

BIHAR ELECTRICITY REGULATORY COMMISSION



Case No. 50 of 2014

Tariff Order

Truing-up for FY 2013-14

Annual Performance Review (APR) for FY 2014-15, Revised Annual Revenue Requirement (ARR) and Determination of Tariff for FY 2015-16

of

**BIHAR STATE POWER TRANSMISSION COMPANY LIMITED
(BSPTCL)**

**Issued on 12th March 2015
(With effect from 1st April 2015)**

Contents

ORDER	1
1. Introduction	5
1.2 Functions of BERC	5
1.3 Bihar State Power Transmission Company Limited (BSPTCL)	6
1.4 Commission's Tariff Orders issued earlier for BSPTCL	7
1.5 Admission of Current Petition and Public Hearing Process	7
1.6 Approach of this order	9
1.7 Contents of this order	10
2 Summary of the petition for True-up of FY 2013-14, Annual Performance Review (APR) for FY 2014-15 and Revised Annual Revenue Requirement for FY 2015-16 and Transmission Charges for FY 2015-16	12
2.1 Summary of the petition for Aggregate Revenue Requirement and Transmission Charges for FY 2015-16	12
2.2 Request to the Commission	14
3 Stakeholder's Objections/Suggestions, Petitioner's Response and Commission's Observations	16
3.1 Introduction	16
3.2 Stakeholders Objections/Suggestions, BSPTCL's Response and Commission's Observations	17
4. True up for FY 2013-14	20
4.1 Background	20
4.2 Performance of Transmission System	21
4.3 Capital Investment	23
4.4 Gross Fixed Assets	25
4.5 Depreciation	27
4.6 Interest and Finance Charges	30
4.7 Employee cost	34
4.8 Repairs and Maintenance (R&M) Expenses	36
4.9 Administration & General (A&G) Expenses	38
4.10 Allocation of Holding Company Expenses	39
4.11 Total O & M expenses	40
4.12 Interest on working capital	42
4.13 Return on Equity	43
4.14 Non-Tariff Income	47
4.15 Annual Fixed Charges / Transmission ARR for FY 2013-14	48
4.16 Revenue Gap / (Surplus) for FY 2013-14	50
5. Performance Review of FY 2014-15	53
5.1 Background	53
5.2 Existing Transmission System	54
5.3 Performance of Transmission System	54
5.4 Capital Investment Plan	56
5.5 Capitalisation	64
5.6 Funding of Capital Expenditure	65
5.7 Interest during Construction (IDC)	70
5.8 Gross Fixed Assets	71
5.9 Depreciation	72
5.10 Interest on Loans	75
5.11 Operation and Maintenance (O&M) Expenses	78
5.12 Employee Costs	79

5.13	Repairs and Maintenance (R&M) Expenses.....	80
5.14	Administration and General (A&G) Expenses.....	82
5.15	Allocation of Holding Company Expenses	84
5.16	Summary of Operations and Maintenance (O&M) Expenses.....	86
5.17	Interest on working capital	87
5.18	Return on Equity	89
5.19	Non-Tariff Income.....	92
5.20	Transmission charges for FY 2014-15 (RE).....	92
5.21	Revenue Gap / (Surplus) for FY 2014-15 (RE)	94
5.22	Approved Transmission Charges for FY 2014-15 (RE).....	95
6.	Determination of Revised Aggregate Revenue Requirement (ARR) and Transmission Tariff for FY 2015-16.....	97
6.1	Background	97
6.2	Existing Transmission System	98
6.3	Performance of Transmission System	98
6.4	Capital Investment Plan.....	100
6.5	Capitalisation	108
6.6	Funding of Capital Expenditure.....	110
6.7	Interest During Construction (IDC)	116
6.8	Gross Fixed Assets.....	117
6.9	Depreciation.....	118
6.10	Interest on Loans	120
6.11	Operation and Maintenance (O&M) Expenses.....	123
6.12	Employee Costs.....	124
6.13	Repairs and Maintenance (R&M) Expenses.....	125
6.14	Administration and General (A&G) Expenses.....	127
6.15	Allocation of Holding Company Expenses	129
6.16	Summary of Operations and Maintenance (O&M) Expenses.....	131
6.17	Interest on working capital	131
6.18	Return on Equity	133
6.19	Non-Tariff Income.....	136
6.20	Annual Fixed Cost / ARR for FY 2015-16.....	137
6.21	Revenue Gap / (Surplus) for FY 2015-16.....	138
6.22	Approved Transmission Charges for FY 2015-16	140
7.	Compliance of Directive	142
7.1	Background	142
7.2	Directives issued and the status of compliance.....	142
7.2.1	Directive: Transmission Loss	142
7.2.2	Directive: Separate ARR for SLDC	143
7.3	New Directives	144
7.3.1	Energy Auditing of Transmission System	144
7.3.2	Scheme-wise details capital expenditure and capitalisation.....	144
	Annexure-I.....	145

LIST OF TABLES

Table 2.1: ARR approved for FY 2013-14 in earlier Tariff Orders and now claimed in Truing-up for FY 2013-14	12
Table 2.2: Revenue Gap / (Surplus) proposed for FY 2013-14.....	13
Table 2.3: ARR approved for FY 2014-15 and FY 2015-16 in earlier Tariff Orders and now claimed in Revised Proposal for FY 2014-15 and FY 2015-16.....	13
Table 2.4: Revenue Gap/ (Surplus) proposed for FY 2014-15 and FY 2015-16.....	14
Table 4.1: Actual Transmission Losses for FY 2013-14 projected by the Petitioner	21
Table 4.2 : Capital investment proposed for truing up for FY 2013-14	24
Table 4.3: Capital investment approved in truing up for FY 2013-14.....	24
Table 4.4: Gross Fixed Assets proposed for truing up for FY 2013-14.....	25
Table 4.5: Gross Fixed Assets approved in truing up for FY 2013-14.....	26
Table 4.6: Depreciation proposed in truing up for FY 2013-14	27
Table 4.7: Depreciation approved in truing up for FY 2013-14	30
Table 4.8: Interest on loans and average rate of interest proposed for FY 2013-14:.....	31
Table 4.9: Interest on loans proposed in truing up for FY 2013-14	31
Table 4.10: Interest & finance charges approved in truing up for FY 2013-14.....	34
Table 4.11: Employee Expenses proposed for FY 2013-14.....	35
Table 4.12 : Employee Expenses approved in truing up for FY 2013-14	35
Table 4.13: R&M Expenses proposed for FY 2013-14	36
Table 4.14: R&M Expenses approved in truing up for FY 2013-14	38
Table 4.15: Administration and General Expenses proposed for FY 2013-14	38
Table 4.16: Administration and General Expenses approved in truing up for FY 2013-14	39
Table 4.17: Holding company expenses proposed in truing up for FY 2013-14	39
Table 4.18: Holding company expenses approved in truing up for FY 2013-14	40
Table 4.19: Total O&M Expenses proposed in truing up for FY 2013-14.....	41
Table 4.20: Total O&M Expenses approved in truing up for FY 2013-14	41
Table 4.21: Norms for working capital requirement	42
Table 4.22: Interest on working capital projected for FY 2013-14	42
Table 4.23: Interest on working capital approved in truing up for FY 2013-14.....	43
Table 4.24: Return on Equity claimed in truing up for FY 2013-14.....	44
Table 4.25: Return on Equity approved in truing up for FY 2013-14 (Rs. Crore)	47
Table 4.26: Non tariff income claimed in truing up for FY 2013-14	48
Table 4.27: Non tariff income considered in truing up for FY 2013-14	48
Table 4.28: Annual Fixed Charges proposed in truing up for FY 2013-14.....	49
Table 4.29: Annual Fixed Charges approved in truing up for FY 2013-14.....	49
Table 4.30: Revenue Gap projected in true up for FY 2013-14	50
Table 4.31: Revenue Gap approved in truing up for FY 2013-14.....	51
Table 4.32: Summary of trued up Revenue Surplus and interest of FY 2013-14 approved to be carried forwards to ARR of FY 2015-16	52
Table 5.1: Power Transformer Capacity (in MVA)	54
Table 5.2: Transmission Line Length (in KMs).....	54
Table 5.3: Revised Transmission Loss Trajectory Projected by the Petitioner	55
Table 5.4: Capital Investment Plan approved in Tariff order dated 28.02.2014	56
Table 5.5: Revised capital investment plan proposed by the Petitioner	61
Table 5.6: Capital Investment considered by the Commission.....	63
Table 5.7: Year-wise Capitalisation proposed by the Petitioner.....	64
Table 5.8: Capitalisation of capital expenditure considered by the Commission for FY 2014-15 and FY 2015-16	65

Table 5.9: Scheme wise funding for capital expenditure projected by the Petitioner:	66
Table 5.10: Funding Ratio for Capital expenditure and Capitalisation of New investment proposed by the Petitioner:	67
Table 5.11: Scheme wise funding of capital expenditure considered by the Commission	68
Table 5.12: Scheme wise funding of Capital expenditure considered by the Commission	68
Table 5.13: Scheme wise funding of capital expenditure considered by the Commission	69
Table 5.14: Projected IDC for FY 2014-15	70
Table 5.16: Gross Fixed Assets projected for FY 2014-15	71
Table 5.17: Gross Fixed Assets approved in review for FY 2014-15	72
Table 5.18: Projected Depreciation for FY 2014-15	73
Table 5.19: Approved Depreciation for FY 2014-15	74
Table 5.20: Projected Interest on Loan for FY 2014-15	75
Table 5.21: Interest & finance charges considered in truing up for FY 2013-14	77
Table 5.22: O&M Expenses - weightage of indexation/inflation factor	78
Table 5.23: Employee Cost for FY 2014-15 (RE) proposed by the Petitioner	79
Table 5.24: Approved Employee Cost for FY 2014-15 (Rs. Crore).....	80
Table 5.25: Projected Repairs and Maintenance expenses for FY 2014-15.....	81
Table 5.26: Approved R&M expenses for FY 2014-15	82
Table 5.27: Proposed Administration and General Expenses for FY 2014-15	83
Table 5.28: Approved Administration & General Expenses for FY 2014-15	84
Table 5.29: Expenses of Holding Company projected for FY 2014-15	85
Table 5.30: Allocation of Expenses of Holding Company approved for FY 2014-15.....	86
Table 5.31: Total O&M cost considered by the Commission for FY 2014-15 (RE).....	86
Table 5.32: Norms for working capital requirement	87
Table 5.33: Projected Interest on working capital for FY 2014-15	87
Table 5.34: Approved Interest on working capital for FY 2014-15	88
Table 5.35: Projected Return on Equity for FY 2014-15	89
Table 5.36: Approved Return on Equity for FY 2014-15 (Rs. Crore)	91
Table 5.37: Projected non tariff income for FY 2014-15.....	92
Table 5.38: Non tariff income considered for FY 2014-15.....	92
Table 5.39: Projected Annual Fixed Charges/ (ARR) for FY 2014-15.....	93
Table 5.40: Approved Annual Fixed Charges / ARR for FY 2014-15.....	94
Table 5.41: Projected revenue Gap / (Surplus) for FY 2014-15	94
Table 5.42: Approved revenue gap / (surplus) for FY 2014-15.....	95
Table 5.43: Revised Transmission charges for FY 2014-15	96
Table 6.1: Power Transformer Capacity.....	98
Table 6.2: Transmission Line Length.....	98
Table 6.3: Revised Transmission Loss Trajectory Projected by the Petitioner	99
Table 6.4: Capital Investment Plan proposed by the Petitioner	100
Table 6.5: Revised capital investment plan proposed by the Petitioner	105
Table 6.6: Capital Investment considered by the Commission.....	107
Table 6.7: Capitalisation proposed by the Petitioner for FY 2015-16.....	108
Table 6.8: Capitalisation of capital expenditure considered by the Commission for FY 2015-16	109
Table 6.9: Scheme wise funding for capital expenditure projected by the Petitioner:	110
Table 6.10: Funding Ratio for Capital expenditure and Capitalisation of New investment proposed by the Petitioner:	111
Table 6.11: Scheme wise funding of capital expenditure considered by the Commission	112
Table 6.12: Scheme wise funding of Capital expenditure considered by the Commission	113
Table 6.14: Capitalisation and Funding of capitalisation of CAPEX considered for	115
FY 2015-16	115

Table 6.15: Projected IDC for FY 2015-16	116
Table 6.16: Approved IDC for FY 2015-16	116
Table 6.17: Gross Fixed Assets projected for FY 2015-16	117
Table 6.18: Gross Fixed Assets approved for FY 2015-16	117
Table 6.19: Projected Depreciation for FY 2015-16	118
Table 6.20: Approved Depreciation for FY 2015-16	119
Table 6.21: Projected Computation of Interest on Loan for FY 2015-16	120
Table 6.22: Interest & finance charges considered in truing up for FY 2015-16	123
Table 6.23: O&M Expenses - weightage of indexation/inflation factor	124
Table 6.24: Projected Employee Cost for FY 2015-16	124
Table 6.25: Approved Employee Cost for FY 2015-16	125
Table 6.26: Projected Repairs and Maintenance expenses for FY 2015-16	126
Table 6.27: Approved R&M expenses for FY 2015-16	127
Table 6.28: Proposed Administration and General Expenses for FY 2015-16	128
Table 6.29: Approved Administration & General Expenses for FY 2015-16	128
Table 6.30: Expenses of Holding Company projected for FY 2014-15	130
Table 6.31: Allocation of Holding Company Expenses approved for FY 2015-16	130
Table 6.32: Total O&M cost considered by the Commission for FY 2015-16	131
Table 6.33: Norms for working capital requirement	131
Table 6.34: Projected Interest on working capital for FY 2015-16	132
Table 6.35: Approved Interest on working capital for FY 2015-16	133
Table 6.36: Projected Return on Equity for FY 2015-16	133
Table 6.37: Approved Return on Equity for FY 2015-16 (Rs. Crore)	136
Table 6.38: Projected non tariff income for FY 2015-16	136
Table 6.39: Non tariff income considered for FY 2015-16	137
Table 6.40: Projected Annual Fixed charges / ARR for FY 2015-16	137
Table 6.41: Approved Annual Fixed charges /ARR for FY 2015-16	138
Table 6.42: Projected revised Transmission charges for FY 2015-16	139
Table 6.43: Projected revenue gap / (surplus) for FY 2015-16	139
Table 6.44: Approved Revenue Gap / (Surplus) for FY 2015-16	140
Table 6.45: Approved Revised Transmission charges for FY 2015-16	140

ABBREVIATIONS

A&G	Administration and General Expenses
ACT	Electricity Act. 2003
ARR	Aggregate Revenue Requirement
BERC	Bihar Electricity Regulatory Commission
BSHPS	Bihar State Hydro Power Station
BSEB	Bihar State Electricity Board
BSPHCL	Bihar State Power (Holding) Company Limited
BSPTCL	Bihar State Power Transmission Corporation Limited
BTPS	Barauni Thermal Power Station
CAGR	Compounded Annual Growth Rate
CAPEX	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Station
CKM	Circuit Kilometre
CTU	Central Transmission Utility
CWIP	Capital Work in Progress
D/C	Double Circuit
DISCOM	Distribution Company
ERLDC	Eastern Region Load Despatch Centre
ERPC	Eastern Region Power Committee
FC	Fixed Charges
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Asset
GSS	Grid Sub-Station
KBUNL	Kanti Bijlee Utpadan Nigam Limited
KV	Kilo Volt
KVA	Kilo Volt Ampere
KVAH	Kilo Volt Ampere Hour
KWH	Kilo Watt Hour
LILO	Line In Line Out
MoP	Ministry of Power
MU	Million Unit
MVA	Mega Volt Ampere
MW	Mega Watt
MYT	Multi-Year Tariff
NBPDCL	North Bihar Power Distribution Company Limited
NEP	National Electricity Policy
NFA	Net Fixed Asset
NHPC	National Hydro Power Corporation



Bihar Electricity Regulatory Commission

Ground floor, Vidyut Bhawan –II
Jawahar Lal Nehru Marg, Patna – 800021

Case No: 50 of 2015

In the matter of:

Truing up for Financial year 2013-14, Annual Performance Review (APR) for FY 2014-15 and determination of Annual Revenue Requirement (ARR) and Transmission tariff for the Financial Year 2015-16 for Bihar State Power Transmission Company Limited.

AND

Bihar State Power Transmission Company LimitedPetitioner

Present:

U. N. Panjjar	-	Chairman
S. C. Jha	-	Member

ORDER

(Passed on 12th Day of March 2015)

The erstwhile Bihar State Electricity Board (BSEB) has been restructured on functional basis with effect from 1st November, 2012 into five successor companies under Bihar State Electricity Reforms Transfer Scheme, 2012 vide notification no. 17 dated 30.10.2012 issued by Energy Department, Government of Bihar, namely;

1. Bihar State Power Holding Company Limited (BSPHCL)
2. Bihar State Power Generation Company Limited (BSPGCL)
3. Bihar State Power Transmission Company Limited (BSPTCL)
4. North Bihar Power Distribution Company Limited (NBPDC)
5. South Bihar Power Distribution Company Limited (SBPDCL)

BSPHCL had earlier filed the Multi Year Tariff (MYT) petition for control period of three years i.e. for FY 2013-14 to FY 2015-16 on behalf of the successor transmission company on 14th November, 2012. The Commission approved the Multi Year ARR for the years FY 2013-14 to 2015-16 for BSPTCL, in the order dated 15th March, 2013.

BSPTCL had filed a petition for Annual Performance Review (APR), of (ARR) of FY 2013-14 and re-determination of ARR and Transmission tariff for FY 2014-15 on 14th November, 2013.

The Commission issued the order dated 28th February 2014, reviewing the ARR for FY 2013-14 and re-determining the Annual Revenue Requirement (ARR) and Transmission Tariff for FY 2014-15 for transmission of electricity by Bihar State Power Transmission Company Limited (BSPTCL) in the state of Bihar.

Tariff Regulations specify that the Transmission Company shall file Aggregate Revenue Requirement (ARR) and the Tariff Petition complete in all respects along with requisite fee as specified in the BERC (Fees, Fines and charges) Regulations, 2005 on or before 15th November of the preceding year. But BSPTCL has filled the petition for Truing up for FY 2013-14, Review of ARR of FY 2014-15 and determination of revised ARR and Transmission tariff for FY 2015-16 on 03.12.2014.

Regulation 22(1) of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 (hereinafter referred as Tariff Regulations 2007) provides that the Commission shall undertake a review along with next Tariff Order, of the expenses and revenue approved by the Commission in the current year's Tariff order. Regulation 22(2) of the Tariff Regulations, 2007 provides that the Commission shall undertake, after audited annual accounts of the year are made available, truing up of the expenses and revenue approved in the previous year's Tariff Order.

In Exercise of the powers vested in Bihar Electricity Regulatory commission under Section 62(1)(d) read with Section 62 (3) and Section 64(3)(a) of the Electricity Act,

2003 and Bihar Electricity Regulatory Commission (Terms and conditions for Determination of Tariff) Regulations 2007 (hereinafter referred to as 'Tariff Regulations') and other enabling provisions in this behalf, the Commission has issued the order, truing-up the ARR for FY 2013-14, reviewing ARR for FY 2014-15 and re-determining the ARR and Transmission Tariff for FY 2015-16 for transmission of electricity by Bihar State Power Transmission Company Limited in the State of Bihar.

As per Regulation 6(5) of the Tariff Regulations and for providing adequate opportunities to all stakeholders and general public for making suggestions/objections on the petition filed by BSPTCL as mandated under section 64(3) of the Electricity Act, 2003, the Commission directed BSPTCL to publish the petition in abridged form as "Public notice" in newspapers having wide circulation in the State inviting suggestions/objections on the tariff petition. Accordingly BSPTCL published the tariff petition in the abridged form as "Public notice" in various newspapers. The last date of submission of suggestions/objections was fixed as 9th January, 2015. On request of some stakeholders the date was extended up to 25th January, 2012.

The Commission, in order to ensure transparency in the process of dealing with the petition filed by BSPTCL and for providing proper opportunity to all stakeholders and general public for making suggestions/objections on the tariff petition, decided to hold the public hearing in its office at Patna and accordingly the Commission held public hearing in the Court Room, BERC office at Patna on 10th January, 2015.

The petition submitted by BSPTCL was also placed before the State Advisory Committee in its meeting held on 13th January 2015 and various aspects of the petition were discussed by the Committee. The Commission took the advice of the State Advisory Committee on the petition of BSPTCL during the meeting of the Committee.

The Commission took into consideration the facts presented by the BSPTCL in its petition and subsequent various filings, the suggestion/objections received from

stakeholders, consumer organizations, general public and State Advisory Committee and response of the Bihar State Power Transmission Company Limited on the suggestions/objections.

The Commission taking into consideration all the facts which came up during the public hearing and meeting of the State Advisory Committee, has true up ARR for FY 2013-14, reviewed the ARR for FY 2014-15 and re-determined the ARR and Transmission tariff for FY 2015-16.

BSPTCL has estimated the Annual Revenue Requirement (ARR) of Rs 325.80 Crore in the true up for FY 2013-14 against which the Commission has approved Rs.172.10 Crore. BSPTCL has projected ARR of Rs 511.93 Crore in the review for FY 2014-15 (RE) against which the Commission has approved Rs 206.35 Crore. BSPTCL has projected the revised annual revenue requirement of Rs 728.46 Crore for FY 2015-16 against which the Commission has approved Rs. 223.15 Crore. The Commission has approved the transmission charges of Rs 18.60 Crore per month against Rs 60.70 Crore per month claimed by the Petitioner to be borne by the two distribution companies' viz. NBPDC and SBPDCL in proportion of power delivered to them.

This order shall be effective from 1st April 2015 and shall remain in force till 31st March 2016 or till the next tariff order of the commission.

This order will be placed on the website of the Commission and a copy will be sent to BSPHCL, BSPGCL, BSPHCL, NBPDC, SBPDCL, Department of Energy of Government of Bihar, Central Electricity Regulatory Commission and all State/Joint Electricity Regulatory Commissions.

Sd/-
(S. C. Jha)
Member

Sd/-
(U. N. Panjiar)
Chairman

1. Introduction

1.1 Bihar Electricity Regulatory Commission (BERC)

The Bihar Electricity Regulatory Commission (hereinafter referred to as “Commission” or “BERC”) was constituted by the Government of Bihar under Section 17 of the Electricity Regulatory Commission Act, 1998 vide Government of Bihar notification No. 1284 dated 15th April 2002. The Electricity Regulatory Commission Act, 1998 along with Indian Electricity Act, 1910 and Electricity (Supply) Act, 1948 was repealed by Section 185 (1) of the Electricity Act, 2003 (hereinafter referred to as the “Act”). The first proviso of Section 82 (1) has ensured continuity of the Bihar Electricity Regulatory Commission by laying down that the State Electricity Regulatory Commission established by the State Government under Section 17 of Electricity Regulatory Commission Act, 1998 and functioning as such, immediately before the appointed date, shall be the State Electricity Regulatory Commission for the purpose of the Act.

1.2 Functions of BERC

As per Section 86 of the Electricity Act 2003, the State Commission shall discharge the following functions, namely:

- a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- c) facilitate intra-state transmission and wheeling of electricity;

- d) issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- e) promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;
- f) adjudicate upon the disputes between the licensees, and generating companies and to refer any dispute for arbitration;
- g) levy fee for the purposes of this Act;
- h) specify State Grid Code consistent with the Indian Electricity Grid Code specified with regard to grid standards;
- i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- j) fix the trading margin in the intra-state trading of electricity, if considered, necessary; and
- k) discharge such other functions as may be assigned to it under this Act.

1.3 Bihar State Power Transmission Company Limited (BSPTCL)

The Government of Bihar under the provision of Bihar Electricity Reforms Transfer Scheme 2012 notified vide Notification No.17 dated 30.10.2012 of the Energy Department, Govt. of Bihar restructured the Bihar State Electricity Board with effect from 1st November, 2012. The Generation, Transmission and Distribution Businesses of the erstwhile Bihar State Electricity Board were transferred to four successor companies with one Holding Company as listed below:

- 1) Bihar State Power Holding Company Limited (BSPHCL)
- 2) Bihar State Power Generation Company Limited (BSPGCL)
- 3) Bihar State Power Transmission Company Limited (BSPTCL)
- 4) North Bihar Power Distribution Company Limited (NBPDCCL)
- 5) South Bihar Power Distribution Company Limited (SBPDCL)

The Government of Bihar vide notification dated 30th October, 2012, notified the provisional opening assets and liabilities of the transferee companies based on the audited accounts of erstwhile BSEB as on 1st April, 2011. The value of assets and liabilities stand transferred from the erstwhile Bihar State Electricity Board to the transferee companies, including the Bihar State Transmission Company Limited.

Assets and liabilities (gross block, loans and equity), as on the date mentioned in the notification, have been considered by the Commission in line with the Financial Restructuring Plan (FRP) as approved by the Government of Bihar.

1.4 Commission's Tariff Orders issued earlier for BSPTCL

BSPHCL had filed the Multi Year Tariff (MYT) petition on behalf of BSPTCL, BSPGCL, NBPDC and SBPDCL for provisional true-up for FY 2011-12, performance Review for FY 2012-13 and MYT petition for determination of Annual Revenue Requirement (ARR) for the control period of three years of FY 2013-14 to FY 2015-16 and Transmission charges for FY 2013-14 on 12th November 2012 vide their letter No Com/Tariff Petition– 160/2012/2857, dated 12-11-2012. Subsequently the petitioner filed revised true-up for FY 2011-12 along with audited accounts on 24-12-2012. The Commission issued the Tariff Order on 15th March, 2013 approving Annual Revenue Requirement for the control period FY 2013-14 to FY 2015-16 and Transmission Charges for FY 2013-14 for BSPTCL effective from 1st April 2013.

BSPTCL had filed the petition for Annual Performance Review (APR) for FY 2013-14 and for revised Annual Revenue Requirement and determination of Transmission charges for FY 2014-15 on 14th November 2013. The Commission in its order dated 28th February, 2014 approved the APR for FY 2013-14, determination of revised ARR for FY 2014-15 and Transmission Charges for FY 2014-15.

1.5 Admission of Current Petition and Public Hearing Process

The Commission vide letter BEREC-Case No.50/2014-1088 dated 24.11.2014 directed BSPTCL to file the petition latest by 01.12.2014. BSPTCL has filed the present petition

on 01.12.2014 for the Truing-up of FY 2013-14, Annual Performance Review (APR) for FY 2014-15 and determination of Revised Annual Revenue Requirement for FY 2015-16. BSPTCL has submitted that Truing-up for FY 2013-14 is done based on audited annual accounts for the year and the APR for FY 2014-15 and revised ARR for FY 2015-16 have been carried out based on the actual available data for FY 2013-14 and half yearly data for FY 2014-15 (as available).

On preliminary verification of the Petition, the Commission has admitted the Petition Case No. 50/2014) on 04.12.2014 and in accordance with section 64 of the Electricity Act, 2003 and sub clause 6(5) of BERC (Terms and Conditions of Determination of Tariff) Regulations, 2007. The Commission directed the BSPTCL to publish the petition in the abridged form in at least two daily newspapers, one in English and the other in Hindi, having wide circulation in the State inviting objections and suggestions from its stakeholders on the ARR and Tariff Petition filed by it.

BSPTCL was also directed to publish the schedule for Public Hearings along with the public notice inviting objections/suggestions.

The public notices were published in the following newspapers as given below:

Sl. No	Name of the news paper	Language	Date of first Publication
1	Times of India	English	20.12.2014
2	Dainik Jagran	Hindi	20.12.2014

The tariff petition was also placed on the website of BSPTCL for inviting objections and suggestions on the petition and copies of the petition along with Annexure were also made available for sale in the office of the Chief Engineer (Transmission), BSPTCL.

The interested parties/stakeholders were asked to file their objections/suggestions on the Petition on or before 09.01.2015. However on request from some stakeholders the Commission extended the last date of submission up to 25.01.2015.

The Commission received only one written objections/suggestions from M/s. Bihar Industries Association, Patna vide their letter dated 10th January 2015. The Commission directed the Petitioner to submit the replies/response to the suggestions/objections to the Commission vide letter Nos. as mentioned below:

BERC Letter No	Date	No. of objection/ suggestion sent to BSPTCL	Date of submission of reply by BSPTCL
BERC-Case No.50/2014-150	13.01.2015	1	30.01.2015

The proposal of BSPTCL was also placed before the State Advisory Committee (SAC) in its meeting held on 13.01.2015 and various aspects of the petition were discussed by the committee. The Commission took the advice of the State Advisory Committee on the petition filed by BSPTCL during the meeting of the Committee. The minutes of the meeting are given in **Annexure-I**.

The public hearing was conducted as scheduled in the Court Room of BERC on 10.01.2015.

A note on the main issues raised by the objectors in the written submissions and also in the public hearing in respect of the petitions, along with the response of BSPTCL and the Commission's views on the response, are given in Chapter-3.

1.6 Approach of this order

The BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 provides for truing up for previous year (FY 2013-14) and Annual Performance Review of current year (FY 2014-15)

The BSPTCL has now approached the Commission with the present petition for Truing-up for FY 2013-14, Annual Performance Review for FY 2014-15 and Revised Annual Revenue Requirement and determination of Transmission Charges for FY 2015-16.

The Commission has examined the petition and observed that certain additional data/information and clarifications are required for taking up detailed analysis of the Petition. The Commission directed Petitioner to submit the additional data/information and clarifications vide letter Nos.

1. BERC-Case No.-50/2014-1139 dated 04.12.2014
2. BERC-Case No.-50/2014-1173 dated 11.12.2014
3. BERC-Case No.-50/2014-1242 dated 31.12.2014
4. BERC-Case No.-50/2014-79 dated 13.01.2014
5. BERC-Case No.-50/2014-131 dated 28.01.2014

The Petitioner has submitted additional information/data/clarifications vide their letter Nos.

