 2021-22 (Rs. Crores)

Sr.No.	Particulars	FY 2018-19 PROJECTED					
		MYT Order Dated 21.03.2016	Approved by BERC Dated 07.03.2018	Projected for Review (RE)	Projected for ARR FY 2019-20	Projected for ARR FY 2020-21	Projected for ARR FY 2021-22
1	Employee Cost	106.99	102.36	137.25	142.85	148.79	154.73
2	Indexation	4.65%	3.51%	3.99%	3.99%	3.99%	3.99%
3	Add: Inflationary Increase	4.98	3.59	5.48	5.70	5.94	6.17
4	Employee Cost (sub-total)	111.97	105.95	142.95	148.79	154.73	160.90
5	Less: Support by State Govt. against terminal benefits	0	0	0	0	0	0
6	Net Employee Cost (In Rs. Crore)	111.97	105.95	142.95	148.79	154.73	160.90

7.2 Repairs and Maintenance Expenses

7.2.1 The Petitioner would like to submit that post unbundling it has initiated major drive for maintenance and up keeping of its transmission assets. Further, the Petitioner is also undertaking huge capital expenditure to the schemes and hence Repairs and Maintenance expenses are bound to increase.

7.2.3 Hence, the R&M expenses for the FY 2018-19 & for the control period is calculated at 2.5% of Opening value of Gross Fixed Assets a the inflation over previous year expenditure is insufficient as it ignores R&M cost towards additions of new assets. Hence, inflationary index is computed on the basis of WPI & CPI as shown in Table 33.

7.2.4 The Petitioner would like to provide precedence of some states where R&M expense is allowed as % of Gross Fixed Assets are as under;

Table 36: R&M Expenses incurred by Other States

Particulars	R&M % of GFA
Punjab (PSTCL)	2.75%
Uttar Pradesh (UPPTCL)	2.50%
Delhi (DTL)	2.19%
Uttarakhand (PTCUL)	3.18%
<i>Source: Tariff Orders of resp. states</i>	

7.2.5 Hence considering the above figures, the Petitioner has projected R&M expenses as 2.5% of opening GFA and further inflationary increases to take care of material and labour price increases. The R&M expenses are provided in the table below:

Table 37: Revised R&M Expenses for FY 2018-19 and ARR from FY 2019-20 to FY:2021-22 (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			Projected		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-21)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Opening GFA			6385.61	9068.8	10121.76	12129.34
2	% of GFA			2.5%	2.5%	2.5%	2.5%
3	Base R&M Cost	41.84	48.46	159.64	276.72	253.044	303.2335
4	Inflationary Index	4.65%	3.51%	3.99%	3.99%	3.99%	3.99%
5	Inflationary Increase (3*4)	1.95	1.70	6.37	9.05	10.10	12.10
6	R&M Expenses (3+5)	43.79	50.16	166.01	235.77	263.14	315.33
7	Less: R&M cost relating to SLDC business						
8	R&M Cost	43.79	50.16	166.01	235.77	263.14	315.33

7.2.6 The Petitioner requests the Hon'ble Commission to approve the R&M expenses as projected above for FY 2018-19 and ARR from FY 2019-20 to 2020-21.

7.3 Administration & General Expenses

7.3.1 Administration and General expenses mainly comprise costs towards rent charges, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits.

7.3.2 The Petitioner has considered Revised Estimates for FY 2018-19 and Budget Estimates from FY 2019-20 to FY 2021-22 for the purpose of projected A&G expenses. Based on the above, the net A&G expenses for tariff determination are projected in the table below.

Table 38: Projected A&G Expenses for FY 2018-19 and from FY 2019-20 to FY 2021-22 (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			Projected		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	A&G Expenses	9.71	18.45	35.87	37.30	38.79	40.34
2	Inflationary index	4.65%	3.51%	3.99%	3.99%	3.99%	3.99%
3	Add.: Inflationary increase (1*2)	0.45	0.65	1.43	1.49	1.55	1.61
3	A&G Expenses (1+3)	10.16	19.10	37.30	38.79	40.34	41.95
4	Less: A&G Cost capitalized	-	-	-	-	-	-
5	Net A&G Expenses	10.16	19.10	37.30	38.79	40.34	41.95

7.3.4 The request from Hon'ble Commission to approve the projection and shall consider it on actual basis at the time of truing purpose.

7.4 Allocation of Holding Company Cost

7.4.1 The SCHEDULE 'D' HOLDING UNDERTAKING, PART III of the Bihar State Electricity Reforms Transfer Scheme, 2012 defines the Functions and Duties of Bihar State Power (Holding) Company Limited.

