

BEFORE

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

**Petition
For
True – up for FY 2014-15**

Annual Performance Review (APR) for FY 2015-16

Annual Revenue Requirement (ARR) for FY 2016-17

And

**Determination of Multi Year Transmission Tariff for Control
Period (FY 2016-17 to FY 2018-19)**

For

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

Patna



Chief Engineer (Transmission O&M)

1st Floor, Vidyut Bhawan-1

Jawaharlal Nehru Marg

Patna – 800 021

28 December' 2015

BEFORE, THE BIHAR ELECTRICITY REGULATORY COMMISSION,

IN THE MATTER OF

Filing of the Petition for True-up of FY 2014-15, Annual Performance Review (APR) for FY: 2015-16, Annual Revenue Requirement (ARR) for FY 2016-17 under BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 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-1, 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) has filed a petition for approval of the "Annual Revenue Requirement (ARR)" for the period 2016-17 & determination of Multi Year tariff for FY 2016-17, 2017-18 & 2018-19, True up exercise for FY 2014-15 and "Annual Performance Review (APR)" of FY 2015-16 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. This instant petition is being filed with the Hon'ble Commission for True-up for FY 2014-15, Annual Performance Review (APR) for FY 2015-16, Annual Revenue Requirement (ARR) for FY 2016-17 considering the approved values

6. The present petition is filed on independent basis by the BSPTCL.
7. 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 as amended time to time by the Commission.
8. 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 2014-15 for Rs. 226 Crores, APR for FY 2015-16 for Rs. 392.53 Crores and ARR for FY 2016-17 for Rs. 532.33 Crores.
- 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 2016-17 & 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: December' 2015

(K. N. Singh)
CE/Trans. (O&M)

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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 2015-16 (till November’ 2015) are provided in the table below:

Table 1: Power Transformer Capacity (in MVA)

Sub-stations	FY 2015-16 (up to Oct'15)
220/132kV	4230
132/33kV	7260
132/25 kV	110

Table 2: Transmission Line Length (in Ckm)

Transmission Lines (in Ckm.)	FY 15-16 (up to Oct'15)
220kV	1784
400 kV	75
132 kV Double Ckt. Line	6758

- 1.2.2 The details of the substations 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 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 2014-15, revised APR for FY 2015-16 and ARR for FY 2016-17 and thereby determination of the MYT tariff /charges for FY 2016-17 to 2018-19 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 (Terms and Conditions for Open Access) Regulations, 2005 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 2014-15
- Annual Performance Review (APR) for FY 2015-16
- Annual Revenue Requirement (ARR) for FY 2016-17 & MYT for FY 2016-17 to FY 2018-19.

2. Approach for Present filing

2.1 Approach for the current petition

2.1.1 The Commission in the order dated 12th March 2015 approved the true-up of FY 2013-14, Annual Performance Review of FY 2014-15 and Annual Revenue Requirement of FY 2015-16 for BSPTCL.

2.1.2 Hon'ble Commission in the order dated February 28' 2014 approved the true-up of FY 2012-13 for BSP(H)CL as a whole and also undertook the performance review for FY 2013-14 for BSEB as a whole.

- 2.1.3 Since the performance of FY 2012-13 had been approved by the Hon'ble Commission on an aggregate basis for BSEB as a whole, the true-up of the same has been dealt in a separate order of the Commission (order dated February 28' 2014 in case no. 21/2013 for BSP(H)CL) and revenue gap / surplus allocated to both DISCOMs on an agreed sharing basis.
- 2.1.4 The Commission in its order dated February 28' 2014 carried out the Annual Performance Review (APR) for FY 2013-14 and determination of revised ARR for FY 2014-15 for BSPTCL. The transmission charges for FY 2014-15 were also laid out in this order.
- 2.1.5 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.*
- 2.1.6 This petition contains the actual data for *FY 2014-15* based on the audited account for FY 2014-15. Further, estimates for FY 2015-16 have also been revised based on the actual performance of the licensee *during the last 8 months*.
- 2.1.7 In line with the above, BSPTCL is filing the present petition for the True-up for FY 2014-15, Annual Performance Review (APR) for FY 2015-16 and Annual Revenue Requirement (ARR) for FY 2016-17 & 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 2014-15****3.1 Introduction**

3.1.1 The Petitioner is filing the present petition for the true-up of FY 2014-15 based on the audited annual accounts for the year, Annual Performance Review (APR) for FY 2015-16 based on the actual data of previous eight (8) months and determination of Annual Revenue Requirement for FY 2016-17 & Multi Year Transmission tariff for the control period of three (3) years commencing from FY 2016-17.

3.2 Transmission Loss

3.2.1 The transmission loss trajectory considered by the Commission in the MYT order (dated 12th March ' 2015) is provided in the table below:

Table 3: Transmission Loss approved in the MYT order

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Transmission Loss	4.02%	3.97%	3.92%

3.2.2 The Actual transmission loss for FY 2014-15 is 5.11 % and the same are as per the audited account of the petitioner. The Petitioner submits that the norms of 3.97% for FY 2014-15 as laid out by the Commission was not achieved by the transmission licensee owing to various constraints, explained in the following paragraph. Nevertheless the petitioner is taking all possible measures to minimize the transmission loss for which BSPTCL has initiated intra state transmission system strengthening, augmentation of transformers, development of new intra state transmission infrastructure including creation of new Grid S/s near to the load centre and metering of each incoming & outgoing feeders and implementation of online monitoring of data & getting data on real time basis including Energy Accounting & Audit. The petitioner therefore seek relaxation in the transmission norms as laid out by the commission and requests the commission to approve the losses for FY 2014-15 as per actual based on audited account. The details are as below:

Table 4: Actual Transmission Loss for FY 2014-15

Particulars	FY 2014-15
Energy Input (in Kwh)	17902929467
Energy Output (in Kwh)	16986069903
Transmission Loss (in Kwh)	916859564
Transmission Loss (%)	5.11

- 3.2.3 Further, the Petitioner would like to submit that substantial investments pertaining to strengthening of Intra State transmission network and adding new / link lines, augmentation of existing transformer capacities and establishment of new sub-stations closer to the load centers etc. have been undertaken in FY 2014-15 and are continuing for the future years; however, the benefits out of the capital investments would take time to flow in.
- 3.2.4 Further, petitioner would like to state that the increase in the transmission loss is due to increase in the scheduling of power in the system & at present BSPTCL is in process of implementation of the reliable mechanism.
- 3.2.5 BSPTCL would like to mention that the above mentioned transmission system strengthening proposed in the Intra State network of BSPTCL would result in:
- a) Reduction of Transmission Loss
 - b) Reduction of Distribution Loss
 - c) Improvement of system reliability
 - d) Enable creation of robust transmission network
- 3.2.6 So, the improvement in losses would be reflected only after 3-4 years of the commissioning of these transmission assets.
- 3.2.7 The Petitioner requests the Hon'ble Commission to approve the transmission losses for FY 2014-15 on actual basis.

3.3 Capital Investment and Capitalization

- 3.3.1 The capitalization for FY 2014-15 as per the audited accounts of the petitioner is Rs 375.51 crores. New Investment for the year as per the accounts is Rs 563.66 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 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	To Dated 12.03.2015	True-up
	CWIP			
1	Opening CWIP	613.00	557.88	544.34
2	New Investment	844.00	971.88	563.66
3	Less: Capitalization	739.00	481.20	375.51
	<i>(a) Opening CWIP</i>	55.00	87.17	
	<i>(b) New Investment</i>	684.00	394.03	
4	Closing CWIP	718.00	1048.56	732.49

- 3.3.2 The capitalization has been lower as compared to the approved figures and the

remaining funds for schemes are expected to be capitalized in the remaining years of the control period.