1. Trans (O&M)-Misc-Is-253/2014-22 dated 09.01.2015
2. Trans (O&M)-Misc-Is-253/2014-09 dated 16.01.2015
3. Trans (O&M)-Misc-Is-253/2014-63 dated 30.01.2015

The Commission has undertaken the truing up exercise for FY 2013–14, Annual Performance Review for FY 2014-15 and revision of Annual Revenue Requirement for FY 2015-16 based on the provisions of BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007.

1.7 Contents of this order

The order is divided into Seven (7) chapters for BSPTCL as detailed below:

1. The **First Chapter** provides a background of BSPTCL, Commission's Orders in earlier years, the Petition, details of public hearing process, and the approach adopted for this order.
2. The **Second Chapter** contains a summary of Tariff Petition of BSPTCL.
3. The **Third Chapter** provides a brief account of the public hearing process, including the objections raised by stakeholders, Petitioner's response and Commission's views on the same.
4. The **Fourth Chapter** deals with Truing-up for FY 2013-14 filed by BSPTCL

5. The **Fifth Chapter** deals with “Annual Performance Review” for FY 2014-15.
6. The **Sixth Chapter** deals with the determination of the revised ARR for FY 2015-16 and determination of Transmission Charges for FY 2015-16.
7. The **Seventh Chapter** deals with the Compliance of Directives issued in the Tariff Order for FY 2014-15.

2 Summary of the petition for True-up of FY 2013-14, Annual Performance Review (APR) for FY 2014-15 and Revised Annual Revenue Requirement for FY 2015-16 and Transmission Charges for FY 2015-16

2.1 Summary of the petition for Aggregate Revenue Requirement and Transmission Charges for FY 2015-16

The summary of Aggregate Revenue Requirement (ARR) and Transmission Charges approved in MYT Order dated 15th March, 2013 and now claimed by BSPTCL in Truing-up for FY 2013-14, Review for FY 2014-15 and revised estimates for FY 2015-16 are as given in the Tables below:

Table 2.1: ARR approved for FY 2013-14 in earlier Tariff Orders and now claimed in Truing-up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	FY 2013-14		
		Approved in MYT Order Dated 15.03.2013	Approved in Tariff Order Dated 28.02.2014	Claimed in True-up
1	O&M Expenses	89.56	118.13	143.88
a	Employee Expenses	75.28	87.33	77.57
b	R&M Expenses	9.31	14.94	59.01
c	A&G Expenses	4.98	10.37	6.20
d	Holding Company Expenses Allocated	-	5.49	1.11
2	Depreciation	49.26	33.89	106.61
3	Interest and Finance Charges	33.03	29.08	14.21
4	Interest on Working Capital	8.60	10.23	14.96
5	Return on Equity	32.90	32.90	74.22
6	Gross Annual Revenue Requirement	213.35	224.23	353.89
7	Less: Non Tariff Income	0.51	1.02	28.09
8	Net Revenue Requirement	212.84	223.21	325.80

Table 2.2: Revenue Gap / (Surplus) proposed for FY 2013-14**(Rs. Crore)**

Sl. No	Particulars	FY 2013-14		
		MYT Order Dated 15.03.2013	TO Dated 28.02.2014	True-up
1	Annual Transmission Charges	212.84	223.21	325.80
2	Less: Earlier Approved Annual Transmission Charges for the year			223.21
3	Revenue Gap / (Surplus) for the year			102.59

Table 2.3: ARR approved for FY 2014-15 and FY 2015-16 in earlier Tariff Orders and now claimed in Revised Proposal for FY 2014-15 and FY 2015-16**(Rs. Crore)**

Sl. No	Particulars	FY 2014-15			FY 2015-16	
		Approved in MYT Order Dated 15.03.2013	Approved in Tariff Order Dated 28.02.2014	Projected in APR	Approved in MYT Order Dated 15.03.2013	Revised ARR
1	O&M Expenses	107.05	129.01	238.95	130.11	264.00
a	Employee Expenses	91.66	95.37	95.28	113.53	100.52
b	R&M Expenses	10.03	16.32	116.36	10.80	132.28
c	A&G Expenses	5.36	11.32	21.32	5.78	24.69
d	Holding Company Expenses Allocated	-	6.00	6.00	-	6.49
2	Depreciation	60.25	45.80	115.64	67.58	157.58
3	Interest and Finance Charges	52.11	51.94	31.04	61.29	50.50
4	Interest on Working Capital	10.63	11.97	21.13	13.02	27.52
5	Return on Equity	32.90	32.90	136.10	32.90	262.85
6	Gross Annual Revenue Requirement	262.93	271.62	542.87	304.89	762.45
7	Less: Non Tariff Income	0.61	1.02	30.90	0.73	33.99
8	Net Revenue Requirement	262.32	270.60	511.97	304.16	728.46

Table 2.4: Revenue Gap/ (Surplus) proposed for FY 2014-15 and FY 2015-16
(Rs. Crore)

Sl. No.	Particulars	FY 2014-15			FY 2015-16	
		MYT Order Dated 15.03.2013	TO Dated 28.02.2014	APR	MYT Order Dated 15.03.2013	Revised ARR
1	Annual Transmission Charges	262.32	270.60	511.97	304.16	728.46
2	Less: Approved Annual Transmission Charges for the year			270.60		304.16
3	Revenue Gap/(Surplus) for the year			241.36		424.29

Table 2.5: Transmission Charges proposed for FY 2015-16
(Rs. Crore)

Sl. No	Particulars	Units	Amount
1	Annual Transmission Charges for FY 2015- 16	A	728.46
2	Revised Monthly Transmission Charges for FY 2015-16	B=A/12	60.70

2.2 Request to the Commission:

BSPTCL has requested the Commission to:

- a) Admit this petition;
- b) Examine the proposal submitted by the Petitioner in the enclosed petition for a favourable dispensation;
- c) Pass suitable orders with respect to the True-up for FY 2013-14 amounting to Rs. 325.80 Crore, APR for FY 2014-15 amounting Rs. 511.97 Crore and Revised ARR for FY 2015-16 amounting to Rs. 728.46 Crore;
- d) Approve the transmission charges as per the proposal and allow relaxation in MYT norms wherever sought for;
- e) Pass separate order for the Petitioner against the present petition;
- f) Permit to propose suitable changes to the respective ARRs, prior to the final approval by the Commission. BSPTCL believes that such an approach would go a long way towards providing a fair treatment to all the stakeholders and may eliminate the need for a review or clarification.

- g) Condone any inadvertent omissions/errors/shortcomings 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 Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

3 Stakeholder's Objections / Suggestions, Petitioner's Response and Commission's Observations

3.1 Introduction

In response to the public notice inviting objections/suggestions of the stakeholders on the Tariff petition filed by BSPTCL, one (1) written objection has been filed by M/s. Bihar Industries Association, Patna vide their letter dated 10th January, 2015.

The Public Hearing which was scheduled on 18th December, 2014 was rescheduled to 10th January, 2015 at the request of some of the stakeholders.

The public hearing, as scheduled was held in the Court Room, BERC office, Patna on 10th January, 2015 wherein the representative of M/s. Bihar Industries Association, Patna has put forth their comments and suggestions before the Commission in the presence of the Petitioner, BSPTCL. M/s. Bihar Industries Association has sought some more time to submit additional objections/ suggestions based on further relevant details and information requested from the licensee. The Commission granted time to file further objections/ suggestions, if any, on or before 25th January, 2015. Since, no further objections are received from M/s. Bihar Industries Association, Patna the Commission has taken into consideration the objections/ suggestions submitted in their letter dated 10th January, 2015.

The Commission has examined the issues and concerns voiced by the representative of M/s Bihar Industries Association, Patna in their written comments as well as those made in the public hearing and also the response of the Petitioner thereon. The comments/suggestions submitted by the stakeholder in response to the ARR petition, the replies given by the Petitioner and the views of the Commission have been summarized under various sub-heads as given below:

3.2 Stakeholders Objections / Suggestions, BSPTCL's Response and Commission's Observations

Issue 1: R&M expenses and Depreciation during FY 2013-14

In truing-up for FY 2013-14 there is a huge jump in R&M expenses from Rs. 14.94 Crore to Rs. 59.01 Crore without any rational explanation. Similarly depreciation has increased from Rs. 33.89 Crore to Rs. 106.60 Crore. Further, in APR for FY 2014-15 and ARR for FY 2015-16, there is a disproportionate increase in R&M expenses and depreciation. The objector requested to allow only a proportionate increase in comparison with previous year.

Petitioner's submission

R&M expenses for FY 2013-14 are high due to huge expenditure incurred on the Repair & Maintenance of transmission assets in FY 2013-14 as compared to earlier years. This being the first independent year of operation of the company, huge expenditure was incurred on the R&M assets. R&M expenses of Rs. 14.00 Crore approved for FY 2013-14 were based on inflationary increase considered by the Commission on the prorated expenses for FY 2012-13 and thereby were lower. R&M expenses of Rs. 59.00 Crore claimed are as per audited accounts for FY 2013-14.

Depreciation on GFA and grants as per actual from the audited accounts for FY 2013-14 is considered.

Commission's observation

The Commission has noted the objection and reply of the Petitioner. The Commission has examined the R&M expenses shown in the Petition and audited annual accounts for FY 2013-14. The Commission has analysed the details of R&M expenses and observed that cost of certain new equipments were accounted under R&M expenses in the audited accounts. The Commission has transferred the cost of new equipment from R&M expenses to Fixed Assets and accordingly, the R&M expenses allowed in the truing up for FY 2013-14. The Commission has aptly discussed the issued under R&M expenses in the truing up for FY 2013-14.

Regarding depreciation claimed by the Petitioner for FY 2013-14, the Commission has recomputed the depreciation for FY 2013-14 duly reducing the assets (Land) re-valued and applying the weighted average rate of depreciation both on the average GFA during FY 2013-14 and average grants during 2013-14 to arrive at net depreciation for FY 2013-14.

Issue 2: Return on Equity (RoE)

In Truing-up for FY 2013-14, APR for FY 2014-15 and ARR for FY 2015-16, RoE has been increased to Rs. 74.27 Crore, Rs. 136.60 Crore and Rs. 262.85 Crore respectively. The total increase is at 500%. No evidence for the same has been submitted.

Petitioner's submission

The BRGF (Backward Region Grants Fund) funding being received from the State Govt. is in the form of equity infusion into the Company. Supporting documents (in Hindi) already submitted to the Commission mention that the same is being received in the form of equity infusion into the Company.

As such, the company has taken Rs. 590.35 Crore as equity investment of State Govt. into the company. Since the authorized capital of the company is only Rs. 350 Crore, after enhancement of its authorized capital by the order of the State Govt. the shares will be allotted to the State Govt.

The Petitioner requested the Commission to allow RoE on the actual equity as most of the schemes is Govt. approved/state funded and the same are being given to the Petitioner in the nature of equity.

Commission observation

The Commission has computed the RoE for FY 2013-14 after estimating the equity component for FY 2013-14 taking opening equity as per "Transfer Scheme" and

additional equity for FY 2013-14 as per BERC Tariff Regulation taking into consideration the assets created through grants which are not considered as equity.

Issue: 3 Transmission Charges

The licensee has given only net revenue requirement and has not given any calculation for per unit rate and its comparison with the rates allowed in previous tariff orders.

Petitioner's submission

Per unit transmission charges are as given below:

Sl. No	Particulars	FY 2013-14 (Actual)	FY 2014-15 (RE)	FY 2015-16 (Estimated)
1	Annual Transmission Charges (Rs. Crore)	325.80	511.97	728.46
2	Transmission Charger per month (Rs. Crore)	27.15	42.66	62.70
3	Transmission capacity (MVA)	5482	6220	9640
4	Transmission charge Rs/MVA/month	49526	68592	62972
5	Energy transmitted (MU)	14747	18741	20875
6	Transmission Cost in (Rs./kWh)	0.22	0.27	0.35

Commission's observation

The Commission has computed the per unit transmission charges for FY 2015-16 based on the approved Annual Revenue Requirement (ARR) and Energy Requirement approved for FY 2015-16 and provided the details in this Order.

4. True up for FY 2013-14

4.1 Background

The Commission issued the Tariff Order for FY 2013-14 dated 15th March, 2013 determining the Multi Year Aggregate Requirement (ARR) for the three years control period FY 2013-14 to FY 2015-16 separately for Bihar State Power Generation Company Limited (BSPGCL), Bihar State Power Transmission Company Limited (BSPTCL) and together for North Bihar Power Distribution Company Limited (NBPDC) and South Bihar Power Distribution Company Limited (SBPDCL). The approval was based on the estimates presented by Bihar State Power Holding Company Limited (BSPHCL) on behalf of BSPTCL for costs to be incurred during the control period FY 2013-14 to FY 2015-16.

BSPTCL has submitted the petition separately for first time after unbundling of BSEB, for Annual Performance Review (APR) for FY 2013-14 and revised Annual Revenue Requirement (ARR) for FY 2014-15 on 24.11.2013. The Commission carried out the 'Review' exercise for FY 2013-14 in the Tariff Order dated 28th February, 2014 based on the revised estimates submitted by BSPTCL.

BSPTCL has now submitted the present petition on 3rd December, 2014 which include True-up for FY 2013-14 along with audited Annual Accounts for FY 2013-14.

BSPTCL has further stated that the true-up for FY 2013-14 is based on the audited annual accounts for the year.

True-up for FY 2013-14 is to be done according to the Regulation 22 (1) & 2 of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 which is reproduced below:

"The Commission shall undertake a review along with next Tariff Order of the expenses and revenues approved by the Commission in the current year Tariff Order.

While doing so, the Commission shall consider variations between approvals and revised estimates / pre-actuals of the sale of electricity, income and expenditure for the relevant year and permit necessary adjustments / changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called Review”.

“After audited accounts of the year are made available, the Commission shall undertake a similar exercise as in sub-clause (1) above based on the final actual figures as per the audited accounts. This exercise based on the audited accounts shall be called ‘Truing-up’. The Truing-up exercise for any year shall not ordinarily be considered after more than one year gap after “Review”.

Accordingly, the “Truing-up exercise for FY 2013-14 has been undertaken by the Commission on the basis of audited annual accounts for FY 2013-14 and BERC (Terms and Conditions for determination of Tariff) Regulations 2007. However, wherever deemed necessary, the Commission has considered expenses based on prudence check.

4.2 Performance of Transmission System

Petitioner’s submission

BSPTCL has submitted that the actual transmission losses for FY 2013-14 are 4.38% and the same are as per the audited accounts for FY 2013-14. The norm of 4.02% for FY 2013-14 as laid out by the Commission was a very ambitious target and in spite of efforts to bring down the losses, the transmission losses for FY 2013-14 were 4.38% as shown in the Table below:

Table 4.1: Actual Transmission Losses for FY 2013-14 projected by the Petitioner

Sl. No	Petitioners	Unit	FY 2013-14
1	Energy Input	MU	14417.95
2	Energy Output	MU	13786.16
3	Transmission Loss	MU	631.79
4	Transmission Loss	%	4.38%

BSPTCL further submitted that it has been making consistent efforts to bring down the losses by way of up-gradation of existing infrastructure and capital investments

into new infrastructure. Substantial investments pertaining to strengthening transmission network system by way of taking-up improvement works like adding new/link lines, augmentation of existing transformer capacities and establishment of new sub-stations closer to the load centres etc. have been undertaken in FY 2013-14 and are continuing for the future years. However, the benefits out of the capital investments would take time to flow in. These works would result in;

- a. Reduction of transmission losses
- b. Reduction of distribution losses
- c. Improvement of system reliability
- d. Enable creation of robust transmission net work

BSPTCL has submitted that the improvement in losses would be reflected only after 1-2 years after Commissioning of these transmission assets.

BSPTCL has stated that losses in advanced states which have initiated reforms process much earlier are still having transmission loss more than 4%.

BSPTCL has requested to approve the transmission losses for FY 2013-14 on actual basis at 4.38%.

Commission's analysis

The Commission in the Tariff Order dated 28th February, 2014 has directed BSPTCL as under:

BSPTCL is directed to provide appropriate energy meters at all the interface points of DISCOMs, if not already provided, compute the monthly transmission loss based on the energy input into BSPTCL grid from various sources and energy outgo measured at interface points of DISCOM and HT consumers.

BSPTCL has submitted the compliance/action taken on the above directive as under;

The Petitioner seeks time to comply with the above mentioned directive of the Commission. The Petitioner has only recently completed two years of independent operations and transmission infrastructure up-gradation works are in progress. The Petitioner requests the Commission to grant time extension for completion of the above.

It is evident from the above reply that BSPTCL has not yet provided appropriate energy meters at the interface points to measure the energy input into BSPTCL grid from various source, and energy outgo to DISCOMs and HT consumers. The Commission opines that in the absence of energy meters at all required places, BSPTCL could have only estimated/ assessed the Energy Input, Energy delivered and arrived at the transmission loss for FY 2013-14

Further from the audited annual accounts for FY 2013-14 (Statement – 9), the Commission noted that transmission losses during FY 2012-13 was 4.07%. With the huge capital investment plan under progress, the Petitioner could have reduced the transmission loss by 0.05% and achieved the approved loss trajectory of 4.02% for FY 2013-14

The Commission do not consider any basis/justification for revising the transmission loss trajectory approved for FY 2013-14 in the Tariff Order dated 15th March 2013.

The Commission retains the approved transmission loss for BSPTCL for FY 2013-14 at 4.02% in truing-up

4.3 Capital Investment

Petitioner's submission

BSPTCL has submitted that as per the audited annual accounts for FY 2013-14, the new capital investment made during the year is at Rs.249.18 Crore and capitalisation is at Rs.70.23 Crore. The capitalisation is lower as compared to approved figures and the remaining funds for schemes are expected to be capitalised in the remaining

years of the control period. The Petitioner has furnished the breakup of the opening CWIP, new investment and capitalisation proposed for truing up for FY 2013-14 as shown in the Table below:

Table 4.2 : Capital investment proposed for truing up for FY 2013-14

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.02.2014	Claimed by BSPTCL in truing up for FY 2013-14
1	Opening CWIP	682.00	378.94	378.94
2	Add: New Investment	319.00	660.39	249.18
3	Total Investment (1+2)	1001.00	1039.33	628.12
4	Less: Capitalisation from CWIP	42.00	113.68	
5	Less: Capitalisation from New Investments	346.00	198.12	
6	Total capitalisation (4+5)	388.00	311.80	70.23
7	Net closing CWIP (3 - 6)	613.00	727.53	557.88

BSPTCL has requested the Commission to approve the CWIP and capitalisation as proposed for FY 2013-14

Commission's analysis:

The Commission has examined the computations of capital expenditure furnished by BSPTCL. The Commission has considered the total investment in capital expenditure and capitalisation during the year 2013-14 as per the audited annual accounts of FY 2013-14 of the Petitioner as detailed in the Table below:

Table 4.3: Capital investment approved in truing up for FY 2013-14

(Rs. Crore)					
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.02.2014	Claimed by BSPTCL in truing up for FY 2013-14	Now approved in true up for FY 2013-14
1	Opening CWIP	682.00	378.94	378.94	378.94
2	Add: New Investment	319.00	660.39	249.18	249.18
3	Total Investment (1+2)	1001.00	1039.33	628.12	628.12
4	Less: Capitalisation from CWIP	42.00	113.68		
5	Less: Capitalisation from New Investments	346.00	198.12		

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.02.2014	Claimed by BSPTCL in truing up for FY 2013-14	Now approved in true up for FY 2013-14
6	Total capitalisation (4+5)	388.00	311.80	70.23	70.23
7	Net closing CWIP (3 - 6)	613.00	727.53	557.88	557.89

4.4 Gross Fixed Assets

Petitioner's submission:

BSPTCL has submitted the value of Opening GFA, Additions to GFA and Closing GFA based on the audited annual accounts for FY 2013-14 as detailed in the Table below;

Table 4.4: Gross Fixed Assets proposed for truing up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.02.2014	Claimed by BSPTCL in true up for FY 2013-14
1	Opening GFA	1547.13	3513.08	3513.08
2	Less: Assets Revalued		1255.06	
3	Original value of GFA (1-2)	1547.13	2258.02	3513.08
4	Less: Value of Land		47.46	
5	Original GFA (depreciable GFA) (3-4)	1547.13	2210.56	3513.08
6	Add: Additions during the year	388.00	311.80	70.23
7	Add: Interest during construction (IDC)	11.51	8.91	
8	Closing GFA (5+6+7)	1946.64	2531.27	3583.31

Commission's analysis:

The Commission has examined the gross fixed assets proposed by the Petitioner with reference to the audited annual accounts for the year 2013-14. The opening GFA includes Land value of Rs.47.46 Crore.

The audited annual accounts show net addition of Rs.70.23 Crore during the year 2013-14 which includes Rs.63.60 Crore towards land and land rights.

The Commission observes that the Petitioner has claimed R&M expense of Rs.59.01 Crore in the True up for FY 2013-14. The Commission has addressed the Petitioner to verify and furnish work-wise details of R&M expenses pertaining to Plant &

Machinery, Lines & Cable Net work, Buildings, etc. and whether cost of new equipments such as transformers, etc. were not included in the R&M expenses for FY 2013-14.

In response to the query, the Petitioner has reported that cost of new transformers (100 MVA and 150 MVA) amounting to Rs.20.65 Crore has been accounted against R&M expenses in the annual accounts for FY 2013-14. Further, Rs.11.74 Crore representing erection & stringing of collapse towers, restoration/replacement of CT & PTs etc. was included in the R&M expenses reported under Lines & Cable net work in the annual accounts for FY 2013-14.

The Commission opines that the cost of new transformers and erection of collapsed tower & stringing lines shall be capitalised as these are new assets created during FY 2013-14 and these assets have life span and shall be depreciated over the period of life of the asset. Accordingly, the Commission considers Rs.32.39 Crore (Rs.20.65 Crore + Rs.11.74 Crore) and capitalised in true up for FY 2013-14.

The Commission considers the GFA in true up for FY 2013-14 as detailed in the Table below:

Table 4.5: Gross Fixed Assets approved in true up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.02.2014	Claimed by BSPTCL in true up for FY 2013-14	Approved in true up for FY 2013-14
1	Opening GFA	1547.13	3513.08	3513.08	3513.08
2	Less: Assets Revalued		1255.06		1255.06
3	Original value of GFA (1-2)	1547.13	2258.02	3513.08	2258.02
4	Add: Additions during the year	388.00	311.80	70.23	70.23
5	Add: Cost of new equipment accounted against R&M expenses in accounts for FY 2013-14 now capitalization				32.39
6	Add: Interest during	11.51	8.91		

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.02.2014	Claimed by BSPTCL in true up for FY 2013-14	Approved in true up for FY 2013-14
	construction (IDC)				
7	Closing GFA (3+4+5+6)	1946.64	2578.73	3583.31	2360.64
8	Less: Value of land		47.46		111.06 *
9	Closing GFA (Depreciable GFA) (7-8)	1946.64	2531.27	3583.31	2249.58

* Rs.47.46 Crore + Rs.63.60 Crore = Rs.111.06 Crore

4.5 Depreciation

Petitioner's submission:

BSPTCL has submitted that depreciation for FY 2013-14 as per audited accounts is Rs.106.61 Crore and amortization of the assets created out of grants has been excluded in the depreciation computation. Land and land rights have not been subject to any depreciation.

BSPTCL has further submitted that weighted average rate of depreciation includes the averaging effect of zero depreciation on land and therefore, the average GFA to be considered should include the land component as well. Further depreciation as per accounts has not considered any depreciation on land and therefore, the depreciation as per accounts should be allowed in entirety. Amortization on the assets created out of grants has been excluded from the depreciation charged to the Profit & loss account. BSPTCL has claimed depreciation of Rs.106.61 Crore in truing up for FY 2013-14 as detailed in the Table below:

Table 4.6: Depreciation proposed in truing up for FY 2013-14

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.02.2014	Claimed by BSPTCL in true up for FY 2013-14
1	Opening GFA	1547.13	2210.56	3513.08
2	Additions during the year	388.00	311.80	70.23
3	Interest during construction	11.51	8.91	

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.02.2014	Claimed by BSPTCL in true up for FY 2013-14
4	Closing GFA (1 + 2 +3)	1946.64	2531.27	3583.31
5	Average GFA (1+4)/2	1746.89	2370.92	3548.19
6	Weighted average rate of depreciation	5.12%	5.12%	3.27%
7	Depreciation (5*6)	89.44	121.39	115.89
8	Opening Grants	679.31	1622.44	1624.25
9	Add: Grants during the year	211.00	172.97	9.80
10	Closing Grants (8+9)	890.31	1795.41	1634.05
11	Average Grants (8+10)/2	784.81	1708.93	1629.15
12	Weighted average rate of depreciation	5.12%	5.12%	0.57%
13	Depreciation for GFA on Grants (11*12)	40.18	87.50	9.28
14	Net Depreciation for GFA on loans (7-13)	49.26	33.89	106.61

Commission's analysis:

The Commission has examined the computation of the depreciation of the Petitioner. The Commission observed that depreciation, as per the audited annual accounts for FY 2013-14, is at Rs.115.89 Crore for the year 2013-14. The effective weighted average rate of depreciation works out to 5.23% on the depreciable assets i.e. excluding land value.

Regulation 73(2)(a)(i) of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 specify that ***“the value base for the purpose of depreciation shall be the historical cost of the asset”***.

Regulation 73(2)(a)(ii) of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 specify that ***“land is not a depreciable asset and its cost shall be excluded from the capital cost”***.

Conjoint reading of the above Regulations explicitly specifies that depreciation shall be computed on the historical value of the asset i.e. original cost of the fixed assets excluding revaluation and cost of land. As per the audited annual accounts of the Petitioner for FY 2013-14, the land is valued at Rs.1366.12 Crore. The Commission

has considered the land value of Rs.1366.12 Crore and accordingly, has excluded the value of land for computation of Depreciation in true up for FY 2013-14.

The Petitioner has stated that weighted average rate of depreciation includes the averaging effect of zero depreciation on land. The contention of Petitioner that the depreciation is charged on the depreciable assets (other than land), whereas, the total assets value (including land value) is considered for arriving at the weighted average rate of depreciation is not correct. The depreciation (numerator) shall be divided by the value of assets on which said depreciation is computed i.e. depreciable assets (denominator) so as to arrive at correct weighted average rate of depreciation. The weighted average rate of depreciation computed by the Petitioner has the effect of zero depreciation on land but the average assets value has the effect of land value. The Petitioner should have excluded the value of land for arriving at the weighted average rate of depreciation. If the denominator is considered higher value, the weighted average rate get reduced and do not reflect the real weighted average rate of depreciation against the depreciable assets.

Further, the Petitioner has considered weighted average rate of 0.57% for computing proportionate depreciation on the grants used for creation of assets, but no details were provided. The Commission has considered the same weighted average rate of depreciation at 5.23% for computing proportionate depreciation on the grants.

The Commission has considered the total land value of Rs.1366.12 Crore (including revaluation of Rs.1255.06 Crore) as per audited annual accounts for FY 2013-14 and reduced the same from the GFA for the purpose of computation of depreciation. The Commission has computed and considered the depreciation in true up for FY 2013-14 as detailed in the Table below:

Table 4.7: Depreciation approved in truing up for FY 2013-14 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28th February '14	Claimed by BSPTCL in truing up for FY 2013-14	Now approved in truing up for 2013-14
1	Opening GFA (on 1-4-13)	1547.13	3513.08	3513.08	3513.08
2	Less: Assets (Land) Revalued		1255.06	0.00	1255.06
3	Original value of GFA (1-2)	1547.13	2258.02	3513.08	2258.02
4	Less: Value of Land (as per accounts)		47.46	0.00	111.06
5	Original value of GFA (3-4)	1547.13	2210.56	3513.08	2146.96
6	Additions during the year	388.00	311.80	70.23	102.62
7	Add: IDC	11.51	8.91	0.00	0.00
8	Closing GFA (5+6+7)	1946.64	2531.27	3583.31	2249.58
9	Average GFA {(5+8)/2}	1746.89	2370.92	3548.19	2198.27
10	Weighted average rate of depreciation	5.12%	5.12%	3.27%	5.23%
11	Depreciation (9*10)	89.44	121.39	115.89	114.97
12	Opening Grants	679.31	1622.44	1624.25	1624.25
13	Grants during the year	211.00	172.97	9.80	9.80
14	Total Grants (12+13)	890.31	1795.41	1634.05	1634.05
15	Average Grants {(12+14)/2}	784.81	1708.93	1629.15	1629.15
16	Weighted average rate of depreciation	5.12%	5.12%	0.57%	5.23%
17	Depreciation on assets created out of grants (15*16)	40.19	87.50	9.28	85.20
18	Net Depreciation considered (11 - 17)	49.25	33.89	106.61	29.77

The Commission, accordingly, approves depreciation of Rs.29.77 Crore for FY 2013-14 in truing up.