7.4.2 As per Clause (i) of the above Schedule 'D', the Holding Company shall handle all issues relating to the subsidiary companies in respect of:

“Business of purchasing, importing, exporting and trading of power subject to the provisions of Electricity Act, 2003 and to supply electric power generated by other plants to transmission companies, distribution companies, trading companies, other generation companies and other Persons, and in this regard execute agreements with Central and State generating authorities, departments or companies, Independent Power Producers and other Persons.”

7.4.3 BSPHCL provides common services to all the segregated entities. The Functions and Duties of Bihar State Power (Holding) Company Limited are provided in SCHEDULE ‘D’ HOLDING UNDERTAKING PART III of the Transfer Scheme 2012. The relevant portion of the Transfer Scheme 2012 is extracted for reference as under:

*“(f) Operating expenses incurred by the Holding Company like administration & general expenses legal and consulting fees etc. would be shared by the Bihar State Power Generation Company Limited, Bihar State Power Transmission Company Limited, North Bihar Power Distribution Company Limited and South Bihar Power Distribution Company Limited, in the **ratio of their respective equity.**”*

(Emphasis added)

7.4.4 As per Schedule ‘F’, the Holding Company shall handle all issues relating to the subsidiary companies in respect of: -

SCHEDULE ‘F’ REORGANISATION OF BSEB & TRANSFER OF PERSONNEL Part II
COMMON SERVICES

The Testing Divisions, Training Department at Head-Quarter and all the Departments at the Corporate Head Office like –

- *General Administration*
- *Accounts and Finance*
- *IT*
- *Stores & Purchase*
- *Transmission/Distribution/Generation*
- *Personnel*
- *Publicity*
- *Legal*
- *Vigilance and Security*
- *Commercial*
- *Planning*
- *Civil Engineering*
- *Transmission (O&M)*
- *Rural Electrification*

shall constitute “Common Services”, which shall continue to provide services to all successor entities during the interregnum period, until issue of further transfer notifications allocating the employees to the respective companies.

7.4.5 The Petitioner has considered holding company projected expense for review of Rs 10.7 Crores for FY 2018-19 and the holding company projected expenses from FY 2019-20 to FY 2021-22 have been derived as per the estimation of BSPTCL.

Table 39: Projection of Holding Company Expenses (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			Projected		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Holding Company Exp	5.00	5.35	10.7	11.13	11.57	12.03

7.4.6 The Hon'ble Commission is requested to approve the same as part of overall O&M expenditure of BSPTCL for FY 2018-19 and for Financial Year from FY 2019-20 to FY 2021-22.

7.5 Summary of O&M Expenses

7.5.1 The summary of the O&M expenses is tabulated below for reference:

Table 40: Projected O&M Expense (Rs. Crore)

Sr.No.	Particulars	FY 2018-19			Projected		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Employee Expenses	111.97	105.95	142.95	148.79	154.73	160.90
2	Repair and Maintenance Expenses	43.79	50.16	166.01	235.77	263.14	315.33
3	Administrative and General Expenses	10.16	19.10	37.30	38.79	40.34	41.95
4	Holding Company Expenses	5.00	5.35	10.7	11.13	11.57	12.03
5	Total O&M Expenses	170.91	180.56	356.96	434.48	469.78	530.21
6	Less: O&M exp capitalized	0.00	0.00	0.00	0.00	0.00	0.00
7	Net O&M Expenses	170.92	180.56	356.96	434.48	469.78	530.21

7.5. The Hon'ble Commission is requested to approve the above O&M expenses for FY 2018-19 as APR and for the Financial Year from FY 2019-20 to FY 2021-22 as ARR.

8. Interest on Working Capital

- 8.1 The Petitioner has arrived at the working capital requirement in accordance with the applicable norms for transmission function provided in the BERC (Terms and Conditions of Tariff) Regulations, 2007 and BERC (Multi-Year Transmission Tariff & SLDC Charges) Regulation, 2018 which are reproduced in the following table for reference:

Table 41: Norms for Working Capital Requirement

Sr. No.	Particulars	Norms
1.	Operation & Maintenance Expenses	One month
2.	Maintenance spares	@15% of the O&M expenses for one month
3.	Receivables	Two months of transmission charges calculated on target availability
4.	Less	Depreciation Equivalent to two months
5.	Rate of interest on working capital	Rate of interest on working capital will be computed at 150 basis point over and above the SBI MCLR base rate of 8.45%.

- 8.2 The rate of interest applied on the proposed working capital is as per the SBI PLR is 12.60% as per BERC Regulation, 2007 and from FY 2019-20 to FY 2021-22 is 9.95% as per the BERC (Multi-Year Transmission Tariff & SLDC Charges) Regulations, 2018..