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

3.4 Gross Fixed Assets

3.4.1 The Petitioner hereby submits the computation of Gross Fixed Assets considering the opening GFA and closing GFA for FY 2014-15 as reflected in the audited annual accounts for FY 2014-15. The Gross addition in GFA for the year is Rs 375.51 Crores, however after adjustment of assets disposed off during the period, Net addition in GFA comes to Rs 338.58 Crores and the Petitioner requests the Commission to approve the same.

3.4.2 The computation of Gross Fixed Assets for FY 2014-15 is tabulated below:

Table 6: Gross Fixed Assets for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	True-up
1	Opening GFA as on 01.04.2014	1946.64	2249.58	3583.31
2	Less: Assets Revalued			
3	Original value of GFA	1946.64	2249.58	3583.31
4	Less: Value of Land			1366.12
5	Opening GFA (depreciable GFA)	1946.64	2249.58	2217.19
6	Add: Additions during year (NET)	739.00	480.00	338.58
7	Add: Interest during Construction (IDC)	14.69	9.84
8	Closing GFA	2700.33	2739.42	2555.77

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

3.5 Depreciation on GFA

3.5.1 The depreciation for FY 2014-15 as per the audited accounts is Rs 59.01 Crores. Further, land and land rights have not been subject to any depreciation.

3.5.2 In the tariff order dated 28th February 2014, the Commission had excluded land and land rights from the average GFA and then applied the weighted average rate of depreciation of 5.12% for arriving at the depreciation. Further, depreciation figure as per accounts has not considered any depreciation on land and therefore, the depreciation as per accounts should

be allowed in entirety. Also, amortization on the assets created out of grants has been excluded from the depreciation amount charged to the Profit & Loss (P&L) account of the Petitioner.

3.5.3 The depreciation for the true-up of FY 2014-15 is as below.

Table 7: Depreciation on GFA for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	Opening GFA as on 01.04.2014	1946.64	2249.58	3583.31
2	Additions during year	739.00	480.00	375.51
3	Interest during Construction	14.69	9.84
4	Closing GFA(1+2+3)	2700.33	2739.42	3958.82
5	Average GFA (1+4) / 2	2323.48	2494.50	3771.06
6	Weighted Avg. Rate of Depreciation	5.12%	5.23%	3.36%
7	Depreciation (5*6)	118.96	130.46	126.15
8	Opening Grants	890.31	1634.05	1624.41
9	Grants during year	513.00	280.67	0.30
10	Less: Amortisation during the year			107.64
11	Total Grants (8+9-10)	1403.31	1914.72	1517.07
12	Average Grants (11+8) / 2	1146.81	1774.39	1570.74
13	Weighted Avg. Rate of Depreciation	5.12%	5.23%	3.36%
14	Depreciation for GFA on Grants (12*13)	58.72	92.800	67.14
15	Net Depreciation for GFA on Loans (7-14)	60.25	37.66	59.01

3.5.4 *The Petitioner requests the Hon'ble Commission to approve the depreciation of Rs 59.01 Crores for FY 2014-15.*

3.6 Interest & Finance Charges

3.6.1 The Petitioner has considered the opening and closing loan balances for FY 2014-15 as per the audited annual accounts of the Petitioner.

3.6.2 The interest on loans amount as per the audited accounts of the Petitioner is Rs 18.52 Crores. The amount of interest has been accrued on monthly basis and shown as Long term borrowings into Balance Sheet for the FY 2014-15 due to non-repayment of loans. The details of the same have been shown in the table below.

Table 8: Details of Interest on Loans for FY 2014-15 (Rs. Crores)

S. No.	Source of Loan	Opening Balance as on 1.04.14	Addition	Repayment	Closing Balance as on 31.03.15	Interest Accrued during FY	Average Loan during FY 14-15	Average Rate of Interest (%)
1	State Govt.	195.96	-	-	195.96	18.52	195.96	9.45
2	ADB Loan	29.78	66.36	-	96.14	-	62.96	-
3	Total	225.74	66.36	-	292.10	18.52	258.92	9.45%

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

Table 9: Interest on Loans for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	True-up
1	Opening Loan	317.97	207.26	225.74
2	Additions during year	226.00	146.42	66.36
3	Repayment	60.25	37.66	-
4	Closing Loan(1+2-3)	483.73	316.01	292.10
5	Average Loan(1+4)/2	400.85	261.64	258.92
6	Rate of Interest	13.00%	9.13%	7.15%
7	Interest on Loan	52.11	23.89	18.52

3.6.4 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, interest on security deposit from staff etc. The same are as per the audited accounts of the Petitioner for FY 2014-15.

3.6.5 The Petitioner, therefore, claims an amount of Rs 18.53 (18.52 + 0.01) Crores as the interest and finance charges for FY 2014-15.

3.6.6 The Petitioner requests the Hon'ble Commission to approve the interest and finance charges for FY 2014-15 as submitted above.

3.7 Operation and Maintenance Expenses

3.7.1 Employee Expenses

3.7.1.1 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.

3.7.1.2 The Petitioner submits employee expenses of Rs 93.35 Crores for FY 2014-15 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 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	Employee Cost	176.25	77.57	93.35
2	Indexation		8.24%	
3	Add: Inflationary Increase	-	6.39	
4	Employee Cost (sub-total)	176.25	83.96	93.35
5	Less: Support by State Govt. against terminal benefits	81.42	-	-
6	Employee Cost	94.83	83.96	93.35
7	Less: Employee cost capitalized (@ 1.8% on S. No. 4)	3.17	1.51	-
8	Net Employee Cost (Rs. Crores)	91.66	82.45	93.35

3.7.1.3 The details of the employee expenses for FY 2014-15 as per the audited accounts of the Petitioner are as below.

Table 11: Details of Employee Expenses for FY 2014-15 (Rs. Crores)

Sl. No.	Particulars	Employee Expenses
1	2	3
1	Salaries	45.11
2	Over Time	2.26
3	Dearness Allowance	33.44
4	Other Allowance	2.79
5	Medical Expenses Re-imburement	0.14
6	Staff Welfare Expenses	0.11
7	Employer Contribution for Terminal Benefits	9.48
8	TOTAL	93.35

3.7.1.4 The Petitioner requests the Commission to approve the employee expenses of Rs 93.35 Crores for FY 2014-15 and the same are as per the audited annual accounts of the Petitioner for FY 2014-15.

3.7.2 Repairs and Maintenance Expenses

3.7.2.1 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 2014-15.

3.7.2.2 The Petitioner submits that R&M expenses as per the audited accounts of the petitioner company are Rs. 36.51 Crores incurred during FY 2014-15. 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 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	True-up
1	Base R&M Cost	10.03	26.62	36.51
2	Inflationary Index	***	8.24%	***
3	Add: Inflationary Increase	***	2.19	***
4	Total (4=1+3)	10.03	28.81	36.51

3.7.2.3 The Petitioner requests the Commission to approve the R&M expenses of Rs 36.51 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.

3.7.2.4 The details of the R&M expenses for FY 2014-15 as per the audited accounts of the Petitioner are as below;

Table 13: Details of R&M Expenses for FY 2014-15 (Rs. Crores)

Sl. No.	Particulars	R&M Expenses
1	2	3
1	Plant and Machinery	27.77
2	Building	0.38
3	Civil Works	2.42
4	Hydraulic Works	0.01
5	Line Cable Net Works	5.64
6	Vehicles	0.03
7	Furniture and Fixture	0.16
8	Office Equipment	0.09
	TOTAL	36.51

3.7.2.5 *The Petitioner requests the Hon'ble Commission to approve the R&M expenses as submitted above for FY 2014-15.*

3.7.3 Administration & General Expenses (A&G)

3.7.3.1 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.