4.6 Interest and Finance Charges

Petitioner's submission:

The Petitioner has submitted that the opening and closing loan balance for FY 2013-14 is considered as per the audited annual accounts of FY 2013-14. The interest on loans as per the audited accounts is at Rs.14.20 Crore for FY 2013-14 and the effective average rate of interest is at 9.13%. The petitioner has furnished the details of effective rate of interest and computation of interest expenses in truing up for FY 2013-14 as detailed in the Table below:

Table 4.8: Interest on loans and average rate of interest proposed for FY 2013-14:**(Rs. Crore)**

Sl. No.	Particulars	Opening Balance as on 1.4.13	Addition	Re-payment	Closing Balance as on 31.3.14	Average Loan	Interest accrued during 2013-14	Average rate of Interest %
1	State Government Loan	66.89	129.07		195.96	131.43	14.20	
2	ADB loan	18.52	11.25		29.77	24.15		
3	Total	85.41	140.32	0.00	225.73	155.57	14.20	9.13%

Interest on loans proposed by BSPTCL for FY 2013-14 is as given in the Table below:

Table 4.9: Interest on loans proposed in truing up for FY 2013-14**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.02.2014	Claimed by BSPTCL in true up for FY 2013-14
1	Opening Loan	190.23	172.05	85.41
2	Additions during the year	177.00	137.15	140.32
3	Repayments	49.26	33.89	
4	Closing loan (1+2-3)	317.97	275.31	225.74
5	Average Loan (1+4)/2	254.10	223.68	155.58
6	Rate of Interest	13.00%	13.00%	9.13%
7	Interest on Loan	33.03	29.08	14.20

BSPTCL has further claimed Rs.0.01 Crore towards bank charges, interest on Group Savings Scheme, interest on security deposit from staff, etc. for FY 2013-14 in truing up process based on the audited annual accounts for FY 2013-14

Commission's analysis:

The Commission has examined the computation of interest on loan projected by the Petitioner in truing up for FY 2013-14. The Petitioner has not furnished the source-wise loan details drawn/used for creation of assets. The Petitioner has considered the opening loan, additions to the loan and repayment of loan during FY 2013-14 as per the audited annual accounts for FY 2013-14.

The Regulation 73 (1) of the BEREC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

- (a) interest on loan capital shall be computed loan-wise, on the loans arrived at in the manner indicated in Regulation 71.*
- (b) In the case of existing projects, the actual debt-equity shall be used for tariff determination and any expansion thereto shall be governed as per Regulation 71.*
- (c)*
- (d)*
- (e)*
- (f) In case any moratorium period is availed by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.*

The Regulation 71 of BEREC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

“(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.”*

(2) the debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, Return on Equity, Advance Against Depreciation and Foreign Exchange Rate Variation”.

A conjoint reading of the above Regulations explicitly specify that interest shall be provided on actual debt in case of existing projects and for new projects @ 70% of the project cost to be considered as debt and interest provided.

The Commission observes that majority of transmission schemes/capital investments are funded through grants. As per the audited annual accounts for the year 2013-14, the Petitioner has capitalised the capital investment of Rs.102.62 Crore and received an amount of Rs.9.80 Crore towards grants. The capitalisation, Grants and funding of capitalisation considered is shown below:

Capitalisation

Sl. No.	Particulars	Amount (Rs. Crore)
1	Capitalisation during FY 2013-14	102.62
2	Less: Grants	9.80
3	Net capitalisation	92.82
4	Equity considered (@30% of 3)	27.85
5	Debt considered (@70% of 3)	64.97

The transmission schemes funded by the Government of India through BRGF (Backward Regions Grant Fund) were treated as equity. The Grants of Rs.590.35 Crore received under BRGF for transmission schemes was accounted for as equity capital in the audited annual accounts for FY 2013-14. As could be seen from the Government of Bihar Rajyadesh (copies furnished for Rs.590.35 Crore received during FY 2013-14) the transmission schemes are funded by the Gol under BRGF (Special Plan). The nomenclature of the scheme itself clearly specify these funds are released as Grant from Gol. Treating the Capital Grant amounts as equity in the books of accounts is against the accounting principles and AS-12.

The Commission, for the purpose of computation of interest, has considered the opening loan for FY 2013-14 as per tariff order dated 28th February 2014 and considered 70% of the capitalisation (net of grants) as loan additions during FY 2013-14 in terms of Regulation 71 (1)(ii) of the BERC Regulations, 2007. The Commission has considered the effective rate of interest of 9.13% based on the audited annual accounts for FY 2013-14. The Commission has considered the repayment of loans equivalent to Depreciation allowed during the year 2013-14 in true up. Accordingly, the Commission has considered interest in the truing up for FY 2013-14 as detailed in the Table below:

Table 4.10: Interest & finance charges approved in truing up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up	Now approved in truing up for FY 2013-14
1	Opening loan	190.23	172.05	85.41	172.05
2	Additions during the year	177.00	137.15	140.32	64.97
3	Normative Repayment	49.26	33.89		29.77
4	Closing Loan (1+2-3)	317.97	275.31	225.74	207.25
5	Average Loan $\{(1+4)/2\}$	254.10	223.68	155.58	189.65
6	Interest rate	13.00%	13.00%	9.13%	9.13%
7	Interest & Finance Charges (5*6)	33.03	29.08	14.20	17.32

The Commission, accordingly, approves the interest and finance charges of Rs.17.32 Crore for FY 2013-14 in truing up.

Operation & Maintenance expenses

4.7 Employee cost

Petitioner's submission:

BSPTCL has submitted that employee expenses primarily include costs towards salaries, dearness allowances, bonus, staff welfare and medical benefits, leave travel and earned leave encashment and the terminal benefits in the form of pension, gratuity, etc. The Petitioner has claimed employee expenses for FY 2013-14 based on the audited annual accounts as detailed in the Table below:

Table 4.11: Employee Expenses proposed for FY 2013-14

(Rs. Crore)				
Sl. No	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up
1	Employee cost	162.25	81.43	86.68
2	Add: indexation @ 9.21%		7.50	
3	Sub-total (1+2)	162.25	88.93	86.68
4	Less: Support by State Government against terminal benefits	84.05		9.11
5	Employee cost (3-4)	78.20	88.93	77.57
6	Less: Employee cost capitalised (@1.8% on sl.no.3)	2.92	1.60	
7	Net employee cost (5-6)	75.28	87.33	77.57

Commission's analysis:

The Commission has approved the employee cost for FY 2013-14 at Rs.75.28 Crore in the MYT order dated 15th March 2013. The Commission in the review for FY 2013-14 (RE) has approved Rs.87.33 Crore in the Tariff Order dated 28th February 2014. As per the audited accounts of BSPTCL an amount of Rs.86.68 Crore has been incurred by the Petitioner towards employee cost during FY 2013-14 which includes Rs.9.11 Crore incurred towards employees terminal benefits which is to be borne by the Government. Accordingly, the Petitioner has reduced the Government support towards terminal benefits from the total employee cost and claimed net employee cost of Rs.77.57 Crore in truing up for FY 2013-14.

The Commission, accordingly, approves the net employee cost at Rs.77.57 Crore claimed by BSPTCL for FY 2013-14 in the truing up based on audited annual accounts, which is within the approved level for FY 2013-14 (RE) in tariff order dated 28th February 2014 as indicated in the Table below:

Table 4.12 : Employee Expenses approved in truing up for FY 2013-14

(Rs. Crore)					
Sl. No	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up	Now approved in truing up for FY 2013-14
1	Employee cost	162.25	81.43	86.68	86.68
2	Add: Indexation @		7.50		

Sl. No	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up	Now approved in truing up for FY 2013-14
	9.21% (on 1)				
3	Sub-Total (1+2)	162.25	88.93	86.68	86.68
4	Less: Support by State Government against terminal benefits	84.05		9.11	9.11
5	Employee cost (3-4)	78.20	88.93	77.57	77.57
6	Less: Employee cost capitalised (@1.8% on sl.no.3)	2.93	1.60		
7	Net employee cost (5 - 6)	75.27	87.33	77.57	77.57

The Commission, accordingly, approves the employee cost at Rs.77.57 Crore for FY 2013-14 in the truing up.

4.8 Repairs and Maintenance (R&M) Expenses

Petitioner's submission:

BSPTCL has submitted that post unbundling it has initiated major drive for maintenance and up-keep of its transmission assets. Petitioner has further submitted that huge capital expenditure schemes of Rs.3500 Crore have been undertaken and hence, repairs and maintenance expenses have increased.

The Petitioner submitted that R&M expenses claimed in truing up for FY 2013-14 are as per the audited annual accounts and requested the Commission to approve the same as detailed in the Table below:

Table 4.13: R&M Expenses proposed for FY 2013-14 (Rs. Crore)

Sl. No	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up
1	Base R&M Expenses		13.68	
2	Inflationary index		9.21%	
3	Add: Inflationary increase		1.26	
4	R&M Cost	9.31	14.94	59.01

Commission's analysis:

The Commission has examined the R&M expenses claimed by the Petitioner. The Commission has considered R&M expenses at Rs.14.94 Crore based on the 5 months expenses extrapolating to full year expenses with inflationary increase for FY 2013-14 (RE) in the Tariff Order dated 28th February 2014.

The annual accounts of BSPTCL for FY 2013-14 reflect the R&M expenses of full year (12 months) independent functioning of the BSPTCL. As per the accounts the R&M expenses are at Rs.59.01 Crore for FY 2013-14.

The Commission observes that the Petitioner's submission of increase in R&M expenses due to huge capital expenditure is indefensible as the new equipment do not require Repairs & Maintenance. Normally the equipment is covered by performance guarantee and if failed shall be replaced/repared at the cost of the supplier.

The Commission observes that the Petitioner has claimed R&M expense of Rs.59.01 Crore in the True up for FY 2013-14. The Commission has addressed the Petitioner to verify and furnish work-wise details of R&M expenses pertaining to Plant & Machinery, Lines & Cable Net work, Buildings, etc. and whether cost of new equipments such as transformers, etc. were not included in the R&M expenses for FY 2013-14.

In response to the query, the Petitioner has reported that cost of new transformers (100 MVA and 150 MVA) amounting to Rs.20.65 Crore has been accounted against R&M expenses in the annual accounts for FY 2013-14. Further, Rs.11.74 crore representing erection of collapsed towers & stringing of lines, etc. was included in the R&M expenses reported under Lines & Cable net work in the annual accounts for FY 2013-14.

The Commission opines that the cost of new transformers and erection of collapsed tower & stringing lines shall be capitalised as these are new assets created during

FY 2013-14 and these assets have life span and shall be depreciated over the period of life of the asset. The Commission has considered Rs.32.39 Crore (Rs.20.65 Crore + Rs.11.74 Crore) and capitalised in truing up for FY 2013-14 as discussed under Gross Fixed Assets. The Commission, accordingly, considers the R&M expenses for FY 2013-14 in truing up as indicated in the Table below:

Table 4.14: R&M Expenses approved in truing up for FY 2013-14 (Rs. Crore)

Sl. No	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up	Now approved in truing up for FY 2013-14
1	Base R&M Expenses				59.01
2	Less: Cost of new equipment accounted under R&M now capitalised				32.39
3	R&M Cost	9.31	14.94	59.01	26.62

The Commission, accordingly, approves Rs.26.62 Crore towards R&M expenses for FY 2013-14 in the truing up.

4.9 Administration & General (A&G) Expenses

Petitioner's submission:

BSPTCL has submitted that, as per audited accounts, the actual expenses incurred in FY 2013-14 is at Rs,6.20 Crore. The Petitioner has claimed the A&G expenses as per audited annual accounts in the truing up for FY 2013-14 as detailed in the Table below:

Table 4.15: Administration and General Expenses proposed for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL for true up for FY 2013-14
1	A & G Expenses	5.18	9.89	6.20
2	Inflationary index		9.21%	
3	Add: Inflationary increase		0.91	
4	A&G expenses (1+3)	5.18	10.80	6.20
5	Less: A&G cost capitalised	0.20	0.43	
6	Net A&G expenses (4-5)	4.98	10.37	6.20

Commission's analysis:

The Commission has analysed the A&G expenses in consonance with the audited annual accounts for FY 2013-14 of BSPTCL. The Commission considers the A&G expenses at Rs.6.19 Crore as per the audited annual accounts which is within the approved level of cost for FY 2013-14 as detailed in the Table below:

Table 4.16: Administration and General Expenses approved in truing up for FY 2013-14**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL for true up for FY 2013-14	Now approved in true up for FY 2013-14
1	A & G Expenses	5.18	9.89	6.20	6.19
2	Inflationary index		9.21%		
3	Add: Inflationary increase		0.91		
4	A&G expenses (1+3)	5.18	10.80	6.20	6.19
5	Less: A&G cost capitalised	0.20	0.43		
6	Net A&G expenses (4-5)	4.98	10.37	6.20	6.19

The Commission, accordingly, approves the Administration & General Expenses at Rs.6.19 Crore for FY 2013-14 in the truing up.

4.10 Allocation of Holding Company Expenses**Petitioner's submission:**

It is submitted that as per the audited accounts Holding Company Expenses of Rs.1.11 Crore have been reported for FY 2013-14. Accordingly, the Petitioner has claimed the holding company expenses in truing up for FY 2013-14 as detailed in the Table below:

Table 4.17: Holding company expenses proposed in truing up for FY 2013-14**(Rs. Crore)**

Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL for true up for FY 2013-14
Holding Company Expenses	--	5.49	1.11

Commission's analysis:

The Commission has considered Rs.5.49 Crore in review for FY 2013-14 (RE) in the Tariff Order dated 28th February 2014.

The audited annual accounts of the BSPTCL for FY 2013-14 include Rs.1.11 Crore towards holding company expenses.

BSPHCL vide letter No.1618 dated 22.10.2014 has claimed Rs.4.46 Crore towards holding company expenses for FY 2013-14. BSPTCL has depicted Rs.1.11 Crore towards holding company expenses in the audited annual accounts for FY 2013-14. It is pertinent to mention that an amount of Rs.3.35 Crore (4.46 – 1.11) is outstanding. Accordingly, Rs.3.35 Crore shall be considered for FY 2014-15 (RE) along with the claim pertaining to FY 2014-15.

In view of the above, the Commission, accordingly, considers the holding company expenses based on the audited annual accounts for FY 2013-14 in truing up as detailed in the Table below:

Table 4.18: Holding company expenses approved in truing up for FY 2013-14

Particulars	(Rs. Crore)			
	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28th February '14	Claimed by BSPTCL for true up for FY 2013-14	Now approved in true up for FY 2013-14
Holding Company Expenses	--	5.49	1.11	1.11

The Commission, accordingly, approves Rs.1.11 Crore towards holding company expenses for FY 2013-14 in the truing up.

4.11 Total O & M expenses

Petitioner's submission:

The total O&M expenses for FY 2013-14 proposed by BSPTCL for truing up is summarised in the Table below:

Table 4.19: Total O&M Expenses proposed in truing up for FY 2013-14**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL for true up for FY 2013-14
1	Employee cost	75.28	87.33	77.57
2	A & G Expenses	4.98	10.37	6.20
3	R&M expenses	9.31	14.94	59.01
4	Holding Company expenses allocated		5.49	1.11
5	Total O&M cost	89.56	118.13	143.88

Commission's analysis:

The Commission, based on the analysis, has approved the total O&M expenses for FY 2013-14 in the truing up as detailed in the Table below:

Table 4.20: Total O&M Expenses approved in truing up for FY 2013-14**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL for true up for FY 2013-14	Approved in true up for FY 2013-14
1	Employee cost	75.27	87.33	77.57	77.57
2	A & G Expenses	4.98	10.37	6.20	6.19
3	R&M expenses	9.31	14.94	59.01	26.62
4	Holding Company expenses allocated		5.49	1.11	1.11
5	Total O&M cost	89.56	120.16	143.88	111.49
6	Less: O&M expenses capitalised	3.13	2.03		
7	Net O&M expenses	86.43	118.13	143.88	111.49

The Commission, accordingly, approves total O&M expenses at Rs.111.49 Crore for FY 2013-14 in the truing up.

4.12 Interest on working capital

Petitioner's submission

BSPTCL has submitted that it 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:

Table 4.21: Norms for working capital requirement

Sl. No.	Particulars	Norm
1	O&M expenses	One month
2	Maintenance spares	@1% of historical cost of GFA escalated @ 6% p.a.
3	Receivables	Two months of transmission charges
4	Rate of interest on working capital	Short-term PLR of SBI as on 1 st April of the year

The rate of interest applied on the proposed working capital is as per the SBI PLR @14.45% as on 1st April 2013.

BSPTCL has claimed interest on working for FY 2013-14 computed as per the above norms as detailed in the Table below:

Table 4.22: Interest on working capital projected for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28th February '14	Claimed by BSPTCL for true up for FY 2013-14
1	O&M exp. (1 month)	7.46	10.01	11.99
2	Maintenance spares @1% of opening GFA with 6% escalation	16.40	23.94	37.24
3	Receivables - 2 months	35.65	36.86	55.87
4	Total working capital	59.51	70.81	103.53
5	Rate of interest	14.45%	14.45%	14.45%
6	Interest on working capital	8.60	10.23	14.96

BSPTCL requested the Commission to approve the computation of working capital and interest charges for FY 2013-14 based on the actual components of the normative working capital.

Commission’s analysis:

The Commission has examined the computation of interest on working capital submitted by the Petitioner. The Petitioner has considered the working capital as per Regulations and the rate of interest as per SBI PLR as on 1st April 2013.

The Commission has computed the working capital and interest on working capital as per expenses approved at an interest rate of 14.45% as on 1st April 2013 as given in the Table below:

**Table 4.23: Interest on working capital approved in truing up for FY 2013-14
(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL for true up for FY 2013-14	Now approved in true up for FY 2013-14
1	O&M exp. (1 month)	7.46	10.01	11.99	9.29
2	Maintenance spares @1% of opening GFA with 6% escalation	16.40	23.94	37.24	23.94
3	Receivables - 2 months	35.65	36.86	54.30	28.68
4	Total working capital	59.51	70.81	103.53	61.91
5	Rate of interest	14.45%	14.45%	14.45%	14.45%
6	Interest on working capital	8.60	10.23	14.96	8.95

The Commission, accordingly, approves the interest on working capital at Rs.8.95 Crore for FY 2013-14 in the truing up.

4.13 Return on Equity

Petitioner’s submission

BSPTCL has submitted that final transfer scheme is yet to be notified by the Government and for computation of equity the opening balance as approved in the Tariff Order dated 28th February 2014 is considered. Further it is submitted that the

additions in the equity capital is considered as per the audited accounts and the documents supporting equity infusion of Rs.590.35 Crore in the Company were also furnished along with the Petition.

It is further submitted that the equity capital is excluding Reserves and Surplus as the same comprises of grants for capital assets and consumer contributions, therefore have not been considered for Return on Equity. The Petitioner has claimed Rs.74.22 Crore towards Return on Equity in truing up for FY 2013-14 as detailed in the Table below:

Table 4.24: Return on Equity claimed in truing up for FY 2013-14

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved for FY 2013-14 (RE) in Tariff Order for FY 2014-15	Claimed by BSPTCL for true up for FY 2013-14
1	Opening Equity Balance	235.00	235.00	235.00
2	Add: Equity during the year			590.35
3	Closing equity balance (1+2)	235.00	235.00	825.35
4	Average Equity (1+3)/2	235.00	235.00	530.18
5	Rate of Return on Equity %	14.00%	14.00%	14.00%
6	Return on Equity (4*5)	32.90	32.90	74.22

Commission's analysis:

The Commission observed that during the year 2013-14 the Government of India (GoI) has released funds under BRGF (Special Plan) scheme channelled through Government of Bihar to BSPTCL for strengthening of transmission and sub-transmission system/network under Phase-II and Phase-III. Further, the Government of Bihar has released Rs.10.00 Crore for implementation/erection of 132/33 kV grid substations. The details of amounts received during FY 2013-14 against the above schemes are as follows:

Particulars	Amount (Rs. Crore)	Remarks
Lr.No.02/BSPHCL-33/2013-5162 dt.11-11-2013	62.50	Phase-II
Lr.No.02/BSPHCL-33/2013-5162 dt.11-11-2013	411.02	Phase-III
Lr.No.02/BSPHCL-33/2013-837 dt.24-02-2014	26.48	Phase-III
Lr.No.02/BSPHCL-33/2013-1029 dt.12-03-2014	80.35	Phase-III
Sub-total	580.35	

Particulars	Amount (Rs. Crore)	Remarks
Lr.No.02/BSPTCL-01/2014-840 dated 24-02-2014	10.00	Grid SS
Total	590.35	

The Commission observed that strengthening of transmission and sub-transmission system/network schemes funded by the Government of India through BRGF (Backward Regions Grant Fund) were treated as equity. As could be seen from the Government of Bihar Rajyadesh, the strengthening of transmission and sub-transmission system/network schemes are funded by the Gol under BRGF (Special Plan) and shall be utilized as per the guidelines of the scheme approvals. Further, the Rajyadesh specify that these amounts are “**investment**” in BSPTCL but not invested in the form of Equity in BSPTCL. The funds released by the Gol under BRGF Grants channelled through Bihar Government should be treated as Grants only and cannot be treated as Equity infusion by the Government of Bihar in BSPTCL. Further, the nomenclature itself clearly specify these funds released by Gol are Grants under Backward Regions Grant Fund.

The Regulation 73 (2) (c) of the BERG Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

- (i) **Return on Equity shall be computed on the equity base determined in accordance with Regulation 71 and shall be @ 14% per annum.**
- (ii) *Equity invested in foreign currency shall be allowed a return upto a prescribed limit in the same currency and the payment on this account shall be made in Indian Rupee based on the exchange rate prevailing on the due date of billing.*

Explanation:

The premium raised by the transmission licensee while issuing share capital and investment of internal resources created out of free reserve of the existing transmission licensee, if any, for funding the project, shall also be reckoned as paid up capital for the purpose of computing return on equity provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the project and forms part of the approved financial package. The

*definition of equity thus would involve all net worth deployed in the capital of the unit. **This shall not include any revaluation of reserves and subsidies**".*

The Regulation 71 of BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

"(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;

(j) 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."

(2) the debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, Return on Equity, Advance Against Depreciation and Foreign Exchange Rate Variation".

A conjoint reading of Regulations 73 and 71 explicitly specify that Return on Equity shall be provided on the actual Equity in respect of existing projects and for new projects @ 30% of the project cost.

The Commission, in view of the Regulations 73 and 71 of the BERC Tariff Regulations, 2007, for the purpose of computation of Return on Equity, has considered the equity as per transfer scheme as opening equity in respect of existing projects as on 1st April 2013 and @30% of the capitalisation (net of grants) in respect of new projects as per the audited accounts of the Petitioner for FY 2013-14. The Commission considered

the Grants for FY 2013-14 as per the audited annual accounts for FY 2013-14 and adjusted the same by deducting the grants from the capitalisation during FY 2013-14 for computation of RoE. The capitalisation, grants and funding of capitalisation for FY 2013-14 is shown hereunder:

Capitalisation, Grants and Funding for FY 2013-14

Sl. No.	Particulars	Amount (Rs. Crore)
1	Capitalisation during FY 2013-14	102.62
2	Less: Grants	9.80
3	Net capitalisation	92.82
4	Equity considered (@30% of 3)	27.85
5	Debt considered (@70% of 3)	64.97

The Commission, accordingly, has considered Return on Equity for FY 2013-14 as detailed in the Table below:

Table 4.25: Return on Equity approved in truing up for FY 2013-14 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up	Now approved in truing up for 2013-14
1	Equity during	235.00	235.00	235.00	235.00
2	Add: Equity During the year			590.35	27.85
3	Closing equity balance (1+2)	235.00	235.00	825.35	262.85
4	Average equity $\{(1+3)/2\}$	235.00	235.00	530.18	248.92
5	Rate of Return per annum %	14.00%	14.00%	14.00%	14.00%
6	Return on Equity (4*5)	32.90	32.90	74.22	34.85

The Commission, accordingly approves Return on Equity at Rs.34.85 Crore for FY 2013-14 in the truing up.

4.14 Non-Tariff Income

Petitioner's submission

BSPTCL has submitted that non tariff income accounted for in the annual accounts for FY 2013-14 is at Rs.28.09 Crore and accordingly, proposed the non-tariff income for truing up for FY 2013-14 as detailed in the Table below:

Table 4.26: Non tariff income claimed in truing up for FY 2013-14

Particulars	(Rs. Crore)		
	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28.2.2014	Claimed by BSPTCL in truing up
Non tariff income	0.51	1.02	28.09

Commission's analysis:

The Petitioner has accounted Rs.28.09 Crore towards other income in the audited annual accounts for FY 2013-14. Further, Rs.2.19 Crore (as noted from the audited annual accounts for FY 2013-14) received towards supervision charges during FY 2013-14 has been considered by the Petitioner against Transmission charges instead of other income. The Commission has considered Rs.2.19 Crore as other income and a total non tariff income of Rs.30.28 Crore (Rs.28.09 Crore + Rs.2.19 Crore) is considered in truing up for FY 2013-14 based on the audited annual accounts for FY 2013-14 as detailed in the Table below:

Table 4.27: Non tariff income considered in truing up for FY 2013-14

Particulars	(Rs. Crore)			
	Approved in MYT order dated 15.03.2013	Approved for FY 2013-14 (RE) in Tariff Order dated 28th February '14	Claimed by BSPTCL in truing up	Now approved in truing up for 2013-14
Other income	0.51	1.02	28.09	28.09
Supervision charges				2.19
Total Non tariff income	0.51	1.02	28.09	30.28

The Commission approves the non tariff income at Rs.30.28 Crore as per the audited annual accounts for FY 2013-14 in truing up and adjusted against the ARR for FY 2013-14.

4.15 Annual Fixed Charges / Transmission ARR for FY 2013-14**Petitioner's submission**

BSPTCL has submitted that the annual fixed charges/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. The Petitioner has projected the revised ARR for true up of FY 2013-14 as detailed in the Table below:

Table 4.28: Annual Fixed Charges proposed in truing up for FY 2013-14
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28 th February 2014	Claimed by BSPTCL in true up for FY 2013-14
1	O&M expenses (a+b+c+d)	89.56	118.13	143.88
a	Employee Expenses	75.28	87.33	77.57
b	R&M expenses	9.31	14.94	59.01
c	A&G Expenses	4.98	10.37	6.20
d	Holding company expenses allocated	--	5.49	1.11
2	Depreciation	49.26	33.89	106.61
3	Interest and finance charges	33.03	29.08	14.21
4	Interest on working capital	8.60	10.23	14.96
5	Return on equity	32.90	32.90	74.22
6	Gross Annual Revenue Requirement	213.35	224.23	353.89
7	Less: Non-Tariff Income	0.51	1.02	28.09
8	Net Revenue Requirement	212.84	223.21	325.80

Commission's analysis:

Based on the detailed analysis, the annual fixed charges/Transmission charges considered by the Commission in true up for FY 2013-14 are as detailed in the Table below:

Table 4.29: Annual Fixed Charges approved in truing up for FY 2013-14
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.2.2014	Claimed by BSPTCL in true up for FY 2013-14	Now approved in true up for FY 2013-14
1	O&M expenses (a+b+c+d)	89.56	118.13	143.88	111.49
a	Employee Expenses	75.28	87.33	77.57	77.57
b	R&M expenses	9.31	14.94	59.01	26.62
c	A&G Expenses	4.98	10.37	6.20	6.19
d	Holding company expenses allocated	--	5.49	1.11	1.11
2	Depreciation	49.26	33.89	106.61	29.77
3	Interest and finance charges	33.03	29.08	14.21	17.32
4	Interest on working capital	8.60	10.23	14.96	8.95

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.2.2014	Claimed by BSPTCL in true up for FY 2013-14	Now approved in true up for FY 2013-14
5	Return on equity	32.90	32.90	74.22	34.85
6	Gross Annual Revenue Requirement	213.35	224.23	353.89	202.38
7	Less: Non-Tariff Income	0.51	1.02	28.09	30.28
8	Net Revenue Requirement	212.84	223.21	325.80	172.10

The Commission approves annual fixed charges/Transmission charges at Rs.172.10 Crore in truing up for FY 2013-14.

4.16 Revenue Gap / (Surplus) for FY 2013-14

Petitioner's submission

BSPTCL has submitted that the Commission in the Tariff Order dated 28th February 2014 had approved a revenue gap of Rs.10.37 Crore in 'review' for FY 2013-14 and noted that the deficit / (surplus) of FY 2013-14 based on actuals would be considered in the future years once the audited accounts of the Petitioner are available. The revenue gap for FY 2013-14 as per the audited accounts of the Petitioner is Rs.102.59 Crore as detailed in the Table below:

Table 4.30: Revenue Gap projected in true up for FY 2013-14

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28 th March 2014	Claimed by BSPTCL in true up for FY 2013-14
1	Annual Transmission charges	212.84	223.21	325.80
2	Less: Earlier approved annual transmission charges for the year	--	212.84	223.21
3	Revenue Gap / (Surplus) for the year	--	10.37	102.59

BSPTCL has requested the Commission to allow recovery of the same by raising supplementary bills to enable recovery of the gap on account of truing up for FY 2013-14

Commission's analysis:

During the year FY 2013-14, the Petitioner has received Rs.223.25 Crore excluding supervision charges of Rs.2.19 Crore towards transmission charges from DISCOMs. Further, the Petitioner has allowed an amount of Rs.2.23 Crore towards discount on payment of bills to the DISCOMs. Accordingly, the Commission has considered a net amount of Rs.221.02 Crore towards revenue received from Transmission charges/Annual charges from the DISCOMs during FY 2013-14.

The Commission, based on the detailed analysis, has considered the annual fixed charges/Transmission charges and the revenue gap in true up for FY 2013-14 as detailed in the Table below:

Table 4.31: Revenue Gap approved in truing up for FY 2013-14**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Approved in review for FY 2013-14 in T.O dated 28.2.2014	Claimed by BSPTCL in true up for FY 2013-14	Now approved in true up for FY 2013-14
1	Annual Transmission charges	212.84	223.21	325.80	172.10
2	Less: Transmission charges for the year	212.84	212.84	223.21	221.02
3	Revenue Gap / (Surplus) for the year (1-2)	--	10.37	102.59	(48.92)

The trued up revenue surplus as approved by the Commission for FY 2013-14 is at Rs.48.92 Crore as against revenue gap of Rs.102.59 Crore projected by the Petitioner in the truing up petition for FY 2013-14.

The Regulation 22(3) of the BERC Tariff Regulations, 2007, specify *"the revenue gap of next year shall be adjusted as a result of Review and Truing up exercises"*.