- 8.3 The proposed interest on working capital for FY 2018-19 is in accordance with BERC (Terms and Conditions of Tariff) Regulations, 2007 as APR & for Financial Year from FY 2019-20 to FY 2018-19 as ARR is computed based on the BERC (Multi-Year Transmission Tariff & SLDC Charges) Regulation, 2018 is given in the following table.

Table 42: Projected Interest on Working Capital for FY 2018-19 (Rs. Crores)

Sl. No.	Particulars	FY 2018-19		
		MYT Order dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review
1	O&M Expenses for 1 Month	14.24	15.05	29.75
2	Maintenance Spares @1% of Opening GFA with 6% escalation	80.45	72.6	67.69
3	Receivables 2 Months	122.59	184.88	199.04
4	Total Working Capital	217.28	272.53	296.47
5	Rate of Interest	13.50%	12.60%	12.60%
6	Interest on Working Capital	29.33	34.34	37.36

Accordingly, the petitioner request from Hon'ble Commission to approve the same as mentioned above for FY 2018-19.

Table 43: Projected Interest on Working Capital from FY 2019-20 to FY 2021-22 (Rs. Crores)

Sr.No.	Particulars	PROJECTED		
		Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	O&M Expenses for 1 Month	36.21	39.15	44.19
2	Maintenance Spares @15% of O&M Expenses for one month	5.43	5.87	6.63
3	Receivables 2 Months	314.31	452.55	592.97
4	Working Capital	355.95	497.57	643.79
5	Less: Depreciation	83.77	97.24	113.15
6	Net Working Capital	271.51	399.67	530.03
7	Rate of Interest	9.95%	9.95%	9.95%
8	Interest on working capital (Rs. Crore)	27.01	39.77	52.75

8.4 The Petitioner requests the Hon'ble Commission to approve the computation of working capital and the interest charges thereon for FY 2018-19 as per BERC (Terms and Conditions of Tariff) Regulations, 2007 norms as APR & for Financial Year from FY 2019-20 to FY 2018-19 as ARR based on the BERC (Multi-Year Transmission Tariff & SLDC Charges) Regulation, 2018.

9 Capitalisation Schedule

9.1 The Capitalisation has been computed considered from the debt-equity ratio, in case of all projects the debt-equity ratio as on the date of commercial operation shall be 70: 30 for determination of tariff and the debt & equity amount arrived at in accordance with above shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.

9.2 The projected Capitalisation for FY 2018-19 as APR and for the Financial Year from FY 2019-20 to FY 2021-22 is tabulated as below:

Table 44: Projected Capitalisation (Rs. Crores)

Sr. No.	Particulars	Actual	Projected			
		For FY 2017-18	Projected for (FY 2018-19)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Capitalization during the Year	1391.3	2607.45	1052.96	2007.58	1596.37
2	Less: Grants	0	0	0	0	0
3	Net Capitalization	1391.3	2607.45	1052.96	2007.58	1596.37
4	Equity considered (@ 30% of 3)	417.39	782.235	315.888	602.274	478.911
5	Debt considered (@ 70% of 3)	973.91	1825.215	737.072	1405.306	1117.459

10 Return on Equity

10.1 The Petitioner hereby submits the computation of equity is considering the closing equity balance as per the audited accounts for FY 2017-18 (as considered for true-up of FY 2017-18).

10.2 The computation of return on equity for FY 2018-19 as APR & for the Financial Year from FY 2019-20 to FY 2021-22 as ARR Projection is tabulated below:

Table 45: Computation of Return on Equity

Sr. No.	Particulars	FY 2018-19					
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Equity as on 31.03.2015	375.41	375.41	375.41	375.41	375.41	375.41
2	Rate of return on Equity	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
3	Return on equity (1*2)	52.56	52.56	52.56	52.56	52.56	52.56
	Equity of projects commissioned w.e.f. 1.04.2015						
4	Opening Equity	1092.19	1239.24	1656.63	2438.87	2754.753	3357.027
5	Addition during the Year	412.40	770.02	782.24	315.89	602.274	478.911
6	Closing Equity (4+5)	1504.59	2009.26	2438.87	2754.75	3357.03	3835.94

7	Average equity (4+6)/2	1298.39	1624.25	2047.7475	2596.809	3055.89	3596.4825
8	Rate of Return on equity	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
9	MAT Rate			21.55%	21.55%	21.55%	21.55%
10	Effective Rate of RoE	15.50%	15.50%	19.76%	19.76%	19.76%	19.76%
11	Return on equity (7*10)	201.25	251.76	404.59	513.07	603.78	710.59
12	Total Return on equity(3+11)	253.81	304.32	457.15	565.63	656.33	763.14

10.3 The Petitioner requests the Hon'ble Commission to approve the computation of return on equity for FY 2018-19 as APR and for the Financial Year from FY 2019-20 to FY 2021-22 as ARR as submitted above.