3.7.3.2 The Petitioner submits that A&G expenses of Rs 11.66 Crores have been incurred for FY 2014-15 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;

3.7.3.3 The details of A&G expenses for FY 2014-15 as per the audited accounts towards of the Petitioner are as below;

Table 14: Details of A&G Expenses for FY 2014-15 (Rs. Crores)

Sl. No.	Particulars	A&G Expenses
1	2	3
1	Rent, Rates & Taxes	0.04
2	Insurance	0.36
3	Telephone charges, Postage & Telex	0.36
4	Legal Charges.	0.01
5	Audit Fees	0.01
6	Consultancy Charges	0.08
7	Technical Fees	0.46
8	Other Professional Charges	0.11
9	Conveyance & Travel	1.95
10	<u>Other Expenses</u>	
	Fees & Subscription	1.10
	Books & Periodicals	0.02
	Printing & Stationary	0.17
	Advertisement	0.68
	Loss on theft of stock	0.07
	Electricity Charges	0.22
	Entertainment Charges	0.05
	Commission for sale of scrap	0.41
	Home Guard/ Security Guard	2.07
	Miscellaneous Expenses	0.28
11	Freight	0.03

12	Other Purchase related Expenses	0.002
13	Sub-Total	8.47
14	Miscellaneous losses and write-	-
	Miscellaneous losses and write-offs	
	Bad Debts	-
15	Sub-Total	-
16	Total A&G Expenses	8.47

3.7.3.4 Allocation of Holding Company Cost

The Petitioner submits that holding company expenses of Rs 3.19 Crores have been reported for FY 2014-15 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 15: Holding Company Expenses for FY 2014-15 (Rs. Crores)

Sr.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	True-up
1	Holding Company Expenses	-	7.54	3.19

Total Expenses towards A&G Expenses of BSPTCL is shown in the table below;

Table 16: A&G Expenses of Transmission Company for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	Base A&G Expense	5.58	6.19	11.66
2	Inflationary Increase		8.24%	
3	Add: Inflationary Increase		0.51	
4	A&G Expense	5.58	6.70	11.66
5	Less: A&G cost capitalized	0.22	0.27	
6	Net A&G Expenses	5.36	6.43	11.66

3.7.3.7 *The Petitioner requests the Hon'ble Commission to approve the A&G Expenses of BSPTCL of Rs. 8.47 crores and Holding company expenses of Rs 3.19 Crores totaling Rs. 11.66 Crores as submitted above for FY 2014-15.*

3.7.4 Summary of O&M Expenses

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

Table 17: O&M Expenses for FY 2014-15 (RsCrores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	True-up
1	Employee Expenses	91.66	83.96	93.35
2	Repair and Maintenance Expenses	10.03	28.81	36.51
3	Administrative and General Expenses	5.36	6.70	8.47
4	Holding Company Expenses	-	7.54	3.19
5	Total O&M Expenses	107.05	127.02	141.52

3.7.4.2 *The Hon'ble Commission is requested to approve the above O&M expenses for Rs. 141.52 Crores for FY 2014-15.*

3.8 Interest on Working Capital

3.8.1 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."

3.8.2 The rate of interest applied on the working capital is as per the SBI PLR is 14.05 %. The normative interest on working capital for FY 2014-15 computed as per the above norms is as below

Table 19: Interest on Working Capital for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	O&M Expenses for 1 Month	8.92	10.44	11.79
2	Maintenance Spares @1% of Opening GFA with 6% escalation	20.63	23.85	3.04
3	Receivables 2 Months	43.98	34.39	45.10
4	Total Working Capital	73.53	68.68	59.93
5	Rate of Interest	14.45%	13.50%	14.05%
6	Interest on Working Capital	10.63	9.27	8.42

3.8.1.3 The Petitioner requests the Hon'ble Commission to approve the computation of working capital and the interest charges thereon for FY 2014-15 based on the actual components of the normative working capital.

3.8.1.4 *The Petitioner requests the Commission to approve interest on working capital of Rs 8.42 Crores for true-up of FY 2014-15.*

3.9 Return on Equity

3.9.1 The Petitioner hereby submits that based on the Opening and Closing equity balances as per the audited accounts for FY 2014-15, the revised RoE claimed in true up is Rs. 16.59 crores for 2014-15. The Petitioner submits that the above equity is excluding Reserves and Surplus as the same comprises of grants for capital assets and consumer contributions.

3.9.2 The computation of return on equity for FY 2014-15 is tabulated below:

Table 20: Return on Equity for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	Opening Equity Balance	235	262.85	2.00
2	Add: Equity during the year	-	62.75	233.00
3	Closing Equity Balance	235	325.60	235.00
4	Average Equity	235	294.22	118.50
5	Rate of Return on Equity	14.00%	14.00%	14.00%

6	Return on Equity	32.90	41.19	16.59
7	MAT Rate			20.01%
8	MAT			3.32

3.9.3 *The Petitioner requests the Hon'ble Commission to approve the computation of return on equity (RoE) Rs. 16.59 crores & payment against MAT Rs. 3.32 crores for FY 2014-15 totaling to Rs. 19.91 crores as submitted above.*

3.10 Non-Tariff Income

3.10.1 The Petitioner submits non-tariff income of Rs 21.39 Crores for the true-up for FY 2014-15 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 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	Non-Tariff Income	0.61	30.90	21.39

3.10.2 The details of non-tariff income for FY 2014-15 as per the audited accounts of the Petitioner are as below.

Table 22: Details of Non-Tariff Income for FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	Non-Tariff Income
1	2	3
A	<u>Interest Income</u>	
1	Interest on Staff Loan & Advances	-
2	Income from Investment (Fixed Deposit)	-
3	Interest from Banks (Other than Fixed)	7.94
	Sub-total	7.94
B	<u>Other Income</u>	
1	Income from Scrap Sale	12.29
2	Miscellaneous Receipts	1.16
3	Interest & Finance charges capitalized	-
4	Rebate and Discount Received	-
	Sub-total	13.45
	Total (A + B)	21.39

3.10.3 *The Petitioner requests the Hon'ble Commission to approve the Non-Tariff Income for FY 2014-15 as submitted in table above.*

3.11 Transmission ARR for True-up of FY 2014-15:

- 3.11.1 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.
- 3.11.2 Accordingly, following is the summary of revised projections of Aggregate Revenue Requirement of the Petitioner for the true-up of FY 2014-15 for approval by the Hon'ble Commission.