Accordingly, the revenue surplus arising out of the truing up for FY 2013-14 is to be adjusted in the ARR for FY 2015-16. The Commission approves interest for one and half year (for the entire year of FY 2014-15 and half year of FY 2015-16 assuming that the recovery would have been done over the year) @ 14.75% as per SBI PLR rate as

on 1st April 2014 on the trued up revenue surplus of FY 2013-14 as detailed in the Table below:

Table 4.32: Summary of trued up Revenue Surplus and interest of FY 2013-14 approved to be carried forwards to ARR of FY 2015-16

Particulars	(Rs. Crore) Amount
Revenue Surplus approved in true up for FY 2013-14 to be carried forward	48.92
Interest for FY 2014-15 (SBI PLR @ 14.75%) for 1 year	7.22
Interest for FY 2015-16 (SBI PLR @ 14.75%) for 6 months	3.61
Total Surplus with interest	59.75

The Commission, accordingly, carried forward Rs.59.75 Crore to the ARR of FY 2015-16 for adjustment.

5. Performance Review of FY 2014-15

5.1 Background

The Commission issued the Tariff Order for FY 2013-14 dated 15th March, 2013 determining the Multi Year Aggregate Requirement (ARR) for the three years control period FY 2013-14 to FY 2015-16 separately for Bihar State Power Generation Company Limited (BSPGCL), Bihar State Power Transmission Company Limited (BSPTCL) and together for North Bihar Power Distribution Company Limited (NBPDC) and South Bihar Power Distribution Company Limited (SBPDCL). The approval was based on the estimates presented by Bihar State Power Holding Company Limited (BSPHCL) on behalf of BSPTCL for costs to be incurred during the control period FY 2013-14 to FY 2015-16.

BSPGCL has submitted the petition for Annual Performance Review (APR) for FY 2013-14 and revised Annual Revenue Requirement (ARR) for FY 2014-15 on 24.11.2013. The Commission re-determined the Annual Revenue Requirement (ARR) for FY 2014-15 in the Tariff Order dated 28th February, 2014 based on the revised estimates submitted by BSPTCL.

BSPTCL has now filed the present petition on 3rd November, 2014 which includes Annual Performance Review (APR) for FY 2014-15. The Petitioner submitted that the revised estimates in the APR for FY 2014-15 are based on the half – yearly data available.

BSPTCL has submitted that though the Commission has approved MYT figures for FY 2013-14 to FY 2015-16, the Petitioner seeks opportunity to review /revise ARR for FY 2014-15 so as to avoid financial loss to the Petitioner.

Review for FY 2014-15 is to be done according to the Regulation 22 (1) of BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 which is reproduced below:

“The Commission shall undertake a review along with next Tariff Order of the expenses and revenues approved by the Commission in the current year Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates / pre-actuals of the sale of electricity, income and expenditure for the relevant year and permit necessary adjustments / changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called Review”.

The Commission has analysed the components of expenditure claimed in the review by BSPTCL for FY 2014-15 in this Chapter.

5.2 Existing Transmission System

BSPTCL owns and operates the transmission system above 33 KV i.e. 132 KV, 220 KV and 400 KV system in the State of Bihar. The existing transmission system (as on November, 2014) is as given in the Table below:

Table 5.1: Power Transformer Capacity (in MVA)

Substations	FY 2014-15 (upto November, 2014)
220/132 KV	3300
132/ 33 KV	6090
132/ 25 KV	109
Total	9499

Table 5.2: Transmission Line Length (in KMs)

Transmission Lines	FY 2014-15 (upto November, 2014)
220 KV Line	1663
400 KV Line	75
132 KV Double Circuit Line	6656
Total	8394

5.3 Performance of Transmission System

Petitioner’s submission

BPTCL has submitted that the actual transmission losses for FY 2013-14 was 4.38% which are based on the audited accounts for FY 2013-14 and requested to approve the transmission loss for FY 2014-15 at 4.38% i.e. at the same level of FY 2013-14.

BSPTCL also submitted that it has been making consistent efforts to bring down the losses by way of up-gradation of existing infrastructure and capital investments into new infrastructure.

BSPTCL has further submitted that substantive investments pertaining to strengthening transmission network system by way of taking-up improvement works like adding new/link lines, augmentation of existing transformer capacities and establishment of new substations closer to the load centers etc. are being undertaken in a phased manner and benefits out of the capital investments would take time to flow in. These works would result in;

- a. Reduction of transmission losses
- b. Reduction of distribution losses
- c. Improvement of system reliability
- d. Enable creation of robust transmission net work

BSPTCL has submitted that these improvements in losses would be reflected only after 1-2 years after the Commissioning of these transmission assets.

BSPTCL has stated that losses in advanced states and which have initiated reforms process much earlier are still heavy transmission loss more than 4%.

The Petitioner has requested to approve the revised transmission loss trajectory for FY 2013-14 to FY 2015-16 as furnished in the Table below:

Table 5.3: Revised Transmission Loss Trajectory Projected by the Petitioner

Particulars	FY 2013-14 (Actuals)	FY 2014-15	FY 2015-16
Approved Transmission Loss	4.02%	3.97%	3.92%
Revised Trajectory of Transmission Loss	4.38%	4.38%	4.33%

Commission analysis

As discussed in paragraph 4.2 under Commission's Analysis, BSPTCL has not yet provided appropriate energy meters at the interface points to measure the energy input in to BSPTCL grid from various sources and energy outgo to DISCOMs and HT

consumers. Unless, the meters are provided at all relevant places, it may not be possible to assess the transmission losses. Further, with the huge capital investment plan under progress, the transmission losses could be reduced as per the trajectory given by the Commission in the MYT order

Hence, the Commission has considered the transmission loss trajectory at 3.97% for FY 2014-15, at the approved level as per Tariff Order for FY 2014-15. However, BSPTCL is directed to submit the actual loss level by considering the input energy into the transmission system and energy delivered to DISCOMs and HT consumers based on the Energy Meter readings at interface points to consider any revision in transmission loss during FY 2014-15 while truing-up for FY 2014-15.

5.4 Capital Investment Plan

Petitioner's submission:

BSPTCL has submitted that the capital Investment plan submitted to the Commission in the tariff petition for FY 2014-15 was approved by the Commission in the Tariff Order dated 28th March 2014 as detailed in the Table below:

Table 5.4: Capital Investment Plan approved in Tariff order dated 28.02.2014

(Rs. Crore)

Sl. No.	Particulars	Total Cost	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
1	12 th Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III	1958.50		300.00	1000.00	658.50	1958.50
2	Strengthening of Sub-transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53		125.00	347.53		472.53
3	ADB funded schemes	296.90	18.52	89.86	128.52	60.00	296.90
4	State Plan Schemes	502.33	109.12	139.64	253.57		502.33
5	Installation of 14 Nos. of GSS through State plan funding	350.00			140.00	210.00	350.00
6	Establishment of BSPTCL's Training Centre through state plan funding	3.00		0.30	1.50	1.20	3.00

Sl. No.	Particulars	Total Cost	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
7	Capital expenditure schemes through Internal Resources	13.48		5.59	7.89		13.48
8	Total	3596.74	127.64	660.39	1879.01	929.70	3596.74

BSPTCL has submitted that to meet the growing demand for power by the consumers, its diversity in terms of geography and evacuating the power expected to be available from upcoming intra/inter-state generating stations, Transmission company has under taken various transmission network capacity additions, augmentation and improvement projects for making reliable power uniformly available across the state.

BSPTCL has submitted that it has prepared the report on Evolution of Transmission System of Bihar and submitted to CEA for approval. The transmission system requirements of Bihar for the 12th Plan had been proposed in three parts as under:

- i. Part-1: Bihar Sub-transmission Phase-2 extension scheme
- ii. Part-2 Transmission system strengthening scheme – Phase-1 & 2
- iii. Part-3: ATS for Case-II projects i.e Lakhisarai (2x660MW), Pirpainti (2x660 MW) & Buxar (2x660 MW) and System strengthening for other projects viz. BTPS extension (2x250 + 150 MW), MTPS Extension (2x195 MW), etc.

BSPTCL has submitted that CEA has accordingly examined the proposal and mentioned that the projects/works are technically found to be in order through letter No.69/1/2012-SP&PA/1203-05 dated 15.11.2012.

BSPTCL has submitted that the scope of certain schemes has also changed and is being executed in bundled schemes and hence, the capital expenditure plan provided in the tariff petition for FY 2014-15 has undergone a change and the figures of capital expenditure, capitalisation and funding, etc. for FY 2015-16 presented are for representation purpose only.

BSPTCL has planned huge capital expenditure and projected Rs. 5143.37 Crore from FY 2012-13 to FY 2016-17 for transmission system development in the State of Bihar. The details of schemes planned and year on year investment proposed is detailed in the Tables below:

The details of the schemes are given below:

**(a) 12th Plan Transmission and Sub-transmission system strengthening in Bihar
Phase-III – Rs.2017.96 Crore**

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Amount (Rs. Crore)
1	Preliminary survey and soil investigation	3.35
2	Land acquisition for substation and R&R compensation	62.15
3	Compensation for Crop, tree, Forest and others	66.43
4	Infrastructure for substations	17.05
5	Non residential buildings	7.75
6	Transmission Lines	454.95
7	Sub stations	503.77
8	Data & Voice connectivity	12.78
9	Sub-total (1 to 8)	1128.23
10	Contingencies	33.84
11	Sonenagar 220 kV GSS and associated lines	108.00
12	R&M of 20 Nos. old operating 132/33kV GSS	99.96
13	220/132/33 kV GSS Kishanganj with associated 220/132 kV lines for evacuation of power from 400/220kV GSS Kishanganj (PGCIL)	356.10
14	Strengthening of transmission system for N-1 compliance	291.84
15	Total (9 to 14)	2017.97

**(b) Strengthening of Sub-transmission system in Bihar - Extension scheme of
Phase-2 works (Revised) – Rs.472.53 Crore**

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
1	Augmentation work - 220 / 132 KV GSS – 1050 MVA	7 Nos.	71.63
2	Augmentation work 132 / 33 KV GSS – 420 MVA	12 Nos.	61.54
3	Re-conductoring 220 KV line	240 CKM	33.71
4	Re-conductoring 132 KV line	908 CKM	97.73
5	220 KV Line - New	1 CKM	3.94
6	132 KV Line - New	238 CKM	60.04

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
7	Ganga River Crossing Line	10 CKM	49.00
8	Capacitor Banks, CTs, LAs, etc.		16.08
9	Contingencies		78.86
10	Total		472.53

(c) ADB funded Schemes – Rs.196.90 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
1	132/33 KV GSS at Gangwara & Dhanha	2 Nos.	49.15
2	132 KV bays at Bettiah, Sasaram, Mohnia, Dinara, Lakhisarai and Shikhpura GSS	6 Nos.	
3	33 KV bays at remote end 33/11 KV SS	4 Nos.	
4	220/132 KV GSS at Pusauli 2x150 MVA	1 Nos.	47.98
5	220 KV bay extension at 220/132 KV Dehri GSS	2 Nos.	
6	132 KV line	202 CKM	48.61
7	33 KV Line	40 CKM	9.63
8	220 KV DC LILO Sasaram (PGCIL) – Ara (PGCIL) at New SS at Pusauli (New)	6 CKM	41.53
9	Pusauli (New) – Dehri (BSEB) 220 KV line	8 CKM	
10	Total		196.90

(d) State Plan Schemes – Rs.1545.77 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No	Particulars	Amount (Rs. Crore)
1	220/132 KV GSS, Bihta 2x100 MVA	135.00
2	132/33 KV GSS at Jandaha,	25.00
3	132/33 KV GSS at Tehta and Imamganj	51.20
4	132/33 KV GSS (4x50 MVA) at Kabrigahiya along with 33/11 KV SS (2x10 MVA) at Kabrigahiya	77.36
5	Construction of transmission facilities to evacuate power	26.12
6	Copnstruction of additional 132 kV transformer bay at 132/33kV SS, Sitamarhi, Bihta, Khagaul, Ara and Nawada	5.00
7	Copnstruction of additional 33 kV transformer bays at 132/33kV SS, Sitamarhi, Bihta, Khagaul, Ara and Nawada, etc	3.70
8	Purchase of 3 Nos. 50 MVA 132/33 KV transformers for Siwan, Nawada and Jamalpur GSS	7.92
9	Purchase of 17 Nos transformers (150/100/50 MVA)	49.04
10	Renovation of 15 Nos. old GSS	8.87
11	Construction of control room building, residential complex and building, boundary wall, internal road, etc. at old GSS	76.83
12	Testing equipment for testing of GSS equipments	6.26

Sl. No	Particulars	Amount (Rs. Crore)
13	Replacement of oil & overhauling of 48 Nos. power transformers	12.08
14	Construction of higher capacity bus bar and replacing of old bus bar conductor for strengthening of BSPTCL transmission line	159.00
15	Replacement of 20 No. 20 MVA transformer by 50 MVA transformers at 14 Nos. 132/33 kV GSS and related transformer bays	110.00
16	132 km double circuit towers single string lines and 132/33 kV GSS	123.67
17	Construction of 17 Nos. 132/33 kV GSS	668.72
18	Total	1545.77

(e) Installation of Grid Sub Stations through State Plan funding

BSPTCL has submitted that the value of this scheme as approved in tariff order dated 28th February 2014 was Rs.350.00 Crore which got revised to Rs.555.90 Crore for installation of 14 Nos. of Grid Sub Stations in the areas where there is need for augmentation of the transmission capacity. BSPTCL has requested to approve the additional expenditure under this scheme.

(f) BSPTCL Training Centre through State Plan funding – Rs.3 Crore

BSPTCL has planned to establish training centre for its employees and other subsidiary companies on paid basis. The training centre shall be available/open for external members/utilities/employees and shall act as a “Profit Centre” and not as a “Cost Center”. The training centre shall be well equipped with all the facilities, equipments, testing kits, functional proto types and demos and shall have the facilities of laboratories which shall be based on the norms accredited by certified national agencies. The cost of the proposed training centre is Rs.3.00 Crore which was approved in Tariff Order dated 28.02.2014.

(g) Capital expenditure schemes through Internal Resources – Rs.112.31 Crore

BSPTCL has submitted that it is executing the up-gradation of ULDC in association with PGCIL. The total capital estimate is of Rs. 80.24 Crore out of which the share of Petitioner is Rs. 5.98 Crore.

It is further submitted that additional capex is to be funded through internal resources in the coming years also and projected a total capital investment of Rs.112.31 Crore from FY 2013-14 to FY 2015-16.

(h) New schemes under ADB Funding – Rs.239.00 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Amount (Rs. Crore)
1	Augmentation of 7 Nos. GSS with 8 Nos. 50 MVA power transformer	54.00
2	Re-conductoring of all old 132 & 220 kV transformer lines	155.00
3	ERP Solutions	30.00
4	Total	239.00

BSPTCL has submitted that revision in capital plan is due to certain new schemes getting added in FY 2014-15 and FY 2015-16 and phasing of capex got revised due to delayed approvals and also due to certain schemes are bundled together including swapping of certain schemes from one planned scheme to another.

The Petitioner has furnished the revised capital investment programme for FY 2014-15 and FY 2015-16 based on the existing and new schemes. Further, the actual scheme-wise expenditure for FY 2013-14 and FY 2014-15 (upto 25.11.2014) and further expenditure for the remaining period of FY 2014-15 and estimates for FY 2015-16 based on the actual physical and financial progress of the schemes is furnished as detailed in the Table below:

Table 5.5: Revised capital investment plan proposed by the Petitioner

(Rs. Crore)

Particulars	Total Cost	2012-13	2013-14	2014-15 (upto 25.11.14)	2014-15 (25.11.14 to March'15)	Total for FY 2014-15	2015-16	2016-17
12 th Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III	1370.02		79.94	114.16	220.00	334.16	350.00	605.92
Construction of 220/132/33 kV GSS Kishanganj	356.10		7.39	2.82	20.00	22.82	110.00	215.89

Particulars	Total Cost	2012-13	2013-14	2014-15 (upto 25.11.14)	2014-15 (25.11.14 to March'15)	Total for FY 2014-15	2015-16	2016-17
Phase III (N-1) compliance	291.84				50.00	50.00	110.00	131.84
Strengthening of Sub-transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53		42.35	107.02	110.00	217.02	130.00	83.16
ADB funded schemes	196.90	18.92	13.87	53.23	50.00	103.23	60.88	
ADB funded schemes (New)	239.00				3.00	3.00	200.00	36.00
State Plan Schemes	484.38	5.00	154.54	84.95	97.00	181.95	89.03	53.86
State Plan Schemes	1061.39				20.00	20.00	340.00	701.39
Installation of 14 Nos. of GSS through State plan funding	555.90				10.00	10.00	200.00	345.90
Establishment of Training Centre through state plan funding	3.00		0.30		2.70	2.70		
Capital expenditure schemes through Internal Resources	112.31		20.31	0.57	26.43	27.00	65.00	
Total	5143.37	23.92	318.70	362.75	609.13	971.88	1654.91	2173.96

BSPTCL has requested the Commission to approve the revised capital expenditure plan proposed for FY 2014-15 and for FY 2015-16.

Commission’s analysis:

BSPTCL has projected huge capital investment for transmission system development with addition of substations (220/132/33 KV and 132/33 KV level), lines (220 KV, 132 KV and 33 KV level), bays (220 KV, 132 KV and 33 KV level), augmentation of transformer capacities and other associated/related equipments, works, etc. as detailed above {(a) to (h)} at a total cost of Rs. 5143.37 Crore for the period from FY 2012-13 to FY 2016-17.

The Commission in the Tariff Order dated 28th February 2014 has approved the capital investment plan of Rs.3596.74 Crore from FY 2012-13 to FY 2015-16. The Petitioner has revised certain scheme’s cost planned and furnished in tariff petition

for FY 2014-15 and added new schemes under state plan schemes (Rs.1061.39 Crore, ADB funded schemes (Rs.239.00 Crore), internal Resources Scheme (Rs.98.83 Crore), etc. and the total revised capital expenditure proposed for FY 2012-13 to FY 2016-17 is at Rs.5143.37 Crore.

As submitted by BSPTCL, in view of the need to develop the transmission system to transmit the additional power from upcoming generating stations and to meet the load demand in the State, the Commission approves the revised capital investment proposed by BSPTCL as detailed in the Table below:

Table 5.6: Capital Investment considered by the Commission

Particulars	Total Cost	(Rs. Crore)				
		2012-13	2013-14	2014-15	2015-16	2016-17
12 th Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III	1370.02		79.94	334.16	350.00	605.92
Construction of 220/132/33 kV GSS Kishanganj	356.10		7.39	22.82	110.00	215.89
Phase III (N-1) compliance	291.84			50.00	110.00	131.84
Strengthening of Sub-transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53		42.35	217.02	130.00	83.16
ADB funded schemes	196.90	18.92	13.87	103.23	60.88	
ADB funded schemes (New)	239.00			3.00	200.00	36.00
State Plan Schemes	484.38	5.00	154.54	181.95	89.03	53.86
State Plan Schemes	1061.39			20.00	340.00	701.39
Installation of 14 Nos. of GSS through State plan funding	555.90			10.00	200.00	345.90
Establishment of Training Centre through state plan funding	3.00		0.30	2.70		
Capital expenditure schemes through Internal Resources	112.31		20.31	27.00	65.00	
Total	5143.37	23.92	318.70	971.88	1654.91	2173.96

5.5 Capitalisation

Petitioner's submission:

BSPTCL has submitted that capitalisation has been considered from the schemes in opening CWIP, new schemes under BRGF, ADB and others which are classified as New Schemes and R&M schemes.

BSPTCL has considered the following assumptions for projecting capitalisation schedule for FY 2014-15 and FY 2015-16

- (i) Capitalisation of opening CWIP – Considered in the same ratio as the capitalisation of CWIP to the total opening CWIP as considered in the tariff order dated 28th February 2014 both for FY 2014-15 and FY 2015-16.
- (ii) Capitalisation of the New Investment – Considered in the same ratio as the capitalisation of investment to the total investment as considered in the tariff order dated 28th February 2014 both for FY 2014-15 and FY 2015-16

BSPTCL has furnished the capitalisation schedule and year-wise capitalisation of investment in the following Tables:

Table 5.7: Year-wise Capitalisation proposed by the Petitioner

(Rs. Crore)

Sl. No.	Particulars	FY 2014-15			FY 2015-16		
		MYT order dated 15.3.2013	Tariff Order dated 28.2.2014	Projected for review (RE)	MYT order dated 15.3.2013	Tariff Order dated 28.2.2014	Projected for review (RE)
1	Opening CWIP	613.00	727.53	557.88	718.00	1731.04	1048.55
2	New Investment	844.00	1879.01	971.88	1960.00	929.70	1654.91
3	Less: Capitalisation	739.00	875.50	481.21	968.00	1258.35	2061.92
a.	Opening CWIP	55.00	113.68	87.17		151.58	91.82
b.	New Investment	684.00	761.82	394.03	968.00	1106.77	1970.10
4	Closing CWIP (1+2-3)	718.00	1731.04	1048.55	1710.00	1402.39	641.54

BSPTCL has requested the Commission to approve the proposed capitalisation schedule as detailed in the Table above.

Commission's analysis:

The Commission has considered the revised capital investment of Rs.5143.37 Crore from FY 2012-13 to FY 2016-17, in the foregone paragraph.

The Commission has considered the projections of the Petitioner for capitalisation of investment for FY 2014-15 and FY 2015-16. The schedule of capital investment and capitalisation of capital expenditure/transferred to fixed assets i.e. GFA based on the capital investment approved by the Commission are furnished in the Tables below:

Table 5.8: Capitalisation of capital expenditure considered by the Commission for FY 2014-15 and FY 2015-16

Particulars	FY 2014-15			FY 2015-16		
	MYT order dated 15.3.2013	Projected for review (RE)	Now approved in review (RE)	MYT order dated 15.3.2013	Projected for ARR	Now approved
Opening CWIP	613.00	557.88	557.88	718.00	1048.55	1048.56
New Investment	844.00	971.88	971.88	1960.00	1654.91	1654.91
Less: Capitalisation	739.00	481.21	481.20	968.00	2061.92	2061.92
a. Opening CWIP	55.00	87.17	87.17		91.82	91.82
b. New Investment	684.00	394.03	394.03	968.00	1970.10	1970.10
Closing CWIP (1+2-3)	718.00	1048.55	1048.56	1710.00	641.54	641.55

5.6 Funding of Capital Expenditure

Petitioner's submission:

BSPTCL has submitted that it has planned to fund the schemes through a combination of Equity, State Government Grants and Loans from Financial Institutions as well as from State Government. The opening CWIP is also considered for funding on the basis of Grants and Loans in the ratio of 40:60. The Petitioner has also submitted that the State Government has provided funds for BRGF schemes as "Equity" and not "Grant".

BSPTCL has submitted the scheme wise computation of funding of capital expenditure and capitalisation in the Table below:

**Table 5.9: Scheme wise funding for capital expenditure projected by the
Petitioner:**

(Rs. Crore)

Sl. No.	Planned Scheme	Total Cost	Nature of Scheme	2014-15			2015-16
				Actuals upto 25.11.14	From 25.11.14 to March'15	Total	
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar - Phase-III	1370.02	Equity	114.16	220.00	334.16	350.00
2	Phase-III, Part-II Construction of 220/132/33 kV GSS Kishanganj with associated lines for evacuation of power from 400/220 kV Kishanganj (PGCIL)	356.10	Equity	2.82	20.00	22.82	110.00
3	Phase-III for (N-1) compliance	291.84	Equity		50.00	50.00	110.00
4	Strengthening of sub transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53	Equity	107.02	110.00	217.02	130.00
5	ADB Funded Scheme	196.90	Loan	53.23	50.00	103.23	60.88
6	State Plan Scheme	297.44	Loan	52.16	59.56	111.72	54.67
7	State Plan Scheme	186.94	Equity	32.78	37.44	70.22	34.36
8	New Schemes under State Plan	1061.39	Equity		20.00	20.00	340.00
9	Installation of 14 Nos of GSS (funding through State Plan)	555.90	Equity		10.00	10.00	200.00
10	Establishment of BSPTCL's Training Centre (funding through State Plan)	3.00	Loan		2.70	2.70	
11	Capital Expenditure Schemes through Internal Resources	112.31	Internal Resources	0.57	26.43	27.00	65.00
12	New ADB funded schemes	239.00	Loan		3.00	3.00	200.00
13	Grand Total	5143.37		362.75	609.13	971.88	1654.91

Table 5.10: Funding Ratio for Capital expenditure and Capitalisation of New investment proposed by the Petitioner:

Particulars	2014-15		2015-16	
	Rs. Crore	Ratio	Rs. Crore	Ratio
Equity	724.23	75%	1274.36	77%
Grants				
Loans	220.65	23%	315.55	19%
Internal Resources	27.00	3%	65.00	4%
Total	971.88	100%	1654.91	100%

Commission's analysis

The Commission has examined the scheme wise funding of capital expenditure and scheme wise funding of capitalisation submitted by the Petitioner.

The Commission observed that strengthening of transmission and sub-transmission system/network schemes funded by the Government of India through BRGF (Backward Regions Grant Fund) were treated as equity. As could be seen from the Government of Bihar Rajyadesh, the strengthening of transmission and sub-transmission system/network schemes are funded by the Gol under BRGF (Special Plan) and shall be utilized as per the guidelines of the scheme approvals. Further, the Rajyadesh specify that these amounts are “**investment**” in BSPTCL but not invested in the form of Equity in BSPTCL. The funds released by the Gol under BRGF Grants channelled through Bihar Government should be treated as Grants only and cannot be treated as Equity infusion by the Government of Bihar in BSPTCL. Further, the nomenclature itself clearly specify these funds released by Gol are Grants under Backward Regions Grant Fund.

Further, as could be seen from the Tariff Order for FY 2013-14, the Petitioner had projected these schemes for MYT filings as “Grant” and accordingly, the Commission has considered the same in Tariff Order for FY 2013-14.

The Commission, accordingly, has considered the scheme wise funding of capital expenditure and capitalisation as detailed in the following Tables.

Table 5.11: Scheme wise funding of capital expenditure considered by the Commission

(Rs. Crore)					
Sl. No.	Planned Scheme	Total Cost	Nature of Scheme	2014-15	2015-16
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar-Phase-III	1370.02	Grants	334.16	350.00
2	Phase-III, Part-II Construction of 220/132/33 kV GSS Kishanganj with associated lines for evacuation of power from 400/220 kV Kishanganj (PGCIL)	356.10	Grants	22.82	110.00
3	Phase-III for (N-1) compliance	291.84	Grants	50.00	110.00
4	Strengthening of sub transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53	Grants	217.02	130.00
5	ADB Funded Scheme	196.90	Loan	103.23	60.88
6	State Plan Scheme	297.44	Loan	111.72	54.67
7	State Plan Scheme	186.94	Equity	70.22	34.36
8	New Schemes under State Plan	1061.39	Equity	20.00	340.00
9	Installation of 14 Nos of GSS (funding through State Plan)	555.90	Equity	10.00	200.00
10	Establishment of BSPTCL's Training Centre (funding through State Plan)	3.00	Loan	2.70	
11	Capital Expenditure Schemes through Internal Resources	112.31	Internal Resources	27.00	65.00
12	New ADB funded schemes	239.00	Loan	3.00	200.00
13	Grand Total	5143.37		971.88	1654.91

Table 5.12: Scheme wise funding of Capital expenditure considered by the Commission

(Rs. Crore)						
Particulars	2013-14		2014-15		2015-16	
	Rs. Crore	Ratio	Rs. Crore	Ratio	Rs. Crore	Ratio
Equity			100.22	10%	574.36	35%
Grants	45.47	40%	624.00	64%	700.00	42%
Loans	68.21	60%	220.65	23%	315.55	19%
Internal Resources			27.00	3%	65.00	4%
Total	113.68	100%	971.88	100%	1654.91	100%

The Commission has considered capitalisation schedule in the MYT order dated 15th March 2013 as detailed hereunder:

Particulars	1 st year	2 nd year	3 rd year
For Opening CWIP for FY 2013-14	30%	30%	40%
For New Schemes	30%	30%	40%
For R&M Schemes	30%	30%	40%

The Petitioner has projected capitalisation at Rs.481.20 Crore during FY 2014-15 and capitalisation from opening CWIP at Rs.87.17 Crore and from out of new investment at Rs.394.03 Crore, however, has not provided scheme-wise capitalisation details.