11. Non-Tariff Income

11.1 The Petitioner has submits non-tariff income of Rs 100.00 Crores for the FY 2018-19 projected for review as APR and for the Financial Year from FY 2019-20 to FY 2021-22 as ARR as Non-Tariff income inflated at the rate of 5% every year.

Table 46: Projected Non-Tariff Income (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			PROJECTED		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1.	<u>Non tariff Income inflated @ 5% every year</u>	39.13	43.14	100	105	110.25	115.76

11.2 The Petitioner requests the Hon'ble Commission to approve the Non-Tariff Income for FY 2018-19 and for the Financial Year from FY 2019-20 to FY 2021-22 as proposed above.

12. APR for FY 2018-19 and ARR or the Annual Fixed Charge for the Financial Year from FY 2019-20 to FY 2021-22 of BSPTCL .

- 12.1 The Annual Fixed Charges or Transmission charges have been arrived at by aggregating all the expenses detailed in the previous sections i.e. Depreciation, Interest on Loan, Interest on Working Capital, O&M expenses and ROE. The total expenses less Non- Tariff Income are the net Annual Fixed Charges or Transmission charges.
- 12.2 Accordingly, following is the summary of revised projections of Aggregate Performance Review (APR) and Aggregate Revenue Requirement (ARR) of Bihar State Power transmission Company Limited (BSPTCL) for FY 2018-19 as APR and for the Financial Year from FY 2019-20 to FY 2021-22 for approval by the Hon'ble Commission.

Table 47: Projected Annual Fixed Charges/ ARR (Rs. Crores)

Sr. No.	Particulars	FY 2018-19			PROJECTED		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projectd for ARR (FY 2021-22)
1	O&M expenses	170.91	180.56	356.96	434.48	469.78	528.24
2	Less: IDC	-	18.15	0.00	-	-	-
3	Interest & Finance Charges	227.81	327.29	73.68	204.43	358.87	402.34
4	Interest on working capital	29.33	34.34	37.36	27.01	39.77	52.75
5	Depreciation	177.47	324.07	320.71	419.34	500.14	595.28
6	Return on Equity	253.81	304.32	457.15	565.63	656.33	763.14
7	Total Fixed Cost (1+2+3+4+5+6)	859.33	1152.43	1245.85	1650.95	2029.33	2349.62
8	Less: Non tariff Income	39.13	43.14	100	105	110.25	115.76
9	Less: Revenue from other business			4.73	4.92	5.12	5.32
10	Net Fixed Cost/ ARR (7-8-9)	735.55	1109.29	1141.12	1541.03	1913.96	2228.54
11	Add: Revenue Gap/(Surplus) for FY 2017-18 with carrying cost	0.00	85.09	0.00	306.94	-	-
12	Net Fixed Cost/ARR (11+10)	735.55	1194.38	1141.12	1848.08	1913.96	2228.54

12.3 The Petitioner would like to submit that the Transmission Charges for the years under consideration are estimated based on the applicable rules and regulations and the methods adopted by the Hon'ble Commission and tariff order dated March 07' 2018. The various costs have been estimated in accordance with the regulatory norms, assumptions and detailed justifications provided in this petition. In view of the submitted facts and explanations, the Petitioner humbly prays to the Hon'ble Commission to approve the revised APR for FY 2018-19 and ARR for the Financial Year from FY 2019-20 to FY 2021-22 and resultant Transmission Charges to be recovered from the users of the transmission companies.

12.4 Revenue Gap/(Surplus) for FY 2018-19 and for Financial Year from FY 2019-20 to FY 2021-22

12.5 The Petitioner submits that it has been recovering transmission charges for FY 2018-19 as APR from the distribution licensees as per the charges approved by the Commission as per order dated March 07' 2018. The revenue gap/(surplus) for FY 2018-19 as APR and for the Financial Year from FY 2019-20 to FY 2021-22 as ARR as per the revised projections is depicted in the table below:

Table 48: Projected Revenue Gap/ (Surplus) (Rs. Crores)

Sr.No.	Particulars	FY 2018-19			PROJECTED		
		MYT Order Dated 21.03.2016	Tariff Order Dated 07.03.2018	Projected for Review (RE)	Projected for ARR (FY 2019-20)	Projected for ARR (FY 2020-21)	Projected for ARR (FY 2021-22)
1	Aggregate Revenue Requirement	735.55	1194.38	1141.12	1848.08	1913.96	2228.54
2	Less: Approved Annual Transmission Charges	820.2	1194.38	1194.38	***	***	***
3	Revenue Gap/(Surplus) (1-2)	0	0	-53.26	1848.08	1913.96	2228.54