Table 23: Transmission ARR for True-up of FY 2014-15 (Rs. Crores)

Sr. No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	Tariff Order Dated 12.03.2015	True-up
1	O&M Expenses	107.05	125.24	141.52
a	<i>Employee Expenses</i>	<i>91.66</i>	<i>83.96</i>	<i>93.35</i>
b	<i>R&M Expenses</i>	<i>10.03</i>	<i>28.81</i>	<i>36.51</i>
c	<i>A&G Expenses</i>	<i>5.36</i>	<i>6.70</i>	<i>8.47</i>
d	<i>Holding Company Expenses Allocated</i>	-	<i>7.54</i>	<i>3.19</i>
	<i>Less: O&M exp. capitalised</i>		<i>1.78</i>	-
2	Depreciation	60.25	37.66	59.01
3	Interest and Finance Charges	52.11	23.89	18.53
4	Interest on Working Capital	10.63	9.27	8.42
5	Return on Equity	32.90	41.19	16.59
6	MAT			3.32
7	Gross Annual Revenue Requirement	262.93	237.25	247.39
8	Less: Non Tariff Income	0.61	30.90	21.39
9	Net Revenue Requirement	262.32	206.35	226.00

- 3.11.3 The Petitioner would like to submit that the Transmission Charges for true-up of FY 2014-15 have been determined based on the applicable rules and regulations of the Commission and based on the audited account of BSPTCL for FY 2014-15. 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 2014-15 for Rs. 226 crores and the resultant revenue gap to be adjusted in the Transmission Charges of the Petitioner for FY 2016-17 to be recovered from the two distribution companies.

3.12 Revenue Gap / (Surplus) for FY 2014-15

3.12.1 The revenue gap/(surplus) for FY 2014-15 as per the true-up is as below:

Table 24: Revenue Gap/ (Surplus) for FY 2014-15 (Rs. Crores)

Sr.No.	Particulars	FY 2014-15		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	True-up
1	Annual Transmission Charges	262.32	206.35	226.00
2	Less: Earlier Approved Annual Transmission Charges for the year	262.32	262.32	206.35
3	Revenue Gap (-)/Surplus (+) for the year	--	55.97	(-) 19.65

3.12.2 The Commission in order dated March 12' 2015 had approved revenue surplus of Rs 55.97 Crores for the Review of FY 2014-15 and had noted that the deficit/surplus of FY 2014-15 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 2014-15 as per the audited accounts of the Petitioner amounts to Rs. 19.35 Crores may be approved and Hon'ble Commission allow recovery of the same in the Transmission ARR for FY 2016-17 from NBPDCCL & SBPDCL respectively.

CHAPTER-II**Annual Performance Review (APR) for FY 2015-16 & Annual Revenue Requirement (ARR) for FY 2016-17 and Determination of Multi-year tariff for FY 2016-17 to FY 2018-19****1.0 Introduction**

- 1.1 The instant petition is related with Annual Performance Review (APR) for FY 2015-16 and approval of ARR for FY 2016-17 and determination of Multiyear tariff for the control period 2016-17 to FY 2018-19. The petition has been framed based on the actual available data for FY 2014-15 and available data of past eight (8) months for FY 2015-16.
- 1.2 Transmission Charges for FY 2016-17 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 Revised Trajectory:

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

Table 25: Revised Transmission Loss Trajectory

Particulars	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17 (Expected)	FY 2017-18 (Expected)	FY 2018-19 (Expected)
Approved Transmission Loss in %	4.02	3.97	3.92	***	***	***
Actual Transmission loss in %	4.38	5.11	5.11	***	***	***
Revised Trajectory of Transmission Loss in %	***	5.11	5.11	5.11	5.11	5.11

- 2.2 The Actual transmission loss for FY 2014-15 is 5.11 % and the same are as per the audited account of the petitioner. The Petitioner submits that the norms of 3.97% for FY 2014-15 as laid out by the Commission was a very ambitious target for petitioner, which in spite of efforts to bring down the losses, the transmission losses for FY 2014-15 were 5.11%.
- 2.3 However, petitioner has initiated action to implement ABT metering scheme with facility of online monitoring of data & supply of various data on real time basis at the Central Depatch Centre (i.e. SLDC) including the

provisions of Energy Accounting & Audit. It is expected that the implementation of the said scheme may help in the substantial reduction in the transmission loss owing to correct reporting & auditing of the quantum of power flow and to access the meter data from remote from the Central Despatch Centre. Presently, the above said proposal is pending before CEA, Delhi for approval.

- 2.4 Based on the audited account of FY 2014-15 & monthly meter reading data from April' 2015 to October' 2015 for FY 2015-16 (i.e. 7 months), the transmission loss for the FY 2014-15 & FY 2015-16 (seven months) are as follow;

Table 26: Actual Transmission Loss for FY 2014-15 & FY 2015-16 (up to October' 2015)

Particulars	FY 2014-15	FY 2015-16 (up to Oct' 2015)
h Energy Input (in Kwh)	17902929467	12843973000
e Energy Output (in Kwh)	16986069903	12222193000
Transmission Loss (in Kwh)	916859564	621780000
p Transmission Loss (%)	5.11	4.84

petitioner therefore seeks relaxation in the norms of transmission losses based on the audited account of BSPTCL for FY 2014-15 (i.e. 5.11 %) & also for the FY 2015-16 (i.e. 5.11 %) on provisional basis subject to determination of final transmission loss of BSPTCL by Hon'ble Commission based on the audited account of BSPTCL for 2015-16 . The Hon'ble Commission is requested to allow STU loss for 2014-15 & FY 2015-16 as 5.11 % or as per audited / actual transmission loss of BSPTCL.

- 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.
- 2.5 BSPTCL would like to mention that these works would result in:
- Reduction of transmission losses
 - Reduction of distribution losses
 - Improvement of system reliability
 - Enable creation of robust transmission network

Hence, the improvement in the transmission losses would be reflected only after 3-4 years after the commissioning of the various transmission assets & metering schemes.

- 2.6 It is also relevant to mention that increase in the quantum of power also causes increase in the transmission loss.
- 2.7 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	FY2014-15 (Actual)	FY2015-16 (Expected)	FY2016-17 (Expected)	FY2017-18 (Expected)	FY2018-19 (Expected)
Revised Trajectory of Transmission Loss	5.11%	5.11%	5.11%	5.11%	5.11%

- 2.9 The Petitioner requests the Hon'ble Commission to approve the revised transmission loss trajectory as submitted above for the control FY 2014-15 to FY 2018-19.

3.0 Capital Investment Plan

- 3.1 The Petitioner had submitted the Capital investment plan from FY 2014-15 to FY 2016-17 in the last year's petition and the same had been approved by the Commission. The Petitioner had submitted capital investment of Rs 3469.10 Crores from FY 2013-14 to FY 2015-16, which had been approved by the Commission in its order dated February 28' 2014.

Table 28 : Expenditure Details under BRGF Fund, Government of Bihar as on 31.10.2015 (Rs. in Crores)

Sl. No.	Planned Scheme	Total Cost	2013-14	2014-15	2015-16	2016-17	Total
1	Strengthening of Sub Transmission System Phase -II Extension	472.53	42.35	156.26	115.00	158.92	472.53
2	Strengthening of Sub Transmission System Phase - III Part-I	1620.02	80.00	243.33	835.00	461.69	1620.02
3	Construction of 220 / 132 / 33 KV G.S.S. Kishanganj with associated 220 KV, 132 KV & 33 KV Lines for evacuation of power from 400/220 GSS Kishanganj (PGCIL) Phase- III Part-II	391.10	7.39	7.20	225.00	151.51	391.10
4	Strengthening of Sub Transmission System Under BRGF (Special Plan) (N-1) Scheme	371.98	-	15.57	211.00	145.41	371.98
	Grand Total	2855.63	129.74	422.36	1386.00	917.53	2855.63

3.1.1 The Petitioner would like to submit that to cater the growing demand of power in the State, its diversity in terms of geography and evacuation of power expected to be available from upcoming intra / inter-state generating stations of, Transmission Company has been undertaking various transmission network capacity addition, augmentation and improvement projects for making reliable power uniformly available across the state.

3.1.2 BSPTCL had prepared the report on ‘Evolution of Transmission System of Bihar’ and submitted to Central Electricity Authority (CEA) for approval.