Considering the above capitalisation schedule, the capitalisation shall be at Rs.480.00 Crore (113.68 + 366.32) (30% of Rs.378.94 Crore (Rs.113.68 Crore) opening CWIP of 2013-14, 30% of Rs.249.18 Crore (Rs.74.76 Crore) investment in 2013-14 and 30% of Rs.971.88 Crore (Rs.291.56 Crore) investment in 2014-15, which is working out to less than the petitioners projections. The Commission does not intend to reduce the capitalisation as the Petitioner shall be in a better position to project the capitalisation based on physical progress of the schemes. In view of the above, the Commission opines that in the absence of scheme-wise capitalisation details, the Commission is compelled to consider the capitalisation as per above capitalization schedule. Funding of capitalization in respect of opening CWIP in the ratio of 40% through Grants and 60% through loans and new investment on prorata of funding of new investment vis-à-vis capitalization thereon tentatively, subject to true up based on audited annual accounts of FY 2014-15, as detailed in the Table below:

Table 5.13: Scheme wise funding of capital expenditure considered by the Commission

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Projected by BSPTCL for FY 2014-15 (RE)	Approved for FY 2014-15 (RE)
1	Opening CWIP	613.00	557.88	557.89
2	Add: New Investment	844.00	971.88	971.88
3	Total	1457.00	1529.76	1529.77
4	Less: Capitalised (5+6)	739.00	481.21	480.00
5	CWIP capitalization	55.00	87.17	113.68
6	New Investment capitalization	684.00	394.03	366.32
7	Closing CWIP (1+2-4)	718.00	1048.55	1049.77

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Projected by BSPTCL for FY 2014-15 (RE)	Approved for FY 2014-15 (RE)
8	Funding of capitalization			
9	CWIP capitalisation (a+b)	55.00	87.17	113.68
a	Grant	22.00	34.87	45.47
b	Loans	33.00	52.30	68.21
10	New Investment capitalisation (a to d)	684.00	394.03	366.32
a	Grant	491.00		235.20
b	Equity		293.63	37.78
c	Loans	193.00	89.46	83.16
d	Internal Resources		10.95	10.18
11	Total Grants (9a+10a)	513.00	34.87	280.67
12	Total Equity (b)	0.00	293.63	37.78
13	Total Loans (9b+10b)	226.00	141.77	151.37
14	Total Internal Resources (d)	0.00	10.95	10.18

5.7 Interest during Construction (IDC)

Petitioner's submission

BSPTCL has submitted that the IDC is the amount charged on the actual loan drawal during the year. It is further submitted that for the purpose of IDC estimation, it has assumed the amount capitalised during the year due to new investments and CWIP as the loan drawal. The interest rate considered for IDC is the applicable weighted average interest rate for the proposed loans. The IDC projected by the Petitioner is furnished in the Table below:

Table 5.14: Projected IDC for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Loan drawal	226.00	294.22	141.77
2	Average Loan	113.00	147.11	70.88
3	Interest Rate	13.00%	13.00%	13.00%
4	IDC (on average loan)	14.69	19.12	9.21

BSPTCL has requested the Commission to approve the IDC computations as detailed in the Table above.

Commission's analysis

The Commission has examined the computation of the IDC and considered the IDC as detailed in the Table below:

Table 5.15: Approved IDC for FY 2014-15

(Rs. Crore)					
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Loan drawal	226.00	294.22	141.75	151.37
2	Average Loan	113.00	147.11	70.88	75.68
3	Interest Rate	13.00%	13.00%	13.00%	13.00%
4	IDC (on item 2)	14.69	19.12	9.21	9.84

The Commission approved IDC at Rs.9.84 Crore for FY 2014-15 (RE) as detailed in the Table above.

5.8 Gross Fixed Assets

Petitioner's submission:

BSPTCL has submitted that it has considered the opening GFA for FY 2014-15 based on the closing GFA as reflected in the audited annual accounts for FY 2013-14.

BSPTCL has submitted the computation of Gross Fixed Assets based on the capitalisation schedule for FY 2014-15 as detailed in the Table below:

Table 5.16: Gross Fixed Assets projected for FY 2014-15

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Opening GFA	1946.64	2531.27	3583.31
2	Additions during the year	739.00	875.50	481.21
3	Interest During Construction	14.69	19.12	9.21
4	Closing GFA (1+2+3)	2700.33	3425.89	4073.73

Commission's analysis

The Commission has arrived at the opening and closing GFA considering the capitalisation approved. The opening GFA for FY 2014-15 has been considered based on the closing GFA of true up for FY 2013-14. The opening value of GFA, additions and closing GFA as given in the Table below:

Table 5.17: Gross Fixed Assets approved in review for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Opening GFA	1946.64	2531.27	3583.31	2249.58
2	Additions during the year	739.00	875.50	481.21	480.00
3	Add : IDC	14.69	19.12	9.21	9.84
4	Closing GFA (1+2+3) (depreciable assets)	2700.33	3425.89	4073.73	2739.42

5.9 Depreciation

Petitioner's Submission

BSPTCL has submitted that depreciation has been computed annually based on straight line method by applying weighted average rate of depreciation on the average GFA. The Petitioner has stated that they have reduced the depreciation on assets created out of Grants and Consumers Contributions from the Gross depreciation to arrive at the net depreciation to be charged.

BSPTCL has stated that computation of depreciation on the assets created out of Grants and Consumers Contributions is based on the actual ratio of "Grants and Consumer Contributions" and GFA.

BSPTCL has projected the depreciation for FY 2014-15 as detailed in the Table below:

Table 5.18: Projected Depreciation for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Opening GFA	1946.64	2531.27	3583.31
2	Additions during the year	739.00	875.50	481.21
3	Add: IDC	14.69	19.12	9.21
4	Closing GFA (1+2+3)	2700.33	3425.90	4073.73
5	Average GFA $\{(1+4)/2\}$	2323.48	2978.59	3828.52
6	Weighted average rate of depreciation	5.12%	5.12%	3.27%
7	Depreciation (5*6)	118.96	152.50	125.05
8	Opening Grants	890.31	1795.41	1634.0
9	Grants during the year	513.00	577.23	34.87
10	Total Grants (8+9)	1403.31	2372.64	1668.92
11	Average Grants $\{(8+10)/2\}$	1146.81	2084.03	1651.49
12	Weighted average rate of depreciation	5.12%	5.12%	0.57%
13	Depreciation. on assets created out of grants (11*12)	58.72	106.70	9.41
14	Net Depreciation for GFA on Loans (7-13)	60.25	45.80	115.64

Commission's analysis

The Commission has examined the depreciation computation of the Petitioner.

Regulation 73 (2) (a) (i) of the BERC (Terms and Conditions for Determination of Tariff) Regulations 2007, specifies that ***“the value base for the purpose of depreciation shall be the historical cost of the asset”***

Regulation 73 (2) (a) (ii) of the BERC (Terms and Conditions for Determination of Tariff) Regulations 2007, specifies that ***“Land is not a depreciable asset and its cost shall be excluded from the capital cost”***.

Accordingly, the Commission has not considered the total land value of Rs. 1366.12 Crore (including revaluation of Land by Rs. 1255.06 Crore) based on the land value reported in the audited annual accounts for FY 2013-14. The Commission has

considered closing value of depreciable GFA of Rs.2249.58 Crore (excluding value of land) in the true up for FY 2013-14, accordingly, the same is considered as opening GFA as on 1st April 2014 for computation of depreciation for FY 2014-15 (RE).

The opening value of GFA, additions and closing GFA vis-à-vis the Grants and Loans considered by the Commission and depreciation on assets created out of Grants and depreciation on GFA on Loan is given in the Table below:

Table 5.19: Approved Depreciation for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Opening GFA	1946.64	2531.27	3583.31	2249.58
2	Additions during the year	739.00	875.50	481.21	480.00
3	Add: IDC	14.69	19.12	9.21	9.84
4	Closing GFA (1+2+3)	2700.33	3425.90	4073.73	2739.42
5	Average GFA $\{(1+4)/2\}$	2323.48	2978.59	3828.52	2494.50
6	Weighted average rate of depreciation	5.12%	5.12%	3.27%	5.23%
7	Depreciation (5*6)	118.96	152.50	125.05	130.46
8	Opening Grants	890.31	1795.41	1634.0	1634.05
9	Grants during the year	513.00	577.23	34.87	280.67
10	Total Grants (8+9)	1403.31	2372.64	1668.92	1914.72
11	Average Grants $\{(8+10)/2\}$	1146.81	2084.03	1651.49	1774.39
12	Weighted average rate of depreciation	5.12%	5.12%	0.57%	5.23%
13	Depreciation on assets created out of grants (11*12)	58.72	106.70	9.41	92.80
14	Net Depreciation for GFA on Loans (7-13)	60.25	45.80	115.64	37.66

The Commission, accordingly, considers depreciation of Rs.37.66 Crore in review for FY 2014-15 (RE).

5.10 Interest on Loans

Petitioner's Submission

The Petitioner has submitted that they have considered the opening loan balance for FY 2014-15 based on the closing loan balance as reflected in the audited accounts for FY 2013-14.

The additions to loans are considered as per funding mechanism for capitalisation of assets and the interest is applied on average loan balances. Repayment of loan is considered equal to depreciation. The rate of interest has been considered as per MYT order dated 15th March 2013.

BSPTCL has projected the interest on loans for FY 2014-15 as detailed in the Table below:

Table 5.20: Projected Interest on Loan for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Opening loan balance	317.97	275.31	225.74
2	Additions during the year	226.00	294.22	141.77
3	Repayment	60.25	45.80	115.64
4	Closing Loan (1+2-3)	483.73	523.72	251.86
5	Average Loan $\{(1+4)/2\}$	400.85	399.51	238.80
6	Interest rate	13.00%	13.00%	13.00%
7	Interest & Finance Charges (5*6)	52.11	51.94	31.04

BSPTCL has requested the Commission to approve the interest rate as well as interest on loan amount for FY 2014-15.

Commission's analysis

The Commission has examined the computation of interest on loan projected by the Petitioner for FY 2014-15.

The Regulation 73 (1) of the BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

- (a) *interest on loan capital shall be computed loan-wise, on the loans arrived at in the manner indicated in Regulation 71.*
- (b) *In the case of existing projects, the actual debt-equity shall be used for tariff determination and any expansion thereto shall be governed as per Regulation 71.*
- (c)
- (d)
- (e)
- (f) *In case any moratorium period is availed by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.*

The Regulation 71 of BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

“(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.”*

(2) the debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, Return on Equity, Advance Against Depreciation and Foreign Exchange Rate Variation”.

A conjoint reading of the above Regulations explicitly specify that interest shall be provided on the actual debt in case of existing projects and on 70% of the project cost in case of new projects.

The Commission, in view of the above Regulations, for the purpose of computation of interest, has considered the closing loan as per truing up for FY 2013-14 as opening loan for FY 2014-15 and loan addition @70% of the new project cost of FY 2014-15. The repayment is considered equivalent to depreciation considered for FY 2014-15 (RE). The capitalisation, grants and funding of capitalisation for FY 2014-15 is shown hereunder:

Capitalisation		
Sl. No.	Particulars	2014-15
1	Capitalisation during the year (incl. IDC)	489.84
2	Less: Grants	280.67
3	Net capitalisation	209.17
4	Equity considered (@30% of 3)	62.75
5	Debt considered (@70% of 3)	146.42

The Commission has considered the rate of interest at 9.13% for FY 2014-15 as was considered in true up for FY 2013-14.

The Commission, accordingly, has considered interest for FY 2014-15 (RE) as detailed in the Table below:

Table 5.21: Interest & finance charges considered in truing up for FY 2013-14
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Approved for FY 2014-15 in T.O. dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Opening loan	317.97	275.31	225.74	207.26
2	Additions during the year	226.00	294.22	141.77	146.42
3	Normative Repayment	60.25	45.80	115.64	37.66
4	Closing Loan (1+2-3)	483.73	523.72	251.87	316.01
5	Average Loan $\{(1+4)/2\}$	400.85	399.51	238.80	261.64
6	Interest rate	13.00%	13.00%	13.00%	9.13%
7	Interest & Finance Charges (5*6)	52.11	51.94	31.04	23.89

The Commission accordingly, approves the interest on loans of Rs.23.89 Crore for FY 2014-15 (RE).

5.11 Operation and Maintenance (O&M) Expenses

Petitioner's Submission

BSPTCL has submitted that it has adopted a weighted average method of WPI: CPI in the ratio of 45:55 and considered last year average inflationary increases for estimating Employee and A&G expenses.

BSPTCL has further submitted that R&M expenses are provided as a % of Gross Fixed Assets with inflationary index.

BSPTCL has proposed following inflation index for FY 2014-15 and FY 2015-16;

- (i) Employee cost and A&G expenses

$$\text{INDX}_n = 0.55 * \text{CPI}_n + 0.45 * \text{WPI}_n$$

- (ii) Repairs and Maintenance expenses

$$\text{R\&M}_n = K * \text{GFA} * (1 + \text{WPI}_n),$$

where – 'K' is a constant (expressed in %) governing the relationship between R&M costs and GFA and will be calculated based on the % of R&M to GFA of the preceding year of the base year.

- GFA is the opening value of the gross fixed assets of the nth year
- WPI_n is the wholesale price index increase for immediate preceding year over previous year.

Table 5.22: O&M Expenses - weightage of indexation/inflation factor

Sl. No.	Particulars	WPI	CPI	Total
1	Weightage	0.45	0.55	1.00
2	Index points for FY 2012-13	167.62	215.17	
3	Indexation n-1 (index point * weightage)	75.43	118.34	193.77
4	Index points for FY 2013-14	177.64	236.00	
5	Indexation n (index point * weightage)	79.94	129.80	209.74
6	Combined inflation (5-3) / 3)			8.24%

Commission's analysis:

The Commission has considered the combined weighted indexation/inflationary index at 8.24% of CPI and WPI for considering increase of O&M expenses.

5.12 Employee Costs**Petitioner's submission:**

BSPTCL has submitted that the employee cost comprises of salaries, dearness allowance, bonus, staff welfare, medical benefits, leave travel and earned leave encashment and the terminal benefits in the form of pension, gratuity, etc.

BSPTCL has submitted that they have considered revised estimates for FY 2014-15 for the purpose of projecting revised employees expenses. The employee terminal benefits are expected to be funded by State Government and hence deducted from the employee cost. The employee cost capitalised is considered @1.80% as per the MYT order i.e. Tariff Order for FY 2013-14.

The Petitioner has projected the employee expenses for FY 2014-15 as detailed in the Table below:

Table 5.23: Employee Cost for FY 2014-15 (RE) proposed by the Petitioner
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Employee cost	176.25	88.93	223.69
2	Add: Indexation @ 9.21% (on 1)		8.19	
3	Less: Support from State Govt. against terminal benefits	81.42		126.67
4	Employee Cost (1+2-3)	94.83	97.12	97.02
5	Less: Employee cost capitalised @1.8% (on 1)	3.17	1.75	1.75
6	Net Employee Cost (4 - 5)	91.66	95.37	95.28

The Petitioner has requested the Commission to approve the revised projections of employee expenses for FY 2014-15 (RE).

Commission's analysis:

The Commission has examined the computation of employee cost by the Petitioner.

The Commission has observed that the Petitioner has computed the employee cost on estimates, it should have been projected based on the actual employee cost reported in the audited annual accounts for FY 2013-14.

The Commission has considered the employee cost based audited annual accounts of BSPTCL for FY 2013-14 with escalation at 8.24% (inflation index) as detailed in the Table below:

Table 5.24: Approved Employee Cost for FY 2014-15 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Employee cost	176.25	88.93	223.69	77.57
2	indexation %		9.21%		8.24%
3	Add: inflationary increase		8.19		6.39
4	sub-total (1 + 3)	176.25	223.69	223.69	83.96
5	Less: Support from State Government against terminal benefits	81.42	126.67	126.67	
6	Employee cost (4 - 5)	94.83	97.02	97.02	83.96
7	Less: Employee cost capitalised (@1.8% on sl.no.6)	3.17	1.75	1.75	1.51
8	Net employee cost (6 - 7)	91.66	95.28	95.28	82.45

The Commission, accordingly, considers net employee cost at Rs. 82.45 Crore for FY 2014-15 (RE) as detailed in the above Table.

5.13 Repairs and Maintenance (R&M) Expenses**Petitioner's submission:**

BSPTCL has submitted that post unbundling it has initiated major drive for maintenance and up-keeping of its transmission assets. Further, it is submitted that huge capital expenditure schemes were undertaken to the tune of Rs.5000 Crore and hence, R&M expenses are bound to increase.

BSPTCL has further submitted that the methodology adopted by the Commission to approve expenses based on past trend and with inflation would deprive Petitioner for the R&M expenses on the assets added during the year. Hence, the Petitioner of its legitimate claim and would deprive the licensee for the R&M expenses on the assets added during the year. The Petitioner has estimated R&M expenses as a % of Gross Fixed Assets (GFA) and thereafter escalating by inflationary indices.

BSPTCL has submitted that it would like to provide precedence of some states where R&M expense is allowed as a % of Gross Fixed Assets as detailed below:

Particulars	R&M as a % of GFA
Punjab (PSTCL)	2.75%
Uttar Pradesh (UPPTCL)	2.50%
Delhi (DTL)	2.19%
Uttarakhand (PTCUL)	3.18%

BSPTCL has projected R&M expenses @ 3% of Opening GFA and further escalated for inflationary increase @ 8.24% for FY 2014-15. The details of R&M expenses projected by the Petitioner are as given in the Table below:

Table 5.25: Projected Repairs and Maintenance expenses for FY 2014-15
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Opening GFA			3583.31
2	% of GFA			3.00%
3	R&M Cost	10.03	14.94	107.50
4	Inflationary index		9.21%	8.24%
5	Inflationary increase		1.38	8.86
6	R&M Cost	10.03	16.32	116.36

BSPTCL has requested the Commission to approve the R&M expenses for FY 2014-15 as projected in the Table above.

Commission's analysis

The Commission has examined the R&M expenses projected by BPSTCL. The Commission has approved Rs.10.03 Crore towards R&M expenses for FY 2014-15 in the MYT Order dated 15th March 2013.

The BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 does not provide for allowing R&M expenses as a % on the Gross Fixed Assets.

The Commission has considered Rs.26.62 Crore towards R&M expenses in truing up for FY 2013-14.

The Commission, based on the R&M expenses considered for FY 2013-14 in truing up, has considered the R&M expenditure with inflationary escalation of 8.24% and approved the R&M expenses for FY 2014-15 as detailed in the Table below:

Table 5.26: Approved R&M expenses for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Opening GFA			3583.31	
2	% of GFA			3.00%	
3	R&M Cost	10.03	14.94	107.50	26.62
4	Inflationary index		9.21%	8.24%	8.24%
5	Inflationary increase		1.38	8.86	2.19
6	R&M Cost	10.03	16.32	116.36	28.81

The Commission, accordingly, considered R&M expenses at Rs.28.81 Crore for FY 2014-15 (RE) as detailed in the above Table.

5.14 Administration and General (A&G) Expenses

Petitioner's Submission

BSPTCL has submitted that the Administration and General expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and traveling expenses etc.

The BSPTCL has estimated the net A&G expenses at Rs. 21.32 Crore for FY 2014-15 (RE) as furnished in Table below:

Table 5.27: Proposed Administration and General Expenses for FY 2014-15**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	A&G Expenses	5.58	11.79	22.20
2	Less: A&G expenses capitalised	0.22	0.47	0.89
3	Net A&G expenses	5.36	11.32	21.32

BSPTCL has requested the Commission to approve the A&G expenses for FY 2014-15 as detailed in the Table above.

Commission's analysis:

The Commission has examined the A&G expenses projected by BPSTCL. The Commission has approved Rs.5.36 Crore towards A&G expenses for FY 2014-15 in the MYT Order dated 15th March 2013 and in the review the Commission has approved Rs.11.32 Crore for FY 2014-15 (RE) in Tariff Order dated 28th February 2014.

As per the audited annual accounts of BSPTCL for FY 2013-14, the Petitioner has incurred Rs.6.19 Crore towards A&G expenses during FY 2013-14. The Petitioner has estimated the A&G expenses for FY 2014-15 at Rs.22.20 Crore against the actual expenses of Rs.6.19 Crore for FY 2013-14. The Petitioner has not furnished any justification for claiming such higher A&G expenses for FY 2014-15 vis-à-vis actuals for FY 2013-14.

The Commission has considered the actual expenditure of FY 2013-14 based on the audited annual accounts with inflationary escalation of 8.24% and considered the A&G expenses for FY 2014-15 as detailed in the Table below:

Table 5.28: Approved Administration & General Expenses for FY 2014-15
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	A&G Expenses	5.58	10.80	22.20	6.19
2	Indexation %		9.21%		8.24%
3	Inflationary increase (on 1)		0.99		0.51
4	A & G Expenses	5.58	11.79	22.20	6.70
5	Less: A&G cost capitalised	0.22	0.47	0.89	0.27
6	Net A&G expenses	5.36	11.32	21.32	6.43

The Commission, accordingly, considered net Administration and General Expenses at Rs.6.43 Crore for FY 2014-15 (RE).

5.15 Allocation of Holding Company Expenses

Petitioner's submission

BSPTCL has submitted that 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. As per Clause (i) of the 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 provision 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".

BSPTCL further submitted that BSPHCL provides common services to all the segregated entities and as per the Transfer Scheme *"operating expenses incurred by the Holding Company like administration and general expenses, legal and consulting*

fees, etc. would be shared by the BSPTCL, BSPTCL, NBPDC and SBPDCL in the ratio of their respective equity”.

BSPTCL has also stated that as per Schedule ‘F’, the Holding Company shall handle all issues relating to the subsidiary companies in respect of the testing divisions, training department at Headquarter and all the departments of the Corporate head office viz. General Administration, Accounts and Finance, IT, Stores & Purchase, Transmission/Distribution/Generation, Personnel, Publicity, Legal, Vigilance & Security, Commercial, Planning, Civil Engineers, 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 respective companies.

The BSPTCL has estimated the Holding Company expenses at Rs.6.00 Crore for FY 2014-15 (RE) as furnished in table below:

Table 5.29: Expenses of Holding Company projected for FY 2014-15 (Rs. Crore)

Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 (RE) in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
Holding Company Expenses	--	6.00	6.00

BSPTCL has requested the Commission to approve the expenditure as part of overall O&M expenditure for FY 2014-15 (RE).

Commission’s analysis:

The Commission, based on the submission of the Petitioner, has considered Rs.6.00 Crore towards holding company expenses for FY 2014-15 in the Tariff Order dated 28th February 2014.

The Commission has considered Rs.1.11 core in the true up (based on audited accounts) for FY 2013-14 against the BSPHCL claim of Rs.4.46 Crore (vide letter

No.1618 dated 22.10.2014). The Commission opined to consider balance amount of Rs.3.35 Crore (4.46 – 1.11) along with the claim pertaining to FY 2014-15.

The BSPHCL vide letter No.1618 dated 22.10.2014 has estimated Rs.4.19 Crore towards holding company expenses for FY 2014-15.

In view of the above, the Commission has considered Rs.7.54 Crore (Rs.3.35 Crore for FY 2013-14 and Rs.4.19 Crore for FY 2014-15) in review for FY 2014-15 and factored the same in ARR of FY 2014-15.

The Commission, accordingly, has considered the Holding Company expenses for FY 2014-15 (RE) as detailed in the Table below:

Table 5.30: Allocation of Expenses of Holding Company approved for FY 2014-15
(Rs. Crore)

Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.02.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
Holding Company expenses	--	6.00	6.00	7.54

5.16 Summary of Operations and Maintenance (O&M) Expenses

Table 5.31: Total O&M cost considered by the Commission for FY 2014-15 (RE)
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.02.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Employee cost	91.66	97.12	97.02	83.96
2	R&M expenses	10.03	16.32	116.36	28.81
3	A&G Expenses	5.36	11.79	22.20	6.70
4	Holding company expenses allocated		6.00	6.00	7.54
5	Total O& M cost	107.05	131.23	241.58	127.02
6	Less: O&M exp. capitalised	3.39	2.22	2.64	1.78
7	Net O&M expenses	103.66	129.01	238.94	125.24

The Commission considered the revised Net O&M costs at Rs. 125.24 Crore for FY 2014-15 (RE).

5.17 Interest on working capital

Petitioner's submission:

BSPTCL has submitted that it 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:

Table 5.32: Norms for working capital requirement

Sl. No.	Particulars	Norm
1	O&M expenses	One month
2	Maintenance spares	@1% of historical cost of GFA escalated @ 6% per annum
3	Receivables	Two months of transmission charges
4	Rate of interest on working capital	Short-term PLR of SBI as on 1 st April of the year

The rate of interest applied on the proposed working capital is @14.75% as per the SBI PLR as on 1st April 2014.

BSPTCL has claimed interest on working for FY 2014-15 computed on the above norms as detailed in the Table below:

Table 5.33: Projected Interest on working capital for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	O&M exp. (1 month)	8.92	10.94	19.91
2	Maintenance spares @1% of opening GFA with 6% escalation	20.63	26.83	37.98
3	Receivables - 2 months	43.98	45.10	85.33
4	Total working capital	73.53	82.87	143.22
5	Rate of interest	14.45%	14.45%	14.75%
6	Interest on working capital	10.63	11.97	21.13

Commission's analysis

The Commission has examined the computation of interest on working capital submitted by the Petitioner.

The Regulation 73(4)(ii) of BERC Tariff Regulations, 2007 specify the rate of interest on working capital shall be equal to Short terms PLR of SBI on 1st April of the year. The BERC has issued amendment to the Regulation 73(4)(ii) (amendment notified in the Bihar Gazette dated 27.03.2014) that the rate of interest on working capital will be computed at 350 basis point over and above the base rate. The Regulation (amendment) shall come into force from the date of publication in the Bihar Gazette.

The SBI Base Rate as on 1st April 2014 is at 10%. The rate of interest on working capital shall be considered works out to 13.50% [SBI Base Rate of 10% + 3.50% (350 basis points)] for FY 2014-15 (RE).

The Commission has computed the working capital and interest on working capital as per expenses approved at an interest rate of 13.50% as given in the Table below:

Table 5.34: Approved Interest on working capital for FY 2014-15 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	O&M exp. (1 month)	8.92	10.94	19.91	10.44
2	Maintenance spares @1% of opening GFA with 6% escalation	20.63	26.83	37.98	23.85
3	Receivables - 2 months	43.98	45.10	85.33	34.39
4	Total working capital	73.53	82.87	143.22	68.68
5	Rate of interest	14.45%	14.45%	14.75%	13.50%
6	Interest on working capital	10.63	11.97	21.13	9.27

The Commission considered the interest on working capital at Rs.9.27 Crore for FY 2014-15 (RE).

5.18 Return on Equity

Petitioner's submission:

BSPTCL has submitted that computation of equity is considered based on the closing equity as per true-up of FY 2013-14 and further additions to the equity balance has been considered as per the funding of capitalisation envisaged for FY 2014-15.

BSPTCL has computed the return on equity for FY 2014-15 as detailed in the Table below:

Table 5.35: Projected Return on Equity for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Opening Equity	235.00	235.00	825.35
2	Add: Equity During the year			293.63
3	Closing equity balance (1+2)	235.00	235.00	1118.98
4	Average equity $\{(1+3)/2\}$	235.00	235.00	972.16
5	Rate of Return on Equity %	14.00%	14.00%	14.00%
6	Return on Equity	32.90	32.90	136.10

BSPTCL has requested the Commission to consider the RoE as per the computations furnished in the Table above for FY 2014-15 (RE)

Commission's analysis

The Commission has examined the computation of RoE claim of BSPTCL. The Regulation 73 (2) (c) of the BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

(j) Return on Equity shall be computed on the equity base determined in accordance with Regulation 71 and shall be @ 14% per annum.

(ii) Equity invested in foreign currency shall be allowed a return upto a prescribed limit in the same currency and the payment on this account shall be made in Indian Rupee based on the exchange rate prevailing on the due date of billing.

Explanation:

*The premium raised by the transmission licensee while issuing share capital and investment of internal resources created out of free reserve of the existing transmission licensee, if any, for funding the project, shall also be reckoned as paid up capital for the purpose of computing return on equity provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the project and forms part of the approved financial package. The definition of equity thus would involve all net worth deployed in the capital of the unit. **This shall not include any revaluation of reserves and subsidies**".*

The Regulation 71 of BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

"(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;

(k) 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."

***(2) the debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, Return on Equity, Advance Against Depreciation and Foreign Exchange Rate Variation*".**

A conjoint reading of Regulations 73 and 71 explicitly specify that Return on Equity shall be provided on the actual Equity in respect of existing projects and on 30% of the project cost in respect of new projects.

The Commission, in view of the above Regulations, for the purpose of computation RoE the capitalisation, grants and funding of capitalisation for FY 2014-15 is shown hereunder:

Capitalisation

Sl. No.	Particulars	Amount (Rs. Crore)
1	Capitalisation during the year	489.84
2	Less: Grants	280.67
3	Net capitalisation	209.17
4	Equity considered (@30% of 3)	62.75
5	Debt considered (@70% of 3)	146.42

The Commission has considered the closing equity as on 31st March 2014 based on the true up for FY 2013-14 as opening equity for FY 2014-15 and further updated based on funding of capitalisation approved in review and arrived at the equity for FY 2014-15.

The Commission, in view of the Regulations 73 and 71 of the BERC Tariff Regulations, 2007, for the purpose of computation of Return on Equity, has considered the rate of return on equity @14% as per the BERC Tariff Regulations.

The Commission, accordingly, has considered Return on Equity in review for FY 2014-15 as detailed in the Table below:

Table 5.36: Approved Return on Equity for FY 2014-15 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Equity	235.00	235.00	825.35	262.85
2	Add: Equity During the year			293.63	62.75
3	Closing equity balance (1+2)	235.00	235.00	1118.98	325.60
4	Average equity {(1+3)/2}	235.00	235.00	972.17	294.22
5	Rate of Return per annum %	14.00%	14.00%	14.00%	14.00%
6	Return on Equity (4*5)	32.90	32.90	136.10	41.19

The Commission approves the Return on Equity at Rs.41.19 Crore for FY 2014-15 (RE) as detailed in the Table above.

5.19 Non-Tariff Income

Petitioner's submission:

BSPTCL has submitted that non tariff income as per audited accounts for FY 2013-14 is at Rs.28.09 Crore and projected with an escalation of 10% for FY 2014-15 as detailed in the Table below:

Table 5.37: Projected non tariff income for FY 2014-15
(Rs. Crore)

Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
Non tariff income	0.61	1.02	30.90

Commission's analysis:

The Commission has considered non tariff income as submitted by the Petitioner for FY 2014-15 (RE) as detailed in the Table below.

Table 5.38: Non tariff income considered for FY 2014-15
(Rs. Crore)

Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.02.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
Non tariff income	0.61	1.02	30.90	30.90

The Commission, accordingly, approves Non-tariff income at Rs.30.90 Crore for FY 2014-15 (RE) as detailed in the Table above.

5.20 Transmission charges for FY 2014-15 (RE)

Petitioner's submission

BSPTCL has submitted the annual fixed charges or Transmission charges arrived at by aggregating all the expenses viz. Depreciation, Interest on Loans, Interest on working

capital, O&M expenses, Return on Equity. The total expenses less Non-tariff income are the net annual fixed charges or transmission charges.