3.2 The Petitioner would like to submit that the scope of certain schemes has also changed and is being executed in bundled schemes; hence the capital expenditure plan provided in the last year’s petition has undergone a change. The Petitioner submits that it has presented the figures of capital expenditure, capitalization and funding etc. of FY 2015-16 for representation purpose only.

3.2.1 ADB Funded Scheme – Rs. 199.65 Crores

3.4.1.1 Details of works planned to be spent under this on-going scheme are provided in the table below:

Table 29: Year wise Expenditure of ADB Funded Scheme (Rs. Crores)

Total Project Cost	2013-14	2014-15	2015-16	2016-17	Total
51.90	4.68	34.32	12.90	0.0	51.90
47.98	5.01	29.22	13.75	0.0	47.98
58.24	2.77	15.14	28.00	12.33	58.24
41.53	1.41	3.50	24.00	12.62	41.53
199.65	13.87	82.18	78.65	24.95	199.65

**Table 30: Projected Expenditure in New Schemes under ADB Funding
“Expected Expenditure in Rs. Crs.”**

Sl. No.	Particulars	Project Amount	FY 2015-16	FY 2016-17	FY 2017-18	FY 2017-18
1	Capacity Augmentation work at 07 nos. of GSS with addition 08 nos. of 50 MVA, 132/33 KV power transformer along with associated 132/33 KV power transformer bays.	54.13	0.00	32.48	21.65	0.00

2	Re-conductoring of all remaining old 220 & 132 KV transmission lines of BSPTCL.	155.09	0.00	93.05	51.03	11.01
3	Implementation of Enterprise Resource Planning (ERP) in BSPTCL	24.69	0.00	24.69	0.00	0.00
4	(a) Construction of 33 KV indoor switchgear in 132/33 KV GSS of BSPTCL	338.46	0.00	110.42	201.83	26.20
	(b) Replacement of existing 02 nos of 50 MVA & 08 nos of 20 MVA power transformers with 80 MVA, 132/33 KV power transformer	***	***	***	***	***
5	Old Project	199.65	78.65	24.95		
Total		772.02	78.65	285.60	274.51	37.21

3.2.2 The above cost of the scheme under on-going scheme is Rs 199.65 Crores and under new ADB funded scheme is 572.37 Crores, Petitioner prays to the Commission to approve it.

3.2.3 State Plan Scheme

3.2.3.1 There are certain transmission schemes which are to be undertaken through State Government Plan. The details of the schemes provided in the table below is as follows:

Table 31: Old Schemes under State Government Plan (Rs Crores)

Sr.No.	Scheme	Project cost	Loan	Restructuring	Equity	Grant	Expenditure upto 2014-15	FY 2015-16 (Expected)	FY 2016-17 (Expected)
1	Construction of 132/33 Kv grid sub station connected to Jandaha transmission line, under district Vaishali	25.00	10	15.00	-	-	23.16	1.84	-
2	Construction of 132/33 kV grid substation connected to transmission line at Tehta (Jehanabad) and Imamganj (Gaya)	51.20	22.53	28.67	-	-	40.07	11.13	-
3	Construction of 132/33 kV grid sub station connected to transmission line at Ekma (Saran)	5.10	1.00	4.10	-	-	3.85	1.25	0.00

4	Scheme to extend tower height of middle 132kV transmission line tower at bank of Bagmati river, Block-Runnisaidpur, district-Sitamarhi.	6.15	0.00	6.15	-	-	6.08	0.07	0.00
5	Dismantling of 132/33kV 2X50MVA Meethapur Grid-sub station and 33/11kV Power Sub-station at R.K.Nagar from its place and construction of 132/33kV 4X50 MVA Grid-Sub-station and 33/11kV 2X10 MVA Power Substation at Kabrigahiya	77.36	22.36	55.00	-	-	58.52	18.84	6.84
6	Scheme to construct 132/33kV Sherghati Grid Sub-station and 132kV Bodhgaya-Sherghati Transmission Line, under State Plan with scrutinized cost of 25.10 Cr.	25.10	0.00	25.10	-	-	21.29	3.81	00
7	Re-construction of Muzaffarpur-Sitamarhi Transmission Line	1.72	0.00	1.72	-	-	1.69	0.03	00
8	Construction of Transmission facility to evacuate power from KBUNL	28.40	0.00	26.12	2.28	-	26.77	1.63	00
9	Construction of additional 132 kV Transf-ormer bay at 132/33kVSubstation Sitamarhi,Bihta,Khagaul, Araand Nawada	5.00	2.00	3.00	-	-	3.26	1.74	00
10	Construction of 5 No's of additional 33 kV Transformer Bays at 132/33 kV Grid-Sub-station, Sitamarhi, Bihta, Khagaul, Arah and Nawada and construction of 05 no's of Line Bays with Sonnagar (02 No's) each at Jainagar,Phulparas, Bihta	3.70	1.70	2.00	-	-	3.70	00	00
11	Construction of (2X160+2X50) MVA,220/132/33 kV Grid Substation at Bihta	135.48	40.00	0.00	50.00	-	66.57	68.91	00
12	Purchase of 03 No's 50 MVA 132/33 kV Transformers for Siwan, Nawada & Jamalpur Grid Sub stations	7.92	7.92	0.00	-	-	00	7.92	00

13	Purchase of 17 No's Transformers to minimize gap between capacity addition of old six no's of grid and transmission & distribution capacity of: Bodhgaya-150 MVA, Bihar-shariff-150 MVA Fatuha-100MVA, Begusarai-100 MVA, Sabaur- 50 MVA, Sitamarhi-50MVA, Ara-50 MVA, Bihta-50 MVA, Gopalganj-50MVA (02No.), Motihari-50 MVA, Bettia-50MVA, Kishanganj -50 MVA, Saharsa- 50MVA, Chapra -50MVA , Jakkanpur-50 MVA.	49.04	20.00	0.00	29.04	-	44.74	4.30	00
14	Scheme for R&M of 2 No's of old Grid Sub stations:- Gaighat & Rajgir	18.04	4.88		3.90	-	00	18.04	00
15	Special scheme to purchase specific testing equipments of worth Rs.6.26 Cr for the testing of Grid-sub-station equipments	6.26	6.26			-	2.38	3.88	00
16	Construction of Park and beautification of Karbigahia Thermal Power Complex	27.31	27.31			-	0.00	27.31	00
17	Construction of Control Room Building, Residential Complex and Building, Boundary wall, Internal Road and Drinking Water Sanitation at Old GSS	76.83	25.00		30.00	-	21.55	55.28	00
18	Replacement of oil & over-hauling of 48 nos. Power Transformer	12.08	5.00		7.08	-	5.35	6.73	00
	Total	561.69	195.96	166.86	122.30	00	328.98	232.71	00

3.2.4 The value of the scheme is Rs. 561.69 Crores, the prayer of the petitioner to the Hon'ble commission to approve it in Old scheme under State Plan Funding.

3.2.5 The following new schemes have got added under State Plan funding from FY 2014-15 onwards. Details are as below.

Table 32: New Schemes under State Plan (Rs. Crores)

Sl. No	Particulars	Amount (Rs Cr.)	Loan	Equity	Grant	FY 2014-15 (Actual)	FY 2015-16 (Estimate)	FY 2016-17 (Estimate)	FY 2017-18 (Estimate)	FY 2018-19 (Estimate)
1	Construction of higher capacity bus bar conductors (20 nos. on 132 kV side) & (56 nos. on 33 kV side) replacing old Bus Bar Conductors for strengthening BSPTCL Transmission line	159.00	0.00	159.00	00.00	0.00	50.00	109.00	-	-
2	Replacement of 20 nos. of 20 MVA transformer by 50 MVA transformer at 14 nos. of 132/33 kV GSS of BSPTCL and renovation of related 132/33 kV Transformer Bay	110.00	0.00	110.00	00.00	0.00	30.00	80	-	-
3	132 km double -circuit towers single string lines and 132 /33 kV grid sub-stations	123.67	0.00	15.00	00.00	0.00	10.00	113.67	-	-
4	Construction of 14 nos. of 132/33 kV grid substations in Revenue subdivision	555.90	0.00	120.00	00.00	20.00	178.10	175.00	182.80	-
5	Construction of 17 nos. of 132/33 kV grid substations in Revenue sub-division	668.72	0.00	160.00	00.00	0.00	169.01	170.00	120	209.71
6	Construction of (2X160+2X50) MVA, 220/132/33 KV Khagaria (New) GSS	106.09	0.00	25.00	00.00	0.00	40.00	66.09	-	-
7	Construction of 132 KV Gaurichak-Karbigahiya GSS	42.06	0.00	0.00	00.00	0.00	20.00	22.06	-	-
8	Strengthening of Transmission network around Patna	226.25	0.00	0.00	00.00	0.00	20.00	100.00	106.25	-
9	R&M of 12 nos. old GSS	133.76	0.00	0.00	00.00	0.00	20.00	113.76	-	-
10	07 nos. of new GSS 132/33 KV in uncovered area	374.15	0.00	0.00	00.00	0.00	25.00	100.00	100.00	149.15
11	Construction of double circuit line 220 kV Begusarai-Purnea, 183 KM	97.21	0.00	37.21	60.00	0.00	12.00	85.21	-	-
12	PSDF Scheme 90% as Grants & 10% from internal source	71.35	0.00	7.13	64.22	0.00	12.84	51.38	-	-
	TOTAL	2499.6	0.00	633.34	124.22	20.00	586.95	1186.17	509.05	358.86

3.2.6 The supporting documents regarding sanction of these schemes are attached as **Annexure**.

3.2.7 Capital Expenditure Schemes through Internal Resources Fund

3.2.7.1 The Petitioner submits that it is also undertaking certain capital expenditure schemes through Internal Resources Fund (IRF). The details of such schemes are provided in the table below:

Construction Works under Internal Resource Fund (IRF) (As on 02.11.2015)

Table 33: Capital Expenditure through Internal Resource Fund (IRF)

Name of Work	Contract Amount for Project (Rs. in Cr.)	FY: 2015-16	FY: 2016-17	FY: 2017-18	FY: 2018-19
1. Construction of pile foundation 03 nos in 132 KV Phulparas - Supoul transmission line.	3.98	3.98	-	-	-
2. Construction of 01 nos of 132 KV Line bays each at GSS - Sabour & Banka. (Total 02 nos 132 KV Line bays)	3.88	3.88	-	-	-
3. Construction of 01 nos of 33 KV line bays at GSS – Sasaram.	0.62	0.62	-	-	-
4. Construction of 01 nos of 33 KV line bays at GSS – Raxaul for maintained PSS	0.57	0.57	-	-	-
5. Construction of LILO 220 KV lines on 220 KV Purnea (PG)-Begusarai (D/C) transmission lines to BTPS (Extn.).	3.68	0.00	3.68	-	-
6. Construction of 02 nos of GIS 220 KV line bays at Muzaffarpur (PG). PGCIL deposit head work.	26.12	26.12	-	-	-
7. Construction of transmission system for power evacuation from 2x250 MW Barauni extension project.	2.62	2.62	-	-	-
8. ULDC up-gradation work	5.98	5.98	-	-	-
9. Other Miscellenious works – Renovation of 4 th Floor BSPTCL Office	7.08	4.58	2.50	-	-
10 Other Capital works-Buildings	159.29	12.89	46.40	100.00	-
11 PSDF Scheme 90% as grants & 10% from Internal Source	7.13	0.00	7.13	-	-
Total	220.95	61.24	59.71	100.00	-

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

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

Table 34: Total Capital Expenditure Summery of the Project

S. No	Details	Up to 2014-15	2015-16	2016-17	2017-18	2018-19
1	Existing project	328.98	232.71	0.00	0.00	0.00
2	New Project	20.00	586.95	1186.17	509.05	358.86
3	IRF		61.24	59.71	100.00	0.00
4	ADB	96.05	78.65	285.60	274.51	37.21
5	BRGF	552.10	1386.00	917.53	0.00	0.00
6	Total	997.13	2345.55	2449.00	883.56	396.07

Equity	705.12	2242.06	2064.03	609.05	358.86
Debt	292.01	78.65	285.60	274.51	37.21
Grants		24.84	99.38		

3.2.10 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 31.03.2016 is in the table as below:

Table 35: Gross Fixed Assets Proposed (Rs. Crores)

Sr. No	Particulars	FY 2015-16			PROJECTION		
		MYT Order Dated 15.03.2013	Approved by BERC Dated 12.03.2015	Projected for Review in APR (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Opening GFA	2700.33	2739.42	3921.89	4883.93	6574.13	8264.11
2	Add: Additions during year	968.00	1157.49	952.63	1674.96	1670.62	1155.22
3	Add: Interest during Construction (IDC)	2.80	31.93	9.41	15.24	19.36	16.50
4	Closing GFA	3671.12	3928.84	4883.93	6574.13	8264.11	9435.83

3.2.11 Depreciation on GFA

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

Table 36: Depreciation Proposed (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			Projection		
		MYT Order Dated 15.03.2013	Approved by BERC Order Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Opening GFA	2700.33	2739.42	3921.89	4883.93	6574.13	8264.11
2	Additions during year	968.00	1157.49	952.63	1674.96	1670.62	1155.22
3	Interest during Construction	2.80	31.93	9.41	15.24	19.36	16.50
4	Closing GFA(1+2+3)	3671.13	3928.84	4883.93	6574.13	8264.11	9435.83
5	Average GFA (1+4)/2	3185.73	3334.13	4402.91	5729.03	7419.12	8849.97
6	Weighted Avg. Rate of Depreciation	5.12%	5.23%	3.36%	3.36%	3.36%	3.36%
7	Depreciation(5*6)	163.11	174.38	147.94	192.50	249.28	297.36
8	Opening Grants	1403.31	1914.72	1517.07	1434.27	1426.01	1318.37
9	Grants during year	925.00	474.41	24.84	99.38	-	-
	Less: Grants amortized	-	-	118.94	111.56	110.61	101.93
10	Total Grants(8+9)	2328.31	2389.13	1422.97	1410.79	1300.18	1198.25
11	Average Grants(10+8)/2	1865.81	2151.93	1470.02	1416.88	1355.49	1249.22
12	Weighted Avg. Rate of Depreciation	5.12%	5.23%	3.36%	3.36%	3.36%	3.36%
13	Depreciation for GFA on Grants(11*12)	95.53	112.55	49.39	47.61	45.54	41.97
14	Net Depreciation for GFA on Loans (7-13)	67.58	61.83	98.55	144.89	203.74	255.38

3.3 Interest and Finance Charges

The Projected Computation of the Interest and Finance Charges for the FY 2015-16 as APR and for the Financial year from FY 2016-17 to FY 2018-19 is calculated as per the Projection of the BSPTCL Account.