The summary of revised annual fixed charges / ARR projections and ARR approved by the Commission for FY 2014-15 are given in the Table below:

Table 5.39: Projected Annual Fixed Charges/ (ARR) for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	O&M expenses	107.05	129.01	241.58
2	Employee cost	91.66	97.12	97.02
3	R&M expenses	10.03	16.32	116.36
4	A&G Expenses	5.36	11.79	22.20
5	Holding company expenses		6.00	6.00
6	Less: O&M exp. capitalised		2.22	2.64
7	Interest and finance charges	52.11	51.94	31.04
8	Interest on working capital	10.63	11.97	21.13
9	Depreciation	60.25	45.80	115.64
10	Return on Equity	32.90	32.90	136.10
11	Total Requirement	262.93	271.62	542.87
12	Less: Non-tariff income	0.61	1.02	30.90
13	Net Revenue Requirement	262.32	270.60	511.97

BSPTCL has submitted that the transmission charges for the year are estimated based on the applicable rules and regulations and the methods adopted by the Hon'ble Commission in its MYT order dated 15.3.2013. The various costs are estimated in accordance with the regulatory norms, assumptions and detailed justifications provided in the petition. The Petitioner has requested the Commission to approve the revised ARR for FY 2014-15 and resultant transmission charges to be recovered from the two distribution companies for FY 2015-16.

Commission's analysis:

Based on the Commission's detailed analysis, the Aggregate Revenue Requirement/ annual fixed charges/Transmission charges considered by the Commission for FY 2014-15 (RE) are as detailed in the Table below:

Table 5.40: Approved Annual Fixed Charges / ARR for FY 2014-15**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.02.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	O&M expenses	107.05	129.01	241.58	125.24
2	Employee cost	91.66	97.12	97.02	83.96
3	R&M expenses	10.03	16.32	116.36	28.81
4	A&G Expenses	5.36	11.79	22.20	6.70
5	Holding company expenses		6.00	6.00	7.54
6	Less: O&M exp. capitalised		2.22	2.64	1.78
7	Interest and finance charges	52.11	51.94	31.04	23.89
8	Interest on working capital	10.63	11.97	21.13	9.27
9	Depreciation	60.25	45.80	115.64	37.66
10	Return on Equity	32.90	32.90	136.10	41.19
11	Total Requirement	262.93	271.62	542.87	237.25
12	Less: Non-tariff income	0.61	1.02	30.90	30.90
13	Net Revenue Requirement	262.32	270.60	511.97	206.35

5.21 Revenue Gap / (Surplus) for FY 2014-15 (RE)**Petitioner's submission**

The Petitioner has submitted that it has been recovering transmission charges from the Distribution Companies for FY 2014-15 as per the charges approved by the Hon'ble Commission in the Tariff Order dated 28th February 2014.

BSPTCL has projected the revenue gap considering the transmission charges as per approved figures in the Table below:

Table 5.41: Projected revenue Gap / (Surplus) for FY 2014-15**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.2.2014	Projected by BSPTCL for FY 2014-15 (RE)
1	Annual Transmission charges	262.32	270.60	511.97
2	Less: Approved Annual Transmission charges for FY 2014-15	262.32	262.32	270.60
3	Revenue Gap / (Surplus) for FY 2014-15	--	8.28	241.36

BSPTCL has requested the Commission to approve the transmission charges and revenue gap for FY 2013-14 as detailed above.

Commission's analysis:

The Commission, based on the detailed analysis of the projections made by the Petitioner, has arrived at a net surplus for FY 2014-15 as detailed in the Table below:

Table 5.42: Approved revenue gap / (surplus) for FY 2014-15

(Rs. Crore)					
Sl. No.	Particulars	Approved in MYT for FY 2014-15	Approved for FY 2014-15 in Tariff Order dated 28.02.2014	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Aggregate Revenue Requirement for FY 2014-15	262.32	270.60	511.97	206.35
2	Less: Approved Annual Transmission Charges for FY 2014-15 in tariff order dated 28.02.2014	262.32	262.32	270.60	262.32
3	Revenue Gap / (Surplus) for FY 2014-15 (1-2)	--	8.28	241.36	(55.97)

The net surplus of Rs.55.97 Crore worked out in the review for FY 2014-15 (RE) is not considered in the ARR for FY 2015-16 as it is only indicative and worked out on the revised estimates projected by BSPTCL and not based on any approved annual accounts.

However, the deficit/surplus ARR of FY 2014-15 will be considered in the ARR of FY 2016-17, after truing-up of FY 2014-15 when the audited annual accounts will be made available by BSPTCL.

5.22 Approved Transmission Charges for FY 2014-15 (RE)

Based on the revised ARR computations of the Commission, the transmission charges to be recovered from the Distribution licensees during FY 2014-15 are computed as shown in the table below:

Table 5.43: Revised Transmission charges for FY 2014-15 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15 (RE)	Now approved for FY 2014-15 (RE)
1	Annual Transmission charges	262.32	511.93	206.35
2	Transmission charges to be realized per month from Distribution Companies	21.86	42.66	17.21

Transmission Tariff for other than DISCOMs:

Gross ARR has been considered for computing the transmission charges in Rs/kWh for other than the Distribution Companies who use the State Transmission system i.e. short term open access consumers.

Sl. No.	Particulars	UoM	Approved in MYT order dated 15.03.2013	Projected by BSPTCL for FY 2014-15 (RE)	Approved for FY 2014-15 (RE)
1	Annual Transmission charges	Rs. Crore	262.32	511.93	206.35
2	Total Power Purchases	MU	23344.00	18741.00	17246.73
3	Less: Bilateral sales	MU	6775.00		974.53
4	Net Power Purchases (2-3)	MU	16569.00	18741.00	16272.20
5	Transmission charges per kWh ((1/4)*10)	Rs./kWh	0.16	0.27	0.13

6. Determination of Revised Aggregate Revenue Requirement (ARR) and Transmission Tariff for FY 2015-16

6.1 Background

The Commission issued the Tariff Order for FY 2013-14 dated 15th March, 2013 determining the Multi Year Aggregate Requirement (ARR) for the three years control period FY 2013-14 to FY 2015-16 separately for Bihar State Power Generation Company Limited (BSPGCL), Bihar State Power Transmission Company Limited (BSPTCL) and together for North Bihar Power Distribution Company Limited (NBPDC) and South Bihar Power Distribution Company Limited (SBPDCL). The approval was based on the estimates presented by Bihar State Power Holding Company Limited (BSPHCL) on behalf of BSPTCL for costs to be incurred during the control period FY 2013-14 to FY 2015-16.

BSPTCL has now submitted the present petition on 3rd November, 2014 which includes determination of Revised Aggregate Revenue Requirement (ARR) for FY 2015-16 and determination of Transmission Tariff for FY 2015-16. The Petitioner submitted that the estimates for FY 2015-16 have been revised based on actual performance during first half year of FY 2014-15 and projections for FY 2014-15.

BSPTCL has further submitted that though the Commission has approved MYT figures for FY 2013-14 to FY 2015-16, the Petitioner seeks opportunity to revise ARR for FY 2015-16 to so as to avoid financial loss to the Petitioner.

Re-determination of ARR for FY 2015-16 has been undertaken by the Commission on the basis of annual accounts for FY 2013-14, revised estimates submitted by the Petitioner for FY 2014-15 & FY 2015-16 and BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007.

6.2 Existing Transmission System

BSPTCL own and operates the transmission system above 33 KV i.e. 132 KV, 220 KV and 400 KV system in the State of Bihar. The existing transmission system (as on November, 2014) is as given in the Table below:

**Table 6.1: Power Transformer Capacity
(in MVA)**

Substations	FY 2014-15 (upto November, 2014)
220/132 KV	3300
132/ 33 KV	6090
132/ 25 KV	109
Total	9499

**Table 6.2: Transmission Line Length
(in Kms)**

Transmission Lines	FY 2014-15 (upto November, 2014)
220 KV Line	1663
400 KV Line	75
132 KV Double Circuit Line	6656
Total	8394

6.3 Performance of Transmission System

Petitioner's submission

The Petitioner requested to approve transmission losses for FY 2015-16 at 4.33% i.e. at a reduction of 0.05% on the losses of 4.38% projected for FY 2014-15.

BSPTCL has further submitted that substantive investments pertaining to strengthening transmission network system by way of taking-up improvement works like adding new / link lines, augmentation of existing transformer capacities and establishment of new substations closer to the load centers etc. are being under taken in a phased manner and benefits out of the capital investments would take time to flow in. These works would result in;

- a. Reduction of transmission losses
- b. Reduction of distribution losses
- c. Improvement of system reliability
- d. Enable creation of robust transmission net work

BSPTCL has submitted that these improvements in losses would be reflected only after 1 – 2 years after the Commissioning of these transmission assets.

BSPTCL stated that the losses in advanced states which have initiated reforms process much earlier are still having transmission loss more than 4%.

BPTCL has submitted that the actual transmission losses for FY 2013-14 was 4.38% which are based on the audited accounts for FY 2013-14 and the transmission loss projected in review for FY 2014-15 is also at 4.38% and requested to approve the transmission loss for FY 2015-16 at 4.33%.

The Petitioner has requested to approve the revised transmission loss trajectory for FY 2013-14 to FY 2015-16 as furnished in the Table below:

Table 6.3: Revised Transmission Loss Trajectory Projected by the Petitioner

Particulars	FY 2013-14 (Actuals)	FY 2014-15	FY 2015-16
Approved Transmission Loss	4.02%	3.97%	3.92%
Revised Trajectory of Transmission Loss	4.38%	4.38%	4.33%

Commission analysis

As discussed in paragraph 4.2 under Commission's Analysis, BSPTCL has not yet provided appropriate energy meters at the interface points to measure the energy input in to BSPTCL grid from various sources and energy outgo to DISCOMs and HT consumers. Unless, the meters are provided at all relevant places, it may not be possible to assess the transmission losses. Further, with the huge capital investment plan under progress, the transmission losses could be reduced as per the trajectory given by the Commission in the MYT order.

Hence, the Commission has considered the transmission loss trajectory at 3.92% for FY 2015-16, as approved for FY 2015-16 in MYT Tariff Order dated 15th March, 2013. However, BSPTCL is directed to submit the actual loss level by considering the input energy into the transmission system and energy delivered to DISCOMs and HT consumers based on the Energy Meter readings at interface points to consider any revision in transmission loss for 2015-16, while “Reviewing” for FY 2015-16.

6.4 Capital Investment Plan

Petitioner’s submission:

BSPTCL has submitted that the capital Investment plan submitted to the Commission in the tariff petition for FY 2014-15 was approved by the Commission in the Tariff Order dated 28th March 2014 as detailed in the Table below:

Table 6.4: Capital Investment Plan proposed by the Petitioner

(Rs. Crore)

Sl. No.	Particulars	Total Cost	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
1	12 th Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III	1958.50		300.00	1000.00	658.50	1958.50
2	Strengthening of Sub-transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53		125.00	347.53		472.53
3	ADB funded schemes	296.90	18.52	89.86	128.52	60.00	296.90
4	State Plan Schemes	502.33	109.12	139.64	253.57		502.33
5	Installation of 14 Nos. of GSS through State plan funding	350.00			140.00	210.00	350.00
6	Establishment of BSPTCLs Training Centre through state plan funding	3.00		0.30	1.50	1.20	3.00
7	Capital expenditure schemes through Internal Resources	13.48		5.59	7.89		13.48
8	Total	3596.74	127.64	660.39	1879.01	929.70	3596.74

BSPTCL has submitted that to meet the growing demand for power by the consumers, its diversity in terms of geography and evacuating the power expected to be available from upcoming intra/inter-state generating stations, Transmission company has under taken various transmission network capacity additions, augmentation and improvement projects for making reliable power uniformly available across the state.

BSPTCL has submitted that it has prepared the report on Evolution of Transmission System of Bihar and submitted to CEA for approval. The transmission system requirements of Bihar for the 12th Plan had been proposed in three parts as under:

- i. Part-1: Bihar Sub-transmission Phase-2 extension scheme
- ii. Part-2 Transmission system strengthening scheme – Phase-1 & 2
- iii. Part-3: ATS for Case-II projects i.e Lakhisarai (2x660MW), Pirpainti (2x660 MW) & Buxar (2x660 MW) and System strengthening for other projects viz. BTPS extension (2x250 + 150 MW), MTPS Extension (2x195 MW), etc.

BSPTCL has stated that CEA has accordingly examined the proposal and mentioned that the projects/works are technically found to be in order through letter No.69/1/2012-SP&PA/1203-05 dt.15-11-2012.

BSPTCL has stated that the scope of certain schemes has also changed and is being executed in bundled schemes and hence, the capital expenditure plan provided in the tariff petition for FY 2014-15 has undergone a change and the figures of capital expenditure, capitalisation and funding, etc. for FY 2015-16 presented are for representation purpose only.

BSPTCL has planned huge capital expenditure and projected Rs. 5143.37 Crore from FY 2012-13 to FY 2016-17 for strengthening of transmission and sub-transmission system in the State of Bihar. The details of schemes planned and year on year investment proposed is detailed in the Table below:

The details of the schemes are given below:

**(a) 12th Plan Transmission and Sub-transmission system strengthening in Bihar
Phase-III – Rs.2017.97 Crore**

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Amount (Rs. Crore)
1	Preliminary survey and soil investigation	3.35
2	Land acquisition for substation and R&R compensation	62.15
3	Compensation for Crop, tree, Forest and others	66.43
4	Infrastructure for substations	17.05
5	Non residential buildings	7.75
6	Transmission Lines	454.95
7	Sub stations	503.77
8	Data & Voice connectivity	12.78
9	Sub-total (1 to 8)	1128.23
10	Contingencies	33.84
11	Sonenagar 220 kV GSS and associated lines	108.00
12	R&M of 20 Nos. old operating 132/33kV GSS	99.96
13	220/132/33 kV GSS Kishanganj with associated 220/132 kV lines for evacuation of power from 400/220kV GSS Kishanganj (PGCIL)	356.10
14	Strengthening of transmission system for N-1 compliance	291.84
15	Total (9 to 14)	2017.97

(b) Strengthening of Sub-transmission system in Bihar - Extension scheme of Phase-2 works (Revised) – Rs.472.53 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
1	Augmentation work - 220 / 132 KV GSS – 1050 MVA	7 Nos.	71.63
2	Augmentation work 132 / 33 KV GSS – 420 MVA	12 Nos.	61.54
3	Re-conductoring 220 KV line	240 CKM	33.71
4	Re-conductoring 132 KV line	908 CKM	97.73
5	220 KV Line - New	1 CKM	3.94
6	132 KV Line - New	238 CKM	60.04
7	Ganga River Crossing Line	10 CKM	49.00
8	Capacitor Banks, CTs, LAs, etc.		16.08
9	Contingencies		78.86
10	Total		472.53

(c) ADB funded Schemes – Rs.196.90 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
1	132/33 KV GSS at Gangwara & Dhanha	2 Nos.	49.15
2	132 KV bays at Bettiah, Sasaram, Mohnia, Dinara, Lakhisarai and Shikhpura GSS	6 Nos.	
3	33 KV bays at remote end 33/11 KV SS	4 Nos.	
4	220/132 KV GSS at Pusauli 2x150 MVA	1 Nos.	47.98
5	220 KV bay extension at 220/132 KV Dehri GSS	2 Nos.	
6	132 KV line	202 CKM	48.61
7	33 KV Line	40 CKM	9.63
8	220 KV DC LILO Sasaram (PGCIL) – Ara (PGCIL) at New SS at Pusauli (New)	6 CKM	41.53
9	Pusauli (New) – Dehri (BSEB) 220 KV line	8 CKM	
10	Total		196.90

(d) State Plan Schemes – Rs.1545.77 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Amount (Rs. Crore)
1	220/132 KV GSS, Bihta 2x100 MVA	135.00
2	132/33 KV GSS at Jandaha,	25.00
3	132/33 KV GSS at Tehta and Imamganj	51.20
4	132/33 KV GSS (4x50 MVA) at Kabrigahiya along with 33/11 KV SS (2x10 MVA) at Kabrigahiya	77.36
5	Construction of transmission facilities to evacuate power	26.12
6	Copnstruction of additional 132 kV transformer bay at 132/33kV SS, Sitamarhi, Bihta, Khagaul, Ara and Nawada	5.00
7	Copnstruction of additional 33 kV transformer bays at 132/33kV SS, Sitamarhi, Bihta, Khagaul, Ara and Nawada, etc	3.70
8	Purchase of 3 Nos. 50 MVA 132/33 KV transformers for Siwan, Nawada and Jamalpur GSS	7.92
9	Purchase of 17 Nos transformers (150/100/50 MVA)	49.04
10	Renovation of 15 Nos. old GSS	8.87
11	Construction of control room building, residential complex and building, boundary wall, internal road, etc. at old GSS	76.83
12	Testing equipment for testing of GSS equipments	6.26
13	Replacement of oil & overhauling of 48 Nos. power transformers	12.08
14	Construction of higher capacity bus bar and replacing of old bus bar conductor for strengthening of BSPTCL transmission line	159.00
15	Replacement of 20 No. 20 MVA transformer by 50 MVA transformers at 14 Nos. 132/33 kV GSS and related transformer bays	110.00

Sl.	Particulars	Amount
16	132 km double circuit towers single string lines and 132/33 kV GSS	123.67
17	Construction of 17 Nos. 132/33 kV GSS	668.72
18	Total	1545.77

(e) Installation of Grid Sub Stations through State Plan funding

BSPTCL has submitted that the value of this scheme as approved in tariff order dated 28th February 2014 was Rs.350.00 Crore which got revised to Rs.555.90 Crore for installation of 14 Nos. of Grid Sub Stations in the areas where there is need for augmentation of the transmission capacity. BSPTCL has requested to approve the additional expenditure under this scheme.

(f) BSPTCL Training Centre through State Plan funding – Rs.3 Crore

BSPTCL has planned to establish training centre for its employees and other subsidiary companies on paid basis. The training centre shall be available / open for external members/utilities/employees and shall act as a “Profit Centre” and not as a “Cost Center”. The training centre shall be well equipped with all the facilities, equipments, testing kits, functional proto types and demos and shall have the facilities of laboratories which shall be based on the norms accredited by certified national agencies.

(g) Capital expenditure schemes through Internal Resources – Rs.112.31 Crore

The Petitioner has submitted that it is executing the up-gradation of ULDC in association with PGCIL. The total capital estimate is of Rs. 80.24 Crore out of which the share of Petitioner is Rs. 5.98 Crore.

It is further submitted that additional capex is to be funded through internal resources in the coming years also and projected a total capital investment of Rs.112.31 Crore from FY 2013-14 to FY 2015-16.

(h) New schemes under ADB Funding – Rs.239.00 Crore

Details of works proposed by BSPTCL under this scheme are as detailed below:

Sl. No.	Particulars	Amount (Rs. Crore)
1	Augmentation of 7 Nos. GSS with 8 Nos. 50 MVA power transformer	54.00
2	Re-conductoring of all old 132 & 220 kV transformer lines	155.00
3	ERP Solutions	30.00
4	Total	239.00

BSPTCL has submitted that revision in capital plan is due to certain new schemes getting added in FY 2014-15 and FY 2015-16 and phasing of capex got revised due to delayed approvals and also due to certain schemes are bundled together including swapping of certain schemes from one planned scheme to another.

The Petitioner has furnished the revised capital investment programme for FY 2014-15 and FY 2015-16 based on the existing and new schemes. Further, the actual scheme-wise expenditure for FY 2013-14 and FY 2014-15 (upto 25.11.2014) and further expenditure for the remaining period of FY 2014-15 and estimates for FY 2015-16 based on the actual physical and financial progress of the schemes is furnished as detailed in the Table below:

Table 6.5: Revised capital investment plan proposed by the Petitioner

Particulars	Total Cost	(Rs. Crore)						
		2012-13	2013-14	2014-15 (upto 25.11.14)	2014-15 (25.11.14 to March'15)	Total for FY 2014-15	2015-16	2016-17
12 th Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III	1370.02		79.94	114.16	220.00	334.16	350.00	605.92
Construction of 220/132/33 kV GSS Kishanganj	356.10		7.39	2.82	20.00	22.82	110.00	215.89
Phase III (N-1) compliance	291.84				50.00	50.00	110.00	131.84
Strengthening of Sub-transmission system in Bihar -	472.53		42.35	107.02	110.00	217.02	130.00	83.16

Particulars	Total Cost	2012-13	2013-14	2014-15 (upto 25.11.14)	2014-15 (25.11.14 to March'15)	Total for FY 2014-15	2015-16	2016-17
Extension scheme of Phase-2 works (Revised)								
ADB funded schemes	196.90	18.92	13.87	53.23	50.00	103.23	60.88	
ADB funded schemes (New)	239.00				3.00	3.00	200.00	36.00
State Plan Schemes	484.38	5.00	154.54	84.95	97.00	181.95	89.03	53.86
State Plan Schemes	1061.39				20.00	20.00	340.00	701.39
Installation of 14 Nos. of GSS through State plan funding	555.90				10.00	10.00	200.00	345.90
Establishment of Training Centre through state plan funding	3.00		0.30		2.70	2.70		
Capital expenditure schemes through Internal Resources	112.31		20.31	0.57	26.43	27.00	65.00	
Total	5143.37	23.92	318.70	362.75	609.13	971.88	1654.91	2173.96

BSPTCL has requested the Commission to approve the total capital expenditure plan proposed for FY 2014-15 and for FY 2015-16.

Commission's analysis:

BSPTCL has projected huge capital investment for transmission system development with addition of substations (220/132/33 KV and 132/33 KV level), lines (220 KV, 132 KV and 33 KV level), bays (220 KV, 132 KV and 33 KV level), augmentation of transformer capacities and other associated/related equipments, works, etc. as detailed above {(a) to (h)} at a total cost of Rs. 5143.37 Crore.

The Commission in the Tariff Order Dated 28th February 2014 has approved the capital investment plan of Rs.3596.74 Crore from FY 2012-13 to FY 2015-16. The Petitioner has revised certain schemes cost planned and furnished in tariff petition for FY 2014-15 and added new schemes under state plan schemes (Rs.1061.39 Crore, ADB funded schemes (Rs.239.00 Crore), internal Resources Scheme (Rs.98.83 Crore), etc. and the total revised capital expenditure proposed by the Petitioner for FY 2012-13 to FY 2016-17 is at Rs.5143.37 Crore.

In view of the need to develop the transmission system to transmit the additional power from upcoming generating stations and to meet the load demand in the State, the Commission approves the capital investment proposed by BSPTCL as detailed in the Table below:

Table 6.6: Capital Investment considered by the Commission (Rs. Crore)

Particulars	Total Cost	2012-13	2013-14	2014-15	2015-16	2016-17
12 th Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III	1370.02		79.94	334.16	350.00	605.92
Construction of 220/132/33 kV GSS Kishanganj	356.10		7.39	22.82	110.00	215.89
Phase III (N-1) compliance	291.84			50.00	110.00	131.84
Strengthening of Sub-transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53		42.35	217.02	130.00	83.16
ADB funded schemes	196.90	18.92	13.87	103.23	60.88	
ADB funded schemes (New)	239.00			3.00	200.00	36.00
State Plan Schemes	484.38	5.00	154.54	181.95	89.03	53.86
State Plan Schemes	1061.39			20.00	340.00	701.39
Installation of 14 Nos. of GSS through State plan funding	555.90			10.00	200.00	345.90
Establishment of Training Centre through state plan funding	3.00		0.30	2.70		
Capital expenditure schemes through Internal Resources	112.31		20.31	27.00	65.00	
Total	5143.37	23.92	318.70	971.88	1654.91	2173.96

6.5 Capitalisation

Petitioner's submission:

BSPTCL has submitted that capitalisation has been considered from the schemes in opening CWIP, new schemes under BRGF, ADB and others which are classified as New Schemes and R&M schemes.

BSPTCL has considered the following assumptions for projecting capitalisation schedule for FY 2014-15 and FY 2015-16

- (i) Capitalisation of opening CWIP – Considered in the same ratio as the capitalisation of CWIP to the total opening CWIP as considered in the tariff order dated 28th February 2014 respectively for FY 2014-15 and FY 2015-16.
- (ii) Capitalisation of the New Investment – Considered in the same ratio as the capitalisation of investment to the total investment as considered in the tariff order dated 28th February 2014 respectively for FY 2014-15 and FY 2015-16.

BSPTCL has furnished the capitalisation schedule and year-wise capitalisation of investment in the following Tables:

Table 6.7: Capitalisation proposed by the Petitioner for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order dated 15.3.2013	Projected by the petitioner
1	Opening CWIP	718.00	1048.55
2	New Investment	1960.00	1654.91
3	Less: Capitalisation	968.00	2061.92
a.	Opening CWIP		91.82
b.	New Investment	968.00	1970.10
4	Closing CWIP (1+2-3)	1710.00	641.54

BSPTCL has requested the Commission to approve the proposed capitalisation schedule as detailed in the Table above.

Commission's analysis:

The Commission has considered the revised capital investment of Rs.5143.37 Crore from FY 2012-13 to FY 2016-17, in the foregone paragraph.

The Commission has considered capitalisation schedule in the MYT order dated 15th March 2013 as detailed hereunder:

Particulars	1 st year	2 nd year	3 rd year
For Opening CWIP for FY 2013-14	30%	30%	40%
For New Schemes	30%	30%	40%
For R&M Schemes	30%	30%	40%

The Petitioner has projected capitalisation at Rs.2061.92 Crore during FY 2015-16 and capitalisation from opening CWIP at Rs.91.82 Crore and from out of new investment at Rs.1970.10 Crore, however, has not provided scheme-wise capitalisation details.

Based on the above capitalisation schedule, the capitalisation shall be at Rs.661.02 Crore (195.03 + 174.43 + 291.56) (balance opening CWIP of 2013-14 (Rs.195.03 Crore), balance of Rs.249.18 Crore investment in FY 2013-14 (Rs.174.43 Crore) and 30% of Rs.971.88 Crore investment in FY 2014-15 (Rs.291.56 Crore) and 30% of Rs.1654.91 Crore investment in FY 2015-16 (Rs.496.47 Crore)). The Commission has accordingly, considered the capitalization for FY 2015-16 as detailed in the Table below:

Table 6.8: Capitalisation of capital expenditure considered by the Commission for FY 2015-16

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order dated 15.3.2013	Projected by the petitioner for FY 2015-16	Now approved for FY 2015-16
1	Opening CWIP	718.00	1048.55	1049.77
2	New Investment	1960.00	1654.91	1654.91
3	Less: Capitalisation	968.00	2061.92	1157.49
a.	Opening CWIP		91.82	661.02
b.	New Investment	968.00	1970.10	496.47
4	Closing CWIP (1+2-3)	1710.00	641.54	1547.19

6.6 Funding of Capital Expenditure

Petitioner's submission:

BSPTCL has submitted that it has planned to fund the schemes through a combination of Equity, State Government Grants and Loans from Financial Institutions as well as from State Government. The opening CWIP is also considered for funding on the basis of Grants and Loans in the ratio of 40:60. The Petitioner has also submitted that the State Government has provided funds for BRGF schemes as "Equity" and not "Grant".

BSPTCL has submitted the scheme wise computation of funding of capital expenditure and capitalisation in the Table below:

Table 6.9: Scheme wise funding for capital expenditure projected by the Petitioner:
(Rs. Crore)

Sl. No.	Planned Scheme	Total Cost	Nature of Scheme	2014-15			2015-16
				Actuals upto 25.11.14	From 25.11.14 to March'15	Total	
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar - Phase-III	1370.02	Equity	114.16	220.00	334.16	350.00
2	Phase-III, Part-II Construction of 220/132/33 kV GSS Kishanganj with associated lines for evacuation of power from 400/220 kV Kishanganj (PGCIL)	356.10	Equity	2.82	20.00	22.82	110.00
3	Phase-III for (N-1) compliance	291.84	Equity		50.00	50.00	110.00
4	Strengthening of sub transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53	Equity	107.02	110.00	217.02	130.00
5	ADB Funded Scheme	196.90	Loan	53.23	50.00	103.23	60.88
6	State Plan Scheme	297.44	Loan	52.16	59.56	111.72	54.67
7	State Plan Scheme	186.94	Equity	32.78	37.44	70.22	34.36
8	New Schemes under State Plan	1061.39	Equity		20.00	20.00	340.00

Sl. No.	Planned Scheme	Total Cost	Nature of Scheme	2014-15			2015-16
				Actuals upto 25.11.14	From 25.11.14 to March'15	Total	
9	Installation of 14 Nos of GSS (funding through State Plan)	555.90	Equity		10.00	10.00	200.00
10	Establishment of BSPTCL's Training Centre (funding through State Plan)	3.00	Loan		2.70	2.70	
11	Capital Expenditure Schemes through Internal Resources	112.31	Internal Resources	0.57	26.43	27.00	65.00
12	New ADB funded schemes	239.00	Loan		3.00	3.00	200.00
13	Grand Total	5143.37		362.75	609.13	971.88	1654.91

Table 6.10: Funding Ratio for Capital expenditure and Capitalisation of New investment proposed by the Petitioner:

Particulars	2014-15		2015-16	
	Rs. Crore	Ratio	Rs. Crore	Ratio
Equity	724.23	75%	1274.36	77%
Grants				
Loans	220.65	23%	315.55	19%
Internal Resources	27.00	3%	65.00	4%
Total	971.88	100%	1654.91	100%

Commission's analysis

The Commission has examined the scheme wise funding of capital expenditure and scheme wise funding of capitalisation submitted by the Petitioner.