Table 37: Projected Computation of Interest and Finance Charges (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			Projection		
		MYT Order Dated 15.03.2013	Approved by BERC Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Opening Loan	483.73	316.01	398.72	477.37	762.97	1037.48
2	Additions during year	43.00	500.51	78.65	285.60	274.51	37.21
3	Repayment	67.58	61.83	-	-	-	-
4	Closing Loan(1+2-3)	459.15	754.70	477.37	762.97	1037.48	1074.69
5	Average Loan(1+4)/2	471.44	535.35	438.05	620.17	900.22	1056.08
6	Rate of Interest	13%	9.13%	13%	13%	13%	13%
7	Interest on Loan	61.29	48.88	56.95	80.62	117.03	137.29
8	Finance Charges	-	-	0.01	0.01	0.01	0.01
9	Interest and Finance Charges	61.29	48.88	56.96	80.63	117.04	137.30

3.4 Operation and Maintenance Expenses

3.4.1 Employee Expenses

3.4.1.1 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.

3.4.1.2 The Petitioner has considered Revised Estimates for FY 2014-15 and Budget Estimates of FY 2015-16 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 38: Projected Employee Expenses for FY 2015-16 and ARR from FY:2016-17 to FY: 2018-19 (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			PROJECTED		
		MYT Order Dated 15.03.2013	Approved by BERC Dated 12.03.2015	Projected for Review (RE)	Projected for ARR FY 2016-17	Projected for ARR FY 2017-18	Projected for ARR FY 2018-19
1	Employee Cost	191.46	83.96	165.63	176.41	190.72	206.18
2	Indexation	-	8.24%	-	-	-	-
3	Add: Inflationary Increase	-	6.92	-	-	-	-
4	Employee Cost (sub-total)	191.46	90.88	165.63	176.41	190.72	206.18
5	Less: Support by State Govt. against terminal benefits	74.79	-	59.04	62.93	68.03	72.16
6	Employee Cost	116.97	90.88	106.59	113.48	122.69	134.02
7	Less: Employee cost capitalized (@ 1.8% of Sl. No. 4)	3.44	1.64	-	-	-	-
8	Net Employee Cost (Rs. Crores)	113.53	89.24	106.59	113.48	122.69	134.02

Note: 1 Employee cost for FY 2015-16 (RE) & FY 2016-17 has been projected as per budget estimate prepared for FY 2015-16.

Note: 2 Employee cost for FY 2017-18 & FY 2018-19 has been escalated @ 8.11% (inflationary index).

3.4.2 Repairs and Maintenance Expenses

3.4.2.1 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. The methodology adopted by the Hon'ble Commission to approve expenses based on past trend and with inflation would deprive Petitioner of its legitimate claim and would deprive licensee for the R&M expenses on the assets added during the year.

3.4.2.2 Hence, the R&M expenses are provided as a % of Gross Fixed Assets as the licensee needs to eventually maintain assets and generally the inflation over previous year expenditure is insufficient as it ignores R&M cost towards additions of new assets.

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

Table 39: 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>	

- 3.4.2.4** Hence considering the same, the Petitioner has projected R&M expenses as 1 % 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 40: Projected R&M Expenses for FY 2015-16 and ARR from FY:2016-17 to FY:2018-19 (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			Projected		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Opening GFA			3921.89	4883.93	6574.13	8264.11
2	% of GFA			1%	1%	1%	1%
3	R&M Cost	10.80	28.81	39.22	48.84	65.74	82.64
4	Inflationary Index		8.24%	8.24%	8.24%	8.24%	8.24%
5	Inflationary Increase		2.38				
6	R&M Cost	10.80	31.19	42.45	52.86	71.16	89.45

- 3.4.2.5** The Petitioner requests the Hon'ble Commission to approve the R&M expenses as projected above for FY 2015-16 and ARR from FY:2016-17 to 2018-19.

3.4.3 Administration & General Expenses

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

3.4.3.2 The Petitioner has considered Revised Estimates for FY 2015-16 and Budget Estimates from FY 2016-17 to FY 2018-19 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 41: Projected A&G Expenses for FY 2015-16 and from FY 2016-17 to FY 2018-19 (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			Projected		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	A&G Expenses		6.70	24.21	29.20	31.57	34.13
2	Inflationary increase@8.24 %		0.55	-	-	-	-
3	A&G Expenses	6.02	7.25	24.21	29.20	31.57	34.13
4	Less: A&G Cost capitalized	0.24	0.29	-	-	-	-
5	Net A&G Expenses	5.78	6.96	24.21	29.20	31.57	34.13

Note: 1 A&G expenses for FY 2015-16 (RE) & FY 2016-17 has been projected as per budget estimate prepared for FY 2015-16.

Note: 2 A&G expenses for FY 2017-18 & FY 2018-19 has been escalated @ 8.11% (inflationary index).

3.4.3.3 The Petitioner has considered A&G capitalization amount same as approved by the Hon'ble Commission in the MYT order for the projection purpose and shall consider it on actual basis at the time of truing purpose

3.4.4 Allocation of Holding Company Cost

3.4.4.1 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.

3.4.4.2 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.”

- 3.4.4.3** 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)

- 3.4.4.4** 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.

3.4.4.5 The Petitioner has considered holding company projected expense for review of Rs 4.0 Crores for FY 2015-16 and the holding company projected expenses from FY 2016-17 to FY 2018-19 have been derived as per the estimation of BSPTCL.

Table 42: Projection of Holding Company Expenses (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			Projected		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Holding Company Exp	-	4.82	4.00	5.00	5.00	5.00

3.4.4.6 The Hon’ble Commission is requested to approve the same as part of overall O&M expenditure of BSPTCL for FY 2015-16 and for Financial Year from FY 2016-17 to FY 2018-19.

3.4.5 Summary of O&M Expenses

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

Table 43: Projected O&M Expense (Rs. Crore)

Sr.No.	Particulars	FY 2015-16			Projected		
		MYT Order Dated 15.03.2013	TO Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Employee Expenses	116.97	90.88	106.59	113.48	122.69	134.02
2	Repair and Maintenance Expenses	10.80	31.19	42.45	52.86	71.16	89.45
3	Administrative and General Expenses	6.02	7.25	24.21	29.20	31.57	34.13
4	Holding Company Expenses	-	4.82	4.00	5.00	5.00	5.00
5	Total O&M Expenses	133.79	134.14	177.25	200.54	230.42	262.60
6	Less: O&M exp capitalized	3.68	1.93	-	-	-	-
7	Net O&M Expenses	130.11	132.21	177.25	200.54	230.42	262.60

3.4.5.2 The Hon’ble Commission is requested to approve the above O&M expenses for FY 2015-16 as APR and for the Financial Year from FY 2016-17 to FY 2018-19 as ARR.

3.5 Interest on Working Capital

3.5.1 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 which are reproduced in the following table for reference:

Table 44: Norms for Working Capital Requirement

Sr. No.	Particulars	Norms
1.	Operation & Maintenance Expenses	One month
2.	Maintenance spares	@1% of the opening GFA with 6% escalation per annum
3.	Receivables	Two months of transmission charges
4.	Rate of interest on working capital	Short-term Prime Lending Rate of State Bank of India on 1 st April of the year.

3.5.2 The rate of interest applied on the proposed working capital is as per the SBI PLR is 13.50%.

3.5.3 The proposed interest on working capital for FY 2015-16 as APR & for Financial Year from FY 2016-17 to FY 2018-19 as ARR is computed based on the above norms is given in the following table.

Table 45: Projected Interest on Working Capital (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			PROJECTED		
		MYT Order Dated 15.03.2013	Approved by BERC Order Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	O&M Expenses for 1 Month	10.84	11.02	14.77	16.71	19.20	21.88
2	Maintenance Spares @1% of Opening GFA with 6% escalation	28.62	29.04	41.57	51.77	69.69	87.60
3	Receivables 2 Months	50.65	47.15	58.62	77.84	112.30	151.69
4	Total Working Capital	90.11	87.21	114.96	146.32	201.19	261.17
5	Rate of Interest	14.45%	13.50%	13.50%	13.50%	13.50%	13.50%
6	Interest on Working Capital	13.02	11.77	15.52	19.75	27.16	35.26

3.5.4 The Petitioner requests the Hon'ble Commission to approve the computation of working capital and the interest charges thereon for FY 2015-16 as APR and for Financial Year from FY 2016-17 to FY 2018-19 as ARR.

3.5.5 Capitalisation Schedule

3.5.5.1 The Capitalisation has been 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.

3.5.5.2 The projected Capitalisation for Review for FY 2015-16 as APR and for the Financial Year from FY 2016-17 to FY 2018-19 is tabulated as below:

Table 46: Projected Capitalisation (Rs. Crores)

Sr. No.	Particulars	For FY 2015-16		Projected		
		Approved by BERC Order Dated 12.03.2015	Projected for Review (RE) (FY 2015-16)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Capitalization during the Year	1189.42	952.63	1674.96	1670.62	1155.22
2	Less: Grants	474.41	24.84	99.38	-	-
3	Net Capitalization	715.01	927.79	1575.58	1670.62	1155.22
4	Equity considered (@ 30% of 3)	214.50	278.34	472.67	501.19	346.57
5	Debt considered (@ 70% of 3)	500.51	649.45	1102.91	1169.43	808.65

3.5.6 Return on Equity

3.5.6.1 The Petitioner hereby submits the computation of equity is considering the closing equity balance as per the audited accounts for FY 2014-15 (as considered for true-up of FY 2014-15).

3.5.6.2 The computation of return on equity for FY 2015-16 as APR & for the Financial Year from FY 2016-17 to FY 2018-19 as ARR Projection is tabulated below:

Table 47: Computation of Return on Equity

Sr. No.	Particulars	FY 2015-16			Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
		MYT Order Dated 15.03.2013	Approved by BERC order Dated 12.03.2015	Projected for Review (RE)			
1	Equity as on 31.03.2015		325.60	235.00	235.00	235.00	235.00
2	Rate of return on Equity		14.00 0%	14.00%	14.00%	14.00%	14.00%
3	Return on equity (1*2)		45.58	32.90	32.90	32.90	32.90
	Equity of projects commissioned w.e.f. 1.04.2015						
4	Opening Equity		-	-	278.34	751.01	1252.20
5	Addition during the Year		214.51	278.34	472.67	501.19	346.57
6	Closing Equity (4+5)		214.51	278.34	751.01	1252.20	1598.77
7	Average equity (4+6)/2		107.25	139.17	375.51	626.10	799.38
8	Rate of Return on equity		15.50%	15.50%	15.50%	15.50%	15.50%
9	Return on equity (7*8)		16.62	21.57	58.20	97.05	123.90
10	Total Return on equity (3+9)	32.90	62.20	54.47	91.10	129.95	156.80
11	MAT Rate			20.01%	20.01%	20.01%	20.01%
12	Minimum Alternate Tax(MAT)			10.90	18.23	26.00	31.38

3.5.6.3 The Petitioner requests the Hon'ble Commission to approve the computation of return on equity for FY 2015-16 as APR and for the Financial Year from FY 2016-17 to FY 2018-19 as ARR as submitted above.

3.5.7 Non-Tariff Income

3.5.7.1 The Petitioner has submitted non-tariff income of Rs 33.80 Crores for the FY 2015-16 projected for review as APR and for the Financial Year from FY 2016-17 to FY 2018-19 as ARR as Non-Tariff income inflated at the rate of 5% every.

Table 48: Projected Non-Tariff Income (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			PROJECTED		
		MYT Order Dated 15.03.2013	TO Approved by BERC Order Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Non tariff Income Non tariff Income inflated @ 5% every year	0.73	33.99	33.80	35.49	37.26	39.13

3.5.7.2 The Petitioner requests the Hon'ble Commission to approve the Non-Tariff Income for FY 2015-16 and for the Financial Year from FY 2016-17 to FY 2018-19 as proposed in the above.

3.6 Transmission APR for FY 2015-16 and ARR for the Financial Year from FY 2016-17 to FY 2018-19 or the Annual Fixed Charge

3.6.1 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.

3.6.2 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 2015-16 as APR and for the Financial Year from FY 2016-17 to FY 2018-19 for approval by the Hon'ble Commission.

Table 49: Projected Annual Fixed Charges/ ARR (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			PROJECTED		
		MYT Order Dated 15.03.2013	Approved by BERC Order Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	O&M expenses (2+3+4+5-6)	130.11	132.21	177.25	200.54	230.42	262.60
2	Employee Cost	116.97	90.88	106.59	113.48	122.69	134.02
3	R&M expenses	10.80	31.19	42.45	52.86	71.16	89.45
4	A&G expenses	6.02	7.25	24.21	29.20	31.57	34.13
5	Holding company expenses	0.00	4.82	4.00	5.00	5.00	5.00
6	Less: O&M expenses capitalized	3.68	1.93	-	-	-	-
7	Interest & Finance Charges	61.28	48.88	56.96	80.63	117.04	137.30
8	Interest on working capital	13.02	11.77	15.52	19.75	27.16	35.26
9	Depreciation	67.58	61.83	98.55	144.89	203.74	255.38
10	Return on Equity	32.90	62.20	67.15	103.78	142.63	169.48
11	Minimum Alternate Tax			10.90	18.23	26.00	31.38
12	Total Fixed Cost (1+7+8+9+10)	304.89	316.90	426.33	567.82	746.99	891.40
13	Less: Non tariff Income	0.73	33.99	33.80	35.49	37.26	39.13
14	Net Fixed Cost/ ARR (11-12)	304.16	282.91	392.53	532.33	709.73	852.27

3.6.3 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 in its MYT order dated March 15’ 2013 and order dated March 12’ 2015. 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 for approval of the revised APR for FY 2015-16 and ARR for the Financial Year from FY 2016-17 to FY 2018-19 and resultant Transmission Charges to be recovered from the two distribution companies .

3.7 Revenue Gap / (Surplus) for FY 2015-16 and for Financial Year from FY 2016-17 to FY 2018-19

3.7.1 The Petitioner submits that it has been recovering transmission charges for FY 2015-16 as APR from the distribution licensees as per the charges approved by the Commission as per order dated March 12’ 2015. The revenue gap/(surplus) for FY 2015-16 as APR and for the Financial Year from FY 2016-17 to FY 2018-19 as ARR as per the revised projections is depicted in the table below:

Table 50: Projected Revenue Gap/ (Surplus) (Rs. Crores)

Sr. No.	Particulars	FY 2015-16			PROJECTED		
		MYT Order Dated 15.03.2013*	Approved by BERC Order Dated 12.03.2015	Projected for Review (RE)	Projected for ARR (FY 2016-17)	Projected for ARR (FY 2017-18)	Projected for ARR (FY 2018-19)
1	Aggregate Revenue Requirement	304.16	282.91	392.53	532.33	709.73	852.27
2	Less: Approved Annual Transmission Charges	304.16	304.16	282.91	***	***	***
3	Revenue Gap/(Surplus) (1-2)	0.00	(21.25)	109.62	532.33	709.73	852.27

** Without adjustments of past years revenue gap*