The Commission observed that strengthening of transmission and sub-transmission system/network schemes funded by the Government of India through BRGF (Backward Regions Grant Fund) were treated as equity. As could be seen from the Government of Bihar Rajyadesh, the strengthening of transmission and sub-transmission system/network schemes are funded by the Gol under BRGF (Special Plan) and shall be utilized as per the guidelines of the scheme approvals. Further, the Rajyadesh specify that these amounts are "investment" in BSPTCL but not invested in the form of Equity in BSPTCL. The funds released by the Gol under BRGF Grants

channelled through Bihar Government should be treated as Grants only and cannot be treated as Equity infusion by the Government of Bihar in BSPTCL. Further, the nomenclature itself clearly specify these funds released by Gol are Grants under Backward Regions Grant Fund.

Further, it is pertinent to mention that the Petitioner had projected these schemes in MYT filings as “Grant” and accordingly, the Commission has considered the same for FY 2013-14, FY 2014-15 and FY 2015-16 in MYT Order dated 15th March 2013.

The Commission, accordingly, has considered the scheme wise funding of capital expenditure and capitalisation as detailed in the following Tables.

Table 6.11: Scheme wise funding of capital expenditure considered by the Commission

(Rs. Crore)					
Sl. No.	Planned Scheme	Total Cost	Nature of Scheme	2014-15	2015-16
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar-Phase-III	1370.02	Grants	334.16	350.00
2	Phase-III, Part-II Construction of 220/132/33 kV GSS Kishanganj with associated lines for evacuation of power from 400/220 kV Kishanganj (PGCIL)	356.10	Grants	22.82	110.00
3	Phase-III for (N-1) compliance	291.84	Grants	50.00	110.00
4	Strengthening of sub transmission system in Bihar - Extension scheme of Phase-2 works (Revised)	472.53	Grants	217.02	130.00
5	ADB Funded Scheme	196.90	Loan	103.23	60.88
6	State Plan Scheme	297.44	Loan	111.72	54.67
7	State Plan Scheme	186.94	Equity	70.22	34.36
8	New Schemes under State Plan	1061.39	Equity	20.00	340.00
9	Installation of 14 Nos of GSS (funding through State Plan)	555.90	Equity	10.00	200.00
10	Establishment of BSPTCL's Training Centre (funding through State Plan)	3.00	Loan	2.70	
11	Capital Expenditure Schemes through Internal Resources	112.31	Internal Resources	27.00	65.00
12	New ADB funded schemes	239.00	Loan	3.00	200.00
13	Grand Total	5143.37		971.88	1654.91

Table 6.12: Scheme wise funding of Capital expenditure considered by the Commission

Particulars	(Rs. Crore)			
	2014-15		2015-16	
	Rs. Crore	Ratio	Rs. Crore	Ratio
Equity	100.22	10%	574.36	35%
Grants	624.00	64%	700.00	42%
Loans	220.65	23%	315.55	19%
Internal Resources	27.00	3%	65.00	4%
Total	971.88	100%	1654.91	100%

The Commission has considered capitalisation schedule in the MYT order dated 15th March 2013 as detailed hereunder:

Particulars	1 st year	2 nd year	3 rd year
For Opening CWIP for FY 2013-14	30%	30%	40%
For New Schemes	30%	30%	40%
For R&M Schemes	30%	30%	40%

The Petitioner has projected capitalisation at Rs.2061.92 Crore during FY 2015-16 however, has not provided scheme-wise capitalisation details. The Commission observed that the petitioner has projected capitalisation at Rs.91.82 Crore (@8.76%) against opening CWIP of Rs.1048.55 Crore and Rs.1970.10 Crore (119.05%) from new investment of Rs.1654.91 Crore.

In the absence of scheme-wise capitalisation details, the Commission has no other option but to regulate the capitalisation as per the above capitalisation schedule and funding thereon tentatively for FY 2015-16.

The Petitioner has considered funding of capitalisation of opening CWIP at 40% through Grants and balance 60% through loan. Funding of new investment of FY 2015-16 is projected through Equity, internal resources and loans. The Petitioner has considered the funds provided for BRGF/Special plan as 'Equity' from State Government.

The Commission observed that the Government of India (GoI) is extending funds under '**Backward Regions Grant Fund (BRGF) (Special Plan)**' scheme channelled through Government of Bihar to BSPTCL for strengthening of transmission and sub-transmission system/network under Phase-II and Phase-III. Further, the Government of Bihar is releasing funds for implementation/erection of 132/33 kV grid substations.

The Commission observed from the Government of Bihar '**Rajyadesh**', the strengthening of transmission and sub-transmission system/network schemes are funded by the GoI under BRGF (Special Plan). Further, the Rajyadesh specify that these amounts are "**investment**" in BSPTCL but not invested in the form of Equity in BSPTCL. The funds released by the GoI under BRGF Grants channelled through Bihar Government should be treated as Grants only and cannot be treated as Equity infusion by the Government of Bihar in BSPTCL. Further, the nomenclature itself clearly specifies these funds released by GoI are Grants under Backward Regions Grant Fund. As such, the Commission has considered funding of these schemes through Grants.

The Commission has considered funding of capitalisation of opening CWIP in the ratio of 40% through Grants and 60% through loan as was considered in the Tariff Order dated 28th February 2014. Funding of new investment of FY 2015-16 is considered through Grants as majority of the schemes are funded by GoI and State Government and also through Internal Resources. The Internal resources were considered at the same level as projected by the Petitioner as no scheme-wise funding details of capitalisation were made available by the Petitioner.

The capital investment capitalised / transferred to GFA considered tentatively by the Commission for FY 2015-16 (based on above discussions and subject to true up) is as detailed in the Table below:

Table 6.13: Capitalisation of capital expenditure approved for FY 2013-14 to FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
1	Total investment	249.19	971.88	1654.91	2173.96			5049.94
	Capitalisation							
2	Opening CWIP	70.23	113.68	195.03				378.94
3	Capitalisation of New Investment (a+b+c+d)	0.00	367.53	961.25	1537.41	1314.15	869.58	5049.94
a.	From Capex of FY 2013-14		74.76	174.43				249.19
b.	From Capex of FY 2014-15		291.56	291.56	388.75			971.88
c.	From Capex of FY 2015-16			496.47	496.47	661.96		1654.91
d.	From Capex of FY 2016-17				652.19	652.19	869.58	2173.96
4	Investment capitalised (2+3)	70.23	480.00	1157.49	1537.41	1314.15	869.58	5428.88

Table 6.14: Capitalisation and Funding of capitalisation of CAPEX considered for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Projected by BSPTCL for FY 2015-16	Approved for FY 2015-16
1	Opening CWIP	718.00	1048.55	1049.77
2	Add: New Investment	1960.00	1654.91	1654.91
3	Total	2628.00	2703.46	2704.68
4	Less: Capitalised (5+6)	968.00	2061.92	1157.49
5	CWIP capitalisation	0.00	91.82	661.02
6	New Investment capitalisation	968.00	1970.10	496.47
7	Closing CWIP (1+2-4)	1710.00	641.54	1547.19
8	Funding of capitalisation			
9	CWIP capitalisation (10+11)	0.00	91.82	661.02
10	Grant	0.00	36.73	264.41
11	Loans	0.00	55.09	396.61
12	New Investment capitalisation (13 to 16)	968.00	1970.10	496.47
13	Grant	925.00		210.00
14	Equity		1517.07	172.30
15	Loans	43.00	375.65	94.67
16	Internal Resources		77.38	19.50
17	Total Grants (10+13)	925.00	36.73	474.41
18	Total Equity (14)	0.00	1517.07	172.30
19	Total Loans (11+15)	43.00	430.74	491.28
20	Total Internal Resources (16)	0.00	77.38	19.50

6.7 Interest During Construction (IDC)

Petitioner's submission

BSPTCL has submitted that the IDC is the amount charged on the actual loan drawal during the year. It is further submitted that for the purpose of IDC estimation, it has assumed the amount capitalised during the year due to new investments and CWIP as the loan drawal. The interest rate considered for IDC is the applicable weighted average interest rate for the proposed loans. The IDC projected by the Petitioner is furnished in the Table below:

Table 6.15: Projected IDC for FY 2015-16

(Rs. Crore)			
Sl. No.	Particulars	Approved for FY 2015-16 in MYT order dated 15.3.2013	Projected by BSPTCL for FY 2015-16
1	Loan drawal	43.00	430.74
2	Average Loan	21.50	215.37
3	Interest Rate	13.00%	13.00%
4	IDC (on average loan)	2.80	28.00

BSPTCL has requested the Commission to approve the IDC computations as detailed in the Table above.

Commission's analysis

The Commission has examined the computations of the IDC. The Commission has considered the loan akin capex capitalised as given in Table 6.14 and the weighted average interest rate as per the MYT order dated 15th March 2013. The IDC is considered on average loan for the FY 2015-16 as detailed in the Table below:

Table 6.16: Approved IDC for FY 2015-16

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Loan drawal	43.00	430.74	491.28
2	Average Loan	21.50	215.37	245.64
3	Interest Rate	13.00%	13.00%	13.00%
4	IDC (on average loan)	2.80	28.00	31.93

The Commission approved the IDC at Rs.31.93 Crore for FY 2015-16 as detailed in the Table above.

6.8 Gross Fixed Assets

Petitioner's submission:

BSPTCL has projected the Gross Fixed Assets for FY 2015-16, based on the phasing of capital investment, capitalisation of CWIP and IDC as tabulated in the Table below:

Table 6.17: Gross Fixed Assets projected for FY 2015-16

(Rs. Crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Opening GFA	2700.33	4073.73
2	Additions during the year	968.00	2061.92
3	Interest During Construction	2.80	28.00
4	Closing GFA (1+2+3)	3671.12	6163.65

BSPTCL has requested the Commission to approve the GFA as per above Table.

Commission's analysis

The Commission has arrived at the opening and closing GFA considering the capitalisation approved. The opening GFA for FY 2014-15 has been considered based on the closing GFA of audited annual accounts for FY 2013-14 duly reduced to the extent of Land revalued from the value of GFA in FY 2014-15 (RE) and further updated with capex approved for FY 2014-15 (RE). The closing GFA of FY 2014-15 (RE) is adopted as opening GFA for FY 2015-16. The opening value of GFA, additions and closing GFA for FY 2015-16 is given in the Table below:

Table 6.18: Gross Fixed Assets approved for FY 2015-16

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Opening GFA	2700.33	4073.73	2739.42
2	Additions during the year	968.00	2061.92	1157.49
3	Add : IDC	2.80	28.00	31.93
4	Closing GFA (1+2+3) (Depreciable assets)	3671.12	6163.65	3928.84

6.9 Depreciation

Petitioner's Submission

BSPTCL has submitted that depreciation has been computed annually based on straight line method by applying weighted average rate of depreciation on the average GFA. Depreciation on assets created out of Grants and Consumers Contributions is reduced from the Gross depreciation to arrive at the net depreciation to be charged.

BSPTCL has stated that computation of depreciation on the assets created out of Grants and Consumers Contributions is based on the actual ratio of "Grants and Consumer Contributions" and GFA.

BSPTCL has further submitted that computations of depreciation is based on the weighted average depreciation rate derived as per CERC Tariff Regulations 2009 and also as approved by the Commission in MYT order.

BSPTCL has projected the depreciation for FY 2015-16 as detailed in the Table below

Table 6.19: Projected Depreciation for FY 2015-16

(Rs. Crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Opening GFA	2700.33	4073.73
2	Additions during the year	968.00	2061.92
3	Add: IDC	2.80	28.00
4	Closing GFA (1+2+3)	3671.13	6163.65
5	Average GFA $\{(1+4)/2\}$	3185.73	5118.69
6	Weighted average rate of depreciation	5.12%	3.27%
7	Depreciation (5*6)	163.11	167.19
8	Opening Grants	1403.31	1668.92
9	Grants during the year	925.00	36.73
10	Total Grants (8+9)	2328.31	1705.65
11	Average Grants $\{(8+10)/2\}$	1865.81	1687.28
12	Weighted average rate of depreciation	5.12%	0.57%
13	Depreciation. on assets created out of grants (11*12)	95.53	9.61
14	Net Depreciation for GFA on Loans (7-13)	67.58	157.58

BSPTCL has requested the Commission to approve the computation of depreciation for FY 2015-16.

Commission's analysis

The Commission has examined the depreciation computations of the Petitioner. The computations of the Petitioner includes the assets the Cost of land of Rs.1366.12 Crore as per the audited annual accounts of the Petitioner for FY 2013-14.

Regulation 73 (2)(a) (i) of the BERC (Terms and Conditions for Determination of Tariff) Regulations 2007, specifies that ***“the value base for the purpose of depreciation shall be the historical cost of the asset”***

Regulation 73 (2)(a) (ii) of the BERC (Terms and Conditions for Determination of Tariff) Regulations 2007, specifies that ***“Land is not a depreciable asset and its cost shall be excluded from the capital cost”***.

The Commission has not considered the total land value of Rs.1366.12 Crore based on the land value reported in the audited annual accounts for FY 2013-14 and further up dated with the additions to assets for FY 2014-15 (RE). The closing GFA value of FY 2014-15 (RE) is adopted as opening GFA and further updated with the additions during the year and closing GFA arrived at for FY 2015-16.

The opening value of GFA, additions to GFA and closing GFA vis-à-vis the Grants and Loans considered by the Commission and depreciation on assets created out of Grants and depreciation on GFA on Loan is given in the Table below:

Table 6.20: Approved Depreciation for FY 2015-16

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Opening GFA	2700.33	4073.73	2739.42
2	Additions during the year	968.00	2061.92	1157.49
3	Interest During Construction (IDC)	2.80	28.00	31.93
4	Closing GFA (1+2+3)	3671.13	6163.65	3928.84

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
5	Average GFA $\{(1+4)/2\}$	3185.73	5118.69	3334.13
6	Weighted average rate of depreciation	5.12%	3.27%	5.23%
7	Depreciation (5*6)	163.11	167.19	174.38
8	Opening Grants	1403.31	1668.92	1914.72
9	Grants during the year	925.00	36.73	474.41
10	Total Grants (8+9)	2328.31	1705.65	2389.13
11	Average Grants $\{(8+10)/2\}$	1865.81	1687.28	2151.93
12	Weighted average rate of depreciation	5.12%	0.57%	5.23%
13	Depreciation on assets created out of grants (11*12)	95.53	9.61	112.55
14	Net Depreciation for GFA on Loans (7-13)	67.58	157.58	61.83

The Commission accordingly, approves Rs.61.83 Crore towards depreciation for FY 2015-16

6.10 Interest on Loans

Petitioner's Submission

The Petitioner has submitted the computation of interest on loans considering projected loans i.e. opening loan balances as on 1st April 2015, additions to loans considered as per funding mechanism for capitalisation. Repayment of loan is considered equal to the depreciation for the year 2015-16. The rate of interest is considered as per MYT order dated 15th March 2013. BSPTCL has projected the interest on loans for FY 2015-16 as detailed in the Table below:

Table 6.21: Projected Computation of Interest on Loan for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Opening loan	483.73	251.86
2	Additions during the year	43.00	430.74
3	Repayment	67.78	157.58
4	Closing Loan (1+2-3)	458.95	525.03
5	Average Loan $\{(1+4)/2\}$	471.34	388.44
6	Rate of Interest	13.00%	13.00%
7	Interest Charges (5 * 6)	61.29	50.50

BSPTCL has requested the Commission to approve the interest rate as well as interest on loan amount for FY 2015-16.

Commission's analysis

The Commission has examined the computation of interest on loan projected by the Petitioner for FY 2015-16.

The Regulation 73 (1) of the BEREC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

- (a) interest on loan capital shall be computed loan-wise, on the loans arrived at in the manner indicated in Regulation 71.*
- (b) In the case of existing projects, the actual debt-equity shall be used for tariff determination and any expansion thereto shall be governed as per Regulation 71.*
- (c)*
- (d)*
- (e)*
- (f) In case any moratorium period is availed by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.*

The Regulation 71 of BEREC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

“(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.”

(2) the debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, Return on Equity, Advance Against Depreciation and Foreign Exchange Rate Variation”.

A conjoint reading of the above Regulations explicitly specify that interest shall be provided on the actual debt in respect of existing projects as on 1-4-2013 and thereafter on 70% of the project cost.

The Commission, in view of the above Regulations, for the purpose of computation of interest, has considered the closing loan of FY 2014-15 (RE) as opening loan for FY 2015-16 and further updated based on the funding of capitalisation for FY 2015-16 as shown hereunder.

Capitalisation

Sl. No.	Particulars	Amount (Rs. Crore)
1	Capitalisation during the year (incl. IDC)	1189.42
2	Less: Grants	474.41
3	Net capitalisation	715.01
4	Equity considered (@30% of 3)	214.50
5	Debt considered (@70% of 3)	500.51

The Commission has considered the rate of interest at 9.13% for FY 2015-16 based on the rate of interest considered in true up for FY 2013-14.

The Commission, accordingly, has considered interest for FY 2015-16 as detailed in the Table below:

Table 6.22: Interest & finance charges considered in truing up for FY 2015-16
(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order dated 15.03.2013	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Opening loan balance	483.73	251.87	316.01
2	Additions during the year	43.00	430.74	500.51
3	Normative Repayment	67.58	157.58	61.83
4	Closing Loan (1+2-3)	459.15	525.03	754.70
5	Average Loan {(1+4)/2}	471.44	388.45	535.35
6	Interest rate	13.00%	13.00%	9.13%
7	Interest & Finance Charges (5*6)	61.29	50.50	48.88

The Commission accordingly, approves the interest on loans of Rs.48.88 Crore for FY 2015-16.

6.11 Operation and Maintenance (O&M) Expenses

Petitioner's Submission

BSPTCL has submitted that it has adopted a weighted average method of WPI: CPI in the ratio of 45: 55 and considered last year average inflationary increases for Employee and A&G expenses.

BSPTCL has further submitted that R&M expenses are provided as a % of Gross Fixed Assets.

BSPTCL has proposed following inflation index for FY 2014-15 and FY 2015-16;

(iii) Employee cost and A&G expenses

$$\text{INDX}_n = 0.55 * \text{CPI}_n + 0.45 * \text{WPI}_n$$

(iv) Repairs and Maintenance expenses

$$\text{R\&M}_n = K * \text{GFA} * (1 + \text{WPI}_n),$$

where – 'K' is a constant (expressed in %) governing the relationship between R&M costs and GFA and will be calculated based on the % of R&M to GFA of the preceding year of the base year.

- GFA is the opening value of the gross fixed assets of the nth year
- WPI_n is the wholesale price index increase for immediate preceding year over previous year.

Table 6.23: O&M Expenses - weightage of indexation/inflation factor

Sl. No.	Particulars	WPI	CPI	Total
1	Weightage	0.45	0.55	1.00
2	Index points for FY 2012-13	167.58	215.17	
3	Indexation n-1 (index point * weightage)	75.43	118.34	193.77
4	Index points for FY 2013-14	177.64	236.00	
5	Indexation n (index point * weightage)	79.94	129.80	209.74
6	Combined inflation {(5-3) / 3}			8.24%

6.12 Employee Costs

Petitioner's submission:

BSPTCL has submitted that the employee cost comprises of salaries, dearness allowance, bonus, staff welfare, medical benefits, leave travel and earned leave encashment and the terminal benefits in the form of pension, gratuity, etc.

BSPTCL has submitted that they have considered budget estimates for FY 2015-16 for the purpose of projecting employees' expenses. The employee cost capitalised is considered @1.80% as per the MYT order i.e. Tariff Order for FY 2013-14.

The Petitioner has projected the employee expenses for FY 2015-16 as detailed in the Table below:

Table 6.24: Projected Employee Cost for FY 2015-16

(Rs. Crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Employee cost	191.46	238.15
2	Less: State Government support for Terminal Benefits	74.49	135.78
3	Sub-total (1-2)	116.97	102.37
4	Less: Employee cost capitalised @1.80%	3.44	1.84
5	Net employee cost (3 - 4)	113.53	100.52

The Petitioner has requested the Commission to approve the revised projections of employee expenses for FY 2015-16.

Commission's analysis:

The Commission has examined the Employee cost projected by the Petitioner for FY 2015-16. The Commission considered the employee cost for FY 2015-16 based on the revised estimates of employee cost considered by the Commission for FY 2014-15 (RE) and further escalated @ 8.24% for inflationary increase. Capitalisation of employee cost is considered @1.8% as per MYT order dated 15th March 2013 for FY 2015-16 as detailed in the Table:

Table 6.25: Approved Employee Cost for FY 2015-16

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Employee cost FY 2014-15 (RE)	191.46	238.15	83.96
2	Add: indexation @ 8.24% (on sl.no.1)			6.92
3	Less: Support by State Government against terminal benefits	74.49	135.78	
4	Employee cost (1+2-3)	116.97	102.37	90.88
5	Less: Employee cost capitalised @1.80%	3.44	1.84	1.64
6	Net employee cost (4 - 5)	113.53	100.52	89.24

The Commission, accordingly, approved net employee cost of Rs. 89.24 Crore for FY 2015-16 as detailed in the above Table.

6.13 Repairs and Maintenance (R&M) Expenses

Petitioner's submission:

BSPTCL has submitted that post unbundling it has initiated major drive for maintenance and up-keeping of its transmission assets. Huge capital expenditure schemes were undertaken to the tune of Rs. 5000 Crore and hence, R&M expenses are bound to increase.

BSPTCL has further submitted that the methodology adopted by the Commission to approve expenses based on past trend and with inflation would deprive the Petitioner of its legitimate claim for the R&M expenses on the assets added during the year. The Petitioner has estimated R&M expenses as a % of Gross Fixed Assets (GFA) and thereafter escalating by inflationary indices.

BSPTCL has submitted that it would like to provide precedence of some states where R&M expense is allowed as a % of Gross Fixed Assets as detailed below:

Particulars	R&M as a % of GFA
Punjab (PSTCL)	2.75%
Uttar Pradesh (UPPTCL)	2.50%
Delhi (DTL)	2.19%
Uttarakhand (PTCUL)	3.18%

BSPTCL has projected R&M expenses @ 3% of Opening GFA and further escalated for inflationary increase @ 8.24% for FY 2015-16. The details of R&M expenses projected by the Petitioner are as given in the Table below:

**Table 6.26: Projected Repairs and Maintenance expenses for FY 2015-16
(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Opening GFA		4073.73
2	% of GFA		3.00%
3	R&M Cost	10.80	122.21
4	Inflationary index %		8.24%
5	Inflationary increase		10.07
6	R&M Cost	10.80	132.28

BSPTCL has requested the Commission to approve the R&M expenses for FY 2015-16 as projected in the Table above.

Commission's analysis

The Commission has examined the R&M expenses projected by BPSTCL. The Commission has approved Rs.10.80 Crore towards R&M expenses for FY 2015-16 in the MYT Order dated 15th March 2013.

The Petitioner has claimed R&M expenses at 3% on the GFA, however, the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 does not provide for allowing R&M expenses as a % on the Gross Fixed Assets.

The Commission considered the Repairs and Maintenance expenses for FY 2015-16 based on the R&M expenses considered by the Commission for FY 2014-15 (RE) with escalation at 8.24% (inflation index).

The Commission has considered R&M expenses of Rs.28.81 Crore in review for FY 2014-15 (RE). The Commission has considered the R&M expenses for FY 2015-16 with escalation at 8.24% for inflationary increase over the R&M expenses of FY 2014-15 (RE) as detailed in the Table below:

Table 6.27: Approved R&M expenses for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Opening GFA		4073.73	
2	% of GFA		3.00%	
3	R&M Cost	10.80	122.21	28.81
4	Inflationary index		8.24%	8.24%
5	Inflationary increase		10.07	2.38
6	R&M Cost	10.80	132.28	31.19

The Commission, accordingly, considered R&M expenses at Rs.31.19 Crore for FY 2015-16 as detailed in the above Table.

6.14 Administration and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted that Administration and General expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and traveling expenses etc.

BSPTCL has estimated the net A&G expenses at Rs.24.69 Crore for FY 2015-16 as furnished in the Table below:

Table 6.28: Proposed Administration and General Expenses for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	A & G Expenses	6.02	25.72
2	Less: A&G cost capitalised	0.24	1.03
3	Net A&G expenses	5.78	24.69

BSPTCL has requested the Commission to approve the A&G expenses for FY 2015-16 as detailed in the Table above.

Commission's analysis:

The Commission has examined the A&G expenses projected by BPSTCL. The Commission has approved Rs.5.78 Crore towards A&G expenses for FY 2015-16 in the MYT order dated 15th March 2013.

The Commission has considered capitalisation of A&G expenses @ 4% for FY 2015-16 as per MYT order dated 15th March 2013.

The Commission considered the Administration and General expenses for FY 2015-16 based on the revised estimates of A&G expenses considered by the Commission for FY 2014-15 (RE) with escalation at 8.24% (inflation index) as detailed in the Table:

Table 6.29: Approved Administration & General Expenses for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	A&G Expenses FY 2014-15 (RE)			6.70
2	Inflationary increase @ 8.24%			0.55
3	A & G Expenses	6.02	25.72	7.25
4	Less: A&G cost capitalised	0.24	1.03	0.29
5	Net A&G expenses	5.78	24.69	6.96

The Commission considers Rs.6.96 Crore towards net Administration and General Expenses for FY 2015-16.

6.15 Allocation of Holding Company Expenses

Petitioner's submission

BSPTCL has submitted that 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. As per Clause (i) of the 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 provision 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”.

BSPTCL further submitted that BSPHCL provides common services to all the segregated entities and as per the Transfer Scheme *“operating expenses incurred by the Holding Company like administration and general expenses, legal and consulting fees, etc. would be shared by the BSPTCL, BSPTCL, NBPDC and SBPDCL in the ratio of their respective equity”.*

BSPTCL has also stated that as per Schedule 'F', the Holding Company shall handle all issues relating to the subsidiary companies in respect of the testing divisions, training department at Headquarter and all the department s of the Corporate head office viz. General Administration, Accounts and Finance, IT, Stores & Purchase, Transmission/Distribution/Generation, Personnel, Publicity, Legal, Vigilance & Security, Commercial, Planning, Civil Engineers, 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 respective companies.

The BSPTCL has estimated the Holding Company expenses at Rs.6.49 Crore for FY 2015-16 as furnished in table below:

Table 6.30: Expenses of Holding Company projected for FY 2014-15

(Rs. Crore)		
Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
Holding Company Expenses	--	6.49

BSPTCL has requested the Commission to approve the expenditure as part of overall O&M expenditure for FY 2015-16.

Commission's analysis:

BSPTCL has projected holding company expenses at Rs.6.49 Crore for FY 2015-16.

The Commission has observed that BSPHCL vide letter No.1618 dated 22.10.2014 has estimated the holding company expenses at Rs.4.82 Crore for FY 2015-16 and the same is communicated to the BSPTCL.

The Commission, accordingly, has considered the Holding Company expenses for FY 2015-16 as detailed in the Table below:

Table 6.31: Allocation of Holding Company Expenses approved for FY 2015-16

(Rs. Crore)			
Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
Holding Company expenses	--	6.00	4.82

The Commission, accordingly, considers Rs.4.82 Crore towards holding company Expenses for FY 2015-16.

6.16 Summary of Operations and Maintenance (O&M) Expenses

Table 6.32: Total O&M cost considered by the Commission for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Employee cost	116.97	102.37	90.88
2	R&M expenses	10.80	132.28	31.19
3	A&G Expenses	6.02	25.72	7.25
4	Holding company expenses		6.49	4.82
5	Total O& M cost	133.79	266.86	134.14
6	Less: O&M expenses capitalized	3.68	2.87	1.93
7	Net O&M expenses	130.11	264.00	132.21

The Commission considered total net O&M cost of Rs.132.21 Crore for FY 2015-16

6.17 Interest on working capital

Petitioner's submission:

BSPTCL has submitted that it 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:

Table 6.33: Norms for working capital requirement

Sl. No.	Particulars	Norm
1	O&M expenses	One month
2	Maintenance spares	@1% of historical cost of GFA escalated @6% per annum
3	Receivables	Two months of transmission charges
4	Rate of interest on working capital	Short-term PLR of SBI as on 1 st April of the year

The rate of interest applied on the proposed working capital is @14.75% as per the SBI PLR as on 1st April 2014.

BSPTCL has claimed interest on working for FY 2015-16 computed on the above norms as detailed in the Table below:

Table 6.34: Projected Interest on working capital for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	O&M exp. (1 month)	10.84	22.00
2	Maintenance spares @1% of opening GFA with 6% escalation	28.62	43.18
3	Receivables - 2 months	50.65	121.41
4	Total working capital	90.11	186.59
5	Rate of interest	14.45%	14.75%
6	Interest on working capital	13.02	27.52

The Petitioner has requested to approve the computation of interest on working capital and the interest charges thereon for FY 2015-16.

Commission's analysis

The Commission has examined the computation of interest on working capital submitted by the Petitioner. The Petitioner has considered the working capital as per Regulations and the rate of interest @14.75% as per SBI PLR as on 1st April 2014.

The Regulation 73(4)(ii) of BERC Tariff Regulations, 2007 specify the rate of interest on working capital shall be equal to Short term PLR of SBI on 1st April of the year. The Commission has issued amendment to the Regulation 73(4)(ii) (amendment notified in the Bihar Gazette dated 27.03.2014) that the rate of interest on working capital will be computed at 350 basis point over and above the base rate.

The SBI Base Rate as on 1st April 2014 is at 10%. The rate of interest on working capital to be considered shall work out to 13.50% [SBI Base Rate of 10% + 3.50% (350 basis points)] for FY 2014-15 (RE).

The Commission has computed the working capital and interest on working capital as per expenses approved at an interest rate of 13.50% as given in the Table below:

Table 6.35: Approved Interest on working capital for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	O&M (Gross) exp. (1 month)	10.84	22.00	11.02
2	Maintenance spares @1% of opening GFA with 6% escalation	28.62	43.18	29.04
3	Receivables - 2 months	50.65	121.41	47.15
4	Total working capital	90.11	186.59	87.21
5	Rate of interest	14.45%	14.75%	13.50%
6	Interest on working capital	13.02	27.52	11.77

The Commission approved the interest on working capital at Rs.11.77 Crore for FY 2015-16.

6.18 Return on Equity

Petitioner's submission:

BSPTCL has submitted that computation of equity is considered based on the closing equity as per true-up of FY 2013-14 and further additions to the equity balance has been considered as per the funding of capitalisation envisaged for FY 2014-15 and FY 2015-16.

BSPTCL has computed the return on equity for FY 2015-16 as detailed in the Table below:

Table 6.36: Projected Return on Equity for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Equity	235.00	1118.98
2	Add: Equity During the year		1517.07
3	Closing equity balance (1+2)	235.00	2636.05
4	Average equity $\{(1+3)/2\}$	235.00	1877.51
5	Rate of Return per annum %	14.00%	14.00%
6	Return on Equity (4*5)	32.90	262.85

BSPTCL has requested the Commission to consider the RoE as per the computations furnished in the Table above for FY 2015-16.

Commission's analysis

The Commission has examined the computation of RoE claim of BSPTCL.

The Regulation 73 (2) (c) of the BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

- (i) ***Return on Equity shall be computed on the equity base determined in accordance with Regulation 71 and shall be @ 14% per annum.***
- (ii) *Equity invested in foreign currency shall be allowed a return upto a prescribed limit in the same currency and the payment on this account shall be made in Indian Rupee based on the exchange rate prevailing on the due date of billing.*

Explanation:

*The premium raised by the transmission licensee while issuing share capital and investment of internal resources created out of free reserve of the existing transmission licensee, if any, for funding the project, shall also be reckoned as paid up capital for the purpose of computing return on equity provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the project and forms part of the approved financial package. The definition of equity thus would involve all net worth deployed in the capital of the unit. **This shall not include any revaluation of reserves and subsidies**".*

The BERC in Gazette Notification dated 26th March 2014 has issued amendment to Regulation 73 (2) (i) of BERC (Terms and Conditions for Determination of Tariff) (2nd Amendment) Regulations, 2014 which specify that ***"Return on equity shall be computed on the equity base determined in accordance with Regulation 71 and shall be @ 15.5% for the projects which are commissioned on and after 01.04.2015"***.

The Regulation 71 of BERC Terms and Conditions for Determination of Tariff Regulations, 2007 specify;

“(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.”*
- (2) the debt and equity amount arrived at in accordance with clause (1) shall be used for calculation of interest on loan, Return on Equity, Advance Against Depreciation and Foreign Exchange Rate Variation”.**

A conjoint reading of Regulations 73 and 71 explicitly specify that Return on Equity shall be provided on the actual Equity as on 1.4.2013 and on 30% of the project cost in respect of new projects from FY 2013-14. The return on equity shall be allowed on the capital cost of the projects commissioned prior to 31st March 2014 at 14% and on the capital cost of the projects commissioned on or after 1st April 2015 at 15.50%.

The Commission, in view of the Regulations 73 and 71 of the BERC Tariff Regulations, 2007, for the purpose of computation of Return on Equity, has considered the RoE @ 14% on the opening equity as on 1.4.2015 and further equity additions during

FY 2015-16 based on the capitalisation approved by the Commission for FY 2015-16 for considering RoE @15.50%.

The Commission, accordingly, has considered Return on Equity for FY 2015-16 as detailed in the Table below:

Table 6.37: Approved Return on Equity for FY 2015-16 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Equity as on 31.03.2015			325.60
2	Rate of return on Equity			14.00%
3	Return on equity (1*2)			45.58
4	Equity of projects commissioned w.e.f. 1.04.2015			--
5	Addition in FY 2015-16			214.51
6	Closing Equity (4+5)			214.51
7	Average equity (4+6)/2			107.25
8	Rate of Return on equity			15.50%
9	Return on equity (7*8)			16.62
10	Total Return on equity (3+9)	32.90	262.85	62.20

The Commission approves the Return on Equity at Rs.62.20 Crore for FY 2015-16 as detailed in the Table above.

6.19 Non-Tariff Income

Petitioner's submission:

BSPTCL has submitted that it has considered an escalation of 10% year on year on the actual non tariff income of FY 2013-14 and projected the non tariff income for FY 2015-16 as detailed in the Table below:

Table 6.38: Projected non tariff income for FY 2015-16

(Rs. Crore)

Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
Non tariff income	0.73	33.99

Commission's analysis:

The Commission has considered non tariff income as submitted by the Petitioner for FY 2015-16 as detailed in the Table below.

Table 6.39: Non tariff income considered for FY 2015-16**(Rs. Crore)**

Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
Non tariff income	0.73	33.99	33.99

6.20 Annual Fixed Cost / ARR for FY 2015-16**Petitioner's submission**

BSPTCL has submitted the annual fixed cost arrived at by aggregating all the expenses viz. Depreciation, Interest on Loans, Interest on working capital, O&M expenses, Return on Equity. The total expenses less Non-tariff income are the net annual fixed charges or transmission charges.

The summary of revised annual fixed cost / ARR projections and ARR approved by the Commission for FY 2015-16 in the MYT order are given in the Table below:

Table 6.40: Projected Annual Fixed charges / ARR for FY 2015-16**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	O&M expenses	130.11	264.00
2	Employee cost	116.97	102.37
3	R&M expenses	10.80	132.28
4	A&G Expenses	6.02	25.72
5	Holding company expenses	0.00	6.49
6	Less: Expenses capitalised	3.68	2.87
7	Interest and finance charges	61.28	50.50
8	Interest on working capital	13.02	27.52
9	Depreciation	67.58	157.58
10	Return on Equity	32.90	262.85
11	Total Fixed cost	304.89	762.45
12	Less: Non-tariff income	0.73	33.99
13	Net Fixed cost / ARR	304.16	728.46

BSPTCL has submitted that the transmission charges for the year are estimated based on the applicable rules and regulations and the methods adopted by the Hon'ble Commission in its MYT order dated 15.3.2013. The various costs are estimated in accordance with the regulatory norms, assumptions and detailed justifications provided in the petition. The Petitioner has requested the Commission to approve the ARR for FY 2015-16 and resultant transmission charges to be recovered from the two distribution companies.

Commission's analysis:

Based on the Commission's detailed analysis, the Aggregate Revenue Requirement / annual fixed cost considered by the Commission for FY 2015-16 are as detailed in the Table below:

Table 6.41: Approved Annual Fixed charges /ARR for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	O&M expenses (2+3+4+5-6)	130.11	264.00	132.21
2	Employee cost	116.97	102.37	90.88
3	R&M expenses	10.80	132.28	31.19
4	A&G Expenses	6.02	25.72	7.25
5	Holding company expenses	0.00	6.49	4.82
6	Less: O&M expenses capitalised	3.68	2.87	1.93
7	Interest and finance charges	61.28	50.50	48.88
8	Interest on working capital	13.02	27.52	11.77
9	Depreciation	67.58	157.58	61.83
10	Return on Equity	32.90	262.85	62.20
11	Total Fixed cost (1+7+8+9+10)	304.89	762.45	316.90
12	Less: Non-tariff income	0.73	33.99	33.99
13	Net Fixed cost / ARR (11-12)	304.16	728.46	282.91

6.21 Revenue Gap / (Surplus) for FY 2015-16

Petitioner's submission

The Petitioner has submitted, it has been recovering transmission charges from the Distribution Companies as per the charges approved by the Hon'ble Commission in

the MYT Tariff Order dated 15th March 2013. The Petitioner has submitted the transmission charges as per revised projections in the Table below:

Table 6.42: Projected revised Transmission charges for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Annual Transmission charges	304.16	728.46
2	Transmission cost to be realized per month from Distribution Companies	25.35	60.70

BSPTCL has projected the revenue gap considering the transmission charges as per approved figures for FY 2015-16 in the MYT order dated 15th March 2013 vis-à-vis the revised projections for FY 2015-16 as detailed in the Table below:

Table 6.43: Projected revenue gap / (surplus) for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16
1	Revised ARR for FY 2015-16	304.16	728.46
2	Less: Approved Annual Transmission Charges for FY 2015-16 in MYT order dated 15.03.2013	304.16	304.16
3	Revenue Gap / (Surplus) for FY 2015-16 (1-2)	0.00	424.29

BSPTCL has requested the Commission to approve the transmission charges and revenue gap for FY 2015-16 as detailed above.

Commission's analysis:

Based on the Commission's detailed analysis of the projections made by the Petitioner, the Commission has considered the ARR of Rs.282.91 Crore for recovery from Distribution licensees for FY 2015-16. Accordingly, the Commission has arrived net revenue surplus of Rs. 21.25 Crore for FY 2015-16 over the transmission charges considered for FY 2015-16 in MYT order dated 15th March 2013 as detailed in the Table below:

Table 6.44: Approved Revenue Gap / (Surplus) for FY 2015-16

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Aggregate Revenue Requirement for FY 2015-16	304.16	728.45	282.91
2	Less: Approved Annual Transmission Charges for FY 2015-16 in MYT Order dated 15.03.2013	304.16	304.16	304.16
3	Revenue Gap / (Surplus) for FY 2015-16 (1-2)	0.00	424.29	(21.25)

6.22 Approved Transmission Charges for FY 2015-16

The Commission has considered revenue surplus of Rs.59.75 Crore (including carrying cost) in truing up for FY 2013-14 and is carried forward for adjustment against ARR of FY 2015-16.

Based on the revised ARR computations of the Commission, the transmission charges to be recovered from the Distribution licensees during FY 2015-16 are as shown in the table below:

Table 6.45: Approved Revised Transmission charges for FY 2015-16 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order for FY 2015-16	Projected by BSPTCL for FY 2015-16	Now approved for FY 2015-16
1	Annual Transmission charges	304.16	728.46	282.91
2	Less: Trued up Revenue surplus of FY 2013-14 including carrying cost			59.75
3	Total Transmission charges	304.16	728.46	223.16
4	Transmission charges to be realized per month from Distribution Companies	25.35	60.70	18.60

The transmission charges approved above for FY 2015-16 shall be fully realized from the Distribution Companies on monthly basis in proportion of power delivered to the Distribution Companies.

Gross ARR has been considered for computing the transmission charges (in Rs/kWh) as detailed below:

Sl. No.	Particulars	UoM	Projected by the Petitioner for FY 2015-16	Now approved for FY 2015-16
1	Annual Transmission charges	Rs. Cr	728.45	282.91
2	Total Power Purchases	MU	20875.00	19411.30
3	Less: Bilateral sales	MU		2086.00
4	Net Power Purchases (2-3)	MU	20875.00	17325.30
5	Transmission charges per kWh ((1/4)*10)	Rs./kWh	0.35	0.16

Transmission charges per unit works out to Rs. 0.16 and is representative purpose only and not for billing on the basis of actual energy.

7. Compliance of Directive

7.1 Background

The Commission in its previous Tariff Order dated 28th February, 2014 had issued some directives to the Bihar State Power Transmission Company Limited. This chapter deals with the compliance status of the directives and Commission's views thereon as well as new directives for compliance and implementation by the BSPTCL.

7.2 Directives issued and the status of compliance

The directives issued in the Tariff Order dated 28th February 2014 and their compliance by BSPTCL are dealt below:

7.2.1 Directive: Transmission Loss

BSPTCL is directed to provide appropriate energy meters at all the interface points of DISCOMs, if not already provided, compute the monthly transmission loss based on the energy input into the BSPTCL grid from various sources and energy outgo measured at interface points of DISCOMs and HT consumers.

Compliance by BSPTCL

The Petitioner seeks time to comply with the above mentioned directive of the Commission. The Petitioner has only recently completed two years of independent operations and transmission infrastructure up-gradation works are in progress. The Petitioner requests the Commission to grant time-extension for compliance of the above.

Commission's Observation

BSPTCL has not complied with the directive given by the Commission. Prior to restructuring of BSEB also, the Commission had given directive to the erstwhile BSEB to provide appropriate meters to all the feeders from 220 KV to 11 KV level and conduct energy audit on regular basis. Hence request for time extension to comply with the directive is not justifiable.

The Commission once again directs BSPTCL to provide appropriate energy meters at all the interface points, to measure the energy into the BSPTCL grid from various sources and energy outgo to DISCOMs and EHT consumers, by 30th September, 2015 and report compliance to the Commission.

7.2.2 Directive: Separate ARR for SLDC

The Commission had directed BSPTCL to file ARR for FY 2014-15 separately for transmission and SLDC businesses vide letter dated 30.01.2014. BSPTCL in their reply submitted that they have filed the ARR petition for FY 2014-15 combinedly for transmission and SLDC and also submitted that it would be difficult to file separate ARR/Tariff petition for SLDC along with the proposal for scheduling and operating charges for FY 2014-15 due to the following reasons:

- (i) The SLDC is not functioning as a separate accounting unit.
- (ii) The final transfer scheme is yet to be notified by the Government.
- (iii) Assets and O&M expenses of SLDC are not identified.
- (iv) No separate man power is allotted for working of SLDC.
- (v) Other common cost apportionment of BSPTCL to SLDC function is also pending.

BSPTCL has further submitted that they would maintain separate expenditure for SLDC from FY 2014-15.

The Commission in the Tariff Order dated 28th February, 2014 directed BSPTCL to segregate the assets and liabilities and functions of SLDC and maintain separate account of the expenditure towards SLDC which is presently functioning under BSPTCL. The action taken report along with the amount of monthly expenditure under various heads towards SLDC shall be submitted to the Commission by BSPTCL by 30th June 2014.

Compliance by BSPTCL

The Petitioner submitted that it has only recently completed 2 years of independent operations. In view of the constraints as submitted last time, the Petitioner requests for time extension for compliance of the above directive. The Petitioner requests the Commission to allow time till the start of the next control period FY 2016-17 onwards.

Commission's Observation:

The Commission once again directs BSPTCL to segregate the assets and liabilities and functions of SLDC and maintain separate accounts of the expenditure towards SLDC from FY 2014-15 as reported and file the petition for ARR of next control period separately for SLDC.

7.3 New Directives**7.3.1 Energy Auditing of Transmission System**

The Commission directs BSPTCL to conduct energy auditing of its transmission system on monthly basis and submit copies of reports to the Commission. The first report on energy audit conducted for the month of April 2015 should be sent to the Commission by 15th May 2015.

7.3.2 Scheme-wise details capital expenditure and capitalisation

The Commission directs BSPTCL to furnish scheme wise details of capital expenditure, capitalisation with the tariff petitions invariably, with effect from Tariff year 2016-17 onwards failing which the Commission shall be compelled to disallow the entire capitalisation for all computations.

Bihar Electricity Regulatory Commission (BERC)

Vidyut Bhawan-II, Bailey Road, Patna

Time: 11:00 A.M.

Dated: 13th January, 2015

Minutes of the meeting of the State Advisory Committee (SAC) constituted under section 87 of the Electricity Act 2003 held on 13.01.2015 in the Conference Room of the Commission to discuss on the Tariff petition of BSPGCL, BSPTCL, NBPDC and SBPDCL for FY 2015-16.

1. The meeting of the State Advisory Committee (SAC) was held on 13.01.2015 under the chairmanship of Sri U. N. Panjiar, IAS (Retd.), Chairman, BERC and SAC. The list of participants present in the meeting is enclosed with the minutes.
2. Welcoming the members, the Chairman explained that the erstwhile Bihar State Electricity Board (BSEB) has been restructured into five companies' viz. Bihar State Power (Holding) Company Limited (BSPHCL), Bihar State Power Generation Company Ltd (BSPGCL), Bihar State Power Transmission Company Ltd. (BSPTCL), North Bihar Power Distribution Company Ltd. (NBPDC) and South Bihar Power Distribution Company Ltd. (SBPDCL). The aforesaid generation, transmission and distribution companies have filed their separate petitions for true up of Aggregate Revenue Requirement (ARR) for FY 2013-14, Annual Performance Review for FY 2014-15 and approval of revised ARR for FY 2015-16 and determination of Generation Tariff of Barauni Thermal Power Station (BTPS), Transmission Tariff for Transmission of electricity by BSPTCL and Tariff for retail sale of electricity by NBPDC and SBPDCL for FY 2015-16.

It was stated by the Hon'ble Chairman that the NBPDC and SBPDCL have proposed common tariff for retail sale of electricity during FY 2015-16. The Chairman also informed the SAC that the Commission has held public hearings at Gaya, Muzaffarpur, Munger, Bhagalpur and Chhapra and have received objections/

suggestions on the petitions. The Commission would also conduct public hearing at Darbhanga, Saharsa, Purnea and Patna and would take feedback from the stakeholders and general public. It was further stated that the suggestion of SAC has also to be considered.

3. The chairman directed the Petitioners to present their proposals to the SAC.

GENERATION

Bihar State Power Generation Company Limited (BSPGCL)

4. BSPGCL presented the details of the petition stating the status of generating units of BTPS, details of ARR and proposed tariff for FY 2015-16. They proposed generation tariff of Rs. 4.89/unit as against Rs. 4.27/unit approved by the Commission for FY 2015-16.

It was stated by BSPGCL that the unit No. 6 and 7 is under Renovation and Modernization (R&M) and Unit 7 will come in operation from April 2015 and unit 6 from July 2015. Regarding extension project at BTPS, it was stated by BSPGCL that the expected project completion dates for Unit 8 is August 2015 and for Unit 9 is November 2015. The status of Ganga River Water scheme and BTPS Infrastructure Strengthening schemes were presented during the presentation.

5. After the presentation, the committee discussed the following issues pertaining to BSPGCL:

(i) Weighted Average Landed Price of Oil

During the presentation given by BSPGCL, it was stated that the ratio of Heavy Furnace Oil to that of Light Diesel Oil has been taken in the ratio of 60:40 during the first year of operation, as a result of which, the weighted average works out to be Rs. 58,400/KL.

Chief Engineer Railway, ECR, Hajipur, stated that as against the ratio of HFO:LDO adopted, the proportion should be in the ratio of 80:20 because LDO will be required

only for the purpose of lighting up of the coal and also the cost of the LDO is higher. He further emphasized that adopting the ratio of 80:20 will also cut down the weighted average landed price of the oil.

(ii) **Date of restart (CoD) of Units of BTPS:**

The members of the Bihar Industries Association (BIA) raised the issue about the several extension of the date of restart of the units 6 and 7 of the BTPS. They also stated that due to continuous change in the date of operation of the units, it is affecting the ARR of those units.

In reply to the query made by BIA, BSPGCL stated that R&M work has been carried out by BHEL under the supervision of NTPC. The Energy Secretary and Chairman cum Managing Director, BSPHCL, stated that the Govt. is mounting pressure on them to complete the work soon, so that the units may restart as per the schedule proposed in the petition. It was assured by the BSPGCL that they are hopeful to restart the generation as proposed.

The Chairman stated that while passing the Order, the Commission will take in to consideration the views expressed by the members of the SAC and the ARR will be approved after prudence check.

TRANSMISSION

Bihar State Power Transmission Company Limited (BSPTCL)

6. BSPTCL presented the petition showing the details of ARR and proposed tariff for FY 2015-16. The Petitioner has proposed Rs.728.46 Crore as Annual Transmission charges to be recovered from the two distribution companies' i.e. NBPDC and SBPDCL which translates in to transmission charges of Rs. 60.70 Crore per month as against Rs.25.35 Crore per month approved by the Commission for FY 2015-16. BSPTCL has further requested for additional revenue recovery of Rs 102.59 Crore and Rs. 241.36 Crore for FY 2013-14 (true-up) and FY 2014-15 (Review) respectively.

7. After the presentation, the committee discussed the following issues pertaining to BSPTCL:

(iii) Depreciation

Sanjay Bhartiya of Bihar Industries Association raised the query that there is a difference in the percentage of net depreciation and depreciation on the assets created out of Grants and Consumer Contribution. He also mentioned that, as a result of different percentages adopted, the amount of depreciation is on higher side amounting to Rs. 106.61 Crore as against Rs. 33.89 Crore approved for FY 2013-14.

In reply to the query, BSPTCL replied that the different rates shown are actually derived from the amount of depreciation and average GFA on grants. This rate is derived one and hence the difference which is only notional.

(iv) Transmission Loss

During the presentation, BSPTCL was asked to give the reason for the higher transmission loss against the transmission loss approved in the MYT Order. In the MYT Order dated 15.03.2013, the state transmission loss as detailed below has been approved:

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

Against the above approved percentage, BSPTCL has claimed the following percentage of state transmission loss.

Particulars	FY 2013-14 (Actual)	FY 2014-15	FY 2015-16
Revised Trajectory of Transmission Loss	4.38%	4.38%	4.33%

In reply, BSPTCL stated that the company has only started its independent operation from November 2012. There is a substantial investment pertaining to strengthening of transmission network such as addition of new lines, augmentation of existing transformer capacities etc. The improvement in losses would be reflected after 1-2 years after the commissioning of the transmission assets.

(v) **Return on Equity**

Member of Bihar Industries Association raised the query about the equity addition of Rs. 590.35 Crore during FY 2013-14 in the company as a result of which Return on Equity has jumped to Rs. 74.22 Crore as against Rs. 32.90 Crore approved for FY 2013-14.

BSPTCL clarified that they have annexed the supportive document in the petition in support to the amount claimed and they also assured that they will further provide supportive documents in support to the equity infusion to the Company by Govt.

The Chairman assured that the Commission would take into account the views expressed by the members of the SAC and appropriate order will be passed. In addition, the Chairman BERC and SAC, directed BSPTCL to submit the following information/clarification by 25.01.2015:-

- 1) Supportive document in support of the amount of Rs. 590.35 Crore claimed as equity addition during FY 2013-14 along with the details of investment which has come in operation and source of grants/loans,
- 2) Justification for the substantial increase in O&M expenses. The details of new appointments and amount of ACP arrears with details,
- 3) Increase in R&M expenses from Rs. 14 Crore to Rs. 59 Crore requires clarification. Broad item wise expenditure details,
- 4) Power transmitted in MVA by BSPTCL in the FY 2013-14 (actual), FY 2014-15 (RE), FY 2015-16 (Estimate) and energy transmitted in MU,
- 5) Per unit transmission cost (Rs./kWh) and transmission charges (Rs./MVA/month) worked out for FY 2013-14, FY 2014-15 and FY 2015-16,
- 6) Separate ARR of State Load Despatch Centre (SLDC), to have clear idea of SLDC expenses and charges,
- 7) Monthly energy accounting report (Energy received and energy sent out to Distribution Companies) from 1st April 2014 to 30th November 2014.

DISTRIBUTION**North Bihar Power Distribution Company Limited (NBPDC) & South Bihar Power Distribution Company Limited (SBPDCL)**

8. The two distribution companies i.e. NBPDC and SBPDCL presented their petition showing the details of ARR and proposed tariff for FY 2015-16. The Petitioners have proposed a combined gap of Rs.2540.28 Crore (Rs. 811.31 Crore for NBPDC and Rs. 1729.26 Crore for SBPDCL), which will require a tariff hike of 49.65%. To avoid tariff shock, the Petitioners have proposed to create regulatory asset of Rs. 1740 Crore out of total gap, to be amortized in three years starting from FY 2016-17. Further, the balance gap of Rs. 800.57 Crore along with carrying cost of Rs. 256.65 Crore (i.e. total of Rs. 1057.22 Crore), proposed to be recovered through the tariff hike of 20.66%.
9. After the presentation, the committee discussed the following issues pertaining to NBPDC and SBPDCL:

(vi) Distribution Loss

The member of Bihar Industries Association queried that why there is a wide difference in the distribution loss of the two DISCOMs. The loss proposed by SBPDCL is much higher than NBPDC. For FY 2015-16 SBPDCL has proposed a loss of 41.65% and the NBPDC has proposed 28.48% against 20% approved by the Commission. In response, Managing Director, SBPDCL, replied that the main difference arises due to supply of power to Nepal by NBPDC where there is no distribution loss. The loss is very minimal while supplying power to Nepal. Also, the rural franchisees under NBPDC are much more successful than SBPDCL. It was also stated by Managing Director, NBPDC, that the response of the general consumers is better during the new connection camps in the area of NBPDC. The Chairman, BERC and SAC directed the distribution companies to submit the figures of Distribution losses in franchisee area like Muzaffarpur, Gaya and Bhagalpur. MD, SBPDCL also mentioned that there are 19 districts in South Bihar and 21 districts in North Bihar and general law and order is better in the area of the NBPDC compared to the area under SBPDCL.

(vii) Power Purchase and Sale Ratio between the two DISCOMs

The Chairman enquired about the ratio pertaining to the sales and power purchase among the two DISCOMs.

In response, the Managing Director, SBPDCL, replied that as per new resolution of the BSPHCL power purchase has been allocated in the ratio of 58% to SBPDCL and 42% to NBPDC.

(viii) Adherence of Tariff Policy

The Chairman, BERC, stated that according to Tariff Policy notified by Govt. of India, category wise tariff should be in the price band of $\pm 20\%$ of the average Cost of Supply. But the DISCOMs have proposed further deviation from average Cost of Supply for some categories of the consumers.

Bihar industries Association requested that cross subsidization should be as per the Tariff Policy.

The Chairman, BERC, stated that while passing the Tariff Order, the Commission shall try to determine the tariff within $\pm 20\%$ of the Average cost of Supply.

Retail Tariff Schedule

(ix) The Chairman, BERC and SAC invited the member to give their response on the tariff schedule proposed by the DISCOMs.

BIA suggested that limit of transformer capacity of 150% of the Contract Demand in case of HT categories of consumers should be abolished. This practice is not being followed by many other neighbouring states of Bihar.

Prof. W.S. Triar, Head of Department of Electrical Engineering, NIT, Patna stated that the transformer capacity of 150% of the contract demand is sufficient and safe for operation. It is not also proper to keep too much capacity of transformer if it is not required.

The SBPDCL also stated that extra capacity of transformer will increase the no load loss so capacity of transformer of 150% of contract demand is appropriate. It is also to be noted that all HT/EHT consumers having contract demand of 200KVA and above are allowed to have a standby transformer equivalent to the capacity of main transformers, as per existing tariff order.

Chairman, BERC stated that this point will be considered while passing the Tariff Order.

- (x) It was suggested by the member of Bihar Industries Association (BIA) and other members of the SAC to consider for a separate tariff for 500 watts in the Non-Domestic category as minimum demand for tariff purpose, so that small shops like beetle shop, gumti, etc. may not be compelled to take load of 1000 watt and pay for the same. The Chairman BERC and SAC stated that such proposal has also come during public hearings on Tariff Petition. The Chairman stated that the Commission will consider it during determination of tariff schedule.
- (xi) It was also suggested by BIA to abolish the fixed charges and MMC from all the L.T. categories also to which Chairman, BERC, replied that it is not appropriate to completely remove the fixed charges from all the categories as each consumer is required to pay the capacity charges for the load contracted.
- (xii) The members of Bihar Industries Association (BIA) requested to provide the information of energy audit results, metering status, compliance of the directives and others on the website of the related utility.

The Chairman directed NBPDC and SBPDCL to upload all the information/data/clarification which they submit to the Commission on their website.

The Chairman thanked all the Members and officials present in the meeting for attending the meeting and giving valuable suggestions. It was further stated that the Commission would consider these suggestion while passing the tariff orders of the Generation, Transmission and Distribution companies.

List of Participants

1	The Chairman Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna	15	Shri Lakshman Bhakta, Dy. Director (P) Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna
2	The Secretary Department of Energy Government of Bihar, Patna	16	Shri S. K. P Singh, Director (Projects) North Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna
	The Member Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna	17	Shri Vijay Kumar, G.M. (Rev) North Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna
	The Chairman-cum-Managing Director Bihar State Power (Holding) Company Ltd, Vidyut Bhawan, Bailey Road, Patna	18	Shri Rakesh, EEE/Inter state Bihar State Power (Holding) Company Ltd, Vidyut Bhawan, Bailey Road, Patna
3	The Managing Director North Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna	19	Shri Arvind Kumar, DGM (F) Bihar State Power Generation Company Ltd, Vidyut Bhawan, Bailey Road, Patna
4	The Managing Director South Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna	20	Shri N. K. Jha, GM (F) South Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna
5	The Additional Secretary Food & Consumer Protection Deptt., Govt. of Bihar, Patna	21	Shri Pramod Tiwari, Dy. GM (A/c) BSPTCL & NBPDC Vidyut Bhawan, Bailey Road, Patna
6	The Chief Electrical Engineer, East Central Railway, Hajipur	22	Shri Keshav Ranjan Pd. (OSD) Bihar State Power (Holding) Company Ltd, Vidyut Bhawan, Bailey Road, Patna
7	The Director Bihar Renewable Energy Dev. Agency, Sone Bhawan, Patna	23	Shri Nadeem Ahmad, EEE(Comml.) South Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna
8	The Head of the Department Deptt. of Electrical Engineering, National Institute of Technology (NIT), Patna	24	Shri J. K. Dubey, EEE(Comml.) North Bihar Power Distribution Company Ltd, Vidyut Bhawan, Bailey Road, Patna
9	The President Bihar Chamber of Commerce, Khem Chand Chaudhary Marg, Patna	25	Shri Ankesh Desai Consultant, IL&FS Energy
10	The President Bihar Industries Association, Sinha Library Road, Patna	26	Shri Nitin Gupta Consultant, CRISIL
11	Shri Parmanand Singh, Secretary Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna	27	Shri Atul Abhishek Singh Consultant, CRISIL
12	Shri Sanjeev Kr. Singh, Dy. Director (A) Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna	28	Shrimati Amrita Kaur Consultant, CRISIL
13	Shri Priya Ranjan, Consultant Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna	29	Shri Souvik Das Consultant, ASCI
14	Shri Nand Sharma, Consultant Bihar Electricity Regulatory Commission, Vidyut Bhawan-II, Bailey Road, Patna		